

**SUBMITTAL TO THE BOARD OF SUPERVISORS  
COUNTY OF RIVERSIDE, STATE OF CALIFORNIA**



ITEM: 3.11  
(ID # 23338)

**MEETING DATE:**  
Tuesday, February 06, 2024

**FROM :** FACILITIES MANAGEMENT AND EMERGENCY MANAGEMENT DEPARTMENT  
:


**SUBJECT:** FACILITIES MANAGEMENT (FM) AND EMERGENCY MANAGEMENT DEPARTMENT: Riverside County Western Emergency Operations Center Parking Lot Expansion Project - Approval of Additional Funds to Establish a Project Budget, and Approval of Plans and Specifications to Advertise for Bid; District 1. [\$1,624,308 – 100% Federal Funds - American Rescue Plan Act (ARPA) Coronavirus Relief Fund 21735] (Clerk to Advertise for Bids)(4/5 Vote Required)

**RECOMMENDED MOTION:** That the Board of Supervisors:

1. Approve additional funds in the amount of \$1,624,308 to establish a project budget in the not to exceed amount of \$1,969,102 for the Emergency Management Department Riverside County Western Emergency Operations Center Parking Lot Expansion (Western EOC Parking Lot Expansion) Project, located at 450 E. Alessandro Blvd., Riverside, California;

Continued on Page 2

**ACTION:**4/5 Vote Required, Policy, CIP

  
Bruce Barton, EMD Director 1/22/2024

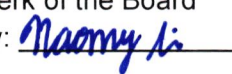
  
Rose Salgado, Director of Facilities Management 1/23/2024

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**MINUTES OF THE BOARD OF SUPERVISORS**

On motion of Supervisor Perez, seconded by Supervisor Spiegel and duly carried by unanimous vote, IT WAS ORDERED that the above matter is approved as recommended.

Ayes: Jeffries, Spiegel, Washington, Perez and Gutierrez  
Nays: None  
Absent: None  
Date: February 6, 2024  
xc: FM, EMD, COBcf

Kimberly A. Rector  
Clerk of the Board  
By:   
Deputy

**SUBMITTAL TO THE BOARD OF SUPERVISORS COUNTY OF RIVERSIDE,  
STATE OF CALIFORNIA**

**RECOMMENDED MOTION:** That the Board of Supervisors:

2. Authorize the use of additional funds for the Western EOC Parking Lot Expansion in the not to exceed amount of \$1,624,308 from the First Installment Countywide Department Response Category of American Rescue Plan Act (ARPA) Fund 21735, including reimbursement to Facilities Management (FM) for incurred project related expenses;
3. Approve and direct the Auditor-Controller to make the budget adjustment in the amount of \$344,794 for Item 3.9 approved on May 9, 2023 plus the subject item in the amount of \$500,000 for current year costs, for a total of \$844,794 as shown on Schedule A;
4. Approve the plans and specifications for the Western EOC Parking Lot Expansion Project, and authorize the Clerk of the Board to advertise for bids to be received by the Clerk of the Board located on the 1<sup>st</sup> floor of the County Administrative Center, 4080 Lemon Street, Riverside, CA 92501 up to the day and hour as instructed in the specifications;
5. Upon completion of the bid process and review of the publicly opened bids, authorize the Director of Facilities Management to submit the construction contract executed by the recommended apparent lowest responsive and responsible bidder to the Chairman of the Board (Chairman), and authorize the Chairman to execute the contract on behalf of the Board, provided that, if any of the following occur, the award will be submitted to the Board for action: there is a bid protest, the lowest bid exceeds the approved project budget, the low bidder is disqualified, two or more bids are the same and are the lowest, or a bidder requests relief from its bid due to an error; and
6. Authorize the Director of Facilities Management, or her designee, to administer the contract for the awarded low bidder in accordance with applicable Board Policies.

<b>FINANCIAL DATA</b>	<b>Current Fiscal Year:</b>	<b>Next Fiscal Year:</b>	<b>Total Cost:</b>	<b>Ongoing Cost</b>
<b>COST</b>	\$ 500,000	\$ 1,124,308	\$ 1,624,308	\$ 0
<b>NET COUNTY COST</b>	\$ 0	\$ 0	\$ 0	\$ 0
<b>SOURCE OF FUNDS:</b> 100% Federal Funds - American Rescue Plan Act (ARPA) Coronavirus Relief Fund 21735			<b>Budget Adjustment:</b> Yes	
			<b>For Fiscal Year:</b> 23/24–24/25	

**C.E.O. RECOMMENDATION:** Approve

**BACKGROUND:**

**Summary**

On May 9, 2023, Item 3.9, the Board of Supervisors (Board) approved in-principle, a preliminary design development budget in the amount of \$344,794, and the Professional Services

**SUBMITTAL TO THE BOARD OF SUPERVISORS COUNTY OF RIVERSIDE,  
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Agreement between the County of Riverside (County) and Ruhnau Clarke Architects (Ruhnau) in the amount of \$163,500 for the Western EOC Parking Lot Expansion Project, located at 450 E. Alessandro Blvd., Riverside, CA, 92508. The Project will allow for 32 new parking stalls at the northern existing parking lot, a new parking area for the Radio Amateur Civil Emergency Service (RACES) trailer, and a turn-around at the southeast corner of the property for additional personnel capacity to include other Operational Area partners.

Ruhnau has completed the plans and specifications for the construction of the EOC Parking Lot Expansion Project. FM recommends the Board approve the plans and specifications for the Project and authorize the Clerk of the Board to advertise the Notice Inviting Bids. Upon completion of the bid process, FM recommends the Board authorize the Director of Facilities Management to award the bid to the lowest responsive and responsible bidder as long as it falls within the specified parameters; and authorize the Chairman to execute the construction contract on behalf of the Board upon Counsel's review and approval.

Facilities Management recommends the Board approve the additional funds in the not to exceed amount of \$1,624,308 to establish a project budget of \$1,969,102 for the Project; and approve the plans and specifications and authorize the Clerk of the Board to advertise the Notice Inviting Bids for the Project to continue moving forward with project schedule commitments.

**Impact on Residents and Businesses**

The Western EOC Parking Lot Expansion Project will provide increased personnel capacity for EMD and its partners for staging during emergencies to better serve the western region of Riverside County and increase the ability to coordinate and distribute information and services during an emergency.

**Additional Fiscal Information**

The approximate allocation of the project budget is as follows:

<b>BUDGET LINE ITEMS</b>	<b>PRELIMINARY DESIGN BUDGET</b>	<b>BUDGET ADJUSTMENT</b>	<b>TOTAL PROJECT BUDGET</b>
DESIGN PROFESSIONAL OF RECORD	163,500	0	163,500
OTHER DESIGN SERVICES	28,415	0	28,415
SPECIALTY CONSULTANTS	50,000	0	50,000
REGULATORY PERMITTING	50,500	0	50,500
CONSTRUCTION	0	1,445,500	1,445,500
COUNTY ADMINISTRATION	21,034	31,144	52,178
PROJECT CONTINGENCY	31,345	147,664	179,009
<b>PROJECT BUDGET</b>	<b>\$ 344,794</b>	<b>\$ 1,624,308</b>	<b>\$ 1,969,102</b>

**SUBMITTAL TO THE BOARD OF SUPERVISORS COUNTY OF RIVERSIDE,  
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The Board previously approved the preliminary design development budget in the amount of \$344,794 on May 9, 2023 (Item 3.9) and is 100% funded through Federal Funds - American Rescue Plan Act (ARPA) Coronavirus Relief Fund 21735. The item did not include a budget adjustment and is requested at this time.

This Board action will approve the additional funds of \$1,624,308 which will establish a project budget of \$1,969,102 which is 100% funded through Federal Funds - American Rescue Plan Act (ARPA) Coronavirus Relief Fund 21735. Of the \$1,624,308, expenditures for FY 23/24 are estimated at \$500,000; and FY 24/25 at \$1,124,308.

Attachments:

- Specification and Contract Documents to Bid for the EMD Riverside County Western Emergency Operations Center Parking Lot Expansion Project
- Construction Documents
- Federal Provisions Attachment

RS:VB:RM:JA:SC:TV

FM08200012205

MT# 23338

G:\Project Management Office\FORM 11'S\Form 11's\_In Process\23338\_D6 – 012205 – Western EOC Parking Lot Exp Proj-Project Budget,Plans&Specs to Bid\_020624.doc

SCHEDULE A

Emergency Management Department

Budget Adjustment

Fiscal Year 2023/2024

**INCREASE IN ESTIMATED REVENUE:**

21735 -2000100000 -763520 Fed-American Rescue Plan Act	<u>\$844,794</u>
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<b>TOTAL INCREASE IN ESTIMATED REVENUES:</b>	<b><u>\$844,794</u></b>
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**INCREASE IN APPROPRIATIONS:**

21735 -2000100000 - 525440 Professional Services	<u>\$844,794</u>
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<b>TOTAL INCREASE IN APPR</b>	<b><u>\$844,794</u></b>
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SUBMITTAL TO THE BOARD OF SUPERVISORS COUNTY OF RIVERSIDE,  
STATE OF CALIFORNIA

*Heydee Koury*  
Heydee Koury, Sr Accountant - Auditor 1/31/2024

*Veronica Santillan*  
Veronica Santillan, Principal Management Analyst 1/30/2024

*Aaron Gettis*  
Aaron Gettis, Deputy County Counsel 1/25/2024

PROJECT MANUAL

COUNTY EMERGENCY OPERATIONS CENTER  
PARKING LOT EXPANSION

COUNTY OF RIVERSIDE

RIVERSIDE, CA

CONSTRUCTION DOCUMENTS

Divisions 00 - 33

3-75-80

August 2023



SPECIFICATIONS AND CONTRACT DOCUMENTS  
FOR

FM08200012205

WESTERN EMERGENCY OPERATION CENTER PARKING EXPANSION  
PROJECT



PREPARED BY  
COUNTY OF RIVERSIDE  
FACILITIES MANAGEMENT



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## **NOTICE INVITING BIDS**

**NOTICE IS HEREBY GIVEN** that the County of Riverside ("County") invites sealed Bids for the construction of the following project ("Work"):

WESTERN EMERGENCY OPERATION CENTER PARKING EXPANSION PROJECT (FM08200012205)

Bids shall be prepared in conformance with the Instructions to Bidders and other Bidding Documents. Bids must be received, by hand delivery or mail, by the Clerk of the Board located on the 1<sup>st</sup> floor of the County Administrative Center, 4080 Lemon Street, Riverside, CA 92501, no later than the Bid Closing Deadline of **2:00 p.m.** on **03/06/24**, to be thereafter on said date and at said location publicly opened and read aloud. The Bidder assumes sole responsibility for timely receipt of its Bid.

On and after 02/08/24, and up to seventy two hours (72) hours prior to the Bid Closing Deadline, copies of Bidding Documents will be available by contacting Mission Reprographics at (951) 686-8828. Project documents and plan holders list may be downloaded on-line by going to Mission Reprographics Online Plan Room website at <https://www.missionreproplanroom.com/jobs/public> . The cost to of bid documents is nonrefundable.

Pursuant to Labor Code section 1771.1, any contractor bidding, or subcontractor to be listed on a bid proposal subject to Public Contract Code section 4104, shall not be qualified to bid after March 1, 2015, unless currently registered and qualified to perform public works pursuant to Labor Code section 1725.5. No Contractor or subcontractor may enter into a contract (after April 1, 2015) without proof of current registration to perform public works.

A mandatory Pre-Bid Conference will be conducted on 02/19/24, commencing promptly at 10:00 a.m., at 450 E Alessandro Blvd., Riverside, CA, 92507. **Attendance at the mandatory Pre-Bid Conference is required as a condition of bidding.** Sign language services are available for the Pre-Bid Conference upon written request received by email at jharrigan@rivco.org at least three (3) business days prior to the Pre-Bid Conference.

The Bidder receiving the Award by the County is required:

(1) to furnish a Performance Bond and Payment Bond as provided in the Instructions to Bidders and other Bidding Documents;

(2) both at the time Bidder submits its Bid and other Bid Submittals and at the time of Award, to: (a) hold a contracting license, active and in good standing, issued by the Contractors State License Board for the State of California for the following license classification(s): Class A or B license classification(s); and (b) hold, or designate a Subcontractor that holds, the certification(s) required by Applicable Laws to perform the following work: storm drain, irrigation, electrical, low voltage, paving, new site lighting, new landscape, new hardscape, extend existing roof top low voltage infrastructure; and

(3) to comply with the provisions of the California Labor Code, including, without limitation, Sections 1771.4, 1773.1, 1774, 1775 and 1776 of the California Labor Code and including, without limitation, the obligations to pay the general prevailing rates of wages in the locality in which the Work is to be performed and comply with Section 1777.5 of the California Labor Code governing employment of apprentices. Copies of the prevailing rates of per diem wages are on file at California State Department of Industrial Relations, 464 West Fourth St., Suite 348, San Bernardino, CA 92401, and are available to any interested party on request.

THIS IS A PUBLIC WORKS PROJECT AND SUBJECT TO COMPLIANCE MONITORING AND ENFORCEMENT BY THE DEPARTMENT OF INDUSTRIAL RELATIONS. The awarded prime contractor shall post job site notices as prescribed by regulation starting January 1, 2015. Contractor or subcontractor shall furnish records specified in Labor Code section 1776 to the Labor Commissioner.

Substitution of securities for any moneys withheld by County shall be permitted as provided for by Section 22300 of the California Public Contract Code.

Capitalized terms used herein shall have the meanings assigned to them in the Bidding Documents. For information contact: Facilities Management, 3450 14<sup>th</sup> Street, 2nd Floor, Riverside, CA 92501.

# INSTRUCTIONS TO BIDDERS

## ARTICLE 1 GENERAL PROVISIONS

### 1.1 DEFINITIONS

Capitalized terms used on the Bidding Documents shall have the meanings assigned to them in the forms of Construction Contract and General Conditions that are included in the Bidding Documents. Capitalized terms not so defined shall have the meanings assigned to them in, or if none is assigned as reasonably interpreted according to the context of, the portion of the Bidding Documents where such terms are used.

### 1.2 SUMMARY OF PROJECT

**1.2.1 Project Description.** The Project to be constructed generally consists of the following: demolition, grading, re-routing of existing utilities including but not limited to storm drain, irrigation, electrical, low voltage, paving, new site lighting, new landscape, new hardscape, extend existing roof top low voltage infrastructure. The identifying name of the Project is Western Emergency Operation Center Parking Expansion (FM08200012205)

**1.2.2 Contract Time.** Substantial Completion of the Work must be achieved within Ninety (90) Days from the Date of Commencement. Final Completion must be achieved within thirty (30) Days after the occurrence of Substantial Completion.

**1.2.3 Liquidated Damages.** The Construction Contract includes provisions: (1) permitting the County to assess liquidated damages to the Contractor of \$750 per Day for each Day after the expiration of the Contract Time for Substantial Completion that the Work is not Substantially Completed by Contractor; and (2) for payment by County to Contractor of liquidated damages to Contractor of \$500 per Day for each Day of Compensable Delay for which Contractor is entitled to a Contract Adjustment of the Contract Time and Contract Price.

**1.2.4 County Furnished Materials.** County reserves the right to elect to furnish the following County Furnished Materials for incorporation by Contractor as part of the Work pursuant to an assignment of one or more County Materials Contract(s) in accordance with Section 2.5 of the General Conditions: not applicable. Said County Materials Contract(s) are available for review by Bidders at not applicable. Bidder is solely responsible to familiarize itself prior to submission of its Bid with the terms and conditions of such County Materials Contract(s). County shall notify the successful Bidder prior to Award if the County elects to assign any of such County Materials Contracts to Contractor for incorporation Contractor of the County Furnished Materials as part of the Work.

**1.2.5 Licensing.** The Bidder to whom the Construction Contract for the Work is Awarded by the County is required, both at the time of the Bid Closing Deadline and at the time of Award, to: (1) hold a contracting license, active and in good standing, issued by the Contractors State License Board for the State of California for the following license classification(s): Class A or B license(s); and (2) hold, or designate in the Designation of Subcontractors a Subcontractor that holds, the certification(s) required by Applicable Laws to perform the following work: demolition, grading, re-routing of existing utilities including but not limited to storm drain, irrigation, electrical, low voltage, paving, new site lighting, new landscape, new hardscape, extend existing roof top low voltage infrastructure.

**1.2.6 No Warranty by County.** Bidders are solely responsible to satisfy themselves as to the suitability of any estimates, projections, budgets, criteria, surveys, reports, test data, recommendations, opinions, and other information provided by County relating to the Site, Work or Project (including, without limitation, all information contained in any Reference Documents) and nothing stated in the Bidding Documents, Contract Documents or in any other information provided by the County shall be construed as implying the creation

or existence of any warranty, express or implied, on the part of the County with respect to the completeness, accuracy or sufficiency thereof.

## **ARTICLE 2 BIDDER'S REPRESENTATIONS**

### **2.1 THE BIDDER BY SUBMITTING ITS BID REPRESENTS THAT:**

**2.1.1 Bidding Documents.** The Bidder has, in its capacity as contractor and not a design professional, carefully and thoroughly examined, compared and understood the Bidding Documents (including, without limitation, the Drawings, Specifications and Reference Documents identified in the Bidding Documents), and acting in that capacity has satisfied itself that the Bidding Documents are free of any errors, conflicts, ambiguities, lack of coordination and violations of Applicable Laws that might affect the Bidder's ability to complete the Work for the amount of its Bid and within the time period(s) for construction required by the Bidding Documents.

**2.1.2 Site Information.** In order to fully acquaint itself with all conditions, restrictions, obstructions, difficulties and other matters which might affect the Bidder's ability to complete the Work for the amount of its Bid and within the time period(s) for construction required by the Bidding Documents, the Bidder has carefully and thoroughly inspected: (1) the Site and its surroundings; (2) all Existing Improvements on the Site and their existing uses by the County, its invitees and the public; (3) routes of ingress and egress to and from the Site; (4) local conditions in the vicinity of the Site (including, without limitation, sources and availability of labor, materials and equipment); (5) the status of construction, if any, that is in-progress at the Site; and (6) all reports, data, as-built drawings and other information (including, without limitation, the Reference Documents identified in the Bidding Documents) concerning visible and concealed conditions (including, without limitation, locations and capacities of utility sources and lines) above and below the surface of the ground and in Existing Improvements that have been made available by the County to Bidders or that are disclosed by public records of the County of Riverside or the City in which the Project is located, and has correlated its observations with the requirements of the Bidding Documents.

**2.1.3 Bid Compliance.** The Bid and other Bid Submittals are in compliance with the Bidding Documents.

**2.1.4 No Exceptions.** The Bid is based upon the materials, equipment, systems and other work required by the Bidding Documents, without any exception, exclusion or qualification.

**2.1.5 Legal Status.** If the Bidder is a corporation, or if one or more of the partners or joint venturers of the Bidder (where the Bidder is a partnership or joint venture) is a corporation, such corporation(s) is(are) duly incorporated, authorized to do business and in good standing under the laws of the State of California.

**2.1.6 Licensing.** Bidder currently holds and, if and when an Award is made to Bidder, Bidder will hold at the time of Award, a license, active and in good standing, issued by the Contractors State License Board for the State of California authorizing the Bidder to contract to perform work in the requisite license classification(s) stated in the Notice Inviting Bids and/or in these Instructions to Bidders.

**2.1.7 Due Authorization.** The person or persons signing the Bid and other Bid Submittals on behalf of the Bidder are authorized to do so on behalf of the Bidder.

**2.1.8 Balanced Bid.** Cost breakdowns of the Bid that are provided by the Bidder are balanced, reflecting in each line item category of Work a reasonable estimate of the Bidder's cost commitments to perform that category of Work and a proportionate share of overhead and profit.

**2.1.9 Labor Compliance.** The Bid includes sufficient funds to enable Bidder to comply with, and Bidder will comply with, all of the applicable provisions of the California Labor Code, including, without

limitation, payment of prevailing wages, maintenance and submission of weekly certified payrolls and hiring of apprentices.

## **2.2 MISREPRESENTATION BY BIDDER**

The County may determine as unresponsive any Bid in which any statement or representation made or incorporated by reference in the Bid, including any Bid Submittal comprising the Bid, is false, incorrect or materially incomplete and misleading.

## **ARTICLE 3 BIDDING DOCUMENTS**

### **3.1 COPIES**

**3.1.1 Availability.** Copies of Bidding Documents will be available, On and after [02/08/24], and up to [seventy two hours (72) hours] hours prior to the Bid Closing Deadline, copies of Bidding Documents will be available by contacting Mission Reprographics at (951) 686-8828. Project documents and plan holders list may be downloaded on-line by going to Mission Reprographics Online Plan Room website at <https://www.missionreproplanroom.com/jobs/public> . The cost to of bid documents is nonrefundable.

**3.1.2 Sub-Bidders.** Unless otherwise stated in the Notice Inviting Bids, the County assumes no obligation to distribute Bidding Documents directly to Sub-Bidders.

**3.1.3 Complete Sets.** The Bidder shall use complete sets of Bidding Documents in preparing its Bid. The County assumes no responsibility for errors or misinterpretations resulting from the use of incomplete sets of Bidding Documents.

**3.1.4 No License.** No license to Bidder is intended or conferred by the County's issuance to Bidders of copies of the Bidding Documents.

### **3.2 INTERPRETATION OR CORRECTION OF BIDDING DOCUMENTS**

**3.2.1 Examination by Bidder.** The Bidder shall, with reasonable care and diligence in its capacity as a contractor and not a design professional, carefully and thoroughly examine the Bidding Documents and prior to the Bid Closing Deadline report to the County in writing by means of a request for clarification provided in accordance with Paragraph 3.2.3, below, any information contained in the Bidding Documents constituting an error, conflict, ambiguity, lack of coordination or violation of Applicable Laws that might affect the Bidder's ability to complete the Work for the amount of its Bid and within the time period(s) for construction required by the Bidding Documents. Failure by the Bidder to do so shall not relieve the Bidder from its representations set forth in these Instructions to Bidders nor serve as the basis for any claim by the Bidder that it was mistaken or misled in connection with the preparation of its Bid or its planning for construction of the Work.

**3.2.2 Pre-Bid Conference.** A mandatory Pre-Bid Conference will be conducted on [02/19/24], commencing promptly at [10:00 a.m.], at [450 E Alessandro Blvd., Riverside, CA, 92507]. Attendance at the mandatory Pre-Bid Conference is required as a condition of bidding. Sign language services are available for the Pre-Bid Conference upon written request received by email at [jharrigan@rivco.org] at least three (3) business days prior to the day of the Pre-Bid Conference. Regardless of whether the Pre-Bid Conference is described in the Bidding Documents as mandatory or optional, Bidder shall be deemed charged with knowledge of all facts, circumstances and other information that were apparent, available or provided to Bidders at the Pre-Bid Conference, including, without limitation, any and all of the physical conditions of the land and Existing Improvements at the Site that were visible or available for inspection or review by the Bidders attending the Pre-Bid Conference.

**3.2.3 Requests for Clarification.** If the Bidder requires clarification or interpretation of the Bidding Documents, it shall make a written request to County by a request for clarification. All requests for clarification of the Bidding Documents must be submitted, in writing, between the hours of 07:00 a.m. and 05:00 p.m. on any Day, Monday through Thursday (except Holidays) up to, including and no later than the Seven (7) Day(s) prior to Bid Closing Deadline, by hand delivery, mail, fax or e-mail to the following: Ruhnau Clarke Architects via email [rerbe@ruhnauclarke.com](mailto:rerbe@ruhnauclarke.com). No response will be made to requests for clarification received after that time.

**3.2.4 Addenda.** Interpretations, corrections and changes of the Bidding Documents will be made by Addenda. Interpretations, corrections and changes of the Bidding Documents made in any other manner will not be binding and the Bidder shall not rely upon them.

**3.2.5 Communications.** The Bidder shall not, at any time during the bidding process following advertisement of the Notice Inviting Bids and prior to issuance of the Notice of Intent to Award, communicate with the County, Architect, County Consultants or any employee or representative of any of them, concerning the Project except by means of a written requests for clarification submitted by Bidder in accordance with Paragraph 3.2.3, above.

### 3.3 SUBSTITUTIONS

**3.3.1 Requests for Substitutions.** The Bidder shall make requests for Substitutions on the County's Request for Substitution form included in the Bidding Documents. Such requests shall comply with the requirements of the Bidding Documents, including without limitation, the Plans and Specifications. Without limitation to the other requirements of the Request for Substitution form, requests for Substitutions shall include: (1) a description of the material, equipment or other work that is to be replaced or eliminated by the Substitution; (2) a description of any other changes to the Work, Existing Improvements, the Site or the work of Separate Contractors that would be necessary if the proposed Substitution were incorporated as part of the Work; (3) a statement that the Bidder accepts responsibility for the inclusion in its Bid of all of the costs of implementing the Substitution, including, without limitation, the costs of any related changes to the Work, Existing Improvements, the Site or the work of Separate Contractors; (4) all drawings, performance and test data and other information necessary for an evaluation of the Substitution by the County, Architect and County Consultants; and (5) a statement that the Bidder understands and agrees that if the Substitution is not approved and the Bidder submits a Bid, Bidder will provide the Work as specified in the Bidding Documents without such Substitution. The burden of proof of the merit of a proposed Substitution is entirely upon the Bidder requesting the Substitution.

**3.3.2 Deadline for Submission.** Any completed Request for Substitution form that Bidders wishes to have considered by County must be submitted, between the hours of 07:00 a.m. and 05:00 p.m. on any Day, Monday through Thursday (except Holidays) up to, including and no later than the fourteenth (14th) Day prior to the Bid Closing Deadline, in writing, by hand delivery, mail, or fax or e-mail to the following: Ruhnau Clarke Architects via email [rerbe@ruhnauclarke.com](mailto:rerbe@ruhnauclarke.com). No response will be made to any Requests for Substitution form received after that time.

**3.3.3 Review by County.** To the maximum extent permitted by Applicable Laws, approval or disapproval of a Substitution proposed by a Bidder is in the sole and absolute discretion of the County. The County's decision to approve or disapprove of a proposed Substitution shall be final and binding. An Addendum shall be issued to all Bidders describing any Substitution properly and timely requested prior to the Bid Closing Deadline that is approved by the County. Failure by County to respond to a properly and timely submitted Request for Substitution prior to 11:00 a.m. of the second (2nd) working day before the Bid Closing Deadline shall be automatically deemed to be a disapproval by County thereof.

**3.3.4 Standards.** In evaluating a Request for Substitution form submitted by a Bidder, the materials, products and equipment described in the Bidding Documents are generally viewed by the County as establishing the standards for function, dimension, appearance and quality to be met by the requested Substitution.

**3.3.5 Performance by Bidder.** In the event the Bidder has submitted a Request for Substitution form and the request for Substitution is denied, or deemed denied, by the County and the Bidder thereafter submits a Bid and receives the Award, then the Bidder shall execute the Construction Contract and provide the Work as specified, without such Substitution and at no additional cost or expense to the County.

**3.3.6 No Postponement.** Delays associated with the review, processing or approval of a Request for Substitution form submitted by Bidder shall not entitle Bidder to a postponement of the deadlines set forth in the Bidding Documents.

**3.3.7 No Bid Adjustment.** Neither approval nor disapproval of a Request for Substitution form shall be grounds for adjustment of a Bid.

### **3.4 ADDENDA**

**3.4.1 Transmittal.** Addenda will be transmitted by County to all prospective Bidders who (1) attended and signed in at the Pre-Bid Conference (if any) or (2) have submitted a written request to County for notice of Addenda at Facilities Management – Project Management Office, 3450 14<sup>th</sup> Street, 2<sup>nd</sup> Floor, Riverside, CA 92501, [jharrigan@rivco.org](mailto:jharrigan@rivco.org), including in such request the Bidder's name and address for mailing.

**3.4.2 Inspection.** Copies of Addenda will also be made available for in-person inspection wherever Bidding Documents are on file for that purpose.

**3.4.3 Issuance.** Without limitation to the County's right to withdraw its request for Bids, Addenda may be issued up to, but not later than, seventy-two (72) hours prior to the Bid Closing Deadline; provided, however, that an Addendum withdrawing the request for Bids or one which postpones the Bid Closing Deadline may be issued at any time prior to the Bid Closing Deadline.

**3.4.4 Receipt by Bidder.** Failure of the Bidder to receive any Addendum shall not relieve the Bidder from any of its obligations under its Bid Submittal. The costs of performance by Bidder of all items of Work and other obligations contained in all Addenda issued by County shall be deemed included in the amount of the Bidder's Bid. The Bidder shall identify and list in its Bid all Addenda received and included in its Bid. The Bidder's failure to so acknowledge the receipt of all Addenda in its Bid may be asserted by the County as a basis for determining its Bid non-responsive.

## **ARTICLE 4 BIDDING PROCEDURES**

### **4.1 PREPARATION OF BIDS**

**4.1.1 Bid Form.** Bidder shall state its Bid price using the Bid Form included in the Bidding Documents. A Bid presented on other forms shall be disregarded.

**4.1.2 Blanks.** All blanks on the Bid Form shall be legibly executed in a nonerasable medium.

**4.1.3 Figures.** Sums shall be expressed in a Bid in both words and figures. In case of discrepancy, the amount written in words shall govern.

**4.1.4 Alterations.** Interlineations, alterations and erasures in a Bid must be initialed by each and all of the signer(s) of the Bid.

**4.1.5 Alternative Bids.** Alternative Bids will not be accepted unless specifically requested in the Bidding Documents.

**4.1.6 Multiple Bids.** Where two or more Bids for designated portions of the Work have been requested, the Bidder may, without forfeiture of the Bid Security, state in its Bid the Bidder's refusal to



accept the Award of less than the combination of Bids stipulated by the Bidder. The Bidder shall make no additional stipulations on or conditions to its Bid Form nor qualify its Bid in any other manner.

**4.1.7 Name of Bidder.** Each copy of the Bid shall state the legal name of the Bidder and its legal form of business (i.e., sole proprietor, partnership, joint venture or corporation). Bids shall be submitted in the name of Bidder that appears in the Bidder's license issued by the State of California Contractors State License Board for the license classification(s) that the Bidder is required to hold pursuant to the Notice Inviting Bids. Each Bid shall bear the longhand signature and printed name and title of the person or persons legally authorized to bind the Bidder to a contract. A Bid by a corporation shall further give the state of incorporation and have the corporate seal affixed. A Bid submitted by an agent shall have a current power of attorney attached certifying the agent's authority to bind the Bidder.

**4.1.8 Bid Submittals.** Each Bid shall include the following Bid Submittals executed in the manner required by the Bidding Documents:

- .1 Bid Form, in the form specified in the Bidding Documents;
  - .2 Bid Security, consisting of either (a) a Bid Bond, in the form specified in the Bidding Documents, or (b) such other form of Bid Security as is permitted by these Instructions to Bidders;
  - .3 Bid Security Receipt, in the form specified in the Bidding Documents;
  - .4 Designation of Subcontractors, in the form specified in the Bidding Documents;
- and
- .5 Non-Collusion Declaration, in the form specified in the Bidding Documents.
  - .6 Iran Contracting Act Certification
  - .7 Economic Sanctions in Response to Russia's Actions in Ukraine

**4.1.9 Modifications by Bidder.** Changes or additions to the Bid Form, recapitulations of the Work bid upon, conditions or limitations on the Work to be done, alternative proposals or any other modification of the Bid Form not specifically called for by the Bidding Documents may result in the County's rejection of the Bid as being non-responsive. No oral, telephonic, electronic, facsimile or telegraphic modification of any Bid submitted will be considered.

**4.1.10 Designation of Subcontractors.** The Bidder shall submit, on the Designation of Subcontractors form specified in the Bidding Documents, a list of the proposed Subcontractors and the portion of Work to be done by each Subcontractor as required by the Subletting and Subcontracting Fair Practices Act (Public Contract Code Sections 4100 et seq). Unless the Notice Inviting Bids expressly states otherwise, any information requested in the Designation of Subcontractors other than a Subcontractor's name and location of business must be submitted as part of the Bid and may not be submitted after the Bid Closing Deadline. If additional sheets are needed to provide the information requested in the Designation of Subcontractors, they shall be included by Bidder as part of its Bid and shall accompany the Designation of Subcontractors. If bidding of Alternates is called for by the Bidding Documents and the Bidder intends to use different or additional Subcontractors or if acceptance of the Alternate by County would cause the value of the Work to be performed by a Subcontractor not identified in the Designation of Subcontractors accompanying the Base Bid to exceed the threshold dollar amount required by Applicable Law for listing of Subcontractors, then a separate Designation of Subcontractors form must be submitted for each such Alternate. If the Bidding Documents require the performance of Work for which the Bidder or a Subcontractor must hold a certification required by Applicable Laws to perform the work, and if the Bidder intends to use a Subcontractor holding such certification to satisfy said requirement and to perform such Work, then Bidder shall, without limitation to any other information that may be required by Applicable Laws, include in the Designation of Subcontractors the name of such Subcontractor and a description of the Work requiring such certification that the Subcontractor will be performing.

**4.1.11 Builder's All Risk (Course of Construction) Insurance.** The Bid Form states whether the Bidder shall include Builder's All Risk (Course of Construction) Insurance for the Project. If the Bid Form states that such insurance shall be included by the Bidder in its Bid, then Contractor shall provide a policy of Builder's All Risk (Course of Construction) insurance coverage that conforms to the requirements set forth in Subparagraph 11.1.1.5 and the other applicable provisions of Article 11 of the General Conditions. NOTWITHSTANDING THE FOREGOING, COUNTY RETAINS THE RIGHT exercised at any time prior to award TO ELECT TO USE ITS OWN BUILDER'S ALL RISK (COURSE OF CONSTRUCTION) INSURANCE and in the event County so elects to deduct the price for such insurance that is stated in Contractor's Bid, or if not so stated the amount included by Contractor for such insurance in the preparation of the Contractor's Bid, from the Contract Price by means of a Contract Adjustment pursuant to Change Order or Unilateral Change Order. If the County so provides the All Risk (Course of Construction) insurance for the Project, then Contractor shall assume the cost of any and all applicable policy deductibles (currently, \$50,000 per occurrence) and shall insure its own machinery, equipment, tools, etc. from any loss of any nature whatsoever.

**4.1.12 Interested Bidder.** No person, partnership, joint venture, corporation or other association of persons or entities submitting a Bid shall be allowed to submit more than one Bid or be interested in a Bid submitted by any other Bidder. A person, partnership, joint venture, corporation or other association of persons or entities that, in the capacity as a Subcontractor to a Bidder, has quoted a bid price to a Bidder is not disqualified from submitting a proposal or quoting prices to other Bidders or making a Bid as a general contractor for the entirety of the Work. For the purpose of this Paragraph, "interested in" means having a managerial or financial interest in another Bidder.

**4.1.13 Prequalification.** If the County has stated in the Notice Inviting Bids that bidding is limited only to bidders that were prequalified pursuant to a Prequalification conducted by County, and if Bidder was previously prequalified pursuant to that process to submit a Bid for the Project, then in addition to the requirements of the Bidding Documents the Bidder must comply with any additional requirements for bidding that are set forth in the Prequalification Documents, including, without limitation, compliance by Bidder with any continuing responsibilities for disclosure of any changes in ownership, management or financial condition. If the Bidder has been prequalified to submit a Bid for the Project it shall, if requested by County, submit prior to or with its Bid any certification(s) that the County is authorized to request by the terms of the Prequalification Documents governing the Bidder's prequalification.

**4.1.14 Applicable Laws.** All Bids must be submitted, filed, made and executed in accordance with Applicable Laws relating to bids for contracts of the nature provided for by the Bidding Documents, whether such Applicable Laws are expressly referred to herein or not.

**4.1.15 Non-Transferable.** A Bid is non-transferable.

**4.1.16 Registration with Department of Industrial Relations.** Pursuant to Labor Code section 1771.1, any contractor bidding, or subcontractor to be listed on a bid proposal subject to Public Contract Code section 4104, shall not be qualified to bid after March 1, 2015, unless currently registered and qualified to perform public works pursuant to Labor Code section 1725.5. No contractor or subcontractor may enter into a contract after April 1, 2015, without proof of current registration to perform public works.

## **4.2 BID SECURITY**

**4.2.1 Forms of Bid Security.** Each Bid shall be accompanied by a Bid Security in the form of (1) cash, (2) a certified or cashier's check made payable to the County or (3) a Bid Bond (using the form of Bid Bond included in the Bidding Documents) issued by an Admitted Surety, in an amount equal to at least ten percent (10%) of the Bid Amount, as a guarantee that the Bidder, if awarded the Construction Contract, will enter into a Construction Contract with the County and furnish the Performance Bond, Payment Bond and other Post-Award Submittals required by the Bidding Documents. Should the Bidder refuse to enter into the Construction Contract or fail to furnish the Performance Bond, Payment Bond or any other Post-Award Submittal, then the Bid Security shall be forfeited to the County in an amount equal to the difference

between the amount of Bidder's Bid Amount and the amount for which the County may procure the work from another Bidder plus the costs to the County of redrafting, redrawing and republishing the Bidding Documents.

**4.2.2 Retention by County.** The County will have the right to retain the Bid Security of any Bidder to whom an Award is being considered until either (1) the Construction Contract has been executed and the Performance Bond, Payment Bonds and other Post-Award Submittals have been furnished, or (2) all Bids have been rejected.

**4.2.3 Return by County.** Bid Security of an unsuccessful Bidder will be returned no later than sixty (60) Days after the Award by the County. Bid Security of the successful Bidder will be returned upon signing of a Construction Contract by the Bidder and County and submission by Bidder to the County of the Performance Bond, Payment Bond and other Post-Award Submittals in accordance with the requirements of the Bidding Documents.

### **4.3 SUBMISSION OF BIDS**

**4.3.1 Sealed Envelope.** All copies of the Bidder's Bid, Bid Security and other Bid Submittals shall be enclosed by the Bidder in a sealed opaque envelope. Said envelope, as well as any other, outer envelope or packaging in which said envelope may have been placed by Bidder or the carrier for delivery, shall be addressed and delivered as provided in the Notice Inviting Bids and shall be clearly and conspicuously labeled with the Project name, the Bidder's name and address and the identifying name of the Project as set forth in Paragraph 1.2.1, above.

**4.3.2 Deposit.** Bids shall be hand delivered to, or received by mail at, the Clerk of the Board located on the 1st floor of the County Administrative Center, 4080 Lemon Street, Riverside, CA 92501, at any time Monday through Thursday (excepting Holidays) between the hours of 8:00 a.m. to 5:00 p.m. up to the Bid Closing Deadline of 2:00 p.m. on 06/06/24. Bids must be received at the designated location prior to the Bid Closing Deadline. Bids, or any Bid Submittal comprising a Bid, that is received after the Bid Closing Deadline will be returned unopened.

**4.3.3 Postponement.** The County reserves the right to postpone the Bid Closing Deadline by issuance of an Addendum to the Bidding Documents at any time prior to the Bid Closing Deadline.

**4.3.4 Timely Receipt.** The Bidder assumes full and sole responsibility for timely receipt of its Bid, including its Bid Security and all other Bid Submittals, at the location designated in the Bidding Documents for receipt of Bid.

**4.3.5 Delivery Methods.** Deposit of Bids shall be by hand delivery or mail, only. Oral, telephonic, telegraphic, facsimile or other electronic transmission is not permitted.

### **4.4 WITHDRAWAL OR RESUBMISSION OF BID**

**4.4.1 Before Bid Closing Deadline.** Prior to the Bid Closing Deadline, a Bid may be withdrawn by notice to the County at the place designated for receipt of Bids stated in the Notice Inviting Bids. Such notice shall be in writing and signed by the Bidder. Partial withdrawal of a Bid or any Bid Submittal is not permitted.

**4.4.2 After Bid Closing Deadline.** Except as otherwise permitted by these Instructions to Bidders, each Bid shall constitute an offer that shall remain open for a period of sixty (60) Days after the Bid Closing Deadline and during that period of time shall not, without the written consent of the County, be modified, withdrawn or canceled by the Bidder.

**4.4.3 Resubmission.** Withdrawn Bids may be resubmitted up to the Bid Closing Deadline.

**4.4.4 Bid Security.** If a Bid is withdrawn and re-submitted, the amount of Bid Security shall be based on the Bid Amount based on the Bid as resubmitted.

**4.5 BID ALTERNATES**

**4.5.1 Alternates.** The Bidding Documents  do  do not include Alternates.

**4.5.2 Bid Form.** If Alternates are included in the Bidding Documents, then a Bid amount for each and every such Alternate shall be included in the spaces provided in the Bid Form for that purpose. If the Bidder determines that the Alternate does not affect the amount of its Base Bid, then the Bidder shall enter "No Change" in the Bid Form.

**4.5.3 Basis for Award.** Where the Bidding Documents include Alternates, the method checked in the box provided below will be used to determine the lowest Bid price (only wording following a checked box applies):

**Award Method #1:** The lowest Bid price shall be the lowest Base Bid price without consideration of the Bidder's prices on the Alternates.

**Award Method #2:** The lowest Bid price shall be the lowest total of the Base Bid price and the following Alternates that will be used for the purpose of determining the lowest Bid price:

- 1. \_\_\_\_\_
- 2. \_\_\_\_\_
- 3. \_\_\_\_\_
- 4. \_\_\_\_\_
- 5. \_\_\_\_\_

**Award Method #3:** The lowest Bid price shall be the lowest total of the Base Bid price and the following Alternates taken in the order as shown below which, when the Bidder's amount for the Alternate is added to or deducted from such Base Bid price, are less than, or equal to, the funding amount publicly disclosed by the County before the first Bid is opened:

- 1. \_\_\_\_\_
- 2. \_\_\_\_\_
- 3. \_\_\_\_\_
- 4. \_\_\_\_\_
- 5. \_\_\_\_\_

**Award Method #4:** The lowest Bid price shall be determined in a manner that will prevent any information that would identify any of the Bidders or any of their Subcontractors from being revealed to the County before the ranking of Bidders from lowest to highest has been determined.

**4.5.4 Bid Escrow Provisions.** The following provisions apply only if Subparagraph 4.5.4.1, below, provides that a Bid Escrow will be used for the Project.

**.1 Bid Escrow.** A Bid Escrow  will  will not be used for the Project.

**.2 Escrow Bid Documents.** Escrow Bid Documents, as that term is defined in the General Conditions, shall: (1) be in English; (2) be legible; (3) be detailed and comprehensive, showing a complete breakdown of quantities, prices, productivity calculations, crew sizes, direct and repair labor, plant and equipment usage, general conditions (i.e., direct overhead) costs, indirect overhead and profit and contingencies, and all other numerical factors used to compute the Bid (provided, however, with respect to Bid items having an estimated cost under \$10,000, estimated unit costs are acceptable without detailed cost estimates provided that the indirect costs, contingencies and markups are shown and allocated); (4) if estimates are based, in whole or in part, on a Geological Baseline Report (GBR) or other report on surface or subsurface conditions at the Site, clearly reference any statements, data, opinions or recommendations used or relied upon from the GBR or such other report; and (5) if the Bidder's Bid is based on a price from a Sub-Bidder that exceeds five percent (5%) of the Bid Amount, provide documentation and electronic files from such Sub-Bidder relating to its bid submitted to Bidder that comply with all of the requirements herein for Escrow Bid Documents, in which case such documents and electronic files from such Sub-Bidder shall be considered and submitted by Bidder as part of the Escrow Bid Documents that are required to be submitted pursuant to this Paragraph 4.5.4.

**.3 Deposit with County.** Each of the Bidders submitting the apparent three (3) lowest Bid prices shall place its Escrow Bid Documents in a sealed container, marked on the outside with (1) the words "Escrow Bid Documents", (2) the name of the Project, (3) Bidder's name and (4) the date of the submission. The sealed container with the Escrow Bid Documents shall be delivered by such Bidders to the County, at the place for submission of Bids, within twenty-four (24) hours after the Bid Closing Deadline.

**.4 Review by County.** County will review the Escrow Bid Documents of the apparent successful Bidder to ensure that the Escrow Bid Documents comply with the requirements of this Paragraph 4.5.4, and any other requirements of the Bidding Documents relating to use of a bid escrow. Such review shall not constitute approval or acceptance by County of the proposed means, methods, techniques or procedures of the Bidder, confirmation by County that the Escrow Bid Documents comply with the Bidding Documents, nor shall such review or alter any term or condition of the Contract Documents.

**.5 Noncompliance by Bidder.** Failure by Bidder to comply with any of the requirements of this Paragraph 4.5.4 or any other requirements of the Bidding Documents relating to use of a bid escrow shall be grounds for County to determine that the Bidder's Bid is non-responsive. Without limitation to the foregoing, County shall have the right, in the exercise of its sole and absolute discretion, if it finds that the Escrow Bid Documents submitted by a Bidder do not so comply to: (1) direct that the Bidder submit the required documentation and electronic files within twenty-four (24) hours of written request by County; and/or (2) discuss with the Bidder any questions that may exist concerning the Escrow Bid Documents in an effort to clarify and reconcile the information contained in the Escrow Bid Documents.

**.6 Escrow Procedure.** The Escrow Bid Documents of the successful Bidder receiving the Award shall be placed and held in storage at a safe and secure location, at the expense of County, for the duration of the performance of the Work and until the later of (1) ninety (90) Days after Final Completion is achieved or (2) final resolution by settlement or final judgment in legal proceedings of all disputes relating to the Construction Contract or Work (the "Escrow Bid Documents Storage Period"). Escrow Bid Documents of the unsuccessful Bidders will be returned to them within sixty (60) Days following Award. Upon expiration of the Escrow Bid Documents Storage Period, County shall destroy or return to Bidder, and shall not retain, copies of that Bidder's Escrow Bid Documents. County will take reasonable steps to protect and preserve the Escrow Bid Documents from damage; however, County shall not be liable for damage or loss occasioned by circumstances beyond the reasonable control of County, such as, without limitation, fire or Acts of God.

**.7 Bidder's Warranty and Representation.** Submission by a Bidder of its Escrow Bid Documents shall constitute a warranty and representation by such Bidder that it has no other written documents or electronic files containing information used in computing its Bid that are within the definition

of Escrow Bid Documents as defined in the Bidding Documents and that Bidder agrees, in the event it receives Award of the Construction Contract, that it shall have no right to submit or offer into evidence in any legal proceedings in support of any request for Contract Adjustment, Claim or other request for any legal remedy or relief, any documentation or electronic files constituting Escrow Bid Documents that were not included in the Escrow Bid Documents submitted by Bidder.

**.8 Not Contract Documents.** The contents of the Escrow Bid Documents shall not be considered part of the Contract Documents.

**.9 Property Rights, Confidentiality.** The Escrow Bid Documents are, and shall always remain, the property and confidential information of the Bidder, subject to rights of review by the County and Bidder and other Permitted Uses as further described below. To the maximum extent permitted by Applicable Laws, County shall safeguard the Escrow Bid Documents, and all information contained therein, against disclosure and in so doing shall not disclose the Escrow Bid Documents to anyone who is not an employee, attorney or consultant of the County having a reason and need to review the Escrow Bid Documents in connection with one or more of the Permitted Uses.

**.10 Permitted Uses.** The Escrow Bid Documents may be opened, examined and used at any time by County or Bidder (including, without limitation, admission into evidence in any legal proceedings) for the purposes of aiding in an evaluation by County or Bidder, or a resolution by negotiation, settlement or legal proceedings, of a dispute between County and Bidder involving: (1) the submission or content of the Escrow Bid Documents submitted by Bidder; (2) a request by Bidder for relief from its Bid or for relief from any other obligation of Bidder in connection with the bidding process; (3) questions or disputes over the Bidder's right to, or the terms of, a Contract Adjustment; or (4) a Claim or other demand by County or Bidder for a legal remedy or recovery of money ("Permitted Uses"). Escrow Bid Documents shall not be used for any other purpose.

**.11 Examination.** Examination of the Escrow Bid Documents shall be in the presence of a representative of both County and Contractor unless a party fails, after reasonable notice from the party seeking to examine the Escrow Bid Documents, to arrange for a representative to be present, in which case the examination may take place by the requesting party alone. Copies of any portion of the Escrow Bid Documents may be made by either County or Bidder at the time of examination.

## **ARTICLE 5 CONSIDERATION OF BIDS**

### **5.1 OPENING OF BIDS**

All Bids shall be publicly opened and read aloud at the location for receipt of Bids on the Day of the Bid Closing Deadline. Without limitation to the County's right to reject all Bids, if two or more responsive Bids from responsible Bidders are the same and lowest, then the successful Bidder may be chosen by the County.

### **5.2 REJECTION OF BIDS**

**5.2.1 Rejection of Bid.** Any Bid that is in any way incomplete or irregular is subject to rejection by County.

**5.2.2 Rejection of All Bids.** The County has the right to reject all Bids, with or without extending the opportunity to any Bidder to re-bid.

### 5.3 WAIVER OF IRREGULARITIES

The County has the right to waive informalities and irregularities in a Bid received or in the bidding process.

### 5.4 AWARD

**5.4.1 Basis of Award.** It is the intent of the County to Award the Construction Contract to the responsible Bidder submitting a Bid in accordance with the requirements of the Bidding Documents for the lowest Bid Amount.

**5.4.2 Notice of Award.** Within fourteen (14) Days following public opening and reading of Bids, the County will issue a Notice of Intent to Award identifying the name of the Bidder to whom the County intends to Award the Construction Contract. Such notice will be mailed to all Bidders submitting a Bid. The County may, in its sole and absolute discretion, elect to extend the time for its issuance of its Notice of Intent to Award.

**5.4.3 Bid Protests.** Any Bidder submitting a Bid to the County may file a protest of the County's proposed Award of the Construction Contract provided that each and all of the following are complied with:

.1 The bid protest is in writing.

.2 The bid protest is both: (1) filed with and received by the Clerk of the Board at the following address, 4080 Lemon St. 1st Floor Riverside, CA 92501, not more than five (5) Days following the date of issuance of the Notice of Intent to Award. Failure to timely file and serve the bid protest as aforesaid shall constitute grounds for the County's denial of the bid protest without consideration of the grounds stated therein.

.3 The written bid protest sets forth, in detail, all grounds for the bid protest, including without limitation all facts, supporting documentation, legal authorities and argument in support of the grounds for the bid protest. Any grounds not set forth in the bid protest shall be deemed waived. All factual contentions must be supported by competent, admissible and credible evidence. Any bid protest not conforming to the foregoing shall be rejected as invalid.

.4 Provided that a bid protest is filed in conformity with the foregoing, the Director of Facilities Management, such individual(s) as may be designated by the Director of Facilities Management in his/her discretion, shall review and evaluate the basis of the bid protest, and shall provide a written decision to the Bidder submitting the bid protest, either concurring with or denying the bid protest. The written decision of the Director of Facilities Management or his/her designee shall be final, unless overturned by the Board of Supervisors.

## ARTICLE 6 POST- AWARD

### 6.1 POST- AWARD SUBMITTALS

**6.1.1 Construction Contract.** The Bidder identified in the Notice of Intent to Award as the successful Bidder to receive Award by the County shall execute the Construction Contract and return it to the County within [fourteen] (14) Days after issuance by County to Bidder of the Construction Contract from the County and prior to execution of the Construction Contract by County.

**6.1.2 Other Post-Award Submittals.** Within the time periods set forth below, the Bidder identified in the Notice of Intent to Award as the successful Bidder shall submit the following additional Post-Award Submittals, completed and signed in the manner required by the Bidding Documents, to the County

at Facilities Management – Project Management Office, 3450 14<sup>th</sup> Street, 2<sup>nd</sup> Floor, Riverside, CA. 92501  
Attn: John Harrigan;

.1 within fourteen (14) Days after issuance by County to Bidder of the Notice of Intent to Award and prior to commencement of the Work, such Bidder shall submit to County the following:

- (1) Performance Bond and Payment Bond (issued by Surety);
- (2) Evidence of Insurance, in the form specified in the Bidding Documents;
- (3) Workers' Compensation Certificate, in the form specified in the Bidding Documents;
- (4) Declaration of Sufficiency of Funds (required only if the Bidder has not entered into a collective bargaining agreement covering the workers to be employed for performance of the Work), in the form specified in the Bidding Documents;

.2 within twenty-one (21) Days after issuance by County to Bidder of the Notice of Intent to Award, such Bidder shall submit to the County the following:

- (1) Construction Schedule, prepared by Bidder in the manner required by Section 3.9 of the General Conditions and Section [section no.] of the Specifications; and
- (2) Schedule of Values, prepared by Bidder in the manner required by Section 9.3 of the General Conditions and Section 01 20 00 PRICE AND PAYMENT PROCEDURES of the Specifications.

**6.1.3 Failure to Submit.** Failure of the successful Bidder to submit any the Post-Award Submittals specified in Paragraphs 6.1.1 and 6.1.2, above, within the time periods specified therein shall be deemed to be a failure or refusal to execute the Construction Contract and shall be cause for forfeiture of such Bidder's Bid Security.

## **6.2 BIDDER RESPONSIBILITY**

County reserves the right to request that any Bidder submit, as a condition of Award, information demonstrating that the Bidder and/or any of the Subcontractors listed in the Designation of Subcontractors submitted by Bidder, is financially and in all other respects possessed of the attributes of trustworthiness, as well as quality, fitness, capacity and experience, to satisfactorily perform under the terms and conditions of the Bidding Documents, Contract Documents and its Bid. Bidder shall comply with such request by submitting the information requested within five (5) Days of receipt of County's request. Failure to do so may be treated by County as a grounds to reject Bidder's Bid. Failure by the County to make such a request shall not constitute a waiver of its right to determine that Bidder or any such Subcontractor is not responsible to perform the Work.

## **ARTICLE 7 PERFORMANCE BOND AND PAYMENT BOND**

### **7.1 BOND REQUIREMENTS**

**7.1.1 Performance and Payment Bonds.** The successful Bidder will be required to furnish: (1) a Performance Bond in the form included in the Bidding Documents guaranteeing faithful performance of all obligations under the Construction Contract; and (2) a Payment Bond that complies with the requirements of Civil Code Section 9554 in the form included in the Bidding Documents. The penal sums of the Performance Bond and Payment Bond shall each be initially in the amount of one hundred percent (100%) of the Contract Price. The penal sum shall be increased for Contract Adjustments increasing the Contract Price that are authorized by Change Order or Unilateral Change Orders.



**7.1.2 Cost of Bonds.** The cost of Performance Bonds and Payment Bonds shall be deemed included in the amount of a Bidder's Bid.

**7.1.3 Surety.** Both the Performance Bond and Payment Bond shall be issued by an Admitted Surety. The Surety on the Performance Bond shall have an A.M. Best's Insurance Rating of A:VIII (A:8) or better.

## **7.2 TIME OF DELIVERY AND FORM OF BONDS**

**7.2.1 Submission by Bidder.** Within the time period set forth in Subparagraph 6.1.2.1, above, the successful Bidder shall deliver the required Performance Bond and Payment Bond to the County fully executed and issued by the Bidder's Surety(ies).

**7.2.2 Execution of Bonds.** Notary acknowledgements of the signatures of the Bidder and Surety(ies) is required. The attorney-in-fact who executes the required Performance Bond or Payment Bond on behalf of a Surety shall affix thereto a certified and current copy of the power of attorney authorizing such attorney-in-fact to execute same on behalf of such Surety.

## **ARTICLE 8 CONSTRUCTION CONTRACT**

### **8.1 EXECUTION OF CONTRACT**

The successful Bidder shall execute the Construction Contract in the form included in the Bidding Documents.

### **8.2 BOARD APPROVAL**

The Construction Contract shall not be binding upon the County until it has been awarded by the Director of Facilities Management or Board of Supervisors, and executed by the Board Chair, or designee.

## BID FORM

**TO THE GOVERNING BOARD OF THE COUNTY OF RIVERSIDE:**

Date: \_\_\_\_\_

Bidder: \_\_\_\_\_

The undersigned Bidder, having carefully examined the Bidding Documents for the following Project:

WESTERN EMERGENCY OPERATION CENTER PARKING EXPANSION PROJECT,

including, without limitation, the Plans and Specifications made part thereof, and taking into consideration all matters disclosed thereby, all matters of which Bidder is charged with knowledge by the terms thereof and all matters that are reasonably ascertainable by Bidder in the exercise of its duties of inquiry or investigation created by the terms set forth in the Bidding Documents (including, without limitation, the terms of Section 3.2 of the General Conditions, proposes, agrees to furnish in strict accordance with the Contract Documents all of the following:

- labor, materials, equipment, services, transportation;
- permits, licenses and taxes,
- **Builder's Risk (Course of Construction) Insurance coverage in accordance with the terms of Subparagraph 11.1.1.5 of the General Conditions;** and
- all other work, services and other things necessary for the undersigned to perform its obligations under the Contract Documents, excepting only those that are expressly stated in the Bidding Documents to be the responsibility of County,

for the total Base Bid price of (state in figures) \$ \_\_\_\_\_ (state in words) \_\_\_\_\_ dollars  
and \_\_\_\_\_ cents.

The foregoing Base Bid is submitted based upon and taking into consideration all of modifications and additions to the Bid Documents and other information set forth in each Addendum listed below, receipt and review of which is hereby acknowledged by Bidder (state below each and every Addendum number and date):

Addendum No.		Date:	
Addendum No.		Date:	
Addendum No.		Date:	
Addendum No.		Date:	
Addendum No.		Date:	
Addendum No.		Date:	
Addendum No.		Date:	

Subject to County's acceptance of such Alternate(s) in the manner set forth in the Instructions to Bidders, the foregoing Base Bid shall be adjusted as hereinafter stated for the following Alternates set forth in the Bidding Documents and/or the above-listed Addenda:

State Amount (in words and figures)	State if Amount is an "Add" or "Deduct" to Base Bid or, if Base Bid is Not Affected, Enter "No Change"
<b>Alternate 1:</b> N/A	
Figures: \$ _____	<input type="checkbox"/> Add <input checked="" type="checkbox"/> Deduct <input type="checkbox"/> No Change
Words: _____	
_____ Dollars _____ Cents	
<b>Alternate 2:</b> N/A	
Figures: \$ _____	<input type="checkbox"/> Add <input type="checkbox"/> Deduct <input type="checkbox"/> No Change
Words: _____	
_____ Dollars _____ Cents	
<b>Alternate 3:</b> N/A	
Figures: \$ _____	<input type="checkbox"/> Add <input type="checkbox"/> Deduct <input type="checkbox"/> No Change
Words: _____	
_____ Dollars _____ Cents	
<b>Alternate 4:</b> N/A	
Figures: \$ _____	<input type="checkbox"/> Add <input type="checkbox"/> Deduct <input type="checkbox"/> No Change
Words: _____	
_____ Dollars _____ Cents	
<b>Alternate 5:</b> N/A	
Figures: \$ _____	<input type="checkbox"/> Add <input type="checkbox"/> Deduct <input type="checkbox"/> No Change
Words: _____	
_____ Dollars _____ Cents	

**THE UNDERSIGNED BIDDER HEREBY MAKES THE FOLLOWING REPRESENTATIONS AND COVENANTS:**

1. Except as otherwise permitted by the Instructions to Bidders, this Bid shall remain open for a period of sixty (60) Days after the Bid Closing Deadline (as defined in the Bidding Documents) and during that period of time shall not, without the written consent of County, be modified, withdrawn or canceled by the Bidder.

2. Bidder adopts and incorporates into this Bid all of the representations set forth in the Instructions to Bidders and hereby warrants that all such representations are true and correct.

3. The Bid Security submitted by Bidder is given as a guarantee that if Award of the Construction Contract that is the subject of this Bid is made to Bidder that Bidder will execute the Construction Contract and furnish the Performance Bond, Payment Bonds, evidence of insurance and other documents that Bidder is required to submit under the terms of the Bidding Documents, and in the event that the Bidder fails or refuses to execute and deliver same, such Bid Security shall be charged with the all losses and damages suffered by County as a result thereof and permitted by Applicable Law, including, without limitation, the difference between the amount of the Bid and amount for which the County may legally contract with another party to perform the Project (if such latter amount be greater than the Bid), costs of publication, and all other Losses suffered by County (including, without limitation, those associated with Delay to the Project).

4. Capitalized terms used in this Bid Form shall have the meanings assigned to them in the Bidding Documents.

**Individual Bidder**

Name of Bidder: \_\_\_\_\_

By: \_\_\_\_\_  
(Signature)

Print Name: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

Business Address:  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Business Telephone: \_\_\_\_\_

Business Fax: \_\_\_\_\_

Business E-mail: \_\_\_\_\_

Contractor's License: \_\_\_\_\_  
Dept. of Industrial Relations  
Registration No: \_\_\_\_\_

**Corporation Bidder**

Corporate Name  
of Bidder: \_\_\_\_\_

State of Incorporation: \_\_\_\_\_

By: \_\_\_\_\_  
(Signature)

Print Name: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

Business Address:  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Business Telephone: \_\_\_\_\_

Business Fax: \_\_\_\_\_

Business E-mail: \_\_\_\_\_

Contractor's License: \_\_\_\_\_  
Dept. of Industrial Relations  
Registration No: \_\_\_\_\_

Space for Corporate Seal and Attestation

**Partnership Bidder**

Name of Bidder: \_\_\_\_\_

By: \_\_\_\_\_  
(Signature)

Print Name: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

Business Address: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Business Telephone: \_\_\_\_\_

Business Fax: \_\_\_\_\_

Business E-mail: \_\_\_\_\_

Contractor's License: \_\_\_\_\_

Dept. of Industrial Relations

Registration No: \_\_\_\_\_

If additional partners are signing, attach additional sheets setting forth the above signature information for each signing partner.

If the partner or partners signing on behalf of the Bidder is/are a corporation, then for each such corporate partner complete the following (attach additional sheets, if necessary):

Corporate Name  
of Partner: \_\_\_\_\_

State of Incorporation: \_\_\_\_\_

By: \_\_\_\_\_  
(Signature)

Print Name: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

Business Address: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Business Telephone: \_\_\_\_\_

Business Fax: \_\_\_\_\_

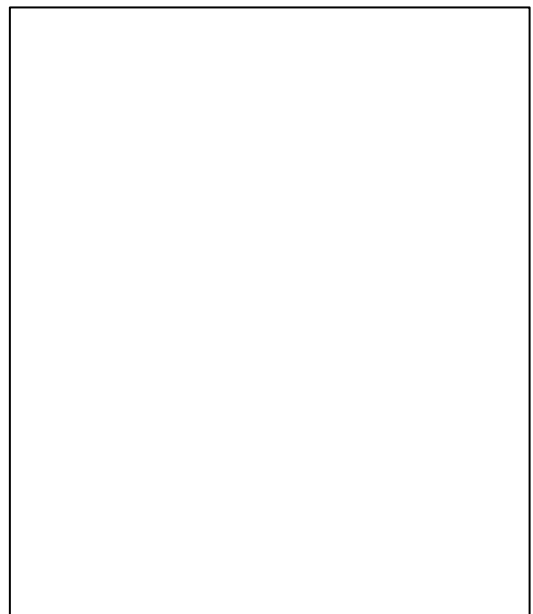
Business E-mail: \_\_\_\_\_

Contractor's License: \_\_\_\_\_

Dept. of Industrial Relations

Registration No: \_\_\_\_\_

Space for Corporate Seal and Attestation



**Joint Venture Bidder**

Name of Bidder: \_\_\_\_\_

By: \_\_\_\_\_  
(Signature)

Print Name: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

Business Address:  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Business Telephone: \_\_\_\_\_

Business Fax: \_\_\_\_\_

Business E-mail: \_\_\_\_\_

Contractor's License: \_\_\_\_\_  
Dept. of Industrial Relations  
Registration No: \_\_\_\_\_

If additional joint venture partners are signing, attach additional sheets setting forth the above signature information for each signing joint venture partner.

If the joint venture partner or partners signing on behalf of the Bidder is/are a corporation, then for each such corporate joint venture partner complete the following (attach additional sheets, if necessary):

Corporate Name  
of Partner: \_\_\_\_\_

State of Incorporation: \_\_\_\_\_

By: \_\_\_\_\_  
(Signature)

Print Name: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

Business Address:  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

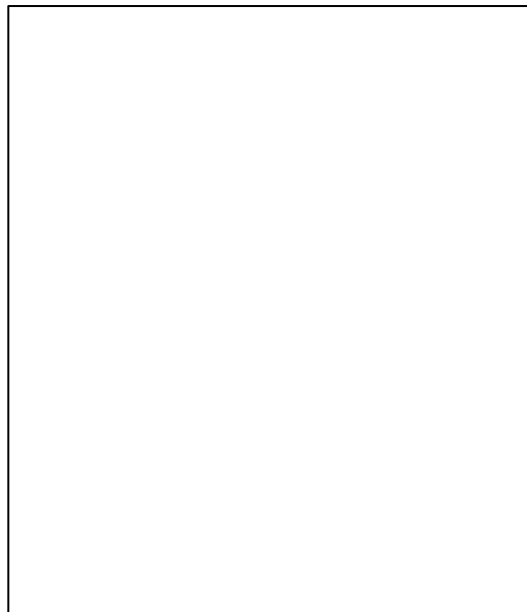
Business Telephone: \_\_\_\_\_

Business Fax: \_\_\_\_\_

Business E-mail: \_\_\_\_\_

Contractor's License: \_\_\_\_\_  
Dept. of Industrial Relations  
Registration No: \_\_\_\_\_

Space for Corporate Seal and Attestation



Project No. FM08200012205

Bond No. \_\_\_\_\_

## **BID BOND**

(Public Work – Public Contract Code Section 20129 (a))

KNOW ALL MEN BY THESE PRESENTS THAT:

WHEREAS, The undersigned \_\_\_\_\_ (“Principal”) is herewith submitting to the County of Riverside (“County”) a Bid dated \_\_\_\_\_ 20\_\_, in the amount of \_\_\_\_\_ (\$ \_\_\_\_\_) [Enter amount of Principal’s Bid Amount, as defined in the Instructions to Bidders] (“Bid Amount”) for the award by County to Principal of a contract (“Contract”) for the following: WESTERN EMERGENCY OPERATION CENTER PARKING EXPANSION (“Project”);

AND, WHEREAS, Principal is obligated as a condition of said Bid to submit security pursuant to Public Contract Code Section 20129 (a) in the amount of ten percent (10%) of the Bid Amount, which security may be in the form of a Bid Bond issued by an admitted surety insurer pursuant to Code of Civil Procedure Section 995.120 (“Admitted Surety”);

NOW THEREFORE, the Principal and \_\_\_\_\_ (“Surety”), an Admitted Surety, are held and firmly bound unto the County in the penal sum of \_\_\_\_\_ (\$ \_\_\_\_\_) for the payment of which sum in lawful money of the United States, well and truly to be made, we, Principal and Surety, bind ourselves, our executors, administrators, successors, heirs and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THE ABOVE OBLIGATION IS SUCH, that if Principal is awarded the Contract upon such Bid and thereafter within the period of time specified in County’s bidding documents governing the bidding process applicable to such Bid (“Bidding Documents”) enters into the Contract with County on the terms and conditions required by the Bidding Documents and furnishes the performance and payment bonds, evidence of insurance and other documents that Principal is required to submit under the terms of the Bidding Documents, then this obligation shall be null and void; otherwise, it shall remain in full force and effect and the sum guaranteed by this bond shall, at the option of County, be forfeited to County to pay all losses and damages suffered by County as a result thereof and permitted by applicable law, including, without limitation, the difference between the Bid Amount and amount for which the County may legally contract with another party to perform the Work (if such latter amount be greater than the Bid Amount), costs of publication, and all other losses and damages suffered by County (including, without limitation, those associated with delay to the Project); provided, however, that Surety’s liability shall not exceed the penal amount of this bond.

Surety, for value received, hereby agrees that no change, extension of time, alteration or addition to the terms of the Contract or the Bidding Documents, or to the work to be performed thereunder, nor any withdrawal of the Bid in a manner not permitted by the requirements of the Bidding Documents shall in any way



impair or affect Surety's obligation under this bond, and Surety does hereby waive notice of any such changes, extensions of time, alterations or additions.

IN WITNESS WHEREOF the undersigned parties have executed this instrument under their several seals this day of \_\_\_\_\_, 20\_\_, the name and corporate seal of each corporate party being hereto affixed and these presents duly signed by its undersigned representative, pursuant to authority of its governing body.

**Affix Seal if Corporation**

\_\_\_\_\_  
**(Firm Name – Principal)**

\_\_\_\_\_  
\_\_\_\_\_

\_\_\_\_\_  
**(Business Address)**

**By** \_\_\_\_\_  
**(Original Signature)**

\_\_\_\_\_  
**(Title)**

\_\_\_\_\_  
**(Corporation Name – Surety)**

**Affix Corporate Seal**

\_\_\_\_\_  
\_\_\_\_\_

\_\_\_\_\_  
**(Business Address)**

**By** \_\_\_\_\_  
**(Original Signature)**  
**ATTORNEY-IN-FACT**

\_\_\_\_\_

**Note: Notary acknowledgment for Surety's signature and Surety's Power of Attorney must be included or attached**

## BID SECURITY RECEIPT

The undersigned Bidder has submitted as Bid Security for its Bid in the form of (check appropriate box):

- Bid Bond executed by an Admitted Surety, made payable to the County of Riverside,
- cash,
- cashier's check payable to the order of the County of Riverside, or
- certified check payable to the order of the County of Riverside,

in the amount of \_\_\_\_\_  
dollars/\_\_\_\_\_ cents (\$\_\_\_\_\_), which amount is equal to ten percent (10%) of  
the Bidder's Bid Amount, as defined in the Instructions to Bidders.

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Print Name of Bidder

\_\_\_\_\_  
Print Name of Signer

## DESIGNATION OF SUBCONTRACTORS

In compliance with the Subletting and Subcontracting Fair Practices Act (Chapter 4, commencing at Section 4100, Division 2, Part 1 of the Public Contract Code of the State of California) and any amendments thereto ("Act"), Bidder sets forth below the information required by the Act for those Subcontractors who are required to be listed by Bidder pursuant to the provisions of the Act [Insert information requested. Attach additional sheets, if needed.]:

<u>Portion of Work</u>	<u>Subcontractor Name</u>	<u>License No.</u>	<u>DIR No.</u>	<u>Location</u>

Date: \_\_\_\_\_

\_\_\_\_\_ (Name of Bidder)

By: \_\_\_\_\_  
(Signature of Bidder)

Address: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Phone: \_\_\_\_\_

**NON-COLLUSION DECLARATION TO BE EXECUTED BY BIDDER AND  
SUBMITTED WITH BID**

(Public Contract Code Section 7106)

The undersigned declares:

I am the \_\_\_\_\_ of \_\_\_\_\_, the party making the foregoing bid.

The bid is not made in the interest of, or on behalf of, any undisclosed person, partnership, company, association, organization, or corporation. The bid is genuine and not collusive or sham. The bidder has not directly or indirectly induced or solicited any other bidder to put in a false or sham bid. The bidder has not directly or indirectly colluded, conspired, connived, or agreed with any bidder or anyone else to put in a sham bid, or that anyone shall refrain from bidding. The bidder has not in any manner, directly or indirectly, sought by agreement, communication, or conference with anyone to fix the bid price of the bidder or any other bidder, or to fix any overhead, profit, or cost element of the bid price, or of that of any other bidder.

All statements contained in the bid are true. The bidder has not, directly or indirectly, submitted his or her bid price of any breakdown thereof, or the contents thereof, or divulged information or data relative thereto, to any corporation, partnership, company, association, organization, bid depository, or to any member or agent thereof to effectuate a collusive or sham bid, and has not paid, and will not pay, any person or entity for such purpose.

Any person executing this declaration on behalf of a bidder that is a corporation, partnership, joint venture, limited liability company, limited liability partnership, or any other entity, hereby represents that he or she has full power to execute, and does execute, this declaration on behalf of the bidder.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct and that this declaration is executed on \_\_\_\_\_ [date], at \_\_\_\_\_ [city], \_\_\_\_\_ [state].

\_\_\_\_\_  
[Signature of Declarant]

\_\_\_\_\_  
[Printed Name of Person Signing]

\_\_\_\_\_  
[Name of Bidder]

\_\_\_\_\_  
[Office or Title]

## Iran Contracting Act

(Public Contract Code sections 2200-2208)

In accordance with Public Contract Code Section 2204(a), prior to bidding on, submitting a proposal or executing a contract or renewal for a County of Riverside contract for goods or services of \$1,000,000 or more, a Contractor must either:

- a) Certify it is not on the current list of persons engaged in investment activities in Iran created by the California Department of General Services (“DGS”) pursuant to Public Contract Code section 2203(b) and is not a financial institution extending twenty million dollars (\$20,000,000) or more in credit to another person, for 45 days or more, if that other person will use the credit to provide goods or services in the energy sector in Iran and is identified on the current list of persons engaged in investment activities in Iran created by DGS; or
- b) Demonstrate it has been exempted from the certification requirement for that solicitation or contract pursuant to Public Contract Code section 2203(c) or (d).

To comply with this requirement, please insert your Contractor or financial institution name and Federal ID Number (if available) and complete one of the options below. Please note: California law establishes penalties for providing false certifications, including civil penalties equal to the greater of \$250,000 or twice the amount of the contract for which the false certification was made; contract termination; and three-year ineligibility to bid on contracts. (Public Contract Code section 2205.)

### **Option #1 – Certification**

I, the official named below, certify I am duly authorized to execute this certification on behalf of the Contractor/financial institution identified below, and the Contractor/financial institution identified below is **not** on the current list of persons engaged in investment activities in Iran created by DGS and is not a financial institution extending twenty million dollars (\$20,000,000) or more in credit to another person/vendor, for 45 days or more, if that other person/vendor will use the credit to provide goods or services in the energy sector in Iran and is identified on the current list of persons engaged in investment activities in Iran created by DGS.

<i>Contractor Name/Financial Institution (Printed)</i>	<i>Federal ID Number (or n/a)</i>
<i>By (Authorized Signature)</i>	
<i>Printed Name and Title of Person Signing</i>	
<i>Date Executed</i>	<i>Executed in</i>

**Option #2 – Exemption**

Pursuant to Public Contract Code sections 2203(c) and (d), a public entity may permit a Contractor/financial institution engaged in investment activities in Iran, on a case-by-case basis, to be eligible for, or to bid on, submit a proposal for, or enters into or renews, a contract for goods and services.

If you have obtained an exemption from the certification requirement under the Iran Contracting Act, please fill out the information below, and attach documentation demonstrating the exemption approval.

<i>Contractor Name/Financial Institution (Printed)</i>		<i>Federal ID Number (or n/a)</i>
<i>By (Authorized Signature)</i>		
<i>Printed Name and Title of Person Signing</i>		
<i>Date Executed</i>	<i>Executed in</i>	

## ECONOMIC SANCTIONS IN RESPONSE TO RUSSIA'S ACTIONS IN UKRAINE

The Contractor must certify that it is not a target of economic sanctions imposed in response to Russia's actions in Ukraine imposed by the United States government or the State of California. The Contractor is required to comply with the economic sanctions imposed in response to Russia's actions in Ukraine, including with respect to, but not limited to, the federal executive orders identified in California Executive Order N-6-22, located at <https://www.gov.ca.gov/wp-content/uploads/2022/03/3.4.22-Russia-Ukraine-Executive-Order.pdf> and the sanctions identified on the United States Department of the Treasury website at (<https://home.treasury.gov/policy-issues/financial-sanctions/sanctions-programs-and-country-information/ukraine-russia-related-sanctions>).

The Contractor is required to comply with all applicable reporting requirements regarding compliance with the economic sanctions, including, but not limited to, those reporting requirements set forth in California Executive Order N-6-22 for all parties with one or more agreements with the State of California, the County of Riverside, or any other local agency, with a value of Five Million Dollars (\$5,000,000) or more. Notwithstanding any other provision in these documents, failure to comply with the economic sanctions and all applicable reporting requirements may result in disqualification or termination of the Construction Agreement, if awarded. For contractors with an agreement value of Five Million Dollars (\$5,000,000) or more with the State of California, the County of Riverside, or any other local agency, reporting requirements include, but are not limited to, information related to steps taken in response to Russia's actions in Ukraine, including but not limited to:

1. Desisting from making any new investments or engaging in financial transactions with Russian institutions or companies that are headquartered or have their principal place of business in Russia;
2. Not transferring technology to Russia or companies that are headquartered or have their principal place of business in Russia; and
3. Direct support to the government and people of Ukraine.  
To comply with this requirement, please insert your Contractor name and Federal ID Number (if available) on the Certification Form on Page XXI, execute by a duly authorized representative for the contractor and return with the bid proposal.

**COMPLIANCE WITH ECONOMIC SANCTIONS IN RESPONSE TO RUSSIA'S ACTIONS IN UKRAINE  
(Bidders)**

Prior to bidding on, submitting a proposal, or executing a contract, a contractor must certify: 1) it is not a target of economic sanctions and 2) in compliance with economic sanctions imposed by the U.S. government in response to Russia's actions in Ukraine, as well as any requirements related to the Russian sanctions imposed by the California Governor's Executive Order N-6-22 issued on March 4, 2022 and under state law, if any.

To comply with this requirement, please insert the contractor name and Federal ID Number (if available), complete the information described below and execute by an authorized representative of the contractor.

**CERTIFICATION**

I, the authorized representative for contractor named below, certify I am duly authorized to execute this certification on behalf of the contractor below, and the contractor identified below has conducted a good faith review of existing contracts. I attest that the contractor is not a target of economic sanctions, and that contractor is in compliance with the economic sanctions imposed by the U.S. government in response to Russia's actions in Ukraine, as well as any requirements related to the Russian sanctions imposed by the California Governor's Executive Order N-6-22 issued on March 4, 2022 and under state law, if any.

<i>Contractor Name (Printed)</i>		<i>Federal ID Number (or n/a)</i>	
<i>By (Authorized Signature)</i>			
<i>Printed Name and Title of Person Signing</i>			
<i>Date</i>			



Project No. FM08200012205

Bond No. \_\_\_\_\_

## **PAYMENT BOND**

(Public Work - Civil Code Sections 9550 et seq.)

KNOW ALL PERSONS BY THESE PRESENTS:

THAT WHEREAS, the County of Riverside ("County") by action of the Board of Supervisors has awarded Construction Contract Number \_\_\_\_\_ ("Contract") to the undersigned \_\_\_\_\_ as Principal ("Principal") to perform the work ("Work") for the following project WESTERN EMERGENCY OPERATION CENTER PARKING EXPANSION;

AND, WHEREAS, said Principal is required by the Contract and/or by Division 3, Part IV, Title XV, Chapter 7 (commencing at Section 9550) of the California Civil Code to furnish a payment bond in connection with the Contract;

NOW THEREFORE, we, the Principal and \_\_\_\_\_ ("Surety"), an admitted surety insurer pursuant to Code of Civil Procedure, Section 995.120, are held and firmly bound unto County in the penal sum of \_\_\_\_\_ Dollars (\$ \_\_\_\_\_), this amount being not less than one hundred percent (100%) of the total sum payable by County under the Contract at the time the Contract is awarded by County to the Principal, lawful money of the United States of America, for the payment of which sum well and truly to be made, we, Principal and Surety, bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH that if Principal, its heirs, executors, administrators, successors, or assigns approved by County, or its subcontractors, of any contracting tier, shall fail to pay any person or persons named in California Civil Code, Section 9554, then Surety will pay for the same, in or to an amount not exceeding the penal amount hereinabove set forth.

Surety, for value received, agrees that no change, extension of time, alteration or addition to the terms of the Contract, or to the Work to be performed thereunder, nor any rescission or attempted rescission of the Contract or this bond, nor any conditions precedent or subsequent in the bond or Contract attempting to limit the right of recovery of any claimant otherwise entitled to recover under the Contract or this bond shall in any way impair or affect Surety's obligation under this bond, and Surety does hereby waive notice of any such changes, extensions of time, alterations or additions.

Surety is not released from liability to those for whose benefit this bond has been given, by reason of any breach of the Contract by County or Principal.

Surety's obligations hereunder are independent of the obligations of any other surety for the

performance of the Contract, and suit may be brought against Surety and such other sureties, joint and severally, or against any one or more of them or against less than all of them, without impairing County's rights against the others.

**Affix Seal if Corporation**

\_\_\_\_\_  
**(Firm Name – Principal)**

\_\_\_\_\_  
\_\_\_\_\_

\_\_\_\_\_  
**(Business Address)**

**By** \_\_\_\_\_  
**(Original Signature)**

\_\_\_\_\_  
**(Title)**

\_\_\_\_\_  
**(Corporation Name – Surety)**

**Affix Corporate Seal**

\_\_\_\_\_  
\_\_\_\_\_

\_\_\_\_\_  
**(Business Address)**

**By** \_\_\_\_\_  
**(Signature – Attached Notary's Acknowledgment)**

\_\_\_\_\_  
**ATTORNEY-IN-FACT**  
**(Title-Attach Power of Attorney)**

**Note: Notary acknowledgment of signatures of Bidder and Surety, and Surety's Power of Attorney, must be included or attached**

Project  
No. FM08200012205

Bond No. \_\_\_\_\_

## **PERFORMANCE BOND**

(Public Work – Public Contract Code Section 20129 (b))

KNOW ALL PERSONS BY THESE PRESENTS:

THAT WHEREAS, the County of Riverside ("County") by action of the Board of Supervisors has awarded Construction Contract Number \_\_\_\_\_ ("Contract") to the undersigned \_\_\_\_\_ as Principal ("Principal") to perform the work ("Work") for the following project: WESTERN EMERGENCY OPERATION CENTER PARKING EXPANSION, which Contract is by this reference hereby incorporated herein and made a part hereof;

AND, WHEREAS, said Principal is required by the Contract and/or by California Public Contract Code, Section 20129 (b) to furnish a performance bond for the faithful performance of the Contract;

NOW THEREFORE, we, the Principal and \_\_\_\_\_ ("Surety"), an admitted surety insurer pursuant to Code of Civil Procedure, Section 995.120, are held and firmly bound unto County in the penal sum of \_\_\_\_\_ Dollars (\$\_\_\_\_\_), this amount being not less than one hundred percent (100%) of the total sum payable by County under the Contract at the time the Contract is awarded by County to the Principal, lawful money of the United States of America, for the payment of which sum well and truly to be made, we, Principal and Surety, bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH that if Principal, its heirs, executors, administrators, successors or assigns approved by County, shall in all things stand to and abide by and well and truly keep and perform all the undertakings, terms, covenants, conditions and agreements in the Contract, including, without limitation, all obligations during the original term and any extensions thereof as may be granted by County, with or without notice to Surety thereof (including, without limitation, the obligation for Principal to pay liquidated damages), all obligations during the period of any warranties and guarantees required under the Contract and all other obligations otherwise arising under the terms of the Contract (such as, but not limited to, obligations of indemnification), all within the time and in the manner therein designated in all respects according to their true intent and meaning, then this obligation shall become null and void; otherwise, it shall be and remain in full force and effect.

Whenever Principal shall be, and is declared by County to be, in default under the Contract, the Surety shall promptly either remedy the default, or, if the Contract is terminated by County or the Principal's performance of the Work is discontinued, Surety shall promptly complete the Contract through its agents or independent contractors, subject to acceptance of such agents or independent contractors by County as

hereinafter set forth, in accordance with its terms and conditions and to pay and perform all obligations of Principal under the Contract (including, without limitation, all obligations with respect to payment of liquidated damages) less the "Balance of the Contract Price" (as hereinafter defined); subject to the penal amount of this bond as set forth above. The term "Balance of the Contract Price," as used in this paragraph, shall mean the total amount payable to Principal by County under the Contract and any modifications thereto, less the amount previously paid by County to the Principal and less amounts that County is authorized to withhold under the terms of the Contract.

If County determines that completion of the Contract by Surety or its agents or independent contractors must be performed by a lowest responsible bidder selected pursuant to a competitive bidding process, then Surety shall comply with such processes in accordance with the requirements of County and applicable laws. Unless otherwise approved by District, in the exercise of its sole and absolute discretion, Surety shall not utilize Principal in completing performance of the Work.

No right of action shall accrue on this bond to or for the use of any person or entity other than County or its successors or assigns.

Correspondence or claims relating to this bond shall be sent to Surety at the address set forth below.

Surety, for value received, agrees that no change, extension of time, alteration or addition to the terms of the Contract, or to the work to be performed thereunder, shall in any way impair or affect Surety's obligation under this bond, and Surety does hereby waive notice of any such changes, extensions of time, alterations or additions.

Surety's obligations hereunder are independent of the obligations of any other surety for the performance of the Contract, and suit may be brought against Surety and such other sureties, joint and severally, or against any one or more of them or against less than all of them, without impairing County's rights against the others.

**Affix Seal if Corporation**

\_\_\_\_\_  
**(Firm Name – Principal)**

\_\_\_\_\_  
\_\_\_\_\_

\_\_\_\_\_  
**(Business Address)**

**By** \_\_\_\_\_  
**(Original Signature)**

\_\_\_\_\_  
**(Title)**

\_\_\_\_\_  
**(Corporation Name – Surety)**

**Affix Corporate Seal**

\_\_\_\_\_  
\_\_\_\_\_

\_\_\_\_\_  
**(Business Address)**

**By** \_\_\_\_\_  
**(Signature – Attached Notary’s Acknowledgment)**

\_\_\_\_\_  
**ATTORNEY-IN-FACT**  
**(Title-Attach Power of Attorney)**

**Note:** Notary acknowledgment of signatures of Bidder and Surety, and Surety’s Power of Attorney, must be included or attached

**CONTRACTOR'S CERTIFICATE REGARDING WORKERS'  
COMPENSATION**

Labor Code Section 3700 states:

"Every employer except the state shall secure the payment of compensation in one or more of the following ways:

(a) By being insured against liability to pay compensation by one or more insurers duly authorized to write compensation insurance in this state.

(b) By securing from the Director of Industrial Relations a certificate of consent to self-insure either as an individual employer, or as one employer in a group of employers, which may be given upon furnishing proof satisfactory to the Director of Industrial Relations of ability to self-insure and to pay any compensation that may become due to his or her employee.

(c) For any county, city, city and county, municipal corporation, public district, public agency, or any political subdivision of the state, including each member of a pooling arrangement under a joint exercise of powers agreement (but not the state itself), by securing from the Director of Industrial Relations a certificate of consent to self-insure against workers' compensation claims, which certificate may be given upon furnishing proof satisfactory to the director of ability to administer workers' compensation claims properly, and to pay workers' compensation claims that may become due to its employees. On or before March 31, 1979, a political subdivision of the state which, on December 31, 1978, was uninsured for its liability to pay compensation, shall file a properly completed and executed application for a certificate of consent to self-insure against workers' compensation claims. The certificate shall be issued and be subject to the provisions of Section 3702.

For purposes of this section, 'state' shall include the superior courts of California."

I am aware of the provisions of Section 3700 of the California Labor Code which require every employer to be insured against liability for workers' compensation or to undertake self-insurance in accordance with the provisions of that code, and I will comply with such provisions before commencing the performance of the work of this contract.

\_\_\_\_\_  
(Name of Contractor)

\_\_\_\_\_  
By:

\_\_\_\_\_  
(Name of Signer)

\_\_\_\_\_  
(Signature)

(In accordance with Article 5 (commencing at Section 1860), Chapter 1, Part 7, Division 2 of the Labor Code, the above certificate must be signed and filed with the awarding body prior to performing any work under this contract.)

## DECLARATION OF SUFFICIENCY OF FUNDS

(California Labor Code Section 2810)

I, the undersigned, an authorized representative of \_\_\_\_\_ (“Bidder”) with authority to make the statements contained in this Declaration on behalf of Bidder, hereby declare the following:

1. The Bidder’s employer identification number for state tax purposes is \_\_\_\_\_.
2. The Bidder’s workers’ compensation insurance policy number is \_\_\_\_\_ and the name, address, and telephone number of the insurance carrier providing said insurance is: \_\_\_\_\_.

3. The following information is provided concerning any and all vehicles that are owned by the Bidder and that will be used for transportation in connection with any service provided for the performance of the Work that is the subject of the Bidder’s Bid [Insert information requested. Attach additional sheets, if needed.]:

<i>Vehicle</i>	<i>Vehicle ID #</i>	<i>Vehicle. Liability Insurance Policy Number (of policy covering vehicle)</i>	<i>Name, Address and Telephone Number of Vehicle Liability Insurance Carrier (issuing policy covering vehicle)</i>

4. The following is the address of any real property that will be used to house workers in connection with the performance of the Work that is the subject of the Bidder’s Bid [If no such housing will be provided, enter “none”]: \_\_\_\_\_.

5. The actual or estimated number of workers that will be employed to perform the Work that is the subject of the Bidder’s Bid, the total amount of wages to be paid to said workers, and the dates on which said wages will be paid are as follows [Attach additional sheets, if needed.]:

<b>Total Number of Workers</b>	<b>Total Amount of Wages</b>	<b>Date(s) for Payment of Wages</b>

6. Check only one of the following boxes, as applicable:

The statement of number of workers declared in Paragraph 5, above, is a statement of the actual number of workers that will be employed.

The actual number of workers requested in Paragraph 5, above, is unknown and therefore the statement of number of workers declared therein is based on the Bidder's best estimate available at the time of submitting its Bid, rather than the actual number of workers that will be employed and if and when the actual number of workers and the other information requested above is available, it will be reported to the County of Riverside by Bidder in writing.

7. The actual or estimated total number of persons who will be utilized as independent contractors to perform the Work of the Project that is the subject of the Bidder's Bid (together with their known, current local, state, and federal contractor license identification numbers that each is required to have under local, state or federal laws or regulations) are as follows [Attach additional sheets, if needed.]:

<b>List of Independent Contractors</b>	<b>Current, local, state and federal contractor license identification number</b>

8. Check only one of the following boxes, as applicable:

The statement of number of independent contractors declared in Paragraph 7, above, is a statement of the actual number of independent contractors that will be utilized.

The actual number of independent contractors requested in Paragraph 7, above, is unknown and therefore the statement of number of independent contractors declared therein is based on the Bidder's best estimate available at the time of submitting its Bid, rather than the actual number of independent contractors that will be utilized, and if and when the actual number of independent contractors



and the other information requested above is available, it will be reported to the County of Riverside by Bidder in writing.

I, the undersigned, declare under penalty of perjury that the foregoing statements are within my personal knowledge and are true and correct. Executed on this \_\_\_\_\_ day of \_\_\_\_\_, in the year 20\_\_ at \_\_\_\_\_, California.

\_\_\_\_\_  
(signature)

\_\_\_\_\_  
Type Name of Signer:

\_\_\_\_\_  
Type Name of Bidder:

## **SUBSTITUTION REQUEST FORM**

ONLY ONE (1) REQUEST FOR SUBSTITUTION FOR EACH PRODUCT WILL BE CONSIDERED. USE A SEPARATE SUBSTITUTION REQUEST FORM FOR EACH PROPOSED SUBSTITUTION.

**TO:** COUNTY OF RIVERSIDE  
**PROJECT:** WESTERN EMERGENCY OPERATION CENTER PARKING EXPANSION  
**PROJECT NO.:** FM08200012205

Bidder requests Substitution of the following material, product, thing or service:

<b>Specification Section</b>	<b>Article No.</b>
<b>Specified Item</b>	<b>Address</b>
<b>Manufacturer's Name</b>	<b>Model or Catalog Number</b>
<b>Trade Name of Product</b>	<b>Specified Fabricators and Suppliers</b>

For each proposed Substitution, list below where in the Specifications the item to be replaced is currently specified, the item specified in the Specifications and that is proposed to be replaced by the Substitution and a brief description of the proposed Substitution:

Specification Reference	Specified Item	Proposed Substitution

**Respond to each of the following questions, attaching additional sheets if required:**

In the case of a manufactured material, product or thing, does the manufacturer certify that the proposed Substitution is appropriate for use as an "equal" to the material, product, or thing specified?

**Yes**       **No**

If so, attach such certification.

Are maintenance services available?  **Yes**  **No**

If so, describe scope and terms, including any limitations on maintenance services: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Are replacements materials, products or things, and all parts thereof, available?  **Yes**  **No**

Contractor agrees to provide specified item in the event this Substitution Request is denied?  **Yes**  **No**

Does the Substitution affect dimensions shown On Drawings?  **Yes**  **No**

If so, clearly describe changes: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Will you pay for changes to the building design, including architectural, engineering and detailing costs caused by the acceptance of the requested Substitution?  **Yes**  **No**

Would the Substitution, if used, affect any other trades?  **Yes**  **No**

If so, describe each affect: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Would the Substitution, if used, affect your ability to meet The time periods for construction required by the Bidding Documents?  **Yes**  **No**

If so, describe each affect: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Are there any differences between Substitution and specified item?  **Yes**  **No**

If so, describe each difference: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Are the manufacturer's guarantees and warranties of the Substitution and the specified item the same?  **Yes**  **No**

If so, describe each difference or attach copy of all written guarantees and warranties provided for the Substitution : \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Attach complete product data, including but not limited to laboratory tests, approval numbers, research report numbers, listings, and approved assembly descriptions as specified in Section \_\_\_\_\_ of the Specifications or as required by Governmental Authorities under Applicable Laws.

\_\_\_\_\_  
**Contractor**

\_\_\_\_\_  
**County**

\_\_\_\_\_  
By

\_\_\_\_\_  
Reviewed by:

\_\_\_\_\_  
Date

\_\_\_\_\_  
Date

\_\_\_\_\_  
Remarks

\_\_\_\_\_  
**Design Consultant**

\_\_\_\_\_  
Reviewed by:

**SPACE RESERVED FOR COUNTY USE ONLY:**

Decision on Substitution Request:

**Grant**

**Deny**



**STANDARD FORM OF CONSTRUCTION CONTRACT BETWEEN  
COUNTY AND CONTRACTOR**

by and between

**CONTRACTOR'S NAME**

(the "Contractor")

And

**THE COUNTY OF RIVERSIDE**

(the "County")

FOR:

**WESTERN EMERGENCY OPERATION CENTER PARKING EXPANSION PROJECT  
FM08200012205**

**450 E. ALESSANDRO BOULEVARD  
RIVERSIDE, CA 92508**

# **STANDARD FORM OF CONSTRUCTION CONTRACT** **BETWEEN COUNTY AND CONTRACTOR**

**THIS STANDARD FORM OF CONSTRUCTION CONTRACT BETWEEN COUNTY AND CONTRACTOR** (“Agreement”) is entered into as of the date of the last signature on the signature page of this contract by and between **THE COUNTY OF RIVERSIDE**, a political subdivision of the State of California (“County”) and text, a text (“Contractor”) whose principal place of business is located at text, text, text.

## **ARTICLE 1 DEFINITIONS**

Capitalized terms used in the Contract Documents shall have the meanings assigned to them in the General Conditions. If not defined in the General Conditions, they shall have the meanings assigned to them elsewhere in the Contract Documents. If not defined in the General Conditions or elsewhere, they shall have the meanings reasonably understood to apply to them by the context in which they are used.

## **ARTICLE 2 PERFORMANCE OF WORK**

### **2.1 SCOPE OF WORK**

Contractor shall execute the entire Work called for by the Contract Documents, except to the extent specifically indicated in the Contract Documents to be the responsibility of others.

### **2.2 STANDARD OF PERFORMANCE**

In addition to and without limiting Contractor’s other obligations under the Contract Documents, Contractor shall at all times in its performance of its obligations under the Contract Documents conform to the following general standards of performance:

**2.2.1** the requirements of the Contract Documents;

**2.2.2** the requirements and conditions of Applicable Laws;

**2.2.3** the standard of care applicable to those who provide construction of the type called for by this Construction Contract for projects of a scope and complexity comparable to the Project;

**2.2.4** Contractor shall furnish efficient business administration of the Work, utilizing sufficient senior level management and other qualified personnel to manage the Work; and

**2.2.5** Contractor shall apply its best and highest skill and attention to completing the Work in an expeditious and economical manner, consistent with the expressed best interests of the County and within the limitations of the Contract Price and Contract Time.

## ARTICLE 3 CONTRACT TIME

### 3.1 CONTRACT TIME

**3.1.1 Substantial Completion.** Subject to Contract Adjustments permitted by the Contract Documents, Contractor shall achieve Substantial Completion of the entire Work not later than ~~Ninety~~ (90) Days after the Date of Commencement.

**3.1.2 Final Completion.** Subject to Contract Adjustments permitted by the Contract Documents, Contractor shall achieve Final Completion of the Work not later than ~~Thirty~~ (30) Days after the actual occurrence of Substantial Completion.

**3.1.3 Contract Adjustments.** The Contract Time shall be extended or shortened only in accordance with the provisions of the Contract Documents governing Contract Adjustments to the Contract Time.

### 3.2 LIQUIDATED DAMAGES TO COUNTY

**3.2.1 County's Right.** County and Contractor acknowledge that if Contractor fails to Substantially Complete the Work within the Contract Time for Substantial Completion, County will suffer substantial Losses, which would be both extremely difficult and impracticable to ascertain. On that basis they agree, as a reasonable estimate of those Losses and not a penalty, to the assessment and recovery by County of liquidated damages under this Section 3.2.

**3.2.2 Per Diem Rate.** If Contractor fails to actually achieve Substantial Completion of the entire Work within the Contract Time for Substantial Completion, Contractor shall pay to County as liquidated damages the amount of ~~Seven Hundred Fifty~~ Dollars (\$750) per Day for each Day occurring after the expiration of the Contract Time for Substantial Completion until Contractor achieves Substantial Completion of the entire Work.

**3.2.3 Adjustment for Extensions of Time.** Subject to the provisions of Paragraph 8.2.8 of the General Conditions dealing with concurrency of Delays, liquidated damages shall not be charged to Contractor for a period of time for which the Contractor is entitled under the Contract Documents to a Contract Adjustment to the Contract Time for Substantial Completion.

**3.2.4 Partial Completion.** The liquidated damages provided for under this Section 3.2 shall not be reduced or apportioned: (1) for Substantial Completion of portions of the Work prior to Substantial Completion of the entirety of the Work; or (2) if portions of the Work are deleted pursuant to (a) the County's right to order Deleted Work; or (b) a termination by County of a portion of the Construction Contract or a deletion of portion of Work for the convenience of the County or due to an Event of Contractor Default.

**3.2.5 Remedies.** County may deduct any liquidated damages payable under this Section 3.2 from money due or to become due to Contractor under the Contract Documents, or pursue any other legal remedy to collect such liquidated damages from Contractor and/or its Surety.

**3.2.6 Not a Limitation.** County's rights under this Section 3.2 shall not be interpreted as precluding or limiting: (1) any right or remedy of County arising from an Event of Contractor Default other than a failure to achieve Substantial Completion of the Work within the Contract Time for Substantial Completion; or (2) County's right to order an acceleration, at Contractor's Own Expense, of performance of the Work to overcome Delay, including, without limitation, a Delay for which County has the right to assess liquidated damages under this Section 3.2.

### 3.3 LIQUIDATED DAMAGES TO CONTRACTOR

**3.3.1 Contractor's Right.** County and Contractor acknowledge and agree that if Contractor is unable due to Compensable Delay to actually achieve Substantial Completion of the Work within the Contract Time for Substantial Completion, Contractor and its affected Subcontractors will suffer Losses that would be both extremely difficult and

impracticable to ascertain. On that basis they agree, as a reasonable estimate of those Losses and not a penalty, to the payment by County to Contractor of liquidated damages under this Section 3.3.

**3.3.2 Daily Rate.** Subject to the provisions of Paragraph 8.2.8 of the General Conditions dealing with concurrency of Delays, the Contract Price shall be increased by Change Order or Unilateral Change Order in the amount of Five Hundred Dollars (\$500) per Day as liquidated damages for each Day for which Contractor is entitled under the Contract Documents to a Contract Adjustment extending the Contract Time for Substantial Completion due to Compensable Delay, with no additional amount added thereto or calculated thereon for Allowable Markup or any other markup for overhead or profit to Contractor or any Subcontractor, of any Tier.

**3.3.3 Payment by County.** A Change Order or Unilateral Change Order setting forth a Contract Adjustment to the Contract Price for liquidated damages permitted by this Section 3.3 shall be executed following, and not before, actual Substantial Completion and prior to or contemporaneously with Final Completion. Notwithstanding any other provision of the Contract Documents to the contrary and without limitation to the County's rights of withholding payment to Contractor as permitted elsewhere in the Contract Documents or under Applicable Laws, any amounts due to the Contractor under this Section 3.3 shall be payable as part of, and not prior to the due date for payment of, Final Payment to Contractor.

**3.3.4 Deleted Work.** A Contract Adjustment shall be made pursuant to Subparagraph 8.2.6.2 of the General Conditions reducing the Contract Price and Contract Time in the event that the Contract Time is shortened due to (1) Deleted Work; or (2) a termination by County of a portion of the Construction Contract for convenience or due to an Event of Contractor Default.

**3.3.5 Termination.** County shall have no liability to Contractor to pay any liquidated damages under this Section 3.3, nor shall County have any other liability to Contractor or any Subcontractor for any Loss due to Delay (including, without limitation, Compensable Delay) in the event the Construction Contract is wholly terminated (whether such termination is a termination for cause by County or Contractor or a termination for convenience by County) at any time prior to expiration of the Contract Time for Substantial Completion set forth in Paragraph 3.1.1, above.

**3.3.6 Exclusive Remedy.** Liquidated damages payable by County under this Section 3.3 constitute the Contractor's sole and exclusive right and remedy for recovery from County of Losses to Contractor and its Subcontractors, of every Tier, that are attributable to Compensable Delay, regardless of the cause, duration or timing of the Compensable Delay and no other Contract Adjustment, or other form of compensation or reimbursement, of any kind, shall be made to Contractor or any Subcontractor, of any Tier, for any Loss resulting, directly or indirectly, from, or attributable to, any of the following: (1) Unexcused Delay or acceleration to overcome Unexcused Delay; (2) Excusable Delay or any acceleration not authorized by County in writing to overcome Excusable Delay; or (3) concurrency of a Compensable Delay with any different type or class of Unexcused Delay or Excusable Delay, whether such concurrency is a concurrency in cause or in effect.

**3.3.7 WAIVER BY CONTRACTOR.**

**CONTRACTOR WAIVES THE RIGHT TO FURTHER RECOURSE OR RECOVERY OF COSTS OR DAMAGES BY REASON OF OR RELATED TO ANY DELAY (INCLUDING, WITHOUT LIMITATION, COMPENSABLE DELAY) THAT IS IN EXCESS OF OR NOT RECOVERED BY CONTRACTOR AS PART OF THE LIQUIDATED DAMAGES PAYABLE TO CONTRACTOR UNDER THIS SECTION 3.3.**

**ARTICLE 4  
CONTRACTOR COMPENSATION**

**4.1 CONTRACT PRICE**

**4.1.1 Contract Price.** County shall pay the Contractor in current funds for the Contractor's performance of the Work in accordance with the Contract Documents the Contract Price, exclusive of Contract Adjustments, of ~~text~~ Dollars (\$xx).

**4.1.2 Basis.** The Contract Price set forth in Paragraph 4.1.1, above, is based on the Bid submitted by Contractor as adjusted for Alternates accepted by County as set forth in Section 4.2, below.



**4.1.3 Adjustments.** The Contract Price is only subject to adjustment as permitted by the General Conditions for Contract Adjustments due to Compensable Changes, Deleted Work or Compensable Delay.

**4.1.4 All-Inclusive Price.** The Contract Price as adjusted for Contract Adjustment permitted by the Contract Documents is the total amount payable by County to Contractor for performance of the Work under the Contract Documents and is deemed to cover all Losses, foreseeable or unforeseeable, arising out of or related to past, present or future circumstances within or outside the control of the Contractor or its Subcontractors affecting the time or cost of performing the Work, including, without limitation, the effects of natural elements upon the Work, unforeseen difficulties or obstructions affecting the performance of the Work (including, without limitation, unforeseen conditions at the Site that do not constitute Differing Site Conditions) and unforeseen fluctuations in market conditions and price escalations (whether occurring locally, nationally or internationally).

**4.2 ALTERNATES**

The Contract Price includes the following Alternates, which are described in the Contract Documents and are hereby accepted by County:

Number	Description	Dollar Amount

**4.3 UNIT PRICES**

Unit prices agreed to by County and Contractor are as follows:

Description	Measurement Unit	Dollar Amount

**ARTICLE 5  
ENUMERATION OF CONTRACT DOCUMENTS**

**5.1 LIST OF CONTRACT DOCUMENTS**

The Contract Documents include, without limitation, the following:

**5.1.1 Construction Contract.** The Contract Documents include this executed Standard Form of Construction Contract Between County and Contractor.

**5.1.2 General Conditions.** The Contract Documents include the  General Conditions of the Standard Form of Construction Contract Between County and Contractor (Long Form) or  General Conditions of the Standard Form of Construction Contract Between County and Contractor (Short Form).

**5.1.3 Specifications.** The Contract Documents include the following Specifications:

Title	Date	Divisions
SEE EXHIBIT 'A ' WITH TABLE OF CONTENTS FOR SPECIFICATIONS AS APPROVED BY BOARD OF SUPERVISORS ON <u>Date</u> AND INCORPORATED HEREIN.		

**5.1.4 Drawings.** The Contract Documents include the following Drawings dated January 11, 2024, unless a different date is shown below:

Sheet Number	Title	Date	Pages
SEE EXHIBIT 'B' WITH LIST OF DRAWINGS INCLUDED IN SPECIFICATIONS APPROVED BY BOARD OF SUPERVISORS ON <u>Date</u> AND INCORPORATED HEREIN.			

**5.1.5 Addenda.** The Contract Documents include the following Addenda:

Addendum Number	Title	Date	Pages

**5.1.6 Reference Documents.** The Contract Documents include the following Reference Documents:

Title	Author	Date	Pages

**5.1.7** [List Other Contract Documents, if any]

**ARTICLE 6  
SPECIAL REQUIREMENTS**

**6.1 LABOR CODE SECTION 1861 CERTIFICATION**

By signing below, Contractor certifies that he/she/it is aware of the provisions of Section 3700 of the California Labor Code which require every employer to be insured against liability for Worker's Compensation or to undertake self-insurance in accordance with the provisions of the California Labor Code, and that he/she/it will comply with such provisions before commencing the performance of the Work.

**CONTRACTORS ARE REQUIRED BY LAW TO BE LICENSED AND REGULATED BY THE CONTRACTORS' STATE LICENSE BOARD WHICH HAS JURISDICTION TO INVESTIGATE COMPLAINTS AGAINST CONTRACTORS IF A COMPLAINT REGARDING A PATENT ACT OR OMISSION IS FILED WITHIN FOUR YEARS OF THE DATE OF THE ALLEGED VIOLATION. A COMPLAINT REGARDING A LATENT ACT OR OMISSION PERTAINING TO STRUCTURAL DEFECTS MUST BE FILED WITHIN 10 YEARS OF THE DATE OF THE ALLEGED VIOLATION. ANY QUESTIONS CONCERNING A CONTRACTOR MAY BE REFERRED TO THE REGISTRAR, CONTRACTORS' STATE LICENSE BOARD, P.O. BOX 26000, SACRAMENTO, CALIFORNIA, 95826.**

**IN WITNESS WHEREOF**, the parties hereto have made and executed four (4) originals of this Construction Contract, on \_\_\_\_\_ [to be filled in by Clerk of the Board].

**[SIGNATURES ON FOLLOWING PAGE (PM'S PLEASE EDIT THE POSITIONING OF THIS STATEMENT ACCORDINGLY AND DELETE THIS NON-BOLDED TEXT AFTERWARD)]**

**“COUNTY”**

**COUNTY OF RIVERSIDE**

By: \_\_\_\_\_  
Chairman, Board of Supervisors

**ATTEST:**

KIMBERLY RECTOR  
Clerk of the Board

By: \_\_\_\_\_  
(Deputy)

(SEAL)

**APPROVED AS TO FORM:**  
MINH C. TRAN  
County Counsel

By: \_\_\_\_\_

Deputy County Counsel

**“CONTRACTOR”**

\_\_\_\_\_

(Sign on line above)

By: \_\_\_\_\_  
(Type name)

Title: \_\_\_\_\_

The following information must be provided concerning the Contractor:

State whether Contractor is corporation, Individual, partnership, joint venture or other:

\_\_\_\_\_

If “other”, enter legal form of business:

\_\_\_\_\_

Enter address:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Telephone: \_\_\_\_\_

Facsimile: \_\_\_\_\_

Email: \_\_\_\_\_

Employer State Tax ID #: \_\_\_\_\_

State Contractor License #: \_\_\_\_\_

Department of Industrial Relations

Registration No: \_\_\_\_\_

If Contractor is not an individual or corporation, list Names of 4 representatives who have authority to contractually bind Contractor:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

If Contractor is a corporation, state:

Name of President: \_\_\_\_\_

Name of Secretary: \_\_\_\_\_

State of Incorporation: \_\_\_\_\_

**GENERAL CONDITIONS OF**  
**THE STANDARD FORM CONSTRUCTION CONTRACT**  
**BETWEEN COUNTY AND CONTRACTOR**

(LONG FORM)

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**GENERAL CONDITIONS OF**  
**THE STANDARD FORM CONSTRUCTION CONTRACT**  
**BETWEEN COUNTY AND CONTRACTOR**

(LONG FORM)

**ARTICLE 1**  
**GENERAL PROVISIONS**

**1.1 DEFINITIONS**

1.1.1 **Acceptance.** "Acceptance" means the point that the Project is formally accepted by the Board of Supervisors and a Notice of Completion is recorded by County.

1.1.2 **Act of God.** "Act of God" means earthquake, natural flood, tornado or other unusually severe natural or weather phenomenon occurring at the Site and causing Delay to performance of the Work at the Site; provided, however, that precipitation and winds shall not be an Act of God unless it exceeds in any given month the 10-year average of monthly levels as established by the National Oceanic and Atmospheric Administration ("NOAA") according to NOAA's records of measurable precipitation and winds taken at NOAA's recording station located within the Riverside County basin area that is nearest to the Site.

1.1.3 **Addendum.** "Addendum" means written or graphic information (including, without limitation, Drawings or Specifications) issued prior to the Bid Closing Deadline, which modifies or interprets the Bidding Documents by additions, deletions, clarifications or corrections.

1.1.4 **Admitted Surety.** "Admitted Surety" means a surety insurer that is duly certified pursuant to California Insurance Code §995.120 to transact business as a surety in the State of California.

1.1.5 **Allowable Costs.** "Allowable Costs" means those costs listed in Paragraph 7.7.3, below, that are used in calculating Contract Adjustments to the Contract Price.

1.1.6 **Allowable Markups.** "Allowable Markups" means those percentage markups listed in Paragraph 7.7.5, below, used in calculating Contract Adjustments to the Contract Price.

1.1.7 **Alternate.** "Alternate" means a proposed alternative described in the Bidding Documents adding to, or deleting from, the Bidding Documents a particular material, system, product or method of construction.

1.1.8 **Applicable Laws.** "Applicable Laws" means all statutes, ordinances, rules, regulations, policies and guidelines enacted by Governmental Authorities (including, without limitation, Environmental Laws and Disability Laws), codes adopted or promulgated by Governmental Authorities (including, without limitation, building and health and safety codes), lawful orders of Governmental Authorities and common law, including, but not limited to, principles of equity applied by the courts of the State of California, which are in effect at the time the Work is performed.

1.1.9 **Application for Payment.** "Application for Payment" means Contractor's itemized application for Progress Payment or Final Payment prepared, submitted and substantiated in accordance with the requirements of the Contract Documents.

1.1.10 **Architect.** "Architect" means the design professional retained by County that is primarily responsible for the preparation of the Drawings and Specifications for the Project.

1.1.11 **Award.** "Award" means either (1) a minute order duly adopted by the Board of Supervisors approving County's entering into the Construction Contract with Contractor or (2) execution of the Construction Contract by the Clerk of the Board.

1.1.12 **Base Bid.** "Base Bid" means the sum of money stated in a Bid for which the Bidder proposes to perform the Work, exclusive of adjustments for Alternates.

1.1.13 **Bid.** "Bid" means the completed and signed Bid Form and other Bid Submittals submitted by a Bidder to County in response to the Notice Inviting Bids and in accordance with the Instructions to Bidders.

1.1.14 **Bid Amount.** "Bid Amount" means the dollar amount that is used as the basis for determining which Bidder has submitted the lowest Bid price for purposes of Award pursuant to the County's chosen method of Award set forth in Paragraph 4.5.3 of the Instructions to Bidders.

1.1.15 **Bid Bond.** "Bid Bond" means alternative form of Bid Security submitted by a Bidder that consists of a surety bond issued by a Surety.

1.1.16 **Bid Closing Deadline.** "Bid Closing Deadline" means the deadline (date and time) for receipt of Bids by County that is stated in the Bidding Documents, as adjusted by Addendum.

1.1.17 **Bid Form.** "Bid Form" means the form prescribed by the Bidding Documents to be completed and signed by a Bidder showing the dollar amount(s) of its Bid.

1.1.18 **Bid Security.** "Bid Security" means a deposit of cash, certified or cashier's check or bond submitted by a Bidder in accordance with the Bidding Documents guaranteeing that if Award is made to the Bidder, the Bidder will enter into the Construction Contract and furnish the Performance Bond and Payment Bond and other Post-Award Submittals.

1.1.19 **Bid Submittal.** "Bid Submittal" means a document that Bidder is required by the Bidding Documents to submit with or as part of its Bid.

1.1.20 **Bidder.** "Bidder" means a person or entity submitting a Bid for Award of the Construction Contract.

1.1.21 **Bidding Documents.** "Bidding Documents" means the following collection of documents prepared and issued by County relating to the Project:

- .1 Notice Inviting Bids;
- .2 Instructions to Bidders;
- .3 Bid Form;
- .4 Standard Form of Construction Contract Between County and Contractor (unsigned);
- .5 General Conditions to Standard Form of Construction Contract Between County and Contractor (Long Form);
- .6 Specifications;
- .7 Plans and Drawings;
- .8 Addenda;
- .9 Reference Documents;
- .10 Safety Program; and
- .11 those documents, or those portions or provisions of documents, that, although not listed in Subparagraph 1.1.22.2 through Subparagraph 1.1.22.10, above, are expressly cross-referenced therein or attached thereto, including, without limitation, all documents submitted by Contractor as part of its Bid or Post-Award Submittals.

1.1.22 **Board of Supervisors.** “Board of Supervisors” means the Board of Supervisors for the County of Riverside.

1.1.23 **Change.** “Change” means a modification, change, addition, substitution or deletion in the Work or in Contractor’s means, methods, manner, time or sequence of performing the Work arising from any cause or circumstances, including, without limitation, either directly at the request of County or constructively by reason of other circumstances. Use of the term “Change,” in any context, in the Contract Documents shall not be interpreted as implying that Contractor is entitled to a Contract Adjustment on any basis other than as permitted by the terms of the Contract Documents for Compensable Change, Deleted Work or Compensable Delay.

1.1.24 **Change Order.** “Change Order” means a written instrument, signed in accordance with the requirements of the General Conditions, setting forth the agreement of County and Contractor on the terms of a Contract Adjustment.

1.1.25 **Change Order Request.** “Change Order Request” means Contractor’s written request for a Contract Adjustment pursuant to Paragraph 7.6.2, below.

1.1.26 **Claim.** “Claim” means a written demand or assertion by Contractor seeking, as a matter of right, an interpretation of contract, payment of money, recovery of damages or other relief. A Claim does not include the following: (1) tort claims for personal injury or death; (2) stop payment notice claims; (3) a determination of the right of County to specific performance or injunctive relief to compel performance; (4) a determination of the right of County to suspend, revoke or limit the Contractor’s Prequalification status or rating or to debar Contractor from bidding or contracting with County; or (5) a determination of the right of County under Applicable Laws to terminate the Construction Contract and/or recovery of penalties imposed upon Contractor for violation of statutory obligations under Public Contract Code §4100 *et seq.*

1.1.27 **Close-Out Documents.** “Close-Out Documents” means all Record Documents, warranties, guarantees, technical information, operations manuals, replacement parts, excess and attic stock and other documents (including, without limitation, electronic versions and hard copies) and things required to be submitted by Contractor under the Contract Documents as a condition of Final Completion or Final Payment.

1.1.28 **Compensable Change.** “Compensable Change” means circumstances involving the performance of Extra Work:

- .1 that are the result of
  - (1) Differing Site Conditions,
  - (2) amendments or additions to Applicable Laws, which amendments or additions are enacted after the Bid Closing Deadline,
  - (3) a Change requested by County in accordance with the conditions of authorization applicable to Compensable Changes set forth in Article 7, below, or
  - (4) other circumstances involving a Change in the Work for which Contractor is given under the Contract Documents a specific and express right to a Contract Adjustment to the Contract Price;
- .2 that are not caused, in whole or in part, by an act or omission of Contractor or a Subcontractor, of any Tier, constituting negligence, willful misconduct, or violation of an Applicable Law, or by a failure of Contractor of a Subcontractor, of any Tier, to comply with the Contract Documents;
- .3 for which a Contract Adjustment is neither prohibited by nor waived under the terms of the Contract Documents; and
- .4 that if performed would require Contractor to incur additional and unforeseeable Allowable Costs that would not have been required to be incurred in the absence of such circumstances.

1.1.29 **Compensable Delay.** “Compensable Delay” means a Delay to the critical path of activities affecting Contractor’s ability to achieve Substantial Completion of the entirety of the Work within the Contract Time:

- .1 that is the result of
  - (a) a Compensable Change,
  - (b) the active negligence of County, Architect, a County Consultant or a Separate Contractor,
  - (c) a breach by County of an obligation under the Contract Documents, or
  - (d) other circumstances involving Delay for which Contractor is given under the Contract Documents a specific and express right to a Contract Adjustment adjusting the Contract Price;
- .2 that is not caused, in whole or in part, by an act or omission of Contractor or a Subcontractor, of any Tier, constituting negligence, willful misconduct, or a violation of an Applicable Law, or a failure by Contractor or any Subcontractor, of any Tier, to comply with the Contract Documents; and
- .3 for which a Contract Adjustment to the Contract Time is neither prohibited by nor waived under the terms of the Contract Documents.

1.1.30 **Construction Change Directive.** “Construction Change Directive” means a written instrument signed in accordance with the requirements of Article 7, below, that: (1) directs the performance of a Change that does not involve a Contract Adjustment; (2) establishes a mutually agreed basis for compensation to Contractor for a Compensable Change under circumstances where performance of the Compensable Change needs to proceed in advance of the County performing a full evaluation of the Contractor’s rights relative to a Contract Adjustment; or (3) directs performance of Work or a Change with respect to which there exists a dispute or question regarding the terms of a Contract Adjustment.

1.1.31 **Construction Contract.** “Construction Contract” means the written form of Standard Form of Construction Contract Between County and Contractor included in the Bidding Documents signed by County and Contractor.

1.1.32 **Construction Schedule.** “Construction Schedule” means the detailed, critical path schedule prepared by Contractor in accordance with the requirements of the Contract Documents showing Contractor’s plan for performance of the Work within the Contract Time.

1.1.33 **Contract Adjustment.** “Contract Adjustment” means an adjustment, additive or deductive, to the Contract Price or Contract Time that is permitted by the Contract Documents due to circumstances constituting a Compensable Change, Compensable Delay or Deleted Work.

1.1.34 **Contract Documents.** “Contract Documents” means the following collection of documents:

- .1 Construction Contract;
- .2 Addenda;
- .3 General Conditions;
- .4 Specifications;
- .5 Plans and Drawings;
- .6 Modifications;

- .7 Reference Documents;
- .8 Change Orders;
- .9 Unilateral Change Orders;
- .10 Construction Change Directives;
- .11 Safety Program;
- .12 other documents that comprise exhibits, attachments or riders to the documents listed in preceding Subparagraph 1.1.35.1 through Subparagraph 1.1.35.11, above;
- .13 executed Declaration of Sufficiency of Funds;
- .14 executed Non-Collusion Declaration; and
- .15 if the Bidding Documents limit bidding to Prequalified Bidders, those written representations, obligations or responsibilities made, acknowledged or assumed by the Bidder as part of the applicable Prequalification conducted by County, including, without limitation, any continuing obligations assumed by Contractor to disclose false or misleading information, report changes in ownership or management and comply with minimum safety requirements.

1.1.35 **Contract Price.** "Contract Price" means the dollar amount set forth in the Construction Contract as the total compensation payable by County to Contractor for complete performance by Contractor in accordance with the Contract Documents of the Work and other obligations assumed by Contractor under the Contract Documents.

1.1.36 **Contract Time.** "Contract Time" means the total number of Days set forth in the Construction Contract within which Contractor is obligated to achieve Substantial Completion and/or Final Completion of the Work, as extended or shortened by Contract Adjustments.

1.1.37 **Contractor.** "Contractor" means the person or entity identified by County as the Bidder receiving Award of the Construction Contract.

1.1.38 **Contractor Amount.** "Contractor Amount" means the component amount calculated on behalf of Contractor pursuant to Paragraph 15.1.5, below, that is used to determine the total net amount payable to Contractor or County in the event of a partial or full termination or discontinuance of the Work.

1.1.39 **Contractor's Own Expense.** "Contractor's Own Expense" means that Contractor agrees to assume sole responsibility to pay and be responsible for any resulting or associated Loss and Delay, without any Contract Adjustment and without any other form of compensation or reimbursement, of any kind, by County.

1.1.40 **County.** "County" means the County of Riverside, a political subdivision of the State of California.

1.1.41 **County Amount.** "County Amount" means the component amount calculated on behalf of County pursuant to Paragraph 15.1.5, below, that is used to determine the total net amount payable to Contractor or County in the event of a partial or full termination or discontinuance of the Work.

1.1.42 **County Consultant.** "County Consultant" means a consultant, other than Architect, engaged by County (or engaged as a subconsultant to the Architect or a County Consultant) to provide professional advice to County with respect to the design, construction or management of the Project.

1.1.43 **County Review Date.** "County Review Date" means an end date set forth in the Construction Schedule or Submittal Schedule within which County, Architect or a County Consultant is to provide information, review documents or render decisions, approvals or disapprovals.

1.1.44 **County Review Period.** “County Review Period” means a period of time set forth in the Construction Schedule or Submittal Schedule within which County, Architect or a County Consultant is to provide information, review documents or render decisions, approvals or disapprovals.

1.1.45 **County Risk Manager.** “County Risk Manager” means the individual employee of the County acting as its risk manager.

1.1.46 **County Website.** “County Website” means the website maintained by County at <http://www.rivcofm.org/RFP-RFQ>

1.1.47 **Date of Commencement.** “Date of Commencement” means the starting date used for calculation of the Contract Time, and is the date, no earlier than the first working day following issuance of the Notice to Proceed, that is fixed in the Notice to Proceed issued by the County or, if no Notice to Proceed is issued, the Day that the Contractor actually commences Work at the Site in accordance with Paragraph 8.1.1, below.

1.1.48 **Day.** “Day”, whether capitalized or not, and unless otherwise specifically provided, means calendar day, including weekends and Holidays.

1.1.49 **Declaration of Sufficiency of Funds.** “Declaration of Sufficiency of Funds” means the declaration, in the form included in the Bidding Documents, required to be submitted by Contractor under circumstances where Contractor has not executed a collective bargaining agreement covering the workers who will be employed to perform the Work.

1.1.50 **Defective Work.** “Defective Work” means materials, equipment, labor, workmanship, construction services or other construction work comprising the Work by Contractor or a Subcontractor that (1) is faulty, omitted, incomplete, or deficient, or (2) does not conform to Applicable Laws, the Contract Documents, or the requirements of any inspection, reference standard, test, code or approval specified in the Contract Documents.

1.1.51 **Delay.** “Delay” means any circumstances involving delay, disruption, hindrance or interference.

1.1.52 **Deleted Work.** “Deleted Work” means Work that is eliminated or its scope or cost reduced pursuant to a Change Order or Unilateral Change Order.

1.1.53 **Department of Industrial Relations.** “Department of Industrial Relations” means The Department of Industrial Relations of the State of California.

1.1.54 **Design Discrepancy.** “Design Discrepancy” means an error, omission, conflict, ambiguity, lack of coordination or noncompliance with Applicable Laws contained in the Bidding Documents, Contract Documents, Reference Documents or other information made available by County to Contractor prior to or after the Bid Closing Deadline.

1.1.55 **Design Documents.** “Design Documents” means all originals, copies and drafts of plans, drawings, tracings, specifications, programs, reports, calculations, presentation materials, models, building information models and other writings or materials containing designs, specifications or engineering information related to the Work or Project prepared by Architect, County Consultants, Contractor, Separate Contractors or Subcontractors including, without limitation, computer aided design materials, electronic data files and paper copies. The term “Design Documents” includes both the written documents and all building and other designs depicted therein.

1.1.56 **Design Intent.** “Design Intent” means the general intended design objectives of the Design Documents prepared by Architect and County Consultants, as described in Paragraph 1.2.1, below.

1.1.57 **Designation of Subcontractors.** “Designation of Subcontractors” means the list of proposed Subcontractors prepared by the Bidder pursuant to California Public Contract Code §§4100 et seq.

1.1.58 **Differing Site Condition.** “Differing Site Condition” means an unforeseen condition that constitutes a basis for Contract Adjustment pursuant to Paragraph 4.3.8, below.



1.1.59 **Director of Facilities Management.** “Director of Facilities Management” means the Director for Facilities Management, or his/her designee.

1.1.60 **Disability Laws.** “Disability Laws” means applicable federal, state, local or municipal laws, rules, orders, regulations, statutes, ordinances, codes, decrees, or requirements of any Government Authority, which regulate, relate to or impose liability or standards of conduct with respect to, or accessibility for, persons with disabilities, including, without limitation, the Americans with Disabilities Act (42 USCA §§ 12101 et seq.) and the Fair Housing Amendments Act of 1988 (42 USCA §§ 3604 et seq.).

1.1.61 **Discovery Date.** “Discovery Date”, generally used in reference to Contractor’s obligation to give written notice of certain facts, conditions or circumstances, means the earlier of the dates that Contractor or any Subcontractor either: (1) discovered such facts, conditions or circumstances; or (2) should have discovered such facts, conditions or circumstances in the exercise of the level of care required by the terms of the Standard of Performance.

1.1.62 **Drawings.** “Drawings” means graphic and pictorial documents showing the design, location and dimensions of the Project, and generally includes plans, elevations, subparagraphs, details, schedules and diagrams. The term “Drawings” is used interchangeably with “Plans”.

1.1.63 **Environmental Laws.** “Environmental Laws” means all applicable federal, state, local or municipal laws, rules, orders, regulations, statutes, ordinances, codes, decrees and permits or other requirements of any Governmental Authority, which regulate, relate to, or impose liability or standards of conduct concerning any Hazardous Substance (including, without limitation, the use, handling, transportation, production, disposal, discharge or storage thereof), occupational or environmental conditions on, under, or about the Site or Existing Improvements (including, without limitation, soil, groundwater, and indoor and ambient air conditions), environmental protection (natural or manmade resources), or occupational health or industrial hygiene (but only to the extent related to Hazardous Substances on, under, or about the Site or Existing Improvements), as now or may at any later time be in effect, including without limitation, the Comprehensive Environmental Response, Compensation and Liability Act of 1980 [42 U.S.C.A. §§ 9601 et seq.]; the Resource Conservation and Recovery Act of 1976 [42 U.S.C.A. §§ 6901 et seq.]; the Clean Water Act (also known as the Federal Water Pollution Control Act) [33 U.S.C.A. §§ 1251 et seq.]; the Toxic Substances Control Act [15 U.S.C.A. §§ 2601 et seq.]; the Hazardous Substances Transportation Act [49 U.S.C.A. §§ 1801 et seq.]; the Insecticide, Fungicide, Rodenticide Act [7 U.S.C.A. §§ 136 et seq.]; the Superfund Amendments and Reauthorization Act [42 U.S.C.A. §§ 6901 et seq.]; the Clean Air Act [42 U.S.C.A. §§ 7401 et seq.]; the Safe Drinking Water Act [42 U.S.C.A. §§ 300f et seq.]; the Solid Waste Disposal Act [42 U.S.C.A. §§ 6901 et seq.]; the Surface Mining Control and Reclamation Act [30 U.S.C.A. §§ 1201 et seq.]; the Emergency Planning and Community Right to Know Act [42 U.S.C.A. §§ 11001 et seq.]; the Occupational Safety and Health Act [29 U.S.C.A. §§ 655 and 657]; the Residential Lead-Based Paint Exposure Act (Title X of the Housing and Community Development Act of 1992) [15 U.S.C.A. §§ 2681 et seq.]; the Lead-Based Paint Poisoning Prevention Act [42 U.S.C.A. §§ 4821 et seq.]; the Federal Endangered Species Act, the California Endangered Species Act, the Migratory Bird Treaty Act, the National Environmental Policy Act, the California Environmental Quality Act, Porter Cologne Water Quality Act (California Water Code §§ 13000 et seq), and all similar federal, state or local laws, rules, orders, regulations, statutes, ordinances, codes, decrees, or requirements.

1.1.64 **Escrow Agent.** “Escrow Agent” means an entity serving as escrow agent pursuant to California Public Contract Code §22300 in connection with the deposit of securities or retention.

1.1.65 **Escrow Bid Documents.** “Escrow Bid Documents” means all written documentation and electronic files reflecting the basis for and calculation of a Bid, including, without limitation, estimates, quantity take-offs, price quotations, product data, pricing data, memoranda, narratives, add/deduct sheets and reports (including, without limitation, reports on conditions at, under, or in the vicinity of the Site). The term “Escrow Bid Documents” does not include copies of Bidding Documents if they are not needed to comply with the requirements of the Bidding Documents applicable to submission of Escrow Bid Documents.

1.1.66 **Event of Contractor Default.** “Event of Contractor Default” means any of the events constituting default by Contractor as set forth in Paragraph 15.1.1, below.

1.1.67 **Evidence of Insurance.** “Evidence of Insurance” means the statement, completed by Bidder in the form included in the Bidding Documents, evidencing the Bidder’s compliance with the insurance requirements of the Bidding Documents.

1.1.68 **Excusable Delay.** "Excusable Delay" means a Delay, other than a Compensable Delay, to Contractor's ability to achieve Substantial Completion or Final Completion of the Work within the Contract Time that is: (1) not caused, in whole or in part, by an act or omission of Contractor or a Subcontractor, of any Tier, constituting negligence, willful misconduct, a violation of an Applicable Law or a failure by Contractor or any Subcontractor, of any Tier, to comply with the Contract Documents; (2) unforeseeable, unavoidable and beyond the control of Contractor and the Subcontractors, of every Tier; and (3) the result of a Force Majeure Event. Without limitation to the foregoing, neither the bankruptcy, insolvency nor financial inability of Contractor or a Subcontractor, of any Tier, nor any failure by a Subcontractor, of any Tier, to perform any obligation imposed by contract or Applicable Laws shall constitute a ground for Excusable Delay.

1.1.69 **Existing Improvements.** "Existing Improvements" means all improvements located on the Site as of the Bid Closing Deadline, whether above or below the surface of the ground, including, but not limited to, existing buildings, utilities, infrastructure improvements and other facilities.

1.1.70 **Extra Work.** "Extra Work" means labor, materials, equipment, services or other work, not reasonably inferable by Contractor or its Subcontractors from the design and other information set forth in the Bidding Documents, the performance of which requires the expenditure by Contractor of additional and unforeseen Allowable Costs. References to Extra Work shall not be interpreted to mean or imply that Contractor is entitled to a Contract Adjustment unless such Extra Work constitutes a Compensable Change.

1.1.71 **Final Completion, Finally Complete.** "Final Completion" and "Finally Complete" mean the point at which the following conditions have occurred with respect to the entire Work:

- .1 the Work is fully completed, including all minor corrective, or "punch list," items;
- .2 all permits, approvals and certificates by Governmental Authorities, such as, but not necessarily limited to, a permanent or temporary certificate of occupancy required to occupy and use the Work have been issued free of any conditions that are the result of an act or omission of Contractor or a Subcontractor, of any Tier, constituting negligence, willful misconduct, a violation of an Applicable Law or a failure by Contractor or any Subcontractor, of any Tier, to comply with the Contract Documents;
- .3 the Work and the related portions of the Site have been thoroughly cleared of all construction debris and cleaned in accordance with the requirements of the Contract Documents, including, but not necessarily limited to where applicable, the following: removal of temporary protections; removal of marks, stains, fingerprints and other soil and dirt from painted, decorated and natural-finished woodwork and other Work; removal of spots, plaster, soil and paint from ceramic tile, marble and other finished materials; all surfaces, fixtures, cabinet work and equipment are wiped and washed clean and in an undamaged, new condition; all aluminum and other metal surfaces are cleaned in accordance with recommendations of the manufacturer; and all stone, tile and resilient floors are cleaned thoroughly in accordance with the manufacturer's recommendations and buff dried by machine to bring the surfaces to sheen;
- .4 all conditions set forth in the Contract Documents for Substantial Completion of the Work have been, and continue to be, fully satisfied;
- .5 all conditions pertaining to the Work and required for the release of County's obligations (including, but not limited to, release of County's bond obligations) to Governmental Authorities (including, but not limited to, matters involving grading, flood control, public works, transportation and traffic) have been satisfied; and
- .6 Contractor has delivered to County all Close-Out Documents.

1.1.72 **Final Completion Punch List.** "Final Completion Punch List" means the list of minor items of Work to be completed or corrected by Contractor for Final Completion.

1.1.73 **Final Payment.** "Final Payment" means payment by County to Contractor of the entire unpaid balance of the Contract Price due to Contractor following Final Completion.

1.1.74 **FM.** "FM" means Facilities Management for the County of Riverside.

**1.1.75 Force Majeure Event.** “Force Majeure Event” means, and is restricted to, any the following: (1) Acts of God occurring at the Site; (2) terrorism or other acts of a public enemy; (3) orders of Governmental Authorities (including, without limitation, unreasonable and unforeseeable Delay in the issuance of permits or approvals by Governmental Authorities that are required for the Work); (4) epidemics or quarantine restrictions; (5) strikes and other organized labor action occurring at the Site and the effects thereof on the Work to the extent such strikes and other organized labor action are beyond the control of Contractor and its Subcontractors, of every Tier, and to the extent the effects thereof cannot be avoided by use of replacement workers or implementation of a dual gate system of entry to the Site; or (6) unusual shortages in materials that are supported by documented proof that (a) Contractor made every effort to obtain such materials from all available sources, (b) such shortage is due to the fact that such materials are not physically available from single or multiple sources or could have been obtained only at exorbitant prices entirely inconsistent with current rates taking into account the quantities involved and the usual industry practices in obtaining such quantities, and (c) such shortages and the difficulties in obtaining alternate sources of materials could not have been known or anticipated as of the Bid Closing Deadline.

**1.1.76 Fragnet.** “Fragnet” means a contemporaneous, fragmentary scheduling network, which graphically identifies the sequencing of all critical and non-critical new activities and/or activity revisions affected by a Compensable Delay or Excusable Delay with logic ties to all affected existing activities noted on the Construction Schedule, that isolates and quantifies a time impact of a specific issue, determines and demonstrates any such specific Delay in relation to past and/or other current Delays and provides a method for incorporating all Contract Adjustments to the Contract Time into an update of the approved Construction Schedule.

**1.1.77 General Conditions.** “General Conditions” means the herein set forth general terms and conditions governing performance of the Work.

**1.1.78 General Requirements.** “General Requirements” means the portion of the Specifications so titled setting forth additional requirements for administration of the Work.

**1.1.79 Good Faith Determination.** “Good Faith Determination” means a determination made by the Director of Facilities Management or other authorized representative of County, which he/she believes in good faith to be a proper exercise of County’s rights and to have a reasonable basis in fact, whether or not such determination is in fact proper, reasonable or correct or adjudged to be so.

**1.1.80 Governmental Authority.** “Governmental Authority” means the United States, the State of California, the County of Riverside (acting in its regulatory, rather than proprietary, capacity), the City in which the Project is located, any other local, regional, state or federal political subdivision, authority, agency, department, commission, board, bureau, court, judicial or quasi-judicial body, and any legislative or quasi-legislative body, or instrumentality of any of them, which exercises jurisdiction over the Project, Work, Site, Contractor or County, including, without limitation, any Governmental Authority having jurisdiction to review and approve or reject the Contract Documents or the Work based on compliance or non-compliance with Applicable Laws.

**1.1.81 Governmental Authority Review Period.** “Governmental Authority Review Period” means a period of time set forth in the Construction Schedule or Submittal Schedule for Governmental Authority review, and/or approval, of the Work.

**1.1.82 Guarantee To Repair Period.** “Guarantee To Repair Period” means the period of time set forth in Section 13.3, below, for repair or replacement of Defective Work.

**1.1.83 Hazardous Substance.** “Hazardous Substance” means either of the following: (1) any chemical, material or other substance defined as or included within the definition of “hazardous substances,” “hazardous wastes,” “extremely hazardous substances,” “toxic substances,” “toxic material,” “restricted hazardous waste,” “special waste,” “contamination” or words of similar import under any Environmental Law, including, without limitation, the following: petroleum (including crude oil or any fraction thereof), asbestos, asbestos-containing materials, polychlorinated biphenyls (“PCBs”) and PCB-containing materials, whether or not occurring naturally; or (2) any substance that because of its quantity, concentration or physical or chemical characteristics poses a significant present or potential hazard to human health and safety or to the environment, and which has been determined by any Governmental Authority to be a hazardous waste or hazardous substance.

1.1.84 **Holiday.** “Holiday” means a Day recognized by County as being a legal holiday for its staff and employees.

1.1.85 **Indemnitees.** “Indemnitees” means those persons or entities listed in Paragraph 3.18.1, below, as the “Indemnitees”.

1.1.86 **Inspector of Record.** “Inspector of Record” means a person designated by the County to perform inspections on behalf of the County, who may be an employee or an independent consultant to County.

1.1.87 **Installation Subcontractor.** “Installation Subcontractor” means a Subcontractor who performs a portion of the Work that includes providing substantial, rather than minor and incidental, services for the installation of temporary or permanent materials, equipment or facilities at the Site.

1.1.88 **Instructions to Bidders.** “Instructions to Bidders” means the portion of the Bidding Documents setting forth the requirements to be followed by Bidders in preparing and submitting Bids.

1.1.89 **Intellectual Property Rights.** “Intellectual Property Rights” means all intellectual property rights, including, without limitation, patent, trademark, trade dress, copyright, industrial design rights, priority rights and trade secrets.

1.1.90 **Key Personnel, Key Persons.** “Key Personnel” and “Key Persons” mean those individuals employed by Contractor as described in Paragraph 3.8.1, below, and any replacements thereto approved by County, whose personal performance is deemed of the essence to the Construction Contract.

1.1.91 **Loss, Losses.** “Loss” and “Losses” mean any and all economic and non-economic losses, costs, liabilities, claims, damages, cost escalations, actions, judgments, settlements, expenses, fines, penalties and punitive damages including, without limitation, actual attorney’s fees, expert and non-expert witness fees, arbitrator and arbitration fees, court costs (statutory and non-statutory), and mediation and mediator fees.

1.1.92 **Modification.** “Modification” means a document, other than a Change Order or Construction Change Directive, approved and signed by County and Contractor after execution of the Construction Contract, agreeing to alter, amend or modify the Contract Documents.

1.1.93 **Mold.** “Mold” means mold, mildew, spores or other microorganisms of any type, nature or description, or any by-product thereof, the presence of which poses an actual or potential threat to human health, including, without limitation, any species of organisms of the kingdoms of fungi or mycota, including yeasts, smuts, ruts, mildews, mold and mushrooms, or any microbial contamination, either airborne or surface, which arises out of or is related to the presence of fungi or spores (including, without limitation, aspergillus, cladosporium, penicillium and stachybotrys chartarum).

1.1.94 **Non-Collusion Declaration.** “Non-Collusion Declaration” means the form, so titled, required by California Public Contract Code §7106 and the Bidding Documents to be submitted by Bidder with its Bid.

1.1.95 **Notice Inviting Bids.** “Notice Inviting Bids” means the notice issued by or on behalf of County inviting submission of Bids for the Project.

1.1.96 **Notice Inviting Prequalification Statements.** “Notice Inviting Prequalification Statements” means the formal notice issued by County inviting contractors to participate in County’s process for Prequalification of Bidders.

1.1.97 **Notice of Change.** “Notice of Change” means a formal written notice required to be submitted by Contractor pursuant to Paragraph 7.6.1, below, notifying County of circumstances that Contractor believes may give rise to a Contract Adjustment.

1.1.98 **Notice of Completion.** “Notice of Completion” means a “notice of completion” as defined in California Civil Code §9204.

1.1.99 **Notice of Delay.** "Notice of Delay" means a formal written notice prepared and submitted by Contractor pursuant to Paragraph 8.2.2, below, notifying County of circumstances that Contractor believes may give rise to a Contract Adjustment to the Contract Time for Excusable Delay or Compensable Delay or a Contract Adjustment to the Contract Price for Compensable Delay.

1.1.100 **Notice of Final Completion.** "Notice of Final Completion" means the written notice by County confirming the date of actual Final Completion.

1.1.101 **Notice of Intent to Award.** "Notice of Intent to Award" means the written notice by or on behalf of County stating County's intent to Award the Construction Contract.

1.1.102 **Notice of Substantial Completion.** "Notice of Substantial Completion" means the written notice by County confirming the date of actual Substantial Completion.

1.1.103 **Notice to Proceed.** "Notice to Proceed" means the written notice issued by County to Contractor to begin the Work.

1.1.104 **Payment Bond, Performance Bond.** "Payment Bond" and "Performance Bond" mean the surety bonds required to be provided by Contractor pursuant to Article 12, below.

1.1.105 **Plans.** "Plans" means the graphic and pictorial portions of the Contract Documents prepared by Architect or its Subconsultants showing the design, location and dimensions of the Work, including, without limitation, plans, elevations, details, schedules and diagrams. The term "Plans" is used interchangeably with "Drawings".

1.1.106 **Post-Award Submittals.** "Post-Award Submittals" means the documents described in the Bidding Documents that the apparent successful Bidder is required to submit after opening of Bids as a condition of Award.

1.1.107 **Pre-Bid Conference.** "Pre-Bid Conference" means the conference, specified in the Notice Inviting Bids as either mandatory or optional, held prior to the Bid Closing Deadline for the purpose of, without limitation, introducing the Bidders to the Project, and which conference may, or may not, include a review of the Site.

1.1.108 **Prequalification.** "Prequalification" means a process for Prequalification of contractors for bidding that is conducted by County pursuant to California Public Contract Code §20101 or as otherwise permitted by Applicable Laws.

1.1.109 **Prequalification Documents.** "Prequalification Documents" means the collection of documents issued to and submitted by individuals or entities pursuant to a Prequalification conducted by County.

1.1.110 **Prequalified Bidder.** "Prequalified Bidder" means a contractor that is prequalified as part of a Prequalification conducted by County pursuant to Public Contract Code §20101.

1.1.111 **Product Data.** "Product Data" means illustrations, standard schedules, charts, instructional brochures, diagrams and other information furnished by Contractor to illustrate a material, product or system for the Work.

1.1.112 **Progress Payment.** "Progress Payment" means a monthly payment of a portion of the Contract Price prior to Final Completion based on Contractor's progressed performance of the Work.

1.1.113 **Project.** "Project" means the improvements comprising, or necessary or appurtenant to the use of, the work of improvements described generally in the Bidding Documents, of which the Work may be the entirety of such improvements or only a part.

1.1.114 **Project Documents.** "Project Documents" means all writings (hard copy and electronic) in the possession of Contractor at the Site or elsewhere that relate in any way to the Project or Work.

1.1.115 **Project Team.** "Project Team" means County, Architect, County Consultants, Contractor, the Subcontractors, the Separate Contractors, Inspectors of Record and other firms or individuals retained by County, or

retained by others with County's approval, participating in the planning, programming, design, construction or inspection of the Work.

**1.1.116 Reasonable Order of Magnitude Estimate.** "Reasonable Order of Magnitude Estimate" means a general estimate prepared by Contractor, or jointly by Contractor and County, without the benefit of complete or definitive pricing by Subcontractors, of the projected additional cost and time associated with Contractor's performance of a particular item or items of Extra Work or Deleted Work described in a Construction Change Directive. Unless otherwise agreed to in writing between County and Contractor, a Reasonable Order of Magnitude Estimate does not constitute either an authorization or agreement by County to any Contract Adjustment or a guarantee or promise by Contractor with respect to the amount of any Contract Adjustment that may be associated with a Compensable Change or Deleted Work.

**1.1.117 Record Documents.** "Record Documents" means the collection of documents assembled and prepared by Contractor (including, without limitation, the Record Drawings and Specifications) showing the condition of the Work as actually built.

**1.1.118 Record Drawings, Record Specifications.** "Record Drawings" and "Record Specifications" mean the Drawings and Specifications marked by Contractor to show the condition, location and placement of the Work as actually built, including, without limitation, the locations of mechanical, electrical, plumbing or similar portions of the Work that are depicted diagrammatically in the Drawings.

**1.1.119 Reference Documents.** "Reference Documents" means reports, studies, surveys and other information provided by County for Contractor's review and consideration in preparing its Bid, including, without limitation, information describing the Site (including surface or subsurface conditions), Existing Improvements or Hazardous Substances at the Site.

**1.1.120 Request for Extension.** "Request for Extension" means a formal written request submitted by Contractor pursuant to Paragraph 8.2.3, below, setting forth the justification and support for Contractor's request for a Contract Adjustment to the Contract Time.

**1.1.121 Request for Information.** "Request for Information" means a written request by Contractor for clarification of what it perceives to be a discrepancy in the Contract Documents (including, without limitation, information in the Contract Documents constituting a Design Discrepancy or a variance between the information in the Bidding Documents or Contract Documents and conditions at the Site or in Existing Improvements).

**1.1.122 Safety Program.** "Safety Program" means the formal, written program prepared by Contractor setting forth detailed procedures and precautionary measures for protecting persons and property from injury or damage.

**1.1.123 Samples.** "Samples" means physical examples that, when approved by County and Architect, illustrate materials, equipment or workmanship by which the Work is to be evaluated and judged as part of the Submittal process.

**1.1.124 Schedule of Values.** "Schedule of Values" means a detailed, itemized breakdown of the Contract Price, which provides for an allocation of the dollar values to each of the various parts of the Work.

**1.1.125 Self-Performed Work.** "Self-Performed Work" means Work related to a Compensable Change or Deleted Work that is performed or to be performed by Contractor's own laborers who are employed by Contractor, rather than by the employees of a Subcontractor, using materials and equipment purchased by Contractor directly from a supplier or manufacturer.

**1.1.126 Separate Contractor.** "Separate Contractor" means a contractor, subcontractor, supplier or vendor under contract directly to County to provide services, materials, labor, equipment or other work to the Project.

**1.1.127 Shop Drawing.** "Shop Drawing" means a drawing, diagram, schedule and other data specially prepared for the Work by Contractor or a Subcontractor to illustrate some portion of the Work.

1.1.128 **Site.** "Site" means: (1) the parcel of land owned by County on which the Project is to be constructed and such additional parcels as may be purchased by County for such construction; (2) all areas adjacent to such parcels that may be used by Contractor or the Subcontractors for staging, storage, parking or temporary offices; and (3) all land areas, both private and public, adjacent to such parcels on which Work is required to be performed under the Contract Documents, Applicable Laws or permits relating to the Project.

1.1.129 **Specifications.** "Specifications" means the portion of the Contract Documents consisting of the written requirements for materials, equipment, standards and workmanship for the Work and performance of related services.

1.1.130 **Standard of Performance.** "Standard of Performance" means the general standard governing Contractor's performance of its obligations under the Construction Contract and General Conditions as set forth in Section 2.2 of the Construction Contract.

1.1.131 **State Water Resources Control Board.** "State Water Resources Control Board" means the State Water Resources Control Board of the State of California.

1.1.132 **Storm Water Permit.** "Storm Water Permit" means any applicable storm water, urban runoff or statewide general NPDES permit issued by the State of California or the United States pursuant to the provisions of the Clean Water Act (Title 33U.S.C. §§1251 et seq.) and/or Porter Cologne Water Quality Control Act (California Water Code §§13000 et seq.) and including any related regulations issued by the State of California or the United States.

1.1.133 **Sub-Bidder.** "Sub-Bidder" means a person or entity that submits a bid to a Bidder for some portion of the Work that is to be performed by that person or entity acting as a first-Tier Subcontractor.

1.1.134 **Subcontractor.** "Subcontractor" means a person or entity that has a contract to perform a portion of the Work, including without limitation, subcontractors, sub-subcontractors, suppliers, equipment operators, manufacturers and vendors, of any and every Tier.

1.1.135 **Submittal.** "Submittal" means a Shop Drawing, Product Data, Sample, detailed design, exemplar, fabrication and installation drawing, list, graph, operating instruction or other document required to be submitted by Contractor under the Contract Documents.

1.1.136 **Submittal Schedule.** "Submittal Schedule" means the schedule prepared by Contractor showing the timing for submission and review of Submittals during construction.

1.1.137 **Substantial Completion, Substantially Complete.** "Substantial Completion" and "Substantially Complete" mean the point at which the following conditions have occurred with respect to the entire Work or a portion of the Work designated by County in writing to be Substantially Completed prior to Substantial Completion of the entire Work:

.1 such Work is sufficiently and entirely complete in accordance with Contract Documents so that such Work can be fully enjoyed and beneficially occupied and utilized by County for its intended purpose (except for minor items which do not impair County's ability to so occupy and use such Work);

.2 all permits, approvals and certificates by Governmental Authorities, such as, but not necessarily limited to, a permanent or temporary certificate of occupancy required to occupy and use such Work have been issued free of any conditions that are the result of an act or omission of Contractor or a Subcontractor, of any Tier, constituting negligence, willful misconduct, a violation of an Applicable Law or a failure by Contractor or any Subcontractor, of any Tier, to comply with the Contract Documents; and

.3 all building systems included in such Work are operational as specified, all designated or required inspections and certifications by Governmental Authorities have been made and posted and instruction of County's personnel in the operation of the systems has been completed.

1.1.138 **Substantial Completion Punch List.** "Substantial Completion Punch List" means the list of items of Work to be completed or corrected by Contractor for Substantial Completion.

1.1.139 **Substitution.** "Substitution" means a material, product or item of material or equipment proposed by the Bidder or Contractor in place of that specified in the Bidding Documents or Contract Documents.

1.1.140 **Substitution Request Form.** "Substitution Request Form" means the form, so titled, that is included in the Bidding Documents for use by the Bidders when requesting a Substitution.

1.1.141 **Supplementary Conditions.** "Supplementary Conditions" means those portions of the Specifications that supplement, by addition, modification or deletion, a specific portion of the General Conditions.

1.1.142 **Surety.** "Surety" means Contractor's surety(ties) issuing the Bid Bond, Performance Bond or Payment Bond.

1.1.143 **Tier.** "Tier" means the contractual level of a Subcontractor with respect to Contractor. For example, a "first-tier" Subcontractor is under contract with Contractor. A sub-subcontractor under contract with a first-tier Subcontractor is in the "second tier," and so on. Use of the phrase "of every Tier", or similar phraseology, in the Contract Documents shall not be interpreted as implying that other provisions of the Contract Documents, where such phrase is not used, are intended to be limited in application to only the first Tier or to only certain other Tiers of Subcontractors.

1.1.144 **Time Impact Analysis.** "Time Impact Analysis" means a written report evaluating the impact of an Excusable or Compensable Delay, which shall include, at a minimum, the following: (1) a narrative description of the Delay and its impact on the critical path to achievement of a Substantial Completion or Final Completion of the Work or a portion of the Work designated by County within the Contract Time; (2) a Fragnet; (3) the number of Days of extension sought by Contractor as a Contract Adjustment to the Contract Time; (4) a computation of the Days of Compensable Delay multiplied times the liquidated damages payable to Contractor pursuant to Section 3.3 of the Construction Contract, if any, sought by Contractor; (5) a statement that Contractor has complied with the requirements of the General Conditions for written notice of Delays, along with the dates and copies of such notices; (6) the measures taken by Contractor and Subcontractors to prevent or minimize the Delay; and (7) Contractor's recommendations for reordering or re-sequencing the Work to avoid or minimize further Delay.

1.1.145 **Unexcused Delay.** "Unexcused Delay" means any Delay that is not a Compensable Delay or Excusable Delay or that constitutes a Compensable Delay or Excusable Delay for which Contractor is not entitled to a Contract Adjustment to the Contract Time, including, without limitation, the following: (1) Delay caused by an act or omission of Contractor or a Subcontractor, of any Tier, constituting negligence, willful misconduct, a violation of an Applicable Law or a failure by Contractor or any Subcontractor, of any Tier, to comply with the Contract Documents; (2) Delay for which Contractor has failed to provide a timely and complete Notice of Delay or Request for Extension; or (3) Delay associated with any circumstances where the costs or risk associated with such circumstances are designated in the Contract Documents as being at Contractor's risk or Contractor's Own Expense.

1.1.146 **Unilateral Change Order.** "Unilateral Change Order" means a writing signed by County in accordance with Article 7, below, in which County unilaterally sets forth its Good Faith Determination of the undisputed portion of an otherwise disputed Contract Adjustment.

1.1.147 **Work.** "Work" means all labor, materials, equipment, services, permits, licenses, taxes and other things necessary for Contractor to perform its obligations under the Contract Documents, including, without limitation, any Changes requested by County, in accordance with the Contract Documents and all Applicable Laws. The Work may constitute the whole or a part of the Project.

1.1.148 **Worker's Compensation Certificate.** "Worker's Compensation Certificate" means the statement, completed by Bidder in the form included in the Instruction to Bidders, evidencing the Bidder's compliance with the worker's compensation insurance requirements of the Bidding Documents and Applicable Laws.

## 1.2 CORRELATION, INTERPRETATION AND INTENT OF CONTRACT DOCUMENTS

1.2.1 **Design Intent.** The intent of the Contract Documents is for Contractor to provide all items necessary to produce a work of improvement that is complete as a whole and that is, in all of its parts, suitable for use and occupancy for its intended purpose, including, without limitation, all equipment, casework, mechanical, electrical and similar devices of whatever nature, completely installed, hooked-up and made fully operational and functional.



1.2.2 **Complementary.** Contract Documents are complementary, and what is called for by one shall be as binding as if called for by all. Any Work called for on the Drawings and not mentioned in the Specifications, or vice versa, shall be performed as though fully set forth in both.

1.2.3 **Technical Words.** Unless otherwise stated in the Contract Documents, technical words and abbreviations contained in the Contract Documents are used in accordance with commonly understood construction industry meanings and non-technical words and abbreviations are used in accordance with their commonly understood meanings.

1.2.4 **Trade Names.** It is not the intention of the Contract Documents to go into detailed descriptions of any materials or methods commonly known to the trade under a "trade name" or "trade term." The mere mention or notation of such "trade name" or "trade term" shall be considered a sufficient notice to the Contractor that it will be required to complete the Work so named with all its appurtenances according to first-class practices of the trade.

1.2.5 **Incidental Items.** The naming of any material or equipment shall mean furnishing and installing of same, including all incidental and accessory items thereto and labor therefor, in accordance with first-class practices of the trade involved, unless specifically noted otherwise.

1.2.6 **Drawing Dimensions.** Figured, derived or numerical dimensions on scale Drawings shall govern over Drawings without figured dimensions. The Drawings shall not be scaled to determine dimensions, and (except in the case of diagrammatic Drawings) dimensions shall be calculated from figures shown on the Drawings. Obvious discrepancies between scale and figured dimensions, not marked "not to scale," must be brought to the Architect's attention before proceeding with the Work affected by the discrepancy. Contractor shall carefully check and compare all portions of the Drawings and Specifications so as to correctly interpolate the intended dimensions for any portion of the Work that is not explicitly dimensioned in the Contract Documents.

1.2.7 **Drawings, Specifications.** In general, the Drawings will show dimensions, positions, and kind of construction and the Specifications will define materials, quality and standards. Work not particularly shown, detailed, marked or specified shall be the same as similar parts that are shown, detailed, marked or specified.

1.2.8 **Typical Work.** Work not particularly shown, detailed, marked or specified shall be the same as similar parts that are shown, detailed, marked or specified.

1.2.9 **Divisions of the Work.** All the Work mentioned or indicated in the Contract Documents shall be performed by Contractor as part of the Work unless specifically indicated in the Contract Documents to be done by others. The organization of the Specifications into divisions, sections and articles and the arrangement of the Drawings shall not control Contractor in dividing the Work among the Subcontractors or in establishing the extent of the Work to be performed by the Subcontractors.

1.2.10 **Applicable Laws.** Compliance with Applicable Laws shall be considered as a part of the Work.

1.2.11 **Interpretations of Laws.** In the event of a conflict between or among Applicable Laws governing performance of the Work, the more stringent shall govern. Contractor assumes, at Contractor's Own Expense, sole responsibility for, and the risk associated with, interpretations of Applicable Laws made by Contractor not predicated on written orders issued by Governmental Authorities that by their terms are applicable to the Project, including, without limitation, interpretations or assumptions made by Contractor based on decisions, orders or approvals (written or unwritten) issued by or on behalf of Governmental Authorities in connection with work on other projects or properties near or in the general vicinity of the Site.

1.2.12 **Modifiers.** The Contract Documents may omit modifying words such as "all" and "any," and articles such as "the" and "an." If a modifier or an article is not included in one statement and appears in another, it is not intended to affect the interpretation of either statement. The use of the word "including," when following any general statement, shall not be construed to limit such statement to specific items or matters set forth immediately following such word or to similar items or matters whether or not non-limiting language (such as "without limitation," "but not limited to," or words of similar import) is used with reference thereto, but rather shall be deemed to refer to all other items or matters that could reasonably fall within the broadest possible scope of such general statement.

1.2.13 **Singular, Gender, Captions.** When appropriate to the context, the use of the singular number shall be deemed to include the plural and vice versa. Each gender shall be deemed to include any other gender, and each shall include corporation, partnership, trust or other legal entity whenever the context so requires. The captions and headings of the various subdivisions of the Contract Documents are intended only as a matter of reference and convenience and in no way define, limit, or prescribe the scope or intent of the Contract Documents or any subdivision thereof.

1.2.14 **Cross-References.** Any cross-references indicated between various paragraphs or other portions of the Specifications, Drawings or other Contract Documents are provided for the convenience of Contractor and shall not be deemed to be all-inclusive.

1.2.15 **Diagrammatic Design.** Drawings and diagrams for mechanical, plumbing, electrical, fire sprinkler, fire alarm and low voltage Work shall be considered as diagrammatic only and shall not be used for any structural guidance or physical layout. Because such Drawings are diagrammatic, Contractor shall be responsible to provide any and all numbers and lengths of fittings, wire, conduit, connections, attachments or similar materials or devices needed to complete the Work, without Contract Adjustment, whether or not they exceed the numbers of pieces or the lengths indicated by such Drawings. Contractor is solely responsible to carefully plan and coordinate in advance, by means of coordination drawings prepared by Contractor or a Subcontractor, the installation of any Work shown diagrammatically and shall do so in such a manner as to make maximum use of the space available and anticipate and avoid wherever possible conflict and interferences among such portions of the Work and with other portions of the Work, including structural members.

1.2.16 **Demolition.** Existing Improvements at the Site of which no specific description is made in the Contract Documents, but which could be reasonably assumed to interfere with the satisfactory completion of the Work, shall be removed and disposed of by Contractor without Contract Adjustment. If Contractor is unsure whether a specific Existing Improvement at the Site which is not specifically described in the Contract Documents should be removed and disposed of, Contractor shall promptly ask the County whether such Existing Improvement is to be removed or remain in place, and shall comply with any directive given in response.

1.2.17 **Omissions.** Items missing from the Contract Documents shall nevertheless be provided by the Contractor, without Contract Adjustment, to the extent reasonably inferable from the Contract Documents as being necessary to satisfy the Design Intent.

1.2.18 **Conflicts.** Notwithstanding the provisions of Paragraph 1.2.19, below, in the event of conflict between any of the Contract Documents, the provision placing a more stringent requirement or greater burden on the Contractor or requiring the greater quantity or higher quality material or workmanship shall prevail, unless otherwise directed by the County in writing.

1.2.19 **Order of Precedence.** Conflicts that cannot be resolved in accordance with the rules of interpretation set forth elsewhere in this Section 1.2, shall be interpreted in accordance with the following order of precedence (the first being the highest order of precedence):

.1 Applicable Laws (provided, however, and notwithstanding Subparagraph 1.2.19.10, below, where the Contract Documents or manufacturer's recommendations or specifications require standards higher than those of Applicable Laws, the Contract Documents or manufacturer's recommendations or specifications shall control);

.2 Change Orders, Unilateral Change Orders and Construction Change Directives;

.3 Addenda;

.4 Construction Contract;

.5 Supplementary Conditions;

.6 General Conditions;

.7 General Requirements;

.8 Specifications;

.9 Drawings, subject to the following: (1) large scale plans and details take precedence over small scale Drawings in all cases; (2) full scale Drawings have precedence over both large and small scale Drawings in all cases; (3) detailed Plans and/or Drawings shall have precedence over general Plans and/or Drawings; (4) architectural and structural Drawings take precedence over electrical and mechanical Drawings in regard to location and arrangement of fixtures, outlets, and equipment; and (5) electrical and mechanical Drawings take precedence in describing and specifying equipment and in describing the diagrammatic requirements;

.10 standard and reference specifications which include industry norms, such as, but not limited to, ANSI and ASTM; and

.11 Reference Documents.

1.2.20 **Conditions Precedent.** Wording used in the Contract Documents indicating that a right of the Contractor or an obligation of the County is subject to or conditioned upon the occurrence of a condition or event, whether or not such condition or event is within the control of Contractor, County or others and whether or not such condition or event is expressly stated to be a "condition precedent", shall be understood and interpreted to mean that the stated condition or event is a condition precedent to the existence, arising, performance and exercise of such right or obligation.

### 1.3 OWNERSHIP AND USE OF DRAWINGS, SPECIFICATIONS AND OTHER DOCUMENTS

1.3.1 **Property of County.** Subject to the provisions of Paragraph 2.4.4, below, all Design Documents, Contract Documents and Project Documents that are prepared by Contractor or a Subcontractor, of any Tier, for use in connection with the Project, including any designs, building designs or other depictions underlying or shown in them, and the Intellectual Property Rights thereto, shall be deemed the sole and exclusive property of County and ownership thereof is irrevocably vested in County, whether the Project is executed or not.

1.3.2 **Assignment of Rights.** Contractor shall, without further consideration, obtain any and all Intellectual Property Rights in the Project Documents and Design Documents prepared by Contractor or any Subcontractor, of any Tier, for use in connection with the Project, including any designs, building designs or other depictions underlying or shown in them, free and clear of any liens or other encumbrances, claims or rights of third parties, transfer such rights, if necessary in writing, to County and cooperate with County in securing and registering such rights, such that County shall own all Intellectual Property Rights and any other tangible and/or intangible property rights associated therewith. Such transfer and assignment will be effective for the entire duration of the copyrights and include, but are not be limited to, all rights in related plans, specifications, documentation, derivative works and moral rights.

1.3.3 **Contractor's Warranty.** Contractor represents and warrants that the Project Documents and Design Documents prepared by Contractor or any Subcontractor for use on the Project, and the use of such Project Documents in the ordinary course, are free of any claim of infringement or any other violation of any Intellectual Property Right or other right of any third party.

1.3.4 **Non-Exclusive License.** Without derogation of County's rights under this Section 1.3, Contractor and Subcontractors, of every Tier, are granted a limited, non-exclusive license, revocable at will of County, to use and reproduce applicable portions of the Design Documents, Contract Documents and Project Documents as appropriate to and for use in the execution of the Work and for no other purpose.

1.3.5 **Reproduction.** Contractor shall do all reproduction and distribution of such reproducible prints of Contract Documents and Design Documents as are necessary for the complete pricing and performance of the Work, including, without limitation, all Changes. The costs of such reproduction shall be at Contractor's Own Expense.

1.3.6 **Delivery to County.** All Design Documents and Contract Documents (including originals and copies), and one (1) copy of all other Project Documents, in the possession of Contractor or Subcontractors shall be delivered to County upon the earlier of Final Completion of the Work or termination of the Construction Contract; provided, however, that Contractor shall have the right to retain one (1) copy of the Contract Documents and Submittals as a permanent record.

1.3.7 **Subcontractors.** Contractor shall take all necessary steps to ensure that a provision is included in all contracts with Subcontractors, of every Tier, who perform Work on the Project protecting and preserving County's rights as set forth in this Section 1.3.

## ARTICLE 2 COUNTY RIGHTS AND OBLIGATIONS

### 2.1 INFORMATION, APPROVALS AND SERVICES REQUIRED OF COUNTY

2.1.1 **Legal Descriptions.** County shall furnish, within a reasonable time after written request by Contractor, a legal description of the Site and information describing legal limitations affecting the Site that are recorded with applicable Governmental Authorities, such as, but not limited to, easements.

2.1.2 **Permits and Fees.** County shall secure and pay for only those permits and fees which are expressly stated to be the responsibility of County under the Contract Documents. County shall pay for all hook-up fees (not including "tap fees", which are the responsibility of Contractor pursuant to Paragraph 3.14.3, below) in order to establish a new account with a utility provider.

2.1.3 **County Approvals.** Information, approvals and decisions required of County or a County Consultant for which a County Review Period or County Review Date is included in the Construction Schedule that is approved by County shall be provided in accordance with the Construction Schedule. If a County Review Period or County Review Date is not set forth in the Construction Schedule approved by County, then such information, approvals and decisions shall be provided upon written request by Contractor without unreasonable Delay. Notwithstanding the foregoing, failure by County, Architect or a County Consultant to provide any information, approvals or decisions shall not be considered as a basis for Contract Adjustment to the Contract Time unless and until, and in calculating a Contract Adjustment any Delay or extension of the Contract Time resulting from a late-issuance of such information, approval or decision shall not commence until after:

.1 in the case of information, approval or decision for which there is a County-approved County Review Period or County Review Date in the County-approved Construction Schedule, seven (7) Days have passed since the County and the individual from whom such information, approval or decision is sought have received from Contractor a written notice containing all the following:

- (1) a detailed description of the information, approval or decision required;
- (2) a statement that the County Review Period or County Review Date has expired or passed; and
- (3) a statement, prominently displayed, that: "PURSUANT TO PARAGRAPH 2.1.3 OF THE GENERAL CONDITIONS, THE FAILURE TO PROVIDE THE REQUESTED INFORMATION, APPROVAL OR DECISION WITHIN 7 CALENDAR DAYS FROM THIS NOTICE MAY RESULT IN A REQUEST FOR A CONTRACT ADJUSTMENT"; or

.2 in the case of information, approval or decision for which there is no County Review Period or County Review Date set forth in the County-approved Construction Schedule, thirty (30) Days have passed since the County and the individual from whom such information, approval or decision is sought have received from Contractor a written notice that includes the statements set forth Clauses (1) and (2) of Subparagraph 2.1.3.1, above, and that includes a statement, prominently displayed, that: "PURSUANT TO PARAGRAPH 2.1.3 OF THE GENERAL CONDITIONS, THE FAILURE TO PROVIDE THE REQUESTED INFORMATION, APPROVAL OR DECISION WITHIN 30 CALENDAR DAYS FROM THIS NOTICE MAY RESULT IN A REQUEST FOR A CONTRACT ADJUSTMENT".

**2.1.4 Approvals.** Contractor shall not be relieved of its obligations to perform the Work in accordance with the Contract Documents either by the activities or duties of County, Architect or any other Project Team member, or by tests, inspections or approvals required or performed by persons other than the Contractor.

**2.1.5 Non-Specified Items.** County reserves the right to approve materials and sources of supply of materials that are not specified in the Contract Documents and that are used for the performance of the Work.

## **2.2 COUNTY'S RIGHT TO STOP THE WORK**

If Contractor fails to correct Defective Work as required by Section 13.2 of these General Conditions, fails to perform the Work in accordance with the Contract Documents or violates any Applicable Law, County may immediately order Contractor to stop the Work, or any portion thereof, until the cause for such direction has been eliminated by Contractor. Contractor shall immediately comply with such notice at Contractor's Own Expense. Nothing stated herein or elsewhere in the Contract Documents shall be interpreted as placing upon County a duty or responsibility to Contractor or any other party to exercise its right to stop the Work.

## **2.3 COUNTY'S RIGHT TO CARRY OUT THE WORK**

If Contractor fails to carry out the Work in accordance with the Contract Documents, fails to provide sufficient labor, materials, equipment, tools and services to maintain the Construction Schedule, or otherwise fails to comply with any requirement of the Contract Documents, and fails to cure such failure in the manner required by Subparagraph 15.1.1.4, below, County may correct such failure. In such case, County shall be entitled to recover from Contractor or deduct from payments then or thereafter due Contractor for any Loss resulting from such failure, including compensation for the additional services and expenses of County, County Consultants and others whose services are reasonably required and made necessary thereby. If payments then or thereafter due Contractor are not sufficient to cover such amounts, Contractor shall promptly pay the amount of the shortfall to County.

## **2.4 ACCOUNTING, RECORDS AND AUDIT**

**2.4.1 Accounting System.** Contractor shall exercise such controls as may be necessary for proper financial management of the Work. Such accounting and control systems shall comply with prevailing custom and practice for similar projects, be satisfactory to County and shall include preservation of the books and records described in Paragraph 2.4.2, below, subject to Contractor's obligations under Paragraph 1.3.6, above, for a period of ten (10) years after Final Completion of the Work, or for such longer period as may be required by Applicable Laws.

**2.4.2 Books and Records.** Contractor shall keep, and shall require provisions to be included in all contracts entered into by Subcontractors, of every Tier, requiring the Subcontractors, of every Tier, to keep, full and detailed books, records, information, materials and data, of every kind and character (hard copy, as well as computer readable data if it exists) that have any bearing on or pertain to any matters, rights, duties or obligations relating to the Project, Work or Construction Contract, including, without limitation, agreements, purchase orders, leases, contracts, commitments, arrangements, notes, change orders, change order requests, estimates, field orders, construction change directives, schedules, requests for information, diaries, logs, reports, shop drawings, samples, exemplars, drawings, specifications, invoices, delivery tickets, receipts, vouchers, cancelled checks, memoranda, accounting records; job cost reports, job cost files (including complete documentation of negotiated settlements), backcharges, general ledgers; documentation of cash and trade discounts earned, insurance rebates and dividends, and other documents relating in any way to any claims, charges or time extensions asserted by Contractor or any of the Subcontractors, of any Tier, or relating to any credits, rebates or discounts owing to County.

**2.4.3 Inspection and Copying.** Contractor shall allow, and shall require provisions to be included in all contracts entered into by Subcontractors, of every Tier, allowing, County and the auditor for the State of California (and the authorized representative(s), auditors, attorneys and accountants of each) upon twenty-four (24) hours notice to Contractor, full access to inspect and copy all its aforesaid books and records at a location within the Southern California area. Such right of audit may be exercised by either County or the auditor for the State of California as often as reasonably necessary to verify Contractor's continuing compliance with the Contract Documents.

**2.4.4 Confidential Information.** Nothing stated in this Section 2.4 or elsewhere in the Contract Documents shall be interpreted as a waiver by Contractor or any Subcontractor of any rights of privilege or confidentiality that are

provided for by Applicable Law nor as authorizing the inspection of books and records that contain information concerning estimating means or methods that is not, in whole or part, relevant to a charge or demand being asserted by Contractor or a Subcontractor involving Extra Work, Deleted Work, Delay or a Claim.

**2.4.5 Withholding of Payment.** In addition to and without limitation upon County's other rights and remedies for breach, including any rights of County to withhold payment that are set forth elsewhere in the Contract Documents, County shall have the right, exercised in its sole discretion, to withhold from any payment due to Contractor under an Application for Payment a sum of up to ten percent (10%) of the total amount set forth in such Application for Payment until Contractor and the Subcontractors have complied with any outstanding and unsatisfied obligation under this Section 2.4. Upon compliance with this Section 2.4, any such monies withheld shall be released to Contractor.

**2.4.6 Specific Performance.** Contractor agrees that any failure to provide access to books and records as required by this Section 2.4 will result in irreparable harm and prejudice to County and shall, without the necessity of posting of any bond or undertaking, be specifically enforceable by means of a mandatory injunctive order (temporary, preliminary, provisional or otherwise) issued by a court of competent jurisdiction, which order the County and Contractor hereby consent to being issued based upon affidavits and without the necessity of oral testimony.

## **2.5 COUNTY FURNISHED MATERIALS**

**2.5.1 Supply by County.** County shall have the right to furnish materials, products or equipment directly for processing and incorporation by Contractor in lieu of Contractor providing materials, products or equipment specified in the Contract Documents to be provided by Contractor as part of the Work.

**2.5.2 Deleted Work.** If the materials, products or equipment provided by County pursuant to Paragraph 2.5.1, above, then a Change Order shall be executed deleting such materials, products or equipment from the Work along with a Contract Adjustment reducing the Contract Price in the manner provided for in Article 7, below, applicable to Contract Adjustments for Deleted Work.

**2.5.3 Delivery Deadlines.** Without limitation to Contractor's obligations under Article 8, below, upon receipt of written instruction by County of its intent to provide materials, products or equipment pursuant to this Section 2.6, Contractor shall notify County promptly in writing of any deadlines within which such materials, products or equipment must be received at the Site in order to avoid Delay.

**2.5.4 Delivery to Site.** Contractor shall, upon their delivery to the Site, properly receive and unload materials, products or equipment furnished by County pursuant to this Section 2.5.

**2.5.5 Care, Custody and Control.** Contractor assumes full and unconditional responsibility for care, custody and control of the materials, products or equipment that are furnished by County pursuant to this Section 2.5, whether or not they have been accepted by County, and assumes sole responsibility for any subsequent loss, injury or damage thereto occurring prior to Final Completion.

**2.5.6 Notice of Deficiencies.** Contractor shall carefully inspect any materials, products or equipment furnished by County pursuant to this Section 2.5 and immediately notify County of any defect or deficiency in such materials, products or equipment or any nonconformity in such materials, products or equipment with the requirements of the Contract Documents or with the requirements of the other documentation provided to Contractor setting forth the conditions of County's purchase. Contractor shall not accept any materials, products or equipment furnished by County with respect to which Contractor has provided such notice of defect, deficiency or non-conformity unless and until instructed to do so in writing by County.

**2.5.7 Incorporation in Work.** Contractor shall, as part of the Work and without Contract Adjustment, provide any and all processing, fabrication, cutting, shaping, fitting, assembly and installation of materials, products or equipment furnished by County pursuant to this Section 2.5 in full compliance with the requirements of the Contract Documents and the manufacturer's instructions and recommendations.

## 2.6 COUNTY INSTALLED ITEMS

Contractor shall notify County, a reasonable time in advance, of the Contractor's scheduled dates for installation of items that are specified in the Contract Documents to be placed on, attached to or incorporated into the Work by County or Separate Contractors. In the event that Contractor fails to do so or if due to Unexcused Delay the County is unable after such notice by Contractor to so place, affix or incorporate such items, then Contractor shall be responsible, in addition to any amounts due to County for liquidated damages, to reimburse County for costs of storage or rental of temporary replacement items until such time as the Work is in a condition suitable for such items to be placed, affixed or incorporated.

## 2.7 COUNTY'S ADDITIONAL RIGHTS

The rights stated in this Article 2 are in addition to and not in limitation of any other rights of County granted elsewhere in the Contract Documents or under Applicable Laws.

# ARTICLE 3 CONTRACTOR PERFORMANCE

## 3.1 CONTRACTOR STATUS

3.1.1 **Independent Contractor.** Contractor is, and shall at all times be deemed to be, an independent contractor and is wholly responsible for the performance of the obligations required of it by the terms of the Contract Documents.

3.1.2 **Agents, Employees.** Contractor wholly assumes responsibility for the acts and omissions of its agents and employees and the agents and employees of each Subcontractor, of every Tier, as they relate to the Work. Contractor, its agents and employees, shall not be entitled to any rights or privileges of County's employees and nothing contained in the Contract Documents and no course of conduct shall be construed as creating the relationship of employer and employee, or principal and agent, between County and any agent or employee of Contractor or any Subcontractor. County shall have the right, but not the obligation, to monitor the employment and other activities of Contractor and the Subcontractors to determine compliance with the terms of the Contract Documents.

3.1.3 **Licenses.** Contractor and the Subcontractors, of every Tier, shall maintain, such contracting, professional and business licenses as may be required by Applicable Laws for the duration of time that Contractor is performing the Work under the Contract Documents, including the period of any warranty provided covering all or any portion of the Work.

3.1.4 **Subcontractors.** Contractor is responsible to County for acts and omissions of the Subcontractors and their agents and employees and other persons performing portions of the Work under a contract with a Subcontractor, of any Tier.

3.1.5 **Design Services.** Contractor shall provide professional services if such services are expressly, or by reasonable implication, required by the Contract Documents for a portion of the Work or are required in order for Contractor to carry out the Contractor's responsibilities for construction means, methods, techniques, sequences and procedures. Professional design services or certifications so required of Contractor shall be furnished by design professionals exercising the highest standard of care and utilizing designs and engineering that comply with all systems, materials or equipment, performance and design criteria set forth in the Contract Documents. Certification by a properly licensed design professional, including such professional's signature and seal, shall appear on all drawings, calculations, specifications, certifications and other documents prepared by such professional. Submittals related to the Work designed or certified by such professional, if prepared by others, shall bear such professional's written approval when submitted. County, Architect and County Consultants shall be entitled to rely upon the adequacy, accuracy and completeness of the services, certifications or approvals performed by such design professionals.

## 3.2 REVIEW OF DOCUMENTS, SITE AND EXISTING IMPROVEMENTS

3.2.1 **Contractor's Duty of Review.** Contractor's submission of its Bid and execution of the Construction Contract constitutes its representation, acknowledgement and agreement that it had sufficient time, access and opportunity prior to the Bid Closing Deadline to conduct a careful and thorough examination, to its satisfaction, of:

.1 the Bidding Documents, Contract Documents, Reference Documents and other information provided by County to Contractor prior to the Bid Closing Deadline concerning the Project, Site or Existing Improvements;

.2 the visible conditions at the Site and its surroundings, visible conditions of Existing Improvements and their existing uses by County or the public, routes of ingress and egress, and local conditions in the vicinity of the Site (including, without limitation, sources and availability of labor, materials and equipment);

.3 the status of any construction at the Site concurrently under construction; and

.4 all information concerning visible and concealed conditions above and below the surface of the ground at the Site and in Existing Improvements (including, without limitation, surveys, reports, data, as-built drawings of Existing Improvements and utility sources, capacities and locations) that was either (1) provided by County to Contractor or other Bidders (including, but not limited to, the Bidding Documents and Reference Documents) or (2) reasonably available to Contractor for review in the public records of the County of Riverside or the City in which the Project is located.

### 3.2.2 Contract Adjustments.

.1 **Differing Site Conditions.** Except as otherwise provided in Subparagraph 3.2.3, below, the Contractor's right to a Contract Adjustment in the event Contractor encounters conditions at the Site or in Existing Improvements that vary from those indicated by the Contract Documents or other information that was either reviewed by Contractor or that Contractor was given the opportunity to review prior to the Bid Closing Deadline shall be governed exclusively by Paragraph 4.3.8, below, pertaining to Differing Site Conditions.

.2 **Design Discrepancies.** Except as otherwise provided in Subparagraph 3.2.3, below, and subject to the Contractor's compliance with the other provisions of the Contract Documents governing the Contractor's right to a Contract Adjustment (including, without limitation, Article 7 and Article 8, below), Contractor shall be entitled to a Contract Adjustment due to Design Discrepancies, subject to the following conditions and limitations:

(1) **Compensable Change.** There shall be no Contract Adjustment to the Contract Price for Extra Work that the Contractor is required to perform as a result of a Design Discrepancy unless all of the following conditions have been met prior to Contractor or any Subcontractor performing any portion of the Work involving or affected by such Design Discrepancy:

(a) the circumstances giving rise to such Extra Work conform to all of the requirements of Subparagraph 1.1.29.2 through Subparagraph 1.1.29.4, above, applicable to Compensable Changes;

(b) Contractor has submitted to County and Architect a Request for Information in compliance with Paragraph 3.2.5, below, seeking clarification of such Design Discrepancy;

(c) Contractor has submitted to County a timely and complete Notice of Change in accordance with Article 7, below, describing such Extra Work in detail;

(d) Contractor has received a Construction Change Directive signed by County in accordance with Article 7, below, directing that Contractor perform the portion of the Work in question; and

(e) unless otherwise provided in such Construction Change Directive, Contractor has submitted to County a Change Order Request in accordance with the requirements of Article 7, below, setting forth the particulars of its request for Contract Adjustment on account of such Extra Work.



**(2) Compensable Delay.** There shall be no Contract Adjustment to the Contract Price or Contract Time for Delay as a result of a Design Discrepancy unless all of the following conditions have been met prior to Contractor or any Subcontractor performing any portion of the Work involving or affected by such Design Discrepancy:

**(a)** if the Delay is the result, in whole or in part, of Extra Work, all of the requirements of Subparagraph 3.2.2.2 (1), (a) through (e), above, have been met;

**(b)** the circumstances giving rise to such Delay conform to all of the requirements of Subparagraph 1.1.30.2 and Subparagraph 1.1.30.3, above, applicable to Compensable Delay; and

**(c)** Contractor has submitted to County a timely and complete Notice of Delay and a timely and complete Request for Extension in accordance with Article 8, below, setting forth the particulars of its request for Contract Adjustment on account of such Compensable Delay.

**(3) Differing Site Conditions.** The Contractor's right to a Contract Adjustment as a result of variances between (a) the Contract Documents or other documents or information described in Paragraph 3.2.1, above, that, prior to the Bid Closing Deadline was either reviewed by Contractor or was available to Contractor for review prior to the Bid Closing Deadline and (b) conditions at the Site or in Existing Improvements shall, notwithstanding the fact that the circumstances asserted by Contractor as a basis for such Contract Adjustment may involve, relate to or arise out of a Design Discrepancy, be governed by the provisions of the Contract Documents setting forth the Contractor's right to Contract Adjustments on the grounds of Differing Site Conditions.

### **3.2.3 WAIVER BY CONTRACTOR.**

**CONTRACTOR AGREES THAT IT SHALL NOT BE ENTITLED TO, AND HEREBY CONCLUSIVELY WAIVES, ANY RIGHT TO CONTRACT ADJUSTMENT, AS WELL AS THE RIGHT TO ANY OTHER OR FURTHER RECOURSE OR RIGHT OF RECOVERY FROM COUNTY, ON ACCOUNT OF LOSSES OR DELAYS THAT ARE A RESULT OF EITHER A DIFFERING SITE CONDITION OR A DESIGN DISCREPANCY, IF PRIOR TO THE BID CLOSING DEADLINE SUCH DIFFERING SITE CONDITION OR DESIGN DISCREPANCY WAS:**

**(1) DISCOVERED BY CONTRACTOR AND CONTRACTOR, NOTWITHSTANDING SUCH DISCOVERY, FAILED TO REPORT SUCH DIFFERING SITE CONDITION OR DESIGN DISCREPANCY TO COUNTY IN WRITING PRIOR TO THE BID CLOSING DEADLINE;**

**(2) ALTHOUGH NOT ACTUALLY DISCOVERED BY CONTRACTOR PRIOR TO THE BID CLOSING DEADLINE WAS REASONABLY DISCOVERABLE BY CONTRACTOR UNDER THE STANDARD OF PERFORMANCE SPECIFIED IN THE CONSTRUCTION CONTRACT, INCLUDING, WITHOUT LIMITATION, A DIFFERING SITE CONDITION OR DESIGN DISCREPANCY THAT WAS OVERLOOKED BY CONTRACTOR DUE TO A FAILURE BY CONTRACTOR TO FULLY FAMILIARIZE ITSELF PRIOR TO THE BID CLOSING DEADLINE WITH ANY OF THE DOCUMENTS, INFORMATION OR CONDITIONS REFERRED TO IN PARAGRAPH 3.2.1, ABOVE.**

**3.2.4 Continuing Obligation.** In addition and without limitation to Contractor's obligations under Paragraph 3.2.1, above, or elsewhere in the Contract Documents, Contractor shall have the continuing obligation until Final Completion to promptly report to County, by means of submission by Contractor of a Request for Information that complies with the requirements of Paragraph 3.2.5, below, any and all of the following:

**.1** information contained in the Bidding Documents, Contract Documents, Reference Documents or other documentation that was either reviewed by Contractor or that Contractor was given the opportunity to review prior to the Bid Closing Deadline, as well as any visible conditions at the Site, in Existing Improvements or in the vicinity of the Project, that Contractor knows, or in the exercise by Contractor of its duties under the Standard of Performance should have known, may render a portion of the Work in any respect, wholly or partially, unsuitable or incomplete to meet the requirements of the Contract Documents, the Design Intent or Applicable Laws, and

**.2** conditions in the Work that constitute Defective Work or that cause or are likely to cause any other portion of the Work to be Defective Work.

Without limitation to County's other rights under the Contract Documents, any portion of the Work, Existing Improvements or the work of Separate Contractors or County's own forces requiring replacement, repair or correction due to a failure by Contractor or any Subcontractor, of any Tier, to comply with its continuing obligation under this Paragraph 3.2.4 shall be promptly replaced, repaired or corrected to County's satisfaction, at Contractor's Own Expense.

### 3.2.5 **Requests for Information.**

**.1 Time for Submittal.** Requests for Information shall be submitted no later than three (3) Days after the date Contractor learns of the circumstances giving rise to the question contained in the Request for Information. Requests for Information shall be submitted by or through the Contractor and not directly by Subcontractors.

**.2 Content.** Each Request for Information shall, in addition to the Contractor's specific question or request, include the following:

(1) a detailed description of the circumstances giving rise to the Contractor's request or question, including, without limitation, any related Design Discrepancy;

(2) Contractor's request for clarification, including, without limitation, any request for further detailing or correction of the Contract Documents; and

(3) a statement of whether Contractor believes it is entitled to a Contract Adjustment by reason of the circumstances described.

**.3 Form.** Contractor shall submit Requests for Information using forms provided or approved by County.

**.4 Unnecessary, Multiple Requests.** Contractor shall carefully review, coordinate and consolidate (where appropriate to prevent piecemeal submission) Requests for Information (whether originating with Contractor or the Subcontractors) prior to submitting them in order to eliminate unnecessary or duplicative requests.

**.5 Responses.** Responses to Requests for Information shall be furnished with reasonable promptness so as to not unreasonably Delay progress of the Work; provided, however, that the timing of a response by the Architect, County or a County Consultant to a Request for Information shall not constitute grounds for a Contract Adjustment unless Contractor has complied with the requirements set forth in this Paragraph 3.2.5 and, if applicable, Paragraph 2.1.3, above.

**.6 Back Charges by County.** County shall have the right to deduct from payments due to Contractor sums expended by County for the services of the Architect, Inspectors of Record or County Consultants due to a failure by Contractor to comply with this Paragraph 3.2.5.

### **.7 WAIVER BY CONTRACTOR.**

**FAILURE BY CONTRACTOR TO SUBMIT A REQUEST FOR INFORMATION IN ACCORDANCE WITH AND UNDER CIRCUMSTANCES IN WHICH A REQUEST FOR INFORMATION WAS REQUIRED BY THIS PARAGRAPH 3.2.5 SHALL RESULT IN CONTRACTOR WAIVING ITS RIGHT TO A CONTRACT ADJUSTMENT ON ACCOUNT OF ANY LOSS OR DELAY THAT COULD HAVE BEEN AVOIDED IF SUCH REQUEST FOR INFORMATION HAD BEEN PROPERLY PREPARED AND TIMELY SUBMITTED.**

**3.2.6 Correction of Work.** Contractor shall, at Contractor's Own Expense, correct or replace in accordance with the direction of County any portion of the Work that is performed by Contractor or a Subcontractor knowing that it involves, or that Contractor or Subcontractor in the exercise of reasonable care and diligence should have known involves, a portion of the Contract Documents that contains an error, omission, conflict, ambiguity, lack of coordination or noncompliance with Applicable Laws, without first notifying and obtaining the written approval of County and Architect.

### 3.3 SUPERVISION AND CONSTRUCTION PROCEDURES

3.3.1 **General Obligation.** Contractor shall provide competent, fully qualified personnel to supervise, administer, manage and direct the Work, competently and efficiently, at all times devoting their best skill and attention to perform the Work in accordance with the Contract Documents.

3.3.2 **Supervisory Staff.** Contractor shall employ a competent project manager, superintendent, scheduler, forepersons and necessary assistants during performance of the Work. Contractor's superintendent and forepersons shall be present at the Site at all times that the Work is in progress and at any time that any employee of Contractor or a Subcontractor is present at the Site. Contractor's project manager and superintendent shall, unless excused from attendance by the County, attend all job meetings. Contractor's project manager and superintendent must be able to fluently read and write in English. Contractor's superintendent shall not perform the Work of any trade, pick up materials, or perform any Work not directly related to the supervision of the Work and shall be available twenty-four (24) hours a Day, seven (7) Days a week, to respond to emergencies.

3.3.3 **County Supplementary Personnel.** Without limitation upon any of the rights or remedies of the County under the Contract Documents or under Applicable Laws, in the event that Contractor fails to have personnel on Site to supervise the Work, the County shall have the right, but not the obligation, upon twenty-four (24) hours' telephonic or email notice by the County to Contractor, to provide such supervision on a temporary basis and to deduct from the sums owing to Contractor the actual costs of such temporary supervision. Contractor shall, notwithstanding the County's providing such temporary supervision, remain solely responsible for all actions and omissions of its personnel and of the Subcontractors.

3.3.4 **Means, Methods, Procedures.** Contractor shall be solely responsible for and have control over construction means, methods, techniques, sequences and procedures and coordinating all portions of the Work, unless the Contract Documents specify other specific instructions concerning these matters. If the Contract Documents give specific instructions concerning construction means, methods, techniques, sequences or procedures, Contractor shall nonetheless be fully and solely responsible for the adequacy and safe implementation of such means, methods, techniques, sequences or procedures. If Contractor believes that such specified means, methods, techniques, sequences or procedures may not be safe or adequate, Contractor shall give written notice to County and Architect and shall not proceed with that portion of the Work without further written instruction from County or Architect. In response to such notice, County may order Contractor to improve the character or increase the efficiency of the means, methods, techniques, sequences or procedures employed, and Contractor shall conform to such order; but the failure of County to order such improvement or increase of efficiency will neither relieve Contractor from its sole responsibility for safety at the Site nor relieve Contractor from its obligation to perform the Work in accordance with the Contract Documents and Applicable Laws.

### 3.4 LABOR, MATERIALS AND EQUIPMENT

3.4.1 **Costs of Work.** Contractor shall provide and pay for labor, materials, tools, equipment, machinery, water, heat, utilities, transportation, facilities and services necessary for proper execution and completion of the Work, whether temporary or permanent and whether incorporated or to be incorporated into the Work.

3.4.2 **Coordination.** Contractor shall provide supervision sufficient to ensure proper coordination for the timely and efficient performance and completion of the Work.

3.4.3 **Field Conditions.** Before commencing the Work or any activities on the Site, Contractor shall take field measurements and verify field conditions and carefully compare such field measurements and conditions with the information in the Contract Documents and other information obtained by or available to Contractor.

3.4.4 **Layout.** Contractor is solely responsible for (1) the accurate layout of all portions of the Work, (2) the accuracy of the Project lines and levels, (3) erection of the Work square, plumb, level, true to line and grade, in the exact plane, and to the correct elevation and (4) sloping of surfaces to drain as indicated by the Contract Documents, or, if not indicated, as needed to provide for adequate drainage.

#### 3.4.5 Materials, Equipment

**.1 Delivery, Storage, Inventory.** Materials and equipment shall be: (1) furnished in ample quantities and at such times as to ensure uninterrupted progress of the Work; and (2) if located on the Site, properly stored and protected as reasonable and necessary, or as directed by County, to prevent Loss from any foreseeable cause, including, without limitation, theft. In the event that County gives direction as to the location for storage or protection of materials or equipment on the Site, Contractor shall nonetheless remain solely responsible for its safe and secure storage and protection. No part of any such stored materials and equipment shall be removed from its place of storage except for immediate installation in the Work. Contractor shall keep an accurate inventory of all such stored materials and/or equipment in a manner satisfactory to County.

**.2 Purchases.** Contractor shall place orders for materials and/or equipment as specified so that delivery of same may be made without Delay to the Work. Contractor shall, upon request from County, furnish to County documentary evidence showing that orders have been placed. County reserves the right in the event Contractor fails, within three (3) Days after receipt of written notice by County to Contractor to comply with the requirements of this Subparagraph 3.4.5.2, to deduct the costs paid or payable by County associated with such purchases from payments otherwise owing to Contractor. Contractor shall, if requested by County, accept assignment of any such contracts entered into by County without a Contract Adjustment.

**.3 Title.** No material, supplies or equipment for the Work shall be purchased subject to any chattel mortgage or under a conditional sale or other agreement by which an interest therein or in any part thereof is retained by seller or supplier. Contractor warrants good title to all material, supplies and equipment installed or incorporated in the Work and agrees upon Final Completion to deliver the Work, including the premises, land, improvements and appurtenances on or to which the Work is placed, located or affixed, to County free from any claims, liens, or charges. Contractor further agrees that neither it nor any person, firm, or corporation furnishing any materials or labor for any of the Work shall have any right of lien upon the Site, or any Existing Improvement or appurtenance thereon, except that (1) nothing stated in this Subparagraph 3.4.5.3 shall be interpreted as a waiver by Contractor or any Subcontractor of its right under Applicable Laws to serve a stop payment notice for Work that is not paid for by County as required under the terms of the Contract Documents; and (2) Contractor may install metering devices or other equipment of utility companies or political subdivisions, title to which may be retained by such utility company or political subdivision, provided that in the event of installation of any such metering device or utility equipment, Contractor shall advise County as to the owner, and the precise location, thereof.

**.4 Substitutions.** No substitution of materials, equipment, articles, processes or other items of the Work required under the Contract Documents will be made without written approval of County, which approval may be granted or denied in the sole and absolute discretion of County. With respect to any such substitution made or requested by Contractor, neither the occurrence of a substitution made or requested by Contractor nor the approval or disapproval by County of a substitution that is made in accordance with this Subparagraph 3.4.5.4 shall give rise to any right of Contractor to a Contract Adjustment. Contractor shall, notwithstanding County's or Architect's approval, remain solely responsible for the sufficiency and suitability of all substitutions requested by Contractor and approved, or otherwise made, by Contractor.

**.5 Parts List.** Contractor will provide a printed parts list for all items which might be subject to replacement and for which parts lists are either expressly required by the Contract Documents or customarily provided according to usual commercial practices.

**.6 Manuals.** As part of its obligation for submission of Record Documents, four (4) hard copies and one (1) electronic version of operations and maintenance manuals shall be prepared and transmitted by Contractor to County prior to and as a condition of Final Completion. Final Payment will not be due until County has received all such manuals and all other manuals covering the Work that are either required to be provided by the terms of the Contract Documents or if not required are customarily provided according to usual commercial practices applicable to the portion of Work involved. Operating instructions will be included within the equipment manuals and will state all information necessary for County to operate, use, maintain and service the equipment fully and efficiently.

**.7 Start Up.** Contractor will be responsible for start-up of all systems and equipment purchased as part of the Work and has included sufficient amounts in its Bid to cover contingencies arising out of the start-up of such systems and equipment. Contractor will comply fully with each manufacturer's specifications and instructions. Systems and equipment specified to be furnished with manufacturer's supervision of start-up will be placed in operation only under such supervision.

### 3.5 CONTRACTOR'S WARRANTY

**3.5.1 General Warranty.** In addition to other warranties and guarantees required by the Contract Documents, Contractor shall, and hereby does, warrant and guarantee that: (1) the Work will conform to the requirements of Contract Documents, including, without limitation, any performance standards that are part thereof; (2) all Work for which there is not a specific requirement, criteria, specification or standard set forth in the Contract Documents will conform to the Standard of Performance; (3) all labor, equipment, materials and other items of Work will be when installed new and free of liens, claims and security interests; (4) without limitation to the other requirements of this warranty, all labor, installation and workmanship will be performed in a good and workmanlike manner; and (5) all labor, materials, equipment, services and work shall be free of defects for a period of one (1) year after Final Completion. If required by County, Contractor shall furnish satisfactory evidence as to the kind and quality of services, labor, installation, materials and equipment used. Manufactured items installed in the Work, unless otherwise specifically stated in the Contract Documents, are to be installed in strict accordance with manufacturer's current printed instructions.

**3.5.2 Repair, Replacement.** Without limitation upon the County's other rights or remedies under the Contract Documents or Applicable Laws, any and all Work that, for reasons other than (1) ordinary wear and tear or (2) abuse or neglect by persons or entities other than the Contractor or the Subcontractors, is not in conformance with the warranties or guarantees required by the Contract Documents or Applicable Laws shall be repaired or replaced, together with the repair or replacement of any other Work, Existing Improvements or the work of the Separate Contractors, the County's own forces or others, which may be removed, displaced or damaged in so doing. The Contractor shall notify the County in writing upon completion of such repair or replacement. In the event of failure by the Contractor to commence and pursue with diligence said replacement or repair within ten (10) Days after being notified by the County, the County is hereby authorized to proceed with such replacement and repair as the County deems necessary and expedient and to charge such costs to Contractor at Contractor's Own Expense.

**3.5.3 Not a Limitation.** The warranties stated in this Section 3.5 are in addition to any other warranties or guarantees that are required under any other provision of the Contract Documents or Applicable Laws. Nothing stated in this Section 3.5 shall be interpreted as a limitation upon the County's rights under any warranties or guarantees provided for under any other provision of the Contract Documents or under Applicable Laws that afford the County greater rights than the rights afforded to County under this Section 3.5.

**3.5.4 Assignment.** Contractor does hereby unconditionally and irrevocably assign to County all warranties and guarantees issued or made by any Subcontractor, of any Tier (including, without limitation, any manufacturer, supplier and distributor) in connection with the Work. Such assignment shall not relieve Contractor of, or otherwise limit, any of its obligations contained in the Contract Documents, including, without limitation, the general responsibility and liability of Contractor for a breach by a Subcontractor (including, without limitation, any manufacturer, supplier and distributor, of any Tier) of a warranty or guarantee given by such Subcontractor in connection with the Work.

**3.5.5 Close-Out.** Unless sooner requested by County, Contractor shall furnish to County, as part of the Close-Out Documents and as a condition to Final Payment, all written guarantees or warranties that are required by the terms of the Contract Documents. All such guarantees and warranties shall be: (1) in writing; (2) indexed and bound; (3) accompanied by such certifications and instruction materials as may be required by the Contract Documents; and (4) issued to County or assignable by their terms, and in fact assigned, to County.

### 3.6 TAXES

**3.6.1 Payment by Contractor.** Contractor shall pay, at Contractor's Own Expense, all local, state and federal taxes, including, without limitation, all sales, consumer, business license, use and similar taxes on materials, labor or other items furnished for the Work or portions thereof provided by Contractor or the Subcontractors, of all Tier, all taxes arising out of its operations under the Contract Documents and all benefits, insurance, taxes and contributions for social security and unemployment insurance which are measured by wages, salaries or other remuneration paid to Contractor's employees. If under federal excise tax law any transaction hereunder constitutes a sale on which a federal excise tax is imposed, and the sale is exempt from such excise tax because it is a sale to a state or local government, then County, upon request, will execute documents necessary to show: (1) that County is a political subdivision of the State for the purposes of such exemption; and (2) that the sale is for the exclusive use of County. No excise tax for

such materials shall be included in any price (including, without limitation, the Bid) submitted by Contractor for the Work or for Changes in the Work.

**3.6.2 Tax Exempt Projects.** If applicable to the Project, Contractor shall comply with Applicable Laws concerning tax-exempt construction projects.

**3.6.3 Records of Taxes.** Contractor and the Subcontractors shall keep sufficient records to verify the amount of sales and use taxes paid. Copies shall be submitted with each monthly Application for Payment. Failure to keep or submit such records, resulting in the inability of County to claim a refund for taxes for such materials, shall render Contractor liable to County for the amount of such tax refund.

### **3.7 PERMITS, FEES AND LEGAL NOTICES**

**3.7.1 Permits.** Contractor shall obtain and pay for all permits and approvals that are not stated in the Contract Documents to be the responsibility of the County. Such permits and approvals that are the responsibility of the Contractor may include local building or land use permits, California Department of Fish and Game Streambed Alteration Agreements (Section 1600 et seq.), California Department of Fish and Game collection permits, U.S. Army Corps of Engineers 404 fill and dredge authorization, Clean Water Act Section 401 authorization (managed by the local California Regional Water Quality Control Boards) land owner agreements, or other regulatory permits or approvals required for the implementation of the Project. All permits, licenses and certificates obtained by Contractor shall be delivered to County prior and as a condition to Final Completion and Contractor's right to Final Payment.

**3.7.2 Applicable Laws, Notices.** Contractor shall comply with, and give notices required by, Applicable Laws bearing on performance of the Work.

**3.7.3 Bonds, Undertakings.** Contractor shall, without Contract Adjustment, procure and obtain all bonds required of the County or the Contractor by the municipality in which the Project is located or by any other public or private body with jurisdiction over the Project. In connection with such bonds, the Contractor shall prepare all applications, supply all necessary back-up material and furnish the surety with any required personal undertakings. The Contractor shall also obtain and pay, without Contract Adjustment, all charges for all approvals for street closings, parking meter removal and other similar matters as may be necessary or appropriate from time to time for the performance of the Work.

**3.7.4 Notice of Violations.** Contractor shall immediately notify County in writing of any instruction received from County, or any other Project Team member that, if implemented, would cause a violation of any Applicable Law.

**3.7.5 Governmental Authority Approvals.** Where the Contract Documents state, or Applicable Laws require, that materials, processes or procedures must be approved by a Governmental Authority, Contractor shall be responsible for satisfying the requirements and obtaining the approval of such Governmental Authority.

### **3.8 CONTRACTOR'S PERSONNEL**

**3.8.1 Key Persons.** Contractor's employees acting as project manager, scheduler and superintendent constitute Key Persons. Individuals acting as Key Persons who are not already identified in Contractor's Post-Award Submittals shall be identified in writing to County prior to commencement of the Work.

**3.8.2 Background Check.** Contractor shall perform, prior to commencing Work on the Site, a thorough background check of each of the Key Persons and shall not, without prior written approval of County, employ any person to act as a Key Person if such background check, or other information known to Contractor, discloses a felony conviction or other matter which casts any reasonable doubt on the competency, reliability or honesty of such person.

**3.8.3 Project Manager.** The Key Person acting as project manager shall be deemed to have full authority to contractually bind Contractor, including, without limitation, the authority to bind Contractor to the terms of Contract Adjustments.

3.8.4 **Transfer.** Contractor's Key Personnel are deemed of essence to the Construction Contract. No Key Person shall, for so long as he/she is employed by Contractor, be transferred to any other project nor any of his/her responsibilities reassigned at any time during performance of the Work without the prior written approval of County, which approval may be granted or withheld in County's sole and absolute discretion.

3.8.5 **Removal.** County shall have the right, at any time, to direct the removal and replacement of any Key Person if his/her performance is determined by County, in its sole and absolute discretion, to be unsatisfactory.

3.8.6 **Replacement.** Any individual proposed by Contractor as a replacement for a Key Person must be approved in advance by County, such approval not to be unreasonably withheld, after submission by Contractor to County of complete information concerning such individual's experience and qualifications.

3.8.7 **Communications.** Important communications by Key Persons shall be confirmed in writing by Contractor. Other communications by Key Persons shall be confirmed on written request in each case.

3.8.8 **Contact Information.** Contractor shall provide to County, prior to the start of the Work, telephone numbers where Key Persons can be reached 24-hours a day, 7 Days a week.

3.8.9 **Signatures.** Prior to commencing the Work, Contractor shall submit to County a facsimile of the signatures of the Key Person acting as project manager, as well as any other representatives of Contractor with authority to sign on behalf of and contractually bind Contractor.

3.8.10 **Exclusion from Site.** Contractor shall at all times maintain good discipline and order at the Site among its employees and the employees of the Subcontractors. Any person in the employ of Contractor or any of the Subcontractors, of any Tier, whom County deems, in its sole and absolute discretion, incompetent, unfit, intemperate, troublesome or otherwise undesirable shall be excluded from the Site and shall not again be employed on the Site except with written approval of County.

### 3.9 **CONTRACTOR'S CONSTRUCTION SCHEDULE**

3.9.1 **Preparation.** Within twenty-one (21) Days after issuance by County of the Notice of Intent to Award, the Contractor shall prepare and submit a Construction Schedule for the Work, both in hard copy and electronically, for the County's approval. The Construction Schedule shall in all respects conform to and be consistent with the time requirements for the Project set forth in the Construction Contract.

3.9.2 **Format.** The Construction Schedule shall be in the form of a critical path progress schedule that shows, in graphic form, a plan for performance of the Work within the Contract Time. It shall be prepared, using Primavera P3, as a time-scaled bar chart showing: (1) continuous flow from left to right and activities and milestones that are critical to Substantial Completion and Final Completion of the Work; (2) identification of "float"; and (3) a clearly highlighted critical path. Durations and specific calendar days shall be clearly and legibly shown for the early and late start and finish of each activity. With the exception of County Review Periods and Governmental Authority Review Periods, any activity with more than fifteen (15) Days in duration will be segmented into fifteen (15) Day increments. No more than ten percent (10%) of the activities shall be shown as critical. Techniques or methods designed to suppress depiction of available float are strictly prohibited.

3.9.3 **Detail.** Activities shown in the Construction Schedule shall be in sufficient detail to demonstrate a practical plan to complete the design, engineering, fabrication and construction within the Contract Time and shall, at a minimum, include the following:

- .1 the start and finish date of each activity;
- .2 the anticipated percent of completion at the end of each month;
- .3 the weighted labor value expressed as a percentage of the total labor cost of the Work for each activity;

- .4 the final manpower curves by trade;
- .5 the anticipated purchase and delivery of major materials and equipment;
- .6 the County's occupancy requirements;
- .7 receipt and incorporation of materials, products or equipment to be furnished by County (if any);
- .8 County Review Periods and County Review Dates that are acceptable to and approved by County;
- .9 Governmental Authority Review Periods; and
- .10 the activities identified as being on the critical path to Substantial Completion and Final Completion of the Work.

3.9.4 **Updates.** Throughout the performance of the Work, weekly updates shall be delivered, in hard copy and, if required by County, in an electronic form satisfactory to County. In addition, Contractor shall regularly prepare and submit to County short term, three (3) week "look-ahead" schedules generated from the Construction Schedule approved by County. Except to the extent permitted by Contract Adjustment to the Contract Time approved by County in a duly executed Change Order or Unilateral Change Order, in no event shall the Contractor's updates or "look ahead" schedules alter the dates for Substantial Completion or Final Completion set forth in the Construction Schedule approved by County.

3.9.5 **Governing Schedule.** The governing schedule for the Work shall be the updated Construction Schedule approved by the County. Unless otherwise directed in a writing signed by County, no other schedule shall be used or relied upon by the Contractor or its Subcontractors in planning or performing the Work or in connection with any request for a Contract Adjustment to the Contract Time.

3.9.6 **Submittal Schedule.** Within twenty-one (21) Days after the receipt by the Contractor of the Notice of Intent to Award, the Contractor shall prepare and submit, in accordance with the Contract Documents, a Submittal Schedule for the County's approval. The Submittal Schedule shall be coordinated with the Construction Schedule and allow time for review of the Submittals as may be required by the Contract Documents, or if none is required, a reasonable time for such review. Contractor shall keep the Submittal Schedule current and updated in the same manner as required for updating of the Construction Schedule.

3.9.7 **Schedule Responsibility.** Contractor is and shall remain solely responsible, notwithstanding the County's review or approval thereof, for the accuracy, suitability and feasibility of all schedules it prepares for the Project, including, without limitation, the Construction Schedule, Submittal Schedule, "look ahead" schedules, recovery schedules and any updates thereof.

3.9.8 **Condition of Payment.** Compliance by Contractor with the requirements of this Section 3.9 and the other provisions of the Contract Documents pertaining to preparing, submitting, revising and updating the Construction Schedule and Submittal Schedule is a condition to County's obligation to make payment to Contractor. Recognizing that scheduling is a continuing, cumulative and recurring obligation, failure by County or to assert a right to withhold payment under this Paragraph 3.9.8 due to a noncompliance by Contractor with its schedule obligations shall not waive or diminish the County's right to withhold or disapprove of future payments on account of such prior, or any other past or future, noncompliance of the same or similar nature.

3.9.9 **Scheduling by County.** Without limitation to County's other rights under the Contract Documents, if Contractor fails after written notice by County to perform any part of its obligations relating to scheduling, County shall have the right, but not the obligation, to retain one or more schedule consultants to perform, in whole or in part, the Contractor's obligations or supplement the scheduling services provided by Contractor and to reimburse County for the costs of such consultant services by withholding such costs from payments to Contractor.



### 3.10 DOCUMENTS AT SITE, REPORTING, MEETINGS

#### 3.10.1 Documents at Site

**.1 Contract Documents, Submittals.** Contractor shall at all times while performing Work at the Site maintain, in good order, at the Site: (1) one legible set of the permitted Contract Documents; (2) one legible copy of the current version of the other Contract Documents; (3) one legible and current version of approved Shop Drawings, Product Data, Samples and other Submittals; (4) one approved Storm Water Pollution Prevention Plan (SWPPP); and (5) one copy of all reports prepared pursuant to the Mitigation, Monitoring, and Reporting Program (MMRP) requirements of the California Environmental Quality Act.

**.2 Record Documents.** Contractor shall maintain Record Drawings and Specifications in a satisfactory record condition by posting, on a weekly basis (or, in the case of building or site mechanical, electrical, plumbing or fire sprinkler systems, as soon thereafter as is reasonable and practical), thoroughly and neatly, on the Drawings and Specifications all Changes to the Work and the location of the Work, including, without limitation, the location of portions of the Work shown diagrammatically, as occurs in the actual construction of the Work. The Record Drawings and Specifications and other Record Documents shall be prepared or converted, if requested by County, to electronic form (such as, AutoCAD, Adobe Acrobat or other software satisfactory to County). All Record Drawings and Specifications and other Record Documents shall be deemed the sole property of County and, at the earlier of Final Completion or termination of the Construction Contract, shall be turned over to County. At the time they are so turned over to County, they shall be manually signed by Contractor's superintendent certifying that, to the best of his/her knowledge, they are true and accurate and that the indications thereon represent the actual condition of the Work.

**.3 Availability for Review.** Copies or originals of all documents required to be maintained by Contractor at the Site or required to be submitted to County or the Architect shall be available at all times at the Site while Work is being performed for review by County, Inspector of Record, Architect and Governmental Authorities.

**.4 Condition of Payment.** Compliance by Contractor with the requirements of this Paragraph 3.10.1 shall be deemed a condition to Contractor's right to payment upon its Applications for Payment.

#### 3.10.2 Daily Reports.

**.1 Delivery.** At the end of each Day that Contractor performs the Work on the Site, Contractor shall submit a daily report to County (on the form provided or approved by County) together with applicable delivery tickets for all labor, materials and equipment furnished that Day. If requested by County, daily reports shall be delivered electronically.

**.2 Content.** Daily Reports shall include the following information:

(1) Labor - The names of the workers, and for each such worker his/her classification and hours worked.

(2) Material - A list of the different materials used and for each different material the quantity used.

(3) Equipment - The type of equipment, size, identification number, and hours of operation, including loading and transportation, if applicable.

(4) Inspection and Testing Activities – A list of inspections performed by name of inspector and testing company and the type of inspection, items of the Work involved and a description of the outcome of such inspection or test.

(5) Visitors, Guests, Dignitaries – A list of visitors and guests by name, title, company and purpose of visit.

(6) Areas of the Work – A statement of the areas of the Site on which the Work was performed and a detailed description of the stage, status and progress of the Work in each such area at the beginning and end of the Day.

(7) Accidents, Delays, Defective Work – A description in detail of any injuries to the workers, accidents or delays that occurred or Defective Work that was encountered.

(8) Other Services and Expenditures – A description of other services and expenditures in such detail as County may require.

.3 **Payment.** Timely and complete submission of daily reports by Contractor shall be a condition to Contractor's right to payment under the Construction Contract.

3.10.3 **Progress Meetings.** Contractor shall attend all progress meetings at the Site, at which meetings progress of the Work shall be reported in detail with reference to the then-current updated Construction Schedule approved by the County. Progress meetings shall be held weekly, or at such other time or frequency as County, in its sole and absolute discretion, deems necessary. A representative of each Subcontractor then actively performing Work, or immediately scheduled to become active, shall have a competent and knowledgeable representative present at such progress meeting to report on the condition of the Work of such Subcontractor and to receive relevant information. Meeting notes shall be taken by the County or Architect and distributed to all meeting attendees and all other affected parties.

3.10.4 **Notice Requirements.** Under no circumstances shall information contained in Contractor's daily job reports, monthly reports or job meeting minutes relieve Contractor of its obligations to comply with, serve as a substitute for, nor constitute a waiver by County of its right to insist upon, Contractor's compliance with the provisions of the Contract Documents relative to timely and complete notice to County of Changes, Delays, Claims or other matters for which written notice is required by the Contract Documents.

3.10.5 **Availability for Review.** Copies or originals of all Record Documents, daily reports, job meeting minutes and other documents required to be maintained or actually maintained by Contractor at the Site or required to be submitted to County or Architect shall be available at the Site for review by County, Architect, Inspectors of Record, County Consultants and Governmental Authorities.

### 3.11 SUBMITTALS

3.11.1 **Not Contract Documents.** Shop Drawings, Product Data, Samples and other Submittals are not Contract Documents. Their purpose is to demonstrate for those portions of the Work for which Submittals are required the way Contractor proposes to conform the Work to the designs and other information in the Contract Documents.

3.11.2 **Coordination with Others.** Contractor shall cooperate in the coordination of Contractor's Shop Drawings, Product Data, Samples and other Submittals with related documents submitted by the Separate Contractors.

#### 3.11.3 **Submission by Contractor.**

.1 **Submission.** All Shop Drawings, Product Data, Samples and other Submittals required by the Contract Documents shall be submitted to Architect for its review and approval, with a copy to County and to such of County's Consultants or Separate Contractors as County may direct in writing. Informational submittals (i.e., Submittals upon which no responsive action is expected) shall be limited to those Submittals so identified in the Contract Documents. Submittals made by Contractor which are not required by the Contract Documents may be returned without action.

.2 **Contractor Approval.** The Contractor shall review, stamp "approved" and submit Contractor's Shop Drawings, Product Data, Samples and other Submittals to the Architect, in accordance with the latest Submittal Schedule approved by the County. The Contractor's approval and submission of Submittals constitutes a representation that the Contractor has determined or verified materials and field measurements and conditions related thereto, and that it has checked and coordinated the information contained within such Submittals with the requirements of the Contract Documents and with the Submittals for related Work. Submittals without evidence thereon of the

Contractor's approval shall be returned, without further consideration, for resubmission in accordance with these requirements.

**.3 Transmittal.** All Submittals shall be accompanied by an accurately completed transmittal in the form required by County. With respect to Submittals of documents, the transmittal shall give a list of the numbers of the sheets submitted. All sheets shall be marked with the name of the Project and the name of Contractor shall be numbered consecutively and referenced to the sheets or paragraphs of the Drawings and Specifications affected. A separate transmittal form shall be used for each specific item or class of material or equipment for which a Submittal is required. Transmission of Submittals of various items using a single transmittal form will be permitted only when the items taken together constitute a manufacturer's "package" or are so functionally related that expediency dictates review of the group or package as a whole. Any Submittal not accompanied by such transmittal form, or where all applicable items on the form are not completed, may be returned for re-submittal without review.

**.4 Timing.** Submittals shall be provided within the time frame specified in the Contract Documents, in accordance with the Construction Schedule and Submittal Schedule and at a time sufficiently early to allow review of the same by the Architect without causing Delay to construction progress. Contractor will be responsible to pay, at Contractor's Own Expense, additional services fees and costs incurred by County to the Architect, Inspectors of Record and County Consultants in order to expedite review of Submittals which are not submitted in a timely fashion.

**.5 Content.** Submittals shall consist of the appropriate combination of catalog sheets, material lists, manufacturer's brochures, technical bulletins, specifications, diagrams and product samples, necessary to describe a system, product or item. Submittals shall show in detail the size, sections and dimensions of all members, the arrangement and construction of all connections, joints and other pertinent details, and all holes, straps and other fittings for attaching the Work. When required by the Architect or the Contract Documents, engineering computations shall be submitted.

**.6 Professional Certifications.** When professional certification of performance criteria of materials, systems or equipment is required by the Contract Documents, Architect shall be entitled to rely upon the accuracy and completeness of such calculations and certifications.

**.7 Multiple Submittals.** Except where the preparation of a Submittal is dependent upon the approval of a prior Submittal, all Submittals pertaining to the same class or portion of the Work shall be submitted simultaneously.

**.8 Notation of Revisions.** Contractor shall direct specific attention, in writing or on resubmitted Shop Drawings, Product Data, Samples or other Submittals, to revisions other than those requested and approved by Architect on previous Submittals.

**.9 Duplicates.** Contractor shall be responsible for delivering duplicates of Submittals to all other persons whose work or services are dependent thereon.

**3.11.4 Review of Submittals.** Review of Submittals by Architect, County or County Consultants is subject to the limitations of Paragraph 4.2.6, below. Contractor shall, notwithstanding any review or approval thereof by County, Architect or a County Consultant, be solely responsible for the content of all Submittals. Without limitation to the foregoing, deviations in Submittals from requirements of the Contract Documents shall remain the sole responsibility of Contractor unless Contractor has specifically informed Architect in writing of such deviation at the time of submission of the Submittal and Architect has given specific written approval thereof.

**3.11.5 Contract Adjustments.** Subject to Contractor's rights and obligations under Article 7, below, revisions indicated on Shop Drawings, Product Data, Samples or other Submittals shall not be considered as a basis for Contract Adjustments.

**3.11.6 Compliance with Contract.** Contractor shall perform no portion of the Work requiring submittal and review of Shop Drawings, Product Data, Samples or other Submittals until the respective Submittal has been returned by the Architect with an indication that it has been reviewed and that the Work addressed by the Submittal may proceed. Such Work shall be in accordance with such Submittals, unless such Submittal indicates that there are corrections to

be made. If corrections are indicated to be made then the Work shall be in accordance with the re-submitted and corrected Submittal that is reviewed and returned to the Contractor by the Architect.

### 3.12 USE OF SITE

3.12.1 **Staging Area.** Contractor will be assigned staging space on or adjacent to the Site, and all field offices, materials and equipment shall be kept within this area. Unless otherwise required by the Contract Documents, Contractor shall be responsible for restoring such areas and surrounding areas to the condition they were in prior to Contractor's commencement of the Work.

3.12.2 **Existing Improvements.** During the installation of the Work, Contractor shall ensure that Existing Improvements are adequately protected. Upon Final Completion of the Work, all Existing Improvements not required by the Contract Documents to be demolished as part of the Work that have been damaged by the actions or inactions of Contractor or its Subcontractors shall be restored to the condition they were in prior to Contractor's commencement of the Work.

3.12.3 **Operations at Site.** Contractor shall confine its activity, access and parking at the Site to areas permitted by Applicable Laws and County and shall not unreasonably encumber the Site with materials or equipment. Contractor acknowledges that it is experienced in performing construction within limited and confined areas and spaces such as those that are anticipated to exist on this Project and agrees to assume responsibility, without a Contract Adjustment, to take all special measures (including, without limitation, those related to protection, storage, staging and deliveries) as may be necessary to adapt its performance to the constraints of the Site.

3.12.4 **Coordination.** Contractor shall coordinate Contractor's operations with, and secure the approval of, County before using any portion of the Site.

3.12.5 **Unauthorized Use.** Personnel of Contractor and the Subcontractors shall not occupy, live upon or otherwise make use of the Site during any time that the Work is not being performed at the Site, except as otherwise approved by County.

3.12.6 **Site Security.** Contractor is responsible for the security of the Site and all of the Work, as well as the work of the Separate Contractors or County's own forces that occurs on the Site. Fences, barricades and other perimeter security shall be maintained in good condition and secured with locking devices. Damage to fences, barricades or other perimeter security, regardless of the cause, shall be repaired immediately at Contractor's Own Expense. Graffiti and unauthorized postings shall be removed or painted over so as to maintain a clean and neat appearance. Mobile equipment and operable machinery shall be kept locked or otherwise made inoperable whenever left unattended.

3.12.7 **Persons on Site.** Contractor shall not allow any person, other than the workers on the Project, authorized representatives of a union, or other individuals authorized by County, to come upon any portion of the Site where the Work is being performed. Only authorized personnel will be permitted on the Site. Contractor shall at all times maintain good discipline and order among its employees and the employees of the Subcontractors. Any person in the employ of Contractor or of any Subcontractors whom County may deem, in its sole and absolute discretion, incompetent, unfit, intemperate, troublesome or otherwise undesirable shall be excluded from the Site and shall not again be employed on the Site except with written approval of County and all Losses to Contractor or County associated therewith shall be borne by Contractor at Contractor's Own Expense.

3.12.8 **County Uses and Activities.** Contractor shall, prior to performing the Work at an operating or occupied County facility, become informed and take into specific account the uses by County and others of the Site and Existing Improvements, including, without limitation, business operations, public uses, employee uses, visitor uses, planned functions and ceremonies, and coordinate its planning, staging, scheduling, barricading and other performance of the Work so as to cause the minimum amount of interference or disturbance, whether before or after operating hours.

3.12.9 **Dust, Fumes, Noise.** Contractor shall take preventive measures to minimize, and eliminate wherever reasonably possible, generation of dust, fumes and noise.

**3.12.10 Confinement of Operations.** Contractor shall confine apparatus, the storage of materials and the operations of the workers to limits indicated by Contract Documents or as otherwise directed by County in writing.

**3.12.11 Prohibited Substances.** Contractor shall not permit (1) the possession or use of alcohol or controlled substances on the Site or (2) smoking in other than designated smoking areas approved by County.

**3.12.12 Survey Markers.** Contractor shall not disturb or cover any survey markers, monuments or other devices marking property boundaries or corners. If such markers are covered they shall be uncovered and if disturbed they shall be replaced by Contractor by means of the services of a licensed land surveyor. The costs of such uncovering and replacement shall be at Contractor's Own Expense.

**3.12.13 Drainage, Erosion.** Contractor is responsible for and shall make corrections to changes in patterns of surface water drainage resulting from, and related erosion control made necessary by, the performance of the Work.

**3.12.14 Trenches.** As required by California Labor Code §6705, if the Contract Price exceeds Twenty-Five Thousand Dollars (\$25,000) and involves the excavation of any trench or trenches five (5) feet or more in depth, Contractor shall, in advance of commencing excavation, submit to County a detailed plan showing the design of shoring, bracing, sloping or other provisions to be made for worker protection from the hazard of caving ground during the excavation of such trench or trenches. If such plan varies from the Shoring Systems Standards established by the Construction Safety Orders of the California Division of Industrial Safety, the plan shall be prepared by a registered civil or structural engineer, employed by Contractor at Contractor's Own Expense. Nothing in this Paragraph 3.12.14 shall be deemed to allow the use of a system less effective than that required by such Construction Safety Orders. No excavation of such trench or trenches shall be commenced until such plan has been approved by County and Architect. Nothing in this Paragraph 3.12.14 shall be construed to impose any liability, including, without limitation, any tort liability, upon the County or upon any of its officers, agents, representatives or employees.

### **3.13 CUTTING AND PATCHING**

Contractor shall be responsible for all cutting, fitting or patching required to complete the Work and to make its parts fit together properly both among themselves and with any Existing Improvements and the work of the Separate Contractors and of County's own forces. In all cases, cutting shall be performed under the supervision of competent mechanics skilled in the applicable trade and openings shall be cut as small as possible to prevent unnecessary damage. Contractor shall not damage or endanger a portion of the Work, Existing Improvements or fully or partially completed construction of County's own forces or of the Separate Contractors by cutting, patching, excavating or otherwise altering such construction. Contractor shall not cut or otherwise alter such Existing Improvements or construction by Separate Contractors or by County's own forces except with the written consent of such Separate Contractors or County, which consent shall not be unreasonably withheld, delayed or conditioned. When asked, Contractor shall not unreasonably withhold from the Separate Contractors or County the Contractor's consent to Separate Contractors' or County's own forces' cutting or other alteration of the Work as required to complete the work of the Separate Contractors or County's own forces.

### **3.14 UTILITIES AND SANITARY FACILITIES**

**3.14.1 Contractor Responsibility.** Except as otherwise required by California Government Code §4215, Contractor shall contact all relevant utility providers and arrange for obtaining all available information, concerning location of subsurface utility lines. Prior to commencement of any digging, Contractor shall make its own investigation, including exploratory excavations, to determine the locations and type of Work which could result in damage to such utilities. In accordance with California Government Code §§4216 et seq., except in an emergency, Contractor shall contact the appropriate regional notification center at least two (2) the working days, but not more than fourteen (14) Days, prior to commencing any excavation, if the excavation will be conducted in an area which is known, or reasonably should be known, to contain sub-service installations, and shall obtain an inquiry identification number from the regional notification center. Contractor shall not assume, unless actual observed surface conditions at the Site indicate otherwise, that utilities are located in the same location as indicated on the as-built records or other information obtained by Contractor. Contractor shall conduct potholing in advance of digging in any areas where there are not apparent surface conditions at the Site indicating the actual location of underground utilities and be at all times vigilant in watching for any conditions encountered, above or below the surface of the ground, that might indicate that underground utilities are at locations other than those indicated by the as-built records or other information obtained by Contractor.

Contractor shall perform its digging operations in a slow and meticulous manner so as to avoid wherever reasonably possible damaging existing underground utilities. Contractor shall, at Contractor's Own Expense, make good any Loss to County or others as a result of Contractor's failure to perform any of its obligations under this Paragraph 3.14.1. Nothing stated in this Paragraph 3.14.1 shall be interpreted as requiring Contractor to do subsurface exploration or potholing for the purpose of locating subsurface utilities at the Site prior to the Bid Closing Deadline or as precluding the Contractor from receiving a Contract Adjustment for unknown subsurface utilities constituting Differing Site Conditions that are encountered in the course of performing the Site investigation or potholing required by this Paragraph 3.14.1.

**3.14.2 County Responsibility.** If and to the extent required by California Government Code §4215, County assumes the responsibility for removal, relocation, and protection of those existing main or trunkline utility facilities located at the Site at the time of commencement of the Work that are not identified in the Contract Documents. Provided that Contractor has exercised the Standard of Care in performing the Work in accordance with the Contract Documents, Contractor shall be entitled to a Contract Adjustment for, relocating, repairing or removing any utility facilities not indicated in the Contract Documents with reasonable accuracy, including, without limitation, equipment on the Site necessarily idled thereby. Delays caused by County's or a utility owner's failure to provide for the removal or relocation of such utility facilities shall constitute a Compensable Delay. Nothing herein shall be deemed to require County to indicate the presence of existing service laterals or appurtenances whenever the presence of such utilities on the Site can be inferred from the presence of other visible facilities, such as buildings or meter junction boxes located on or adjacent to the Site.

**3.14.3 Temporary Utilities.** All utilities, including but not limited to electricity, water, gas and telephone, used in performance of the Work (including, without limitation, meters and temporary distribution systems from distribution points to points on Site where a utility is needed and "tap fees") shall be furnished and paid for by Contractor or, if furnished by County, shall be paid for by Contractor at Contractor's Own Expense. Upon Final Completion of the Work, Contractor shall remove all temporary distribution systems. If the Work involves an addition to an existing facility, Contractor may, with written permission of County, granted or withheld in County's sole and absolute discretion, use County's existing utilities by making prearranged payments to County for utilities used by Contractor. When it is necessary to interrupt any existing utility service to make connections, a minimum of two (2) working days' advance notice shall be given to County. Interruptions shall be of the shortest possible duration and shall be scheduled during a time of Day that minimizes its impact on the operations of the existing facility. Any Loss to County or Contractor associated with interruption of a utility service as a result of Contractor's breach of, or failure to fully comply with, its obligations under this Paragraph shall be paid for by Contractor at Contractor's Own Expense.

**3.14.4 Sanitary Facilities.** Contractor shall provide sanitary temporary toilet facilities, for the use of all the workers, in no fewer numbers than required by Applicable Laws, plus such additional facilities as may be directed by County. Such facilities shall be maintained in a sanitary condition at all times. Use of existing or permanent toilet facilities shall not be permitted except by written consent of County.

### 3.15 **CLEANING UP**

**3.15.1 Contractor Responsibility.** Contractor at all times shall keep the Site free from debris such as waste, rubbish and excess materials and equipment caused by the performance of the Work. At the end of each Day that Work is performed, Contractor shall not leave debris under, in or about the Site but shall promptly dispose of or remove same from the Site. Without limitation to the other clean up requirements of the Contract Documents, upon Final Completion, Contractor shall: (1) clean the interior and exterior of the buildings, including fixtures, equipment, walls, floors, ceilings, roofs, window sills and ledges, horizontal projections and any areas where debris has collected so surfaces are free from foreign material or discoloration; (2) clean and polish all glass, plumbing fixtures, finish hardware and similar finish surfaces and equipment; and (3) remove temporary fencing, barricades, planking, sanitary facilities and similar temporary facilities from the Site.

**3.15.2 Cleanup by County.** If Contractor fails upon 24 hours' notice by County to perform its obligation to clean up, County may arrange to do so, and the cost thereof shall be borne by Contractor at Contractor's Own Expense.

### 3.16 ACCESS TO THE WORK

3.16.1 **County.** County, Inspectors of Record, Architect and County Consultants, and their representatives, and such other persons as authorized by County, shall at all times have access to the Work, either in preparation or in progress. Contractor shall provide safe and proper facilities for such access so that they and their representatives may perform their functions safely.

3.16.2 **Separate Contractors.** County, using its own forces or those of Separate Contractors, may, at any time during the performance of the Work, enter the Site for the purpose of performing construction or for any other purpose. Contractor shall cooperate with County, County's own forces and Separate Contractors and not interfere with other work being done by them or on their behalf.

3.16.3 **Delivery Routes.** Contractor shall arrange for delivery of material over routes designated by County.

### 3.17 INTELLECTUAL PROPERTY RIGHTS

Contractor shall pay all royalties and license fees relating to use of Intellectual Property Rights pertaining to Work performed. Contractor shall defend suits or claims for infringement of Intellectual Property Rights and shall defend, indemnify and hold harmless the Indemnitees from Loss on account thereof in accordance with the terms of Section 3.18, below, unless the infringement is due to a particular design, process, product or product of a particular manufacturer that is required by the Contract Documents; provided, however, that if Contractor has information leading it to believe that the use of a particular design, process or product required by the Contract Documents would constitute an infringement of an Intellectual Property Right, then Contractor shall nonetheless be responsible to provide such defense, indemnification and hold harmless if such information is not promptly furnished in writing to County.

### 3.18 INDEMNIFICATION

3.18.1 **Contractor's Indemnity Obligation.** To the fullest extent permitted by Applicable Laws, Contractor agrees to indemnify, immediately defend at its own expense and hold harmless, County, Board of Supervisors, and each of their respective members, officers, employees, agents, insurers and volunteers ("Indemnitee(s)"), through legal counsel reasonably acceptable to County, from any and all Losses, whether real or alleged, regardless of whether caused in part by such Indemnitee or its agents, servants or independent contractors who are directly responsible to such Indemnitee, arising out of or relating to any of the following:

- .1 any act or omission of Contractor or a Subcontractor, of any Tier;
- .2 the activities of Contractor or a Subcontractor, of any Tier, on the Site or on other properties related to performance of the Work or the preparation for performance of the Work;
- .3 the payment or nonpayment of any Subcontractor, of any Tier, for the Work performed, except where such nonpayment is the result of a breach by County of its payment obligations under the Contract Documents;
- .4 the existence or dispersal of any Hazardous Substances or Mold on the Site as a result of the failure of Contractor or a Subcontractor, of any Tier, to comply with its obligations under the Contract Documents;
- .5 the violation by Contractor or a Subcontractor, of any Tier, of an obligation under Section 3.17, above, involving infringement of an Intellectual Property Right; or
- .6 the violation by Contractor or a Subcontractor, of any Tier, of any Applicable Law, including, without limitation, the violation of any requirement of the State of California General Permit for Storm Water Discharges Associated with Construction Activity and subsequent amendments or orders for construction activities as applicable thereto (including, without limitation, the requirements of a Storm Water Pollution Prevention Plan) or the violation of any applicable requirement of any local or regional Air Quality Management District (AQMD) (including, without limitation, a violation of any of the requirements set forth in the County MOU with AQMD dated January 6, 2004 Agenda Item 3.1 (for projects in the Coachella Valley) or AQMD Rule 403 (for projects west of the Coachella Valley));

PROVIDED, HOWEVER, that nothing contained herein shall be construed as obligating Contractor to indemnify an Indemnitee for Losses resulting from the sole negligence, active negligence or willful misconduct of such Indemnitee or its agents, servants or independent contractors who are directly responsible to such Indemnitee or from a defect in design furnished by such Indemnitee, where such sole negligence, active negligence, willful misconduct or design defect has been determined by agreement of Contractor and that Indemnitee or has been adjudged by the final and binding findings of a court or arbitrator of competent jurisdiction. In instances where the active negligence or willful misconduct of an Indemnitee or its agents, servants or independent contractors who are directly responsible to such Indemnitee or a defect in a design furnished by such an Indemnitee accounts for only a portion or percentage of the Loss involved, the obligation of Contractor will be for that portion or percentage of the Loss not due to such active negligence, willful misconduct or design defect.

**3.18.2 Indemnification of Adjacent Property Owners.** In the event Contractor enters into an agreement with the owners of any adjacent property to enter upon such property for the purpose of performing the Work or other activities incidental to the Work, Contractor shall fully indemnify, defend and hold harmless any person or entity which owns or has any interest in such adjacent property against any Loss resulting from the acts or omissions of the Contractor or its Subcontractors. The form and content of such indemnification agreement shall be approved by County prior to commencement of any Work on or around such property.

**3.18.3 Insurance and Employment Benefits.** The indemnification, defense and hold harmless obligations of Contractor under this Section 3.18, as well as any such obligations stated elsewhere in the Contract Documents: (1) shall not be limited by the amounts or types of insurance (or the deductibles or self-insured retention amounts of such insurance) which any Indemnitee, Contractor or any Subcontractor carries or is required to carry under the terms of the Contract Documents; (2) is independent of and in addition to the Indemnitees' rights under the insurance to be provided by an Indemnitee, Contractor or any Subcontractor; and (3) shall not be limited, in the event of a claim against an Indemnitee by an employee of Contractor, a Subcontractor, anyone directly or indirectly employed by them or anyone for whose acts they may be liable, by a limitation on amount or type of damages, compensation or benefits payable by or for Contractor or Subcontractor under any worker's compensation act, disability benefit act or other employee benefit program.

**3.18.4 Subcontractor Indemnity Agreements.** Contractor agrees to obtain or cause to be obtained executed defense and indemnity agreements with provisions identical to those set forth in this Section 3.18 from each and every Subcontractor, of every Tier.

**3.18.5 Implied Indemnity Rights.** Notwithstanding anything stated in this Section 3.18 or elsewhere in the Contract Documents to the contrary, an Indemnitee's right to seek equitable indemnity and contribution from Contractor is in no way diminished, limited or precluded by any agreement by Contractor to provide express contractual indemnity to such Indemnitee. Contractor's obligations under this Section 3.18 shall be deemed to completely eliminate and preclude any right by Contractor to seek contractual or equitable indemnity or contribution from any Indemnitee for any Loss covered by the Contractor's express indemnification obligations under this Section 3.18.

**3.18.6 Obligation to Defend.** The Contractor's obligation to defend under this Section 3.18 includes, without limitation, the obligation to immediately reimburse an Indemnitee for any attorney's fees, court costs (statutory and non-statutory), arbitration and mediation expenses, professional, expert and consultant fees, investigative costs, postage costs, document copying costs, telecopy costs and any and all other costs and expenses associated with defense of such Indemnitee as and when incurred by any Indemnitee in defense of a claim by any third person or entity as a result of Contractor's failure or refusal to comply with its immediate defense obligation to such Indemnitee. Nothing stated in this Section 3.18 or elsewhere in the Contract Documents shall be interpreted as providing or implying that the obligation of Contractor to defend an Indemnitee against an alleged Loss that is within the scope of the Contractor's indemnification obligation under this Section 3.18 or under any other provision of the Contract Documents is to any extent released, excused, limited or relieved by a finding, determination, award or judgment by a court or arbitrator that the alleged Loss was due to circumstances not within the scope of such indemnification obligation.

### 3.19 LABOR, WAGES, PAYROLL RECORDS

**3.19.1 Public Work.** This Work is a "public work" as defined in Labor Code §1720 and must be performed in accordance with the requirements of Labor Code §§1720 to 1850 and Title 8 California Code of Regulations §§16000 to 17270, which govern the payment of prevailing wage rates on public works projects.



**3.19.2 Prevailing Wage Rates.** Pursuant to the provisions of Article 2 (commencing at §1770), Chapter 1, Part 7, Division 2 of the Labor Code of California, the Board of Supervisors has obtained the general prevailing rate of per diem wages and the general prevailing rate for holiday and overtime Work in the locality in which the Work is to be performed for each craft, classification or type of worker needed to execute the Work from the Director of the Department of Industrial Relations. These rates are on file with County and copies will be made available to any interested party on request. Contractor shall post a copy of such wage rates at the Site. The adoption of such wage rates is not a representation that labor can be obtained at these rates. It is the responsibility of Contractor to inform itself as to the local labor conditions. Holiday and overtime Work, when permitted by Applicable Laws, shall be paid for at a rate of at least one and one-half times the adopted rate of per diem wages, unless otherwise specified. Holidays shall be defined in the collective bargaining agreement applicable to each particular craft, classification or type of worker employed.

**3.19.3 Unclassified Workers.** Any worker employed to perform the Work not covered by any classification listed in the general prevailing wage rate of per diem wages determined by the Director of the Department of Industrial Relations shall be paid not less than the minimum rate of wages specified therein for the classification which most nearly corresponds to the Work to be performed by him/her, and such minimum wage rate shall be retroactive to time of initial employment of such person on the Project in such classification.

**3.19.4 Per Diem Wages.** Contractor shall pay or shall cause to be paid each worker engaged in the Work not less than the general prevailing rate of per diem wages determined by the Director of the Department of Industrial Relations, regardless of any contractual relationship which may be alleged to exist between Contractor or any of the Subcontractors and such workers. Pursuant to California Labor Code §1773.1, per diem wages are deemed to include employer payments for health and welfare, pension, vacation, travel time and subsistence pay.

**3.19.5 Applicable Laws.** Contractor represents and warrants that the Contractor's Bid and the Contract Price includes funds sufficient to allow Contractor to comply with all Applicable Laws governing the labor or services to be provided. Contractor shall defend and indemnify the Indemnitees in accordance with Section 3.18, above, for any violation of any Applicable Law, including but not limited to California Labor Code §2810, and agrees to pay all assessments, including wages and penalties, made against County in relation to such violations.

**3.19.6 Posting at Site.** Contractor shall post at appropriate conspicuous points on the Site the prevailing wage rates of the Department of Industrial Relations in accordance with 8 California Code of Regulations 16100(b).

**3.19.7 Worker Hours.** As provided in Article 3 (commencing at §1810), Chapter 1, Part 7, Division 2 of the California Labor Code, eight (8) hours of labor shall constitute a legal day's work. The standard work day of any worker employed at any time by Contractor or any of the Subcontractors performing the Work, or any part of the Work, shall, except as hereinafter provided, be limited and restricted by Contractor to eight (8) hours per day, between the hours of 6:00 A.M. and 6:00 P.M. (unless otherwise required by Applicable Laws), plus one-half hour unpaid lunch approximately midway through the shift, provided that Contractor or any of the Subcontractors may establish a four day/ten-hour schedule consistent with Applicable Laws pertaining to payment of prevailing wages and the provisions any applicable collective bargaining agreement. A regular-work week shall constitute forty (40) hours during any one week. Notwithstanding the provisions hereinabove set forth, the parties hereto may agree to changes in the work day or the work week as permitted by Applicable Laws, and Contractor and all Subcontractors must pay the appropriate prevailing wage rate for those hours and days worked.

**3.19.8 Overtime.** Overtime work performed by employees of Contractor or any of the Subcontractors shall be compensated according to the applicable general prevailing rate established by the Department of Industrial Relations for holiday and overtime work for each craft, classification or type of worker in the locality in which the Work is to be performed.

**3.19.9 Payroll Records.** It shall be the sole responsibility of Contractor to ensure compliance with the provisions of Applicable Laws and the Contract Documents relating to maintenance and submission of payroll records. Pursuant to the provisions of California Labor Code §1776, Contractor shall keep, and shall cause each Subcontractor performing any portion of the Work to keep, accurate certified payroll records, showing the name, address, social security number, worker classification and straight-time and overtime hours worked each Day and week, and the actual per diem wages paid to each journeyman, apprentice, worker or other employee employed by Contractor in connection with the Work. Certified payroll records must be in the payroll reporting format prescribed by the Division of Labor Standards Enforcement. If there is no work by Contractor or a Subcontractor in a given week, Contractor must keep

and submit a certified "Nonperformance" payroll record, indicating "no work" for that week. Contractor shall submit all certified payroll records to County in complete, unredacted form with an original signature on the Statement of Compliance, along with, and as a condition to, its Applications for Payment. Additionally, payroll records shall be available for inspection at all reasonable hours at the principal office of Contractor on the following basis:

.1 a certified copy of an employee's payroll record shall be made available for inspection or furnished to such employee or his or her authorized representative on request;

.2 a certified copy of all such payroll records shall be made available for inspection or furnished upon request to County, the Division of Labor Standards Enforcement and/or the Division of Apprenticeship Standards of the Department of Industrial Relations or such other person or entity as designated by County;

.3 a certified copy of all such payroll records shall be made available upon request by the public for inspection or the copying thereof, provided that (1) such request is made by the public through either County, the Division of Apprenticeship Standards or the Division of Labor Standards Enforcement of the Department of Industrial Relations, (2) such requested payroll records have not previously been provided pursuant to Subparagraph 3.19.9.2, above, then the requesting individual or entity shall, prior to being provided the records, reimburse the costs of preparation by Contractor, the Subcontractors and the entity through which the request was made, and (3) the public shall not be given access to records at the principal office of Contractor;

.4 Contractor and each Subcontractor shall within ten (10) Days after receipt of a written request file a certified copy of such payroll records with the person or entity that requested the records;

.5 Contractor shall provide, and shall cause each Subcontractor to provide, payroll records as defined in Title 8 California Code of Regulations §16000 to County within ten (10) Days after receipt of written request, at no cost to County;

.6 any copy of such payroll records made available for inspection by, and copies furnished to, the public shall be redacted in a manner so as to prevent disclosure of an individual's name, address, and social security number, except that any copy made available for inspection by, and copies furnished to, a joint labor-management committee established pursuant to the federal Labor Management Cooperation Act of 1978 (29 U.S.C. Section 175a) shall be marked or redacted only to prevent disclosure of an individual's name and social security number, and in either event, the name and address of Contractor or the Subcontractor performing the Work shall not be so obliterated; and

.7 any copy made available to an agency included in the Joint Enforcement Strike Force on the Underground Economy established pursuant to Section 329 of the Unemployment Insurance Code and other law enforcement agencies investigating violations of law shall, upon request, be provided nonr copies of certified payroll records;

.8 Contractor shall inform County concurrently with the submission of its initial Application for Payment, of the location of such payroll records, including the street address, city and county, and thereafter shall, within five (5) working days, provide a notice of any change of location and address of such payroll records.

**3.19.10 Apprentices.** Contractor acknowledges that, even if performance of the Work involves a dollar amount greater than or a number of working days greater than that specified in California Labor Code §1777.5, it shall be the sole responsibility of Contractor, for all apprentice occupations, to ensure compliance with California Labor Code §1777.5, including, without limitation, the following provisions:

.1 Apprentices of any crafts or trades may be employed and, when required by California Labor Code §1777.5, shall be employed provided they are properly registered in full compliance with the provisions of the California Labor Code.

.2 Every such apprentice shall be paid the prevailing rate of per diem wages for apprentices in the trade to which he or she is registered and shall be employed only at the work of the craft or trade to which he or she is registered.

.3 Only apprentices, as defined in California Labor Code §3077, who are in training under apprenticeship standards and written apprentice agreements under Chapter 4 (commencing at §3070), Division 3 of the California Labor Code, are eligible to be employed at the apprentice wage rate on Public Works. The employment and training of each apprentice shall be in accordance with either: (1) the apprenticeship standards and apprentice agreements under which he or she is training, or (2) the rules and regulations of the California Apprenticeship Council.

.4 Contractor and any of the Subcontractors employing workers in any apprenticeable craft or trade in performing any of the Work shall apply to the applicable joint apprenticeship committee for a certificate approving Contractor or the Subcontractor under the applicable apprenticeship standards and fixing the ratio of apprentices to journeymen employed in performing the Work.

.5 Prior to commencing the Work, Contractor shall submit contract award information to an applicable apprenticeship program that can supply apprentices to the Site of the Work. The information submitted shall include an estimate of journeyman hours to be performed under the Construction Contract, the number of apprentices proposed to be employed, and the approximate dates the apprentices would be employed. A copy of this information shall also be submitted to County if requested by County.

.6 The ratio of the Work performed by apprentices to journeymen employed in a particular craft or trade on the Work may be no higher than the ratio stipulated in the apprenticeship standards under which the apprenticeship program operates, where Contractor or the Subcontractor agrees to be bound by those standards, but, except as otherwise provided in this Paragraph, in no case shall the ratio be less than one (1) hour of apprentice work for every five (5) hours of journeyman work. Apprentices may comprise up to thirty percent (30%) of the work force of each particular craft, classification or type of worker employed, unless the applicable joint apprenticeship committee establishes a lower percentage. To the extent possible, fifty percent (50%) of the apprentice work force shall consist of first-year apprentices.

.7 The interpretation and enforcement of California Labor Code §1777.5 shall be in accordance with the rules and procedures of the California Apprenticeship Council.

.8 Contractor and all the Subcontractors shall comply with California Labor Code §1777.6, which forbids certain discriminatory practices in the employment of apprentices.

.9 Contractor shall become fully acquainted with the law regarding apprentices prior to commencement of the Work, paying special attention to California Labor Code §§1777.5, 1777.6, and 1777.7 and Title 8, California Code of Regulations, §§200 et seq. Questions may be directed to the State Division of Apprenticeship Standards, 455 Golden Gate Avenue, San Francisco, California.

**3.19.11 Pre-Construction Meetings, Interviews.** Contractor shall attend any pre-construction meetings held by County to discuss labor requirements. Contractor and the Subcontractors shall allow County, County Consultants and the Department of Industrial Relations, and designated representatives of each, to conduct, at their discretion, interviews of workers at the Site during working hours.

**3.19.12 Penalties for Violations.**

**.1 Prevailing Wage Violations.** Pursuant to California Labor Code §1775, Contractor and any of the Subcontractors shall, as a penalty, pay an amount not to exceed Two Hundred Dollars (\$200) for each Day, or portion thereof, for each worker paid less than the prevailing rates, determined by the Director of the Department of Industrial Relations, for the trade or craft in which such worker is employed by Contractor or, except as provided by said §1775, by any of the Subcontractors, of any Tier, for performance of the Work. The amount of this penalty shall be determined by the Labor Commissioner and shall be based on consideration of both: (1) whether the failure of Contractor or the Subcontractor to pay the correct rate of per diem wages was a good faith mistake and, if so, whether the error was promptly and voluntarily corrected upon being brought to the attention of Contractor or the Subcontractor; and (2) whether Contractor or the Subcontractor has a prior record of failing to meet its prevailing wage obligations. The difference between the amount owed to each worker pursuant to such prevailing wage rates, and the amount paid to each worker for each Day or portion thereof for which each worker was paid less than the prevailing wage rate, shall be paid to each worker by Contractor.

**.2 Working Hour Violations.** Pursuant to Labor Code §1813, Contractor shall pay a penalty of Twenty-Five Dollars (\$25) per worker employed in the performance of the Work by Contractor or by any of the Subcontractors for each Day during which such worker is required or permitted to work more than eight (8) hours in any Day and forty (40) hours in any one calendar week in violation of the provisions of Article 3 (commencing at §1810), Chapter 1, Part 7, Division 2 of the California Labor Code.

**.3 Payroll Record Violations.** Pursuant to California Labor Code §1776, Contractor shall in the event of a failure to comply within ten (10) Days with any written notice requesting the records enumerated in subdivision (a) of said §1776, pay a penalty of One Hundred Dollars (\$100) for each Day, or portion thereof, for each worker, until Contractor has strictly complied with such request. Upon the request of the Division of Apprenticeship Standards or the Division of Labor Standards Enforcement, these penalties shall be withheld from progress payments then due.

**.4 Apprenticeship Violations.** Pursuant to California Labor Code §1777.7, if Contractor or the Subcontractor is determined by the Chief of the Division of Apprenticeship Standards (the "Chief") to have knowingly committed a first-time violation of California Labor Code §1777.5, Contractor or the Subcontractor shall pay, as a civil penalty, an amount not exceeding One Hundred Dollars (\$100) for each full Day of noncompliance, provided that the amount of this penalty may be reduced by the Chief if the penalty would be disproportionate to the severity of the violation. In lieu of this penalty, the Chief may, for a first-time violation and with the concurrence of the joint apprenticeship committee, order Contractor or the Subcontractor to provide apprentice employment equivalent to the work hours that would have been provided for apprentices during the period of noncompliance. If such violation by Contractor or the Subcontractor is a second or subsequent violation committed within a three (3) year period from a previous violation of §1777.5, Contractor or the Subcontractor shall pay, as a civil penalty, to County the sum of not more than Three Hundred Dollars (\$300) for each full Day of noncompliance. County shall withhold the amount of the civil penalty from contract progress payments then due or to become due. In addition, if Contractor or the Subcontractor is determined to have knowingly committed a serious violation of any provision of §1777.5, the Chief may deny to Contractor or the Subcontractor, and to its responsible officers, the right to bid on or be awarded a contract to perform work as a subcontractor on any subsequent project for County for a period of up to one (1) year for the first violation and for a period of up to three (3) years for a second or subsequent violation.

**3.19.13 Subcontractor Provisions.** Contractor shall include, and shall require the Subcontractors to include, contractual provisions in all contracts they enter into for the performance of the Work requiring compliance with the provisions of this Section 3.19 at no additional cost.

**3.19.14 Condition of Payment.** Compliance by Contractor with the requirements of this Section 3.19 and each of its Paragraphs shall be a condition to Contractor's right to payment under its Applications for Payment. Without limitation to the foregoing, payments to Contractor shall not be made when payroll records are delinquent or inadequate.

## **3.20 LABOR CODE §2810**

**3.20.1 Application.** The provisions of this Section 3.20 apply only if the Contractor has not executed a collective bargaining agreement covering the workers who will be employed to perform the Work.

**3.20.2 Declaration by Contractor.** If a Declaration of Sufficiency of Funds has not been submitted by Contractor as a Post-Award Submittal, then it must be submitted prior to Award. In executing the Construction Contract, Contractor warrants and represents that all of the statements contained in its Declaration of Sufficiency of Funds remain true and correct as of the date of execution of the Construction Contract and may be relied upon by County in determining whether there appears to be sufficient funds in the Contractor's Bid to allow the Contractor to comply with all Applicable Laws governing the labor or services to be provided for the performance of the Work. The truth and accuracy of the statements contained in said Declaration and in this Paragraph 3.20.2 constitute a material part of the Contractor's consideration for, and a material inducement to the County's entering into, the Construction Contract.

**3.20.3 Continuing Duty.** To the extent that any of the information provided in the Declaration of Sufficiency of Funds submitted by Contractor relating to numbers of workers or independent contractors that will be employed or utilized for performance of the Work was or is based upon a best estimate, rather than actual figures or information, then the Contractor assumes the continuing duty to the County to ascertain the actual figures and information requested in the Declaration of Sufficiency of Funds and to provide such actual figures and information to the County in the form

of a revised and updated Declaration of Sufficiency of Funds once the actual figures and information become known.

### 3.21 URBAN RUNOFF AND STORM WATER COMPLIANCE

**3.21.1 Contractor's Responsibility.** If and to the extent storm water permitting, control, mitigation or discharge control is required by Applicable Laws, the Contractor shall: (1) prior to starting any Work at the Site, sign and implement the Storm Water Management Plans or Storm Water Pollution Prevention Plans as previously prepared by the County's Consultant for civil engineering or by others; (2) take all necessary steps to monitor, report, enforce and otherwise implement and comply with the requirements of the Storm Water Permit, Storm Water Management Plans and Storm Water Pollution Prevention Plans and all Applicable Laws pertaining to the elimination or mitigation of storm water pollutant discharge to separate storm sewer systems or other watercourses, including without limitation, applicable requirements of the State Water Resources Control Board, Santa Ana, San Diego, and/or Colorado Region Water Quality Control Boards and municipal storm water management programs; (3) adhere to and implement the Special Provisions for Urban Runoff and Water Pollution Control set forth in the Specifications; and (4) ensure that the Work is constructed in conformance with those post-construction best management practices (BMPs) identified within the project-specific Water Quality Management Plan (WQMP).

**3.21.2 Inspections, Reports.** Contractor shall immediately notify the person identified to Contractor as the County's "project manager" for the Project of all inspections by Government Authorities (including, but not limited to, any regional board staff) and, if practicable, arrange for participation by such Governmental Authorities in any other pertinent inspections conducted at the Site. Contractor shall provide to County copies of all reports and monitoring information related to the matters covered by this Section 3.21.

**3.21.3 Violations.** The Contractor recognizes and understands that failure to comply with the requirements of any applicable storm water-related permit issued by the State of California of the United States pursuant to the Clean Water Act (Title 33 U.S.C. §§ 1251 et seq) and/or the Porter Cologne Water Quality Control Act (California Water Code §§13000 et seq.) is a violation of Applicable Laws. Contractor shall be responsible for all Losses and for any liability (including, without limitation, fines, penalties and other administrative liabilities and costs) imposed by Applicable Laws as a result of the Contractor's failure to comply with Applicable Laws, including, without limitation, the requirements of this Section 3.21.

**3.21.4 Condition of Payment.** Compliance by the Contractor with the requirements of this Section 3.21 shall be a condition to the Contractor's right to payment under its Applications for Payment.

**3.21.5 Costs of Compliance.** The Contractor represents and warrants that it has included in its Bid all costs of compliance with the requirements of this Section 3.21.

### 3.22 SOLID WASTE MANAGEMENT

Contractor shall comply with all provisions of Applicable Laws (including, without limitation, the requirements of the California Public Resources Code, rules and regulations of the California Integrated Waste Management Board and provisions of any Site-specific plans adopted by County) that are applicable to the activities of contractors performing construction or related activities on the Site. Compliance by Contractor with the requirements of this Section 3.22 shall be a condition to Contractor's right to payment under its Applications for Payment.

### 3.23 CEQA COMPLIANCE

No Work that is subject to California Environmental Quality Act (CEQA) shall proceed by Contractor until Contract Documents satisfying the CEQA process are reviewed and approved by the County. Contractor shall comply with all applicable CEQA requirements. If there is a federal nexus (e.g. a source of federal funding) to the Project, compliance by Contractor with the National Environmental Policy Act (NEPA) will be required in addition to and in conjunction with compliance with requirements of CEQA. The Contractor shall comply with the conditions identified on the Plans and Specifications for compliance with the California Environmental Quality Act, including, without limitation, all requirements pertaining to Mitigation, Monitoring, and Reporting Program (MMRP).

### 3.24 AQMD COMPLIANCE

Contractor is responsible for full and complete compliance with, as applicable: (1) AQMD Rule 403.1, County Ordinance 742, the County MOU with AQMD dated January 6, 2004 Agenda Item 3.1 (for projects in the Coachella Valley); or (2) AQMD Rule 403 (for projects west of the Coachella Valley). Any fines imposed by AQMD on the County, as well as any other Loss to County, as a result of non-compliance by Contractor with the applicable provisions of the foregoing requirements are the responsibility of Contractor and upon request by County will be paid to County by Contractor or may be withheld by County from amounts due to Contractor under its Applications for Payment.

## ARTICLE 4 CONSTRUCTION ADMINISTRATION

### 4.1 ARCHITECT

**4.1.1 Scope of Authority.** The Architect shall have the authority to act on behalf of County only as expressly provided in the Contract Documents and subject to such limitations on authority as set forth in Paragraph 4.1.2, below. As clarification of the foregoing, if the Contract Documents provide that the Architect has the right to approve of, consent to or direct that Contractor take or forbear from taking an action, such authority shall be limited to issuing such approval, consent or direction and shall not include, or be interpreted to include, authority to bind County with respect to any of the matters set forth in Paragraph 4.1.2, below. If Contractor's compliance with such approval, consent or direction of the Architect would involve or require authorization by County within the scope of the matters set forth in Paragraph 4.1.2, below, Contractor has the obligation, in addition to complying with the Architect's approval, consent or direction, to take steps in accordance with the Contract Documents to obtain such authorization of County as may be required and failing to do so shall not have any right to recourse or recovery from County on account of Contractor's action taken or Work performed in response to such approval, consent or direction by Architect.

**4.1.2 Limitations on Authority.** Without limitation to the other limitations on the Architect's authority expressed or implied under Paragraph 4.1.1, above, and notwithstanding anything else set forth in the Contract Documents to the contrary, Architect does not have authority to: (1) obligate or commit County to any payment of money; (2) obligate County to any adjustment to the Contract Price or Contract Time; (3) relieve Contractor of any of its obligations under the Contract Documents; (4) approve or order any Work involving Delay or Extra Work; or (5) perform any act, make any decision or give any direction or approval that is described in these General Conditions as an act, decision, direction or approval that is to be performed, made or given by any person or entity other than Architect.

**4.1.3 Work Stoppage.** Architect's authority includes, without limitation, the authority to stop the Work whenever such stoppage may be necessary, in Architect's opinion, for the proper execution of the Work. Any Work that is stopped or disapproved by order of Architect shall be resumed if and when County so directs in writing, with or without the concurrence of the Architect.

**4.1.4 Replacement.** County may, in its sole discretion, substitute another person or entity, or add persons or entities, to perform the functions of Architect or to exercise some or all of the authority of Architect provided for in the Contract Documents.

**4.1.5 County Rights.** All rights and authority conferred upon Architect under the Contract Documents constitute rights that County may, in its sole and absolute discretion, exercise in writing on its own behalf, irrespective of whether the County has ordered the removal, replacement or a change in the authority of the Architect.

### 4.2 ADMINISTRATION OF THE CONSTRUCTION CONTRACT

**4.2.1 Observations of the Work.** Architect will visit the Site as appropriate to the stage of the Work to observe the Work in progress. Observations shall be for the purpose of ascertaining the progress of the Work and that the character, scope, quality and detail of construction (including workmanship and materials) comply with the Contract Documents, the Architect's directives, approved Submittals and clarifications issued by Architect. Observations shall be separate from any inspections which may be provided by others.

**4.2.2 Means, Methods.** Construction means, methods, techniques, sequences, procedures and safety precautions and programs in connection with the Work are solely the responsibility of Contractor. Neither County nor

Architect: (1) has control over or charge of, nor are they responsible for, Contractors or any Subcontractor's construction means, methods, techniques, sequences, procedures, safety precautions or programs in connection with the Work, all of which are, as between Contractor and County, solely Contractor's responsibility; (2) is responsible for Contractor's failure to carry out the Work in accordance with the Contract Documents; or (3) has control over, charge of, or responsibility for acts or omissions of Contractor, the Subcontractors or their agents or employees, or of any other persons performing portions of the Work.

**4.2.3 Communications by Contractor.** County shall be provided by Contractor with copies of all communications from Contractor or the Subcontractors to Separate Contractors or the Architect. Contractor shall not rely on oral or other non-written communications.

**4.2.4 Review of Applications for Payment.** If requested by County, Architect will review and certify all Applications for Payment by Contractor, including Applications for Payment requesting Progress Payments and Final Payment. In such cases, if the Architect and County do not concur in respect to the amount to be paid to Contractor, County's determination of the amount due will prevail.

**4.2.5 Rejection of the Work.** Architect will have authority to reject Work that does not conform to the Contract Documents and to require additional inspection or testing, in accordance with Article 10, below, whether or not such Work is fabricated, installed or completed. Whenever Architect considers it necessary or advisable for implementation of the intent of the Contract Documents, Architect will have authority to require additional inspection or testing of the Work in accordance with Article 10, below, whether or not such Work is fabricated, installed or completed. Neither Architect's authority to act under this Paragraph 4.2.5 nor a decision made in good faith either to exercise or not to exercise such authority, shall give rise to a duty or responsibility of Architect to Contractor, the Subcontractors, their agents or employees, or other persons performing any of the Work. County shall have the right, notwithstanding a recommendation by the Architect pursuant to this Paragraph 4.2.5 to reject a portion of the Work, to elect to accept the Work rejected by Architect and to direct in writing the manner in which the Work is to be performed and Contractor shall comply therewith.

**4.2.6 Review of Submittals.** Architect and such other County Consultants as Architect or County determines appropriate will review, approve or take other appropriate action upon the Contractor's Submittals. Such review, approval and other action taken in regard to a Submittal is for the limited purpose of checking for conformance with information given and the design concept expressed in the Contract Documents and is not conducted for the purpose of determining the technical accuracy and completeness of the Submittal, checking details such as dimensions and quantities, or for substantiating instructions for installation or performance of equipment or systems, all of which remain the sole responsibility of Contractor. Actions by Architect and County Consultants in connection with review of a Submittal by Contractor will be taken with such promptness as to cause no unreasonable Delay in the Work of Contractor or in the activities of the Separate Contractors or County, while allowing sufficient time in their judgments to permit adequate review. Whether or not County has identified a particular Submittal for review by Architect or a County Consultant, Contractor shall in all cases submit Submittals sufficiently in advance to allow time to permit adequate review by Architect and other County Consultants. Neither Architect's nor any County Consultant's review of a Submittal shall: (1) relieve Contractor of its obligations under Section 3.11, above; (2) constitute approval of safety precautions or, unless otherwise specifically stated in writing by the Architect or County Consultant at the time such Submittal is returned to Contractor; (3) be construed as an approval of any construction means, methods, techniques, sequences or procedures; and (4) if it involves review or approval of a specific item, be construed as indicating approval of an assembly of which such item is a component.

**4.2.7 Changes.** After consultation with the Architect, County will prepare the Change Orders, Unilateral Change Orders and Construction Change Directives for execution and take appropriate action thereon in accordance with Article 7, below.

#### **4.3 CLAIMS**

**4.3.1 Submission of Claims.** All Claims by Contractor shall be submitted in accordance with the procedures set forth in this Section 4.3.

**4.3.2 Arising of Claim.**

**.1 Changes.** A Claim by Contractor involving a Contract Adjustment due to a Compensable Change or Deleted Work arises upon issuance of a decision denying, in whole or in part, Contractor's Change Order Request. Such Claim shall be prepared and submitted in accordance with the requirements of this Section 4.3, including, without limitation, Paragraphs 4.3.3 through 4.3.5, below.

**.2 Other Claims.** Claims by Contractor other than those described in Subparagraph 4.3.2.1, above, arise at the time that County receives written notice by Contractor of Contractor's intent to file the Claim. Such notice of intent shall be given no later than five (5) Days after the Discovery Date relative to such circumstances (even if Contractor has not yet experienced a Loss or Delay due to such circumstances) and shall state the event or condition giving rise to the Claim and its probable effect, if any, upon the Contract Price and Contract Time. **FAILURE BY CONTRACTOR TO SUBMIT A NOTICE OF INTENT TO FILE CLAIM IN ACCORDANCE WITH THIS SUBPARAGRAPH 4.3.2.2 SHALL, IN ACCORDANCE WITH THE PROVISIONS OF SECTION 4.6 OF THE GENERAL CONDITIONS, CONSTITUTE A WAIVER BY CONTRACTOR OF THE RIGHT TO FURTHER RECOURSE OR RECOVERY UPON SUCH CLAIM.**

**4.3.3 Content of Claims.** A Claim must include the following:

**.1** a statement that it is a Claim and a request for a decision on the Claim;

**.2** a detailed description of the act, error, omission, unforeseen condition, event or other circumstance giving rise to the Claim;

**.3** supporting documentation as follows: (1) if the Claim involves a Contract Adjustment due to Compensable Change or Deleted Work, documentation demonstrating that a complete Notice of Change and Change Order Request were timely and properly submitted as required by Article 7, below; (2) if the Claim involves an adjustment to the Contract Time, documentation demonstrating that a complete Notice of Delay and Request for Extension were timely and properly submitted as required by Article 7 and Article 8, below; and (3) if the Claim does not involve a Contract Adjustment on the basis of Compensable Change or Deleted Work, documentation demonstrating that a notice of intent to file the Claim was timely and properly submitted as required by Subparagraph 4.3.2.2, above;

**.4** a detailed justification for any remedy or relief sought by the Claim, including, without limitation, all of the following: (1) a detailed cost breakdown in the form required for submittal of Change Order Requests, which complies with the prohibition on "total cost" calculations set forth in Paragraph 7.7.15, below; and (2) job cost records substantiating the actual costs that have been incurred; and

**.5** a written certification, signed by a responsible managing officer or principal of Contractor's organization who has the authority to sign contracts on behalf of Contractor and who has personally investigated the matters alleged in the Claim, in the following form:

"I hereby certify under penalty of perjury that I am a managing officer or principal of (Contractor) and that I have reviewed the Claim presented herewith on Contractor's behalf and/or on behalf of (Subcontractor(s)) and that the following statements are, to the best of my knowledge after diligent inquiry into the circumstances of such Claim, true and correct:

**(i)** the facts alleged in or that form the basis for the Claim are true and accurate;

**(ii)** I do not know of any facts or circumstances, not alleged in the Claim, that by reason of their not being alleged render any fact or statement alleged in the Claim materially misleading;

**(iii)** I have, with respect to any request for money or damages alleged in or that forms the basis for the Claim, reviewed the job cost records (including those maintained by Contractor and by any Subcontractor, of any Tier, that is asserting all or any portion of the Claim) and confirmed with reasonable certainty that the losses or damages alleged to have been



suffered by Contractor and/or such Subcontractor were in fact suffered in the amounts and for the reasons alleged in the Claim;

(iv) I have, with respect to any request for extension of time or claim of delay, disruption, hindrance or interference alleged in or that forms the basis for the Claim, reviewed the job schedules (including those maintained by Contractor and by any Subcontractor, of any Tier, that is asserting all or any portion of the Claim) and confirmed that the delays or disruption alleged to have been suffered by Contractor and/or such Subcontractor were in fact experienced for the durations, in the manner, and with the consequent effects on the time and/or sequence of performance of the Work, as alleged in the Claim; and,

(v) Contractor has not received payment from County for, nor has Contractor previously released County from, any portion of the Claim.

Signature: \_\_\_\_\_

Name: \_\_\_\_\_

Title: \_\_\_\_\_

Company: \_\_\_\_\_

Date: \_\_\_\_\_

4.3.4 **Noncompliance.** Failure by Contractor to comply with Paragraph 4.3.3, above, shall give County the right, without obligation, to deny the Claim or return the Claim without any response.

4.3.5 **Submission of Claims.**

.1 **Time for Filing.** All Claims and supporting documentation and certifications required to be submitted by Contractor must be submitted to the County within thirty (30) Days after the Claim arises (as "arises" is defined in Paragraph 4.3.2, above). No Claims by Contractor are permitted after Final Payment.

.2 **Manner of Filing.** A Claim shall be submitted by registered or certified mail, return receipt requested.

.3 **Condition Precedent.** Contractor's strict compliance with the requirements of this Section 4.3 as to a Claim shall be considered a condition precedent to Contractor's right to initiate or seek determination of its rights in any legal proceedings with respect to such Claim.

4.3.6 **Response to Claims by Contractor.**

.1 **Claims Response.** County shall provide a reasonable review and issue a written Good Faith Determination within forty-five (45) Days of receipt of the Claim, unless County and Contractor have by mutual agreement extended the time period. The written Good Faith Determination shall identify which portion of the Claim is disputed by County and which portion is undisputed.

.2 **Meeting with Board.** If County should need to submit and gain approval of the Board of Supervisors prior to providing the Contractor the written statement identifying the undisputed and disputed portions of the Claim, and the governing body does not meet within the forty-five (45) days or within the mutually agreed time extension, County shall have three (3) days following the next duly publicly noticed meeting of the Board of Supervisors after the forty-five (45) day period, or agreed extension, to provide Contractor a written statement identifying the disputed portion and undisputed portion of the Claim.

**.3 Payments on Undisputed Portion(s).** Any payment due on an undisputed portion of the Claim shall be processed and made within sixty (60) days after County issues its written statement. Amounts not paid in a timely manner shall bear interest at 7 percent per annum.

**.4 Failure of County to Respond.** If County should fail to respond to a Claim from Contractor within the time periods set forth in this 4.3.6 or otherwise meet the time requirements, the Claim shall be deemed rejected in its entirety. A Claim that is denied by reasons of County's failure to have responded to the Claim, or its failure to otherwise meet the requirements of Public Contract Code §9204, shall not constitute an adverse finding with regard to the merits of the Claim or the responsibility or qualifications of the Contractor.

**4.3.7 Meet and Confer.**

**.1 Dispute by Contractor.** If Contractor disputes County's Good Faith Determination and written response of a Claim by Contractor, or if County fails to respond within the prescribed time set forth herein, the Contractor may demand, in writing sent by registered or certified mail return receipt requested, an informal conference to meet and confer for settlement of the issues still in dispute. Upon receipt of such demand, County shall schedule a meet and confer conference within thirty (30) Days.

**.2 Conclusion of Meet and Confer.** Within ten (10) business days following conclusion of the meet and confer conference, if the Claim or any portion thereof remains in dispute, County shall provide the Contractor with a written statement identifying the portion of the Claim still in dispute and the portion that is undisputed. Any payment due on the undisputed portion shall be processed and made within sixty (60) days after such written statement is issued. Amounts not paid in a timely manner shall bear interest at 7 percent per annum.

**.3 Mediation.** Any disputed portion of the Claim as identified by the Contractor in writing, shall be submitted to non-binding mediation with the County and Contractor sharing the associated costs equally. The County and Contractor shall mutually agree to a mediator within ten (10) business days after the disputed portion of the Claim has been identified in writing. If the parties cannot agree upon a mediator, each party shall select a mediator and those mediators shall select a qualified neutral third party to mediate with regard to the disputed portion of the Claim. Each party shall bear the fees and costs charged by its respective mediator in connection with the selection of the neutral mediator. Mediation includes any non-binding process, including, but not limited to, neutral evaluation or a dispute review board, in which an independent third party or board assist the parties in dispute resolution through negotiation or by issuance of an evaluation. Any mediation utilized shall conform to the timeframes in this section.

**.4** If mediation is unsuccessful, the parts of the Claim remaining in dispute shall be subject to applicable procedures outside this section.

**4.3.8 Subcontractor Claims.**

**.1 Subcontractor Claim.** If a subcontractor or lower tier subcontractor has a claim against the County, the Contractor may present to the County a claim on behalf of a subcontractor or lower tier subcontractor. A subcontractor may request in writing, either on his or her own behalf or on behalf of a lower tier subcontractor, that the Contractor present a claim for work which was performed by the subcontractor or a lower tier subcontractor on behalf of the subcontractor. The subcontractor requesting that the claim be presented to the County shall furnish reasonable documentation to support the claim.

**.2 Contractor Response.** Within forty five (45) days of receipt of the written request by the subcontractor, the Contractor shall notify the subcontractor in writing as to whether the Contractor presented the claim to the County and, if the Contractor did not present the claim, provide the subcontractor with a statement of the reasons for not having done so.

**4.3.9 Claims Based on Differing Site Conditions.**

**.1 Contractor Responsibility.** Save and except as hereinafter provided in this Paragraph 4.3.9 for Contract Adjustments due to Differing Site Conditions, Contractor agrees at Contractor's Own Expense to assume the risk and costs of Extra Work and Delay due to concealed or unknown conditions, surface or subsurface, at the Site or in Existing Improvements.

**.2 Differing Site Conditions.** Differing Site Conditions are those conditions at the Site or in Existing Improvements and not otherwise reasonably ascertainable by Contractor in the performance of its obligations under the Contract Documents (including, without limitation, conditions not reasonably ascertainable by Contractor from documents or information described in Paragraph 3.2.1, above, that were provided or available to Contractor for its review prior to the Bid Closing Deadline) that constitute: (1) hazardous materials that constitute hazardous waste, as defined in California Health and Safety Code §25117, that is required to be removed to a Class I, Class II, or Class III disposal site in accordance with provisions of Applicable Laws; (2) subsurface or concealed conditions at the Site or concealed conditions in Existing Improvements which differ materially from those indicated by the Contract Documents or other information that was either reviewed by Contractor or that Contractor was given the opportunity to review prior to the Bid Closing Deadline; or (3) unknown physical conditions at the Site or concealed conditions in Existing Improvements of an unusual nature, differing materially from those ordinarily encountered and generally recognized as inherent in work of the character provided for in the Contract Documents.

**.3 Notice of Change.** If Contractor encounters conditions it believes constitute Differing Site Conditions, then Contractor shall, before such conditions are disturbed, give Notice of Change as required by Paragraph 7.6.1, below, stating, without limitation, a detailed description and precise location of the conditions encountered.

**.4 Investigation by County.** Upon receipt of notice from Contractor as required by Subparagraph 4.3.9.3, above, County shall promptly investigate Contractor's report of Differing Site Conditions.

**.5 Change Order Request.** If Contractor intends to seek a Contract Adjustment based upon Differing Site Conditions, it shall submit a complete and timely Change Order Request in accordance with Paragraph 7.6.2, below, setting forth its request for a Contract Adjustment.

**.6 Contract Adjustments.** If, following Contractor's compliance with its obligations under this Paragraph 4.3.9, County finds that Differing Site Conditions exist, then, unless the Contractor's right to Contract Adjustment has been waived as pursuant to Paragraph 3.2.3, above, a Contract Adjustment shall be made for the resulting Compensable Change and Compensable Delay, in such amount and duration as County determines by issuance of a Good Faith Determination are reasonable and permitted by these General Conditions.

**.7 WAIVER BY CONTRACTOR.**

**FAILURE BY CONTRACTOR TO STRICTLY COMPLY WITH THE REQUIREMENTS OF THIS PARAGRAPH 4.3.9 PERTAINING TO CONTRACT ADJUSTMENT BASED ON A CLAIM FOR DIFFERING SITE CONDITIONS SHALL, IN ACCORDANCE WITH THE PROVISIONS OF SECTION 4.6 OF THE GENERAL CONDITIONS, CONSTITUTE A WAIVER BY CONTRACTOR OF THE RIGHT TO FURTHER RECOURSE OR RECOVERY UPON SUCH CLAIM.**

**.8 Final Completion.** No claim by Contractor for additional compensation for Differing Site Conditions shall be allowed if asserted after Final Payment.

**4.3.10 Continuous Work.** Contractor shall, notwithstanding the existence of a Claim by Contractor that is disputed by County, maintain continuous performance, without interruption, suspension or slowing, of the Work and its other obligations (1) pending issuance by County of a Good Faith Determination of the Claim and (2) thereafter in compliance with the terms of such Good Faith Determination.

**4.4 NOTICE OF THIRD-PARTY CLAIMS**

County shall provide notification to Contractor within a reasonable time after receipt of any third-party claim relating to the Construction Contract. County shall be entitled to recover from Contractor its reasonable costs of providing such notification.

**4.5 WAIVERS OF RIGHTS BY CONTRACTOR**

**COUNTY AND CONTRACTOR ACKNOWLEDGE THAT IT IS IN THE INTERESTS OF BOTH PARTIES THAT CHANGES, DELAYS AND CLAIMS BE IDENTIFIED, QUANTIFIED, EVALUATED AND FINALLY RESOLVED PROMPTLY, CONTEMPORANEOUSLY WITH THE CIRCUMSTANCES FROM WHICH THEY ARISE, AND THAT THERE BE CERTAINTY WITH RESPECT TO THE FINALITY OF ANY RESOLUTION OF RELATED DISPUTES. ON**

THOSE PREMISES, AND IN FURTHER RECOGNITION OF THE FACT THAT IT WOULD BE EXREMELY DIFFICULT OR IMPOSSIBLE TO QUANTIFY, DEMONSTRATE OR PROVE THE HARM TO COUNTY IF ANY OF THE FOREGOING PREMISES IS NOT ACHIEVED DUE TO A FAILURE BY CONTRACTOR TO COMPLY WITH THE REQUIREMENTS OF THE CONTRACT DOCUMENTS CONCERNING TIMELY NOTICE OR SUBMISSIONS OF NOTICES AND CLAIMS RELATING TO CHANGES, DELAY AND CONTRACT ADJUSTMENTS, COUNTY AND CONTRACTOR AGREE THAT FAILURE BY CONTRACTOR TO CONFORM TO SUCH REQUIREMENTS OF THE CONTRACT DOCUMENTS SHALL IN AND OF ITSELF CONSTITUTE SUFFICIENT CAUSE AND GROUNDS, WITHOUT THE NECESSITY OF COUNTY DEMONSTRATING ANY ACTUAL HARM OR PREJUDICE, FOR IMPOSING UPON CONTRACTOR A FULL AND UNCONDITIONAL WAIVER BY CONTRACTOR OF ITS RIGHT TO A CONTRACT ADJUSTMENT AND OF ITS RIGHTS AND RECOURSE FOR RECOVERY OF ANY RELATED LOSS BY ANY LEGAL PROCESS OTHERWISE PROVIDED FOR UNDER APPLICABLE LAWS.

#### 4.6 GOOD FAITH DETERMINATIONS

Wherever in the Contract Documents it is provided that the County may or shall make a determination or decision in the exercise of good faith (including, without limitation, provisions for a Good Faith Determination by County), any such determination or decision that the person exercising such right on behalf of County believes in good faith to be a proper exercise of County's rights and to have a reasonable basis in fact, whether or not such determination is in fact proper, reasonable or correct or adjudged to be so, shall be complied with by Contractor without Delay to Contractor's performance of the Work. However, unless the Contract Documents expressly provides otherwise, neither such good faith determination or decision nor Contractor's compliance therewith shall be interpreted as precluding the Contractor from exercising its rights to seek adjudication of its rights in the manner permitted by these General Conditions or Applicable Laws.

#### 4.7 ESCROW BID DOCUMENTS

If the Bidding Documents obligate Contractor to submit Escrow Bid Documents, then submission by Contractor of its Escrow Bid Documents shall constitute a warranty and representation by Contractor that it has no other written documents or electronic files containing any information that Contractor was required to include, but failed to include, as part of its performing such obligation and Contractor agrees it shall have no right to submit for consideration by County, or offer into evidence in legal proceedings, in support of a request for Contract Adjustment or a Claim any such documentation or electronic files that Contractor so failed to include in its Escrow Bid Documents.

### ARTICLE 5 SUBCONTRACTORS

#### 5.1 SUBSTITUTION

5.1.1 **Substitutions Allowed.** There shall be no substitution of or addition to the Subcontractors except as permitted by Chapter 4 (commencing at §4100), Division 2, Part 1 of the California Public Contract Code (the "Act").

5.1.2 **Contractor's Own Expense.** Any increase in the cost or time of performance of the Work resulting from the replacement, substitution or addition of a Subcontractor shall be borne solely by Contractor at Contractor's Own Expense.

5.1.3 **Substantiation of Compliance.** At any time during performance of the Work it shall be the responsibility and burden of Contractor, if requested by County, to present clear and convincing evidence that Contractor is, and all times during the bidding and Award of the Construction Contract was, in full compliance with all of the applicable provisions of the Act. Failure by Contractor to present such evidence when requested shall be deemed a breach of this Section 5.1 and of the Act, thereby entitling County to exercise any or all of its rights and remedies under the Contract Document or Applicable Laws, including, without limitation, the right to cancel the Construction Contract or assess any penalties provided for by the Act.

5.1.4 **Splitting Prohibited.** Any attempt by Contractor to avoid compliance with the Act, such as, but not limited to, by splitting the work of subcontracts with Subcontractors into separate contracts or changes orders so as to not exceed the monetary threshold of the Act applicable to listing of Subcontractors, is strictly prohibited.

## 5.2 SUBCONTRACTUAL RELATIONS

**5.2.1 Written Agreements.** Contractor shall, by written agreement entered into between the Contractor and Subcontractors no later than twenty (20) Days after Award, require each Subcontractor, to the extent of the Work to be performed by the Subcontractor, to be bound to Contractor by terms of the Contract Documents and to assume toward Contractor all the obligations and responsibilities which Contractor, by the Contract Documents, assumes toward County and the Architect. Each subcontract agreement shall preserve and protect the rights of County and the Architect under the Contract Documents with respect to the Work to be performed by the Subcontractor so that subcontracting thereof will not prejudice such rights, and shall allow the Subcontractor, unless specifically provided otherwise in the subcontract agreement, the benefit of all rights, remedies and redress against Contractor that Contractor, by the Contract Documents, has against County. Contractor shall require each first-Tier Subcontractor to enter into similar agreements with their sub-subcontractors. Copies of applicable portions of the Contract Documents shall be made available by Contractor to the first-Tier Subcontractors and each Subcontractor shall similarly make copies of such Contract Documents available to each Subcontractor of a lower-Tier with which it contracts. Without limitation to the foregoing, each contract that is entered into by a Subcontractor, of any Tier, shall, without limitation, require the Subcontractor:

- .1 to perform the Work in accordance with the terms of the Contract Documents;
- .2 to assume toward Contractor all the obligations and responsibilities which Contractor assumes toward County by the Contract Documents;
- .3 to preserve and protect the rights of County under the Contract Documents with respect to the Work to be performed by the Subcontractor so that subcontracting thereof will not prejudice such rights;
- .4 to waive all rights (including, without limitation, rights of subrogation) that the Subcontractor or its insurers may have against County and others required by the Contract Documents to be named as additional insureds, for Losses covered by insurance carried by Contractor or County, except for such rights as the Subcontractor may have to the proceeds of such insurance held by County or such other additional insured;
- .5 to afford County and entities and agencies designated by County the same rights and remedies afforded to them under the Contract Documents with respect to access to, and the right to audit and copy at County's cost, all of the Subcontractor's books, records, contracts, correspondence, instructions, drawings, receipts, vouchers, purchase orders, memoranda and other records and documents relating to the Work and requiring the Subcontractor to preserve all such records and other items for a period of ten (10) years after Final Completion;
- .6 to recognize the rights of the County under Section 5.3, below, including, without limitation, the County's right to (1) accept assignment of the Subcontractor's agreement, (2) accept assignment of Contractor's rights as obligee under a performance bond furnished by a first-Tier Subcontractor, (3) to retain the Subcontractor pursuant to the terms of its agreement with Contractor to complete the unperformed obligations under its agreement, and, (4) if requested by the County, to require that the Subcontractor execute a written agreement on terms acceptable to the County confirming that the Subcontractor is bound to the County under the terms of its agreement with Contractor;
- .7 to submit applications for payment, requests for change orders and extensions of time and claims, and to comply with all other notice and submission requirements of the Contract Documents, sufficiently in advance to allow Contractor time to comply with its obligations under the Contract Documents;
- .8 to purchase and maintain insurance in accordance with the requirements of the Contract Documents;
- .9 to defend and indemnify the Indemnitees on the same terms as provided in Section 3.18, above;
- .10 to comply with the nondiscrimination (Article 16, below) and prevailing wage (Section 3.19, above) provisions of these General Conditions;

.11 limiting the Subcontractor's right to additional compensation or extension of time due to Differing Site Conditions and Design Discrepancies in accordance with the provisions of Section 3.2, above;

.12 to provide for a right of termination for convenience by Contractor that limits the Subcontractor's right to compensation to an allocable share of the subcontract price that corresponds to the percentage of the Work properly performed by the Subcontractor, with no additional sum payable for any other Losses, including, without limitation, prospective damages, lost profits or consequential damages, of any kind; and

.13 to provide that time is of the essence to each of the Subcontractor's obligations.

5.2.2 **Copies.** Contractor shall, upon request by County made at any time, furnish to County true, complete, and executed copies of all contracts with the Subcontractors and amendments, modifications and change orders thereto. Progress payments shall not be made for items of the Work for which County has not received such documents following request therefor by County.

5.2.3 **No Brokering.** Contractor shall not permit any portion of the Work to be contracted to a firm acting as a broker, factor or other entity not actually performing a substantial portion of the Work with its own forces; provided, however, that nothing herein shall be interpreted as precluding the right of a Subcontractor who has agreed to provide all of the materials and labor for a trade to subcontract the labor portion only to a sub-subcontractor.

5.2.4 **Third-Party Rights.** Contractor acknowledges that County is an intended third-party beneficiary to all contracts between Contractor and its first-Tier Subcontractors. Notwithstanding the foregoing or anything else to the contrary in the Contract Documents, there is no intent on the part of County or Contractor to create any rights (including, without limitation, third-party beneficiary rights) in favor of any Subcontractor, of any Tier, against County and nothing contained in the Contract Documents and no course of conduct, act or omission on the part of County shall be construed as creating a direct or indirect contractual right in favor of any Subcontractor, of any Tier, and against County.

5.2.5 **All Subcontractor Tiers.** It is the Contractor's obligation to see to it that all obligations of the Contractor are assumed by (or, "flow down") to the Subcontractors, of every Tier, by the inclusion of contractual provisions requiring each of the Subcontractors, of every Tier, to bind not only themselves but their lower-Tier Subcontractors to the obligations assumed by Contractor under the Contract Documents.

### 5.3 CONTINGENT ASSIGNMENT OF SUBCONTRACTS

5.3.1 **Contingent Assignment.** Contractor hereby contingently assigns to County, or to such person or entity as County, in its sole and absolute discretion, designates, all of its interest in subcontracts entered into by Contractor with its first-Tier Subcontractors. If a first-Tier Subcontractor has provided a performance bond, then Contractor's rights under such performance bond are likewise hereby deemed contingently assigned to County or its designee and provision shall be made in the performance bond for surety's consent to such contingent assignment.

5.3.2 **Acceptance by County.** The contingent assignments provided for by this Section 5.3 will be effective only as to those subcontracts and performance bonds which County or its designee accepts in writing. Said acceptance is the sole condition upon which the effectiveness of such assignments are contingent. County or its designee may accept any such assignment at any time during the course of the Work and prior to Final Completion. Such contingent assignments are part of the consideration to County for entering into the Construction Contract with Contractor and may not be withdrawn prior to Final Completion.

5.3.3 **County Obligation.** County's or its designee's sole obligation in the event it accepts a contingent assignment of a subcontract under this Section 5.3 shall be to pay in accordance with the terms of such subcontract for Work performed after written notice of acceptance of such assignment. In the event County directs that such assignment be made to County's designee, then such designee only, and not County, shall be solely liable under such assignment for Work performed after written notice of acceptance of such assignment.

### 5.4 COMMUNICATIONS BY COUNTY

County shall have the right to communicate, orally or in writing, with the Subcontractors with respect to matters that are related to Contractor's performance of its obligations under the Contract Documents. Nothing herein shall be interpreted

as extending to County the right as part of such communications to direct the manner in which any Subcontractor performs the Work. Except as otherwise provided in the Construction Contract or these General Conditions, Contractor shall be provided with a copy of all such communications that are in writing. Such communications shall not create, or be interpreted as creating, any contractual obligation of County to any Subcontractor.

#### 5.5 DOCUMENT AVAILABILITY

Contractor shall make available to each proposed Subcontractor with whom it enters into a contract for performance of any portion of the Work, prior to the execution of the subcontract agreement, copies of the Contract Documents to which the Subcontractor will be bound so as to ensure that all matters disclosed thereby are taken into consideration and included in the terms of such contracts and shall identify to such Subcontractor the terms and conditions of the proposed subcontract agreement which may be at variance with the Contract Documents. The Subcontractors shall similarly be required to make copies of applicable portions of such documents available to their respective proposed sub-subcontractors or sub-subconsultants.

#### 5.6 NO LIABILITY OF COUNTY

Nothing set forth in this Article 5, and no action taken by County with respect to review or approval of the Subcontractors or their contracts, shall impose any liability or responsibility upon County nor relieve Contractor of its responsibilities under the Contract Documents or Applicable Laws.

### ARTICLE 6 COUNTY'S OWN FORCES AND SEPARATE CONTRACTORS

#### 6.1 COUNTY'S RIGHT TO PERFORM CONSTRUCTION WITH OWN FORCES AND TO AWARD SEPARATE CONTRACTS

6.1.1 **Right of County.** County reserves the right to perform construction or operations related to the Project with County's own forces and to award other contracts to Separate Contractors in connection with other portions of the Project or other construction or operations on the Site.

6.1.2 **Separate Contractors.** Contractor shall ascertain to its own satisfaction the scope of the Project and the nature of any other contracts that have been or may be awarded by County to Separate Contractors in prosecution of the Project. Contractor shall look solely to such Separate Contractors, and County shall not be responsible, for any Losses for which Contractor is not provided a right or recovery by means of a right to Contract Adjustment for Compensable Change or Compensable Delay, that are suffered by Contractor or the Subcontractors, of any Tier, resulting directly or indirectly from the conduct of such work by the Separate Contractors.

6.1.3 **Coordination.** Nothing in the Contract Documents creates or will create any duty on the part of County to coordinate the Work of Contractor with the work of Separate Contractors. Contractor shall, when directed to do so by County, participate with the Separate Contractors and County in reviewing the Separate Contractors' construction schedules. Contractor and Separate Contractors will coordinate all work with the other so as to facilitate the general progress of the Project. Contractor agrees that any recovery of Losses for which Contractor is not provided a right or recovery by means of a right to Contract Adjustment for Compensable Change or Compensable Delay, that are suffered by Contractor due to a failure by a Separate Contractor to coordinate its work with the Work of Contractor will be sought directly against the Separate Contractors as set forth elsewhere in this Article 6.

6.1.4 **Disputes.** Contractor and County agree that Separate Contractors in direct contractual privity with County are third party beneficiaries of the Contract Documents, but only to the extent of claims and causes of action against Contractor arising out of or resulting from Contractor's performance or failure of performance under the Contract Documents or any act or omission of Contractor or the Subcontractors causing Loss to such Separate Contractors. Contractor consents to being sued by Separate Contractors for Losses caused by Contractor or any of the Subcontractors. Contractor hereby waives lack of privity of contract with such Separate Contractors as a defense to such actions.

6.1.5 **Remedy.** If Contractor as a result of the acts or omissions of one or more of the Separate Contractors suffers a Loss that is not compensated by means of a right given to Contractor under the Contract Documents to a

Contract Adjustment, then Contractor's sole remedy is to assert a claim or cause of action directly against the Separate Contractor(s) causing the Loss and Contractor hereby releases, acquits, holds harmless and forever discharges County of and from any and all liability for such Loss.

## 6.2 MUTUAL RESPONSIBILITY

6.2.1 **Use of Site.** Nothing contained in the Contract Documents shall be interpreted as granting Contractor exclusive use or occupancy of the Site. Contractor shall afford County's own forces and the Separate Contractors reasonable opportunity for introduction and storage of their materials and equipment and performance of their activities. Contractor shall not Delay the work of the Separate Contractors or County's own forces.

6.2.2 **Adjoining Work.** If part of Contractor's performance of the Work depends for proper execution or results upon construction or operations by County's own forces or Separate Contractors, Contractor shall, prior to proceeding with that portion of the Work, carefully inspect such construction and operations and promptly report in writing to the County apparent discrepancies or defects in such other construction that would render it unsuitable for such proper execution and results. Contractor will be responsible, at Contractor's Own Expense, for Losses to County resulting from any such discrepancies or defects not reported in accordance with this Paragraph 6.2.1 that were apparent or that should have been apparent to Contractor on careful inspection.

6.2.3 **Damage.** Contractor shall promptly remedy Loss caused by Contractor or its Subcontractors to completed construction or partially completed construction on the Site, or to property of County or the Separate Contractors.

6.2.4 **Disputes.** Contractor shall notify the County in writing within five (5) Days if it believes it has experienced or is experiencing any Delay or Loss due to the activities of County's own forces or the Separate Contractors or in the event of any dispute with County's own forces or a Separate Contractor.

6.2.5 **Settlement of Disputes.** If Contractor or any Subcontractor causes a Loss to a Separate Contractor, then Contractor will promptly settle the matter directly with the Separate Contractor and will defend, indemnify and hold County and the other Indemnitees harmless from any and all effects of such Loss in accordance with the terms of Section 3.18, above.

## 6.3 ALLOCATION OF CLEANUP COSTS

If a dispute arises among Contractor, the Separate Contractors and/or County as to the responsibility for maintaining the Site and surrounding area free from waste materials and rubbish, County may clean up such waste materials and rubbish and allocate the cost among those responsible as County determines in good faith to be just.

## ARTICLE 7 CHANGES IN THE WORK

### 7.1 CHANGES

7.1.1 **General.** County is authorized to make Changes in the Work in accordance with the provisions of this Article 7.

7.1.2 **Contract Adjustments.** Contract Adjustments shall only be permitted as follows: (1) the Contract Price shall only be adjusted by means of a Change Order or Unilateral Change Order for Compensable Change, Deleted Work or Compensable Delay; and (2) the Contract Time shall be adjusted by means of a Change Order or Unilateral Change Order for Excusable Delay, Compensable Delay or Deleted Work. All Contract Adjustments to the Contract Price shall conform, without limitation, to the requirements of this Article 7. All Contract Adjustments to the Contract Time shall conform, without limitation, to the applicable requirements of this Article 7 and Article 8, below.

7.1.3 **Exclusive Rights.** The rights expressly set forth in the Contract Documents for Contract Adjustments constitute Contractor's exclusive rights for additional compensation or extensions of time and are intended to be in lieu of and wholly replace any other such rights and remedies that Contractor has under Applicable Laws for recovery or



relief on account of Loss or Delay in connection with performance of the Work, it being the intent of the County and Contractor that if circumstances arise for which the Contract Documents do not provide to Contractor an express right to a Contract Adjustment, then such omission of an express right shall conclusively be deemed to mean that no right to a Contract Adjustment was intended; and, consistent with that intent, no right to a Contract Adjustment on account of such circumstances shall by any means, legal or equitable, of interpretation, construction, inference, implication or application be considered, found or adjudged to exist.

**7.1.4 Written Authorization.** Any Change performed by Contractor pursuant to any direction other than a duly authorized and executed Change Order, Unilateral Change Order or Construction Change Directive shall be at Contractor's Own Expense.

**7.1.5 Prompt Performance.** Subject to the procedures set forth in this Article 7 and elsewhere in the Contract Documents, all Changes shall be performed promptly and without Delay.

## **7.2 SIGNATURES AND AUTHORIZATIONS**

**7.2.1 Parties.** A Change Order shall be executed by County and Contractor. A Unilateral Change Order shall be executed by the County. Construction Change Directives shall be executed in accordance with Section 7.5, below.

**7.2.2 Form.** Change Orders, Unilateral Change Orders and Construction Change Directives shall be executed using forms furnished by County or, if requested by County, using forms furnished by Contractor that are approved by County.

### **7.2.3 Authorization.**

#### **.1 Compensable Changes.**

**(1) Director of Facilities Management.** A Compensable Change shall be performed by Contractor only if authorized by a Change Order, Unilateral Change Order or Construction Change Directive signed by the Director of Facilities Management in accordance with the requirements of this Article 7; provided, however, that the Director of Facilities Management's authority to bind the County to a Contract Adjustment shall be subject to the limitations of Public Contract Code §20142.

**(2) County's Project Manager.** The person identified by County as its "project manager" for the Project shall have the right to exercise the Director of Facilities Management's authority under this Paragraph 7.2.3, but only if and to the extent that such authority is expressly given to such project manager in a writing signed by the Director of Facilities Management (and not by a designee of the Director of Facilities Management).

**(3) Board of Supervisors.** Except as otherwise provided in Subparagraph 7.2.3.1 (4), below, if a Contract Adjustment increasing the Contract Price would exceed the limitations of Public Contract Code §20142, then in addition to written authorization by the Director of Facilities Management, such Compensable Change shall be performed only if approved by a vote of the Board of Supervisors in accordance with the requirements of Applicable Laws.

**(4) Disputed Changes.** If a dispute arises between County and Contractor over (a) whether a particular portion of the Work constitutes a Compensable Change or (b) the amount of the Contract Adjustment to which Contractor is entitled on account of a Compensable Change, then, notwithstanding such dispute, the Contractor shall, if ordered to do so in a Construction Change Directive signed by the Director of Facilities Management, perform the disputed Work without Delay. Such direction by County shall not be interpreted as an agreement or admission by County that the disputed Change constitutes Extra Work or a Compensable Change for which Contractor is entitled to a Contract Adjustment. Compliance by Contractor with such direction shall not be interpreted as a waiver of Contractor's right to a Contract Adjustment if and to the extent that Contractor is entitled to a Contract Adjustment or Claim under the terms of the Contract Documents, including, without limitation, the right of Contractor to recover upon a Claim for the amount of any excess in the event that it is adjudged that the amount of the Contract Adjustment to which Contractor is entitled exceeds the limits of Public Contract Code §20142.

.2 WRITING OF ESSENCE. IT IS OF THE ESSENCE TO THE CONSTRUCTION CONTRACT BETWEEN CONTRACTOR AND COUNTY THAT ALL CHANGES MUST BE AUTHORIZED IN ADVANCE, IN WRITING, AS REQUIRED BY THIS ARTICLE 7. ACCORDINGLY, NO VERBAL DIRECTIONS, COURSE OF CONDUCT BETWEEN THE PARTIES, EXPRESS OR IMPLIED ACCEPTANCE OF CHANGES OR OF THE WORK, OR CLAIM THAT THE COUNTY HAS BEEN UNJUSTLY ENRICHED (WHETHER OR NOT THERE HAS BEEN SUCH ENRICHMENT) SHALL BE THE BASIS FOR A CONTRACT ADJUSTMENT IF CONTRACTOR HAS NOT OBTAINED ADVANCE WRITTEN AUTHORIZATION IN THE MANNER REQUIRED BY THIS ARTICLE 7.

### 7.3 CHANGE ORDERS

7.3.1 **Purpose.** The purpose of a Change Order is to establish the terms of the County's and Contractor's mutual agreement to a Contract Adjustment.

7.3.2 **Content.** A Change Order is a written instrument, prepared by the County, stating:

- .1 a Compensable Change or Deleted Work;
- .2 a Compensable Delay or Excusable Delay;
- .3 the amount of the Contract Adjustment, if any, to the Contract Price; and/or
- .4 the extent of the Contract Adjustment, if any, to the Contract Time.

### 7.4 UNILATERAL CHANGE ORDERS

7.4.1 **Purpose.** The purpose of a Unilateral Change Order is to establish the County's estimate of a disputed Contract Adjustment.

7.4.2 **Good Faith Determination.** The County's determination in a Unilateral Change Order of a Contract Adjustment shall be based upon a Good Faith Determination by County of the Contract Adjustment that is appropriate under the circumstances and consistent with the terms of the Contract Documents.

7.4.3 **Claim by Contractor.** If Contractor disputes any portion of the County's Good Faith Determination of a Contract Adjustment that is set forth in a Unilateral Change Order, Contractor shall file, within thirty (30) Days after issuance of the Unilateral Change Order by County, a Claim pursuant to Section 4.3, above. The amount of the Contract Adjustment requested in the Claim shall not exceed the difference between the amount (either in terms of dollar amount or number of Days) of the Contract Adjustment requested by Contractor and the amount (either in terms of dollar amount or number of Days) of the Contract Adjustment granted in the Unilateral Change Order. Contractor shall have no reserved right, and hereby waives any such right that may exist under Applicable Laws, to seek in such Claim a Contract Adjustment or recovery that is based upon any amount (either in terms of dollar amount or number of Days) that is in excess of such difference.

#### 7.4.4 WAIVER BY CONTRACTOR.

**FAILURE BY CONTRACTOR TO SUBMIT A CLAIM PURSUANT TO SECTION 4.3, ABOVE, WITHIN THIRTY (30) DAYS AFTER ISSUANCE OF A UNILATERAL CHANGE ORDER BY COUNTY SHALL, IN ACCORDANCE WITH THE PROVISIONS OF SECTION 4.6 OF THE GENERAL CONDITIONS, CONSTITUTE A WAIVER BY CONTRACTOR OF THE RIGHT TO FURTHER RECOURSE OR RECOVERY BASED ON AN ASSERTION THAT THE AMOUNT OF THE CONTRACT ADJUSTMENT ON ACCOUNT OF THE CHANGE OR DELAY DESCRIBED IN SUCH UNILATERAL CHANGE ORDER SHOULD BE DIFFERENT THAN THE AMOUNT OF THE COUNTY'S GOOD FAITH DETERMINATION OF THE CONTRACT ADJUSTMENT AS SET FORTH IN SUCH UNILATERAL CHANGE ORDER.**

## 7.5 CONSTRUCTION CHANGE DIRECTIVES

7.5.1 **Purpose.** The purpose of a Construction Change Directive is to: (1) direct the performance of a Change that does not involve a Contract Adjustment; (2) establish a mutually agreed basis for compensation to Contractor for a Compensable Change under circumstances where performance of the Compensable Change needs to proceed in advance of the County performing a full evaluation of the Contractor's rights relative to a Contract Adjustment; or (3) direct performance of Work or a Change with respect to which there exists a dispute or question regarding the terms of a Contract Adjustment.

7.5.2 **No Contract Adjustment.** A Construction Change Directive that directs the performance of Work or a Change that does not involve a Contract Adjustment to the Contract Price or Contract Time may be authorized by either the Director of Facilities Management or the County's project manager and shall be promptly performed by Contractor so as to not cause Delay to any other portion of the Work. A Construction Change Directive directing performance of a Change that does not contain any statement indicating that a Contract Adjustment is requested or required shall be conclusively presumed to be a Change that is not a Compensable Change and no Contract Adjustment increasing the Contract Price or Contract Time will be made on account thereof.

7.5.3 **Agreed Contract Adjustment.** A Construction Change Directive that contains a complete or partial agreement by the County and Contractor with respect to the Contractor's right to, or the amount of, a Contract Adjustment shall be authorized in accordance with, conform to the requirements of and be binding upon County and Contractor as provided for in, this Paragraph 7.5.3.

**.1 Complete Agreement.** Each Construction Change Directive involving a Compensable Change or Deleted Work with respect to which there is complete agreement on the terms of the Contract Adjustment shall comply with the following:

(1) **Statement of Agreement.** A statement shall be included that the County and Contractor are in agreement on all of the terms of the Contract Adjustment related to performance of such Compensable Change and set forth a full description of the terms of the Contract Adjustment, including, without limitation, its effect on the Contract Price and Contract Time.

(2) **Legal Effect.**

(a) **Upon Contractor.**

**THE AGREED TERMS OF THE CONTRACT ADJUSTMENT WITH RESPECT TO WHICH THERE IS A STATEMENT OF FULL AGREEMENT ON THE TERMS OF THE CONTRACT ADJUSTMENT FOR A CHANGE IN THE WORK SHALL BE FINAL AND BINDING UPON CONTRACTOR. ANY RIGHT OR CLAIM BY CONTRACTOR FOR ANY ADDITIONAL COMPENSATION OR EXTENSION OF TIME RELATING DIRECTLY OR INDIRECTLY TO SUCH CHANGE SHALL BE CONCLUSIVELY DEEMED WAIVED BY CONTRACTOR, EVEN IF THE CIRCUMSTANCES GIVING RISE TO SUCH ADDITIONAL COMPENSATION OR EXTENSION OF TIME WERE NOT SUSPECTED BY OR KNOWN TO THE CONTRACTOR AT THE TIME OF EXECUTION OF THE CONSTRUCTION CHANGE DIRECTIVE AND IF SUSPECTED OR KNOWN WOULD HAVE BEEN CONSIDERED BY CONTRACTOR TO HAVE BEEN MATERIAL TO CONTRACTOR'S AGREEMENT TO THE CONTRACT ADJUSTMENT SET FORTH IN THE CONSTRUCTION CHANGE DIRECTIVE.**

(b) **Upon County.** In recognition of the fact that Construction Change Directives may be issued under circumstances in which the County may not have had the access to pertinent information required for the County to fully evaluate the circumstances giving rise to the Change, it is agreed that neither the issuance nor execution of, nor any statement contained in, nor any course of conduct in connection with, a Construction Change Directive (including, without limitation, a Construction Change Directive that constitutes a full agreement by County and Contractor on the terms of a Contract Adjustment) shall be interpreted as a waiver, release or settlement of any of County's rights relating to the subject matter of the Construction Change Directive, or as creating or implying any right of Contractor to a Contract Adjustment, if it is found by County upon further investigation that circumstances existed, not known to County at the time of executing the Construction Change Directive, demonstrating that the Contractor was not in fact entitled to a Contract Adjustment or was entitled to a Contract Adjustment on different terms than those agreed to in the Construction Change Directive.

**.2 Partial Agreement.** Each Construction Change Directive involving a Compensable Change or Deleted Work with respect to which there is only agreement on a portion of the terms of a Contract Adjustment shall comply with the following:

(1) **Agreed Terms.** The Construction Change Directive shall state those terms of the Contract Adjustment as to which there is agreement.

(a) **Legal Effect.** Except to the extent of any additional open (i.e., non-agreed) terms stated or reserved in the Construction Change Directive, such agreement shall have the same legal effect set forth in Subparagraph 7.5.3.1 (2), above.

(b) **Time and Materials.** In the event that County and Contractor agree in the Construction Change Directive to the “time and materials” method of calculation set forth in Subparagraph 7.7.1.1 (4), below, but do not agree upon a maximum price, then the total cost to County for the Work covered by the Construction Change Directive shall under no circumstances exceed a price that is reasonable, competitive and fair to County given the amount and type of Work involved and the circumstances under which the Compensable Change is performed.

(2) **Open Terms.** The Construction Change Directive shall state those terms of the Contract Adjustment that are “open” or “disputed”; meaning those terms as to which the County and Contractor did not reach agreement.

(a) **ROM Estimate.** If such open terms involve the amount of the Contract Adjustment to the Contract Price or Contract Time on account of a Compensable Change, then the Construction Change Directive shall also include a Reasonable Order of Magnitude Estimate prepared by Contractor, or prepared by County and acknowledged in writing as accepted by Contractor, of the probable amount of the Contract Adjustment to the Contract Price and Contract Time associated with performance of the Compensable Change.

(b) **Legal Effect.** A Reasonable Order of Magnitude Estimate constitutes neither (i) a guarantee by Contractor that the amount of the Contract Adjustment to the Contract Price or Contract Time that may be associated with the Compensable Change or Deleted Work covered by such Construction Change Directive may not exceed the Reasonable Order of Magnitude Estimate nor (ii) authorization or agreement by County to a Contract Adjustment based on the amounts set forth in such Reasonable Order of Magnitude Estimate.

(c) **Time and Materials.** If County and Contractor state in the Construction Change Directive an agreement that the Contractor is entitled to a Contract Adjustment to the Contract Price on account of a Compensable Change, but do not state therein an agreement upon the method of calculation to be used for the Contract Adjustment from among the optional methods of calculation set forth in Paragraph 7.7.1, below, and if the County nonetheless directs Contractor to perform the Compensable Change pending future agreement on the amount of the Contract Adjustment, then it shall be conclusively presumed that County and Contractor have agreed that such Compensable Change shall be performed and compensated based upon the “time and materials” method of calculation set forth in Subparagraph 7.7.1.1 (4), below, and that the total Contract Adjustment for performance thereof shall under no circumstances exceed a price that is reasonable, competitive and fair to County given the amount and type of Work involved and the circumstances under which the Compensable Change is performed.

**7.5.4 Disputed Contract Adjustment.** Each Construction Change Directive involving a Contract Adjustment with respect to which there is a dispute or partial agreement shall, if Contractor is ordered to do so in a Construction Change Directive signed by the Director of Facilities Management, be performed by Contractor without Delay. Except as otherwise provided elsewhere in this Section 7.5, with respect to any open terms as to which the County and Contractor have not reached agreement both County and Contractor shall be deemed to have reserved their respective rights and defenses.

**7.5.5 Other Notices.** With respect to any Contract Adjustment or portion of a Contract Adjustment that is not fully resolved in a Construction Change Directive, neither issuance nor execution of such Construction Change Directive shall be interpreted as relieving Contractor of its obligation to comply with the requirements of these General Conditions relative to timely submission of notices required by the Contract Documents, including, without limitation, Notice of Change, Change Order Request, Notice of Delay or Request for Extension.

## 7.6 PROCEDURES

### 7.6.1 Notice of Change.

**.1 Submission.** Contractor shall submit a written Notice of Change to County if any instruction, request, drawing, specification, action, condition, omission, default or other circumstance occurs that constitutes a Compensable Change, Deleted Work, Compensable Delay or other matter that may involve or require a Contract Adjustment (additive or deductive). Such notice shall be provided prior to commencement of performance of the Work affected and no later than three (3) working days after the Discovery Date of such circumstance.

**.2 Form.** Notices of Change shall be provided using forms furnished by County or, if requested by County, using forms furnished by Contractor that are approved by County. Failure by County to request or approve a particular form shall not relieve Contractor of its obligation to provide a Notice of Change in a written form that complies with the requirements specified in Subparagraph 7.6.1.3, below.

**.3 Content.** Each Notice of Change in order to be considered complete shall include:

(1) a general statement of the circumstances giving rise to the Notice of Change (including, without limitation, identification of any related Construction Change Directive);

(2) a Reasonable Order of Magnitude Estimate by Contractor of any related Contract Adjustments (additive and deductive) to the Contract Price; and,

(3) if such circumstances involve a right to adjustment of the Contract Time due to Compensable Delay or Excusable Delay that has not been waived pursuant to Subparagraph 8.2.2.4, below, or Subparagraph 8.2.3.4, below, Contractor shall include, if not previously provided, a complete and timely Notice of Delay.

### **.4 WAIVER BY CONTRACTOR.**

**FAILURE BY CONTRACTOR TO PROVIDE A COMPLETE AND TIMELY NOTICE OF CHANGE UNDER CIRCUMSTANCES WHERE A NOTICE OF CHANGE INVOLVING A CHANGE IS REQUIRED BY THIS PARAGRAPH 7.6.1 SHALL, IN ACCORDANCE WITH THE PROVISIONS OF SECTION 4.6 OF THE GENERAL CONDITIONS, CONSTITUTE A WAIVER BY CONTRACTOR OF THE RIGHT TO A CONTRACT ADJUSTMENT ON ACCOUNT OF SUCH CIRCUMSTANCES AND A WAIVER OF ANY RIGHT TO FURTHER RECOURSE OR RECOVERY BY REASON OF OR RELATED TO SUCH CHANGE.**

**.5 Deductive Adjustments.** Failure by Contractor to submit a timely or proper Notice of Change under circumstances in which a Notice of Change is required shall in no way affect County's right to any deductive Contract Adjustment on account of such circumstances.

### 7.6.2 Change Order Request.

**.1 Submission.** With respect to any matter that may involve or require a Contract Adjustment (additive or deductive) of the Contract Price, Contractor shall, within fourteen (14) Days after receipt by the County of a Notice of Change pursuant to Paragraph 7.6.1, above, submit to the County a written Change Order Request.

**.2 Form.** Change Order Requests shall be provided using forms furnished by County or, if requested by County, using forms furnished by Contractor that are approved by County. Failure by County to request or approve a particular form shall not relieve Contractor of its obligation to provide a Change Order Request in a written form that complies with the requirements stated in Subparagraph 7.6.2.3, below.

**.3 Content.** Each Change Order Request in order to be considered complete shall include:

(1) a detailed description of the circumstances for the Compensable Change, Deleted Work or Compensable Delay;

(2) a complete, itemized cost breakdown (additive and deductive) of the Allowable Costs that form the basis for the Contractor's request for Contract Adjustment, including: (a) if the pricing is based on time and materials charges, all of Contractor's and each Subcontractor's Allowable Costs (including, without limitation, quantities, hours, unit prices, and rates) and Allowable Markups and (b) if the pricing is in the form of a lump sum price a detailed breakdown of the lump sum price into its component and individual items of Allowable Costs and Allowable Markup; and

(3) if such circumstances involve a right to a Contract Adjustment of the Contract Time due to Compensable Delay or Excusable Delay that has not been waived pursuant to Subparagraph 8.2.2.4, below, or Subparagraph 8.2.3.4, below, Contractor shall include, if not previously provided, a complete and timely Request for Extension.

#### **.4 WAIVER BY CONTRACTOR.**

**FAILURE BY CONTRACTOR TO PROVIDE A COMPLETE AND TIMELY CHANGE ORDER REQUEST UNDER CIRCUMSTANCES WHERE A CHANGE ORDER REQUEST INVOLVING A CHANGE IS REQUIRED BY THIS PARAGRAPH 7.6.2 SHALL, IN ACCORDANCE WITH THE PROVISIONS OF SECTION 4.6 OF THE GENERAL CONDITIONS, CONSTITUTE A WAIVER BY CONTRACTOR OF THE RIGHT TO A CONTRACT ADJUSTMENT ON ACCOUNT OF SUCH CIRCUMSTANCES AND A WAIVER OF ANY RIGHT TO FURTHER RECOURSE OR RECOVERY BY REASON OF OR RELATED TO SUCH CHANGE.**

**.5 Deductive Adjustments.** Failure by Contractor to submit a timely or proper Change Order Request under circumstances in which a Change Order Request is required shall in no way affect County's right to any deductive Contract Adjustment on account of such circumstances.

**7.6.3 Formal Notice of Essence.** Contractor recognizes and acknowledges that timely submission of a formal Notice of Change and Change Order Request, whether or not the circumstances of the Change may be known to the County or available to County through other means, is not a mere formality but is of crucial importance to the ability of County to promptly identify, prioritize, evaluate and mitigate the potential effects of Changes. Any form of informal notice, whether verbal or written (including, without limitation, statements in Requests for Information, statements at regular job meetings or entries on monthly reports, daily logs or job meeting minutes), that does not strictly comply with the formal requirements of Paragraph 7.6.1, above, and Paragraph 7.6.2, above, shall therefore be insufficient.

### **7.7 PRICING**

#### **7.7.1 Basis of Calculation.**

**.1 Changes Not Involving Time.** Contract Adjustments to the Contract Price on account of Compensable Changes or Deleted Work, other than Contract Adjustments to the Contract Price for Compensable Delay, shall be calculated according to one of the following methods:

(1) **Lump Sum.** By mutual acceptance of a lump sum proposal from Contractor based solely on Allowable Costs and Allowable Markups, that is properly itemized and supported by sufficient substantiating data to permit evaluation.

(2) **Unit Prices.** By the unit prices set forth in the Construction Contract or such other unit prices as are subsequently and mutually agreed to in writing between the County and Contractor, with no amount added thereto for Allowable Markups.

(3) **Estimating Guides.** For Compensable Changes with respect to which County elects to make a unilateral and final determination pursuant to Paragraph 7.7.11, below, by the sum of all the following:

(a) **Materials.** The reasonable value of materials and equipment documented as having been actually incorporated into the Work, which reasonable value may be less but shall never be more than Contractor's actual Allowable Costs therefor.

**(b) Labor.** An estimate of the reasonable costs of labor, installation and other services using the lower of the estimated prices for the locale of the Project (or if prices are not reported for the locale of the Project, the estimated prices that are reported for the region in which the Project is located) as reported in following recognized estimating guides: (i) R. S. Means Company, Inc. Building Construction Cost Data, Western Region - Latest Edition, P.O. Box 800 Kingston, MA 02364-800; or (ii) Lee Saylor, Inc. Current Construction Costs - Latest Edition, 9420 Topanga Canyon Boulevard, Woodland Hills, CA 91311.

**(c) Allowable Markup.** The amount that results when the applicable Allowable Markup is applied to the sum of the amounts derived from preceding Clauses (a) and (b) of this Subparagraph 7.7.1.1 (3).

**(4) Time and Materials.**

**(a) Compensable Changes.**

**(i) Contract Adjustment.** With respect to Compensable Changes, if none of the methods provided for in Subparagraphs 7.7.1.1 (1) through 7.7.1.1 (3), above, is applicable, then the additive amount increasing the Contract Price shall be calculated by taking (A) the total of the reasonable expenditures by Contractor and its Subcontractors, documented in the manner required by Paragraph 7.7.2, below, for Allowable Costs that are actually and directly incurred and paid in the performance of the Compensable Change, not to exceed for any Compensable Change a price that is reasonable, competitive and fair to County given the amount and type of Work involved and the circumstances under which the Compensable Change is performed, and (B) adding thereto the amount which results when the applicable Allowable Markups are applied to such total specified in preceding Clause (A) of this Subparagraph 7.7.1.1 (4) (a) (1).

**(ii) T & M/Guaranteed Maximums.** A Contract Adjustment that is calculated pursuant to this Subparagraph 7.7.1.1 (4) shall be subject to a not-to-exceed or guaranteed maximum price if such not-to-exceed or guaranteed maximum price has been mutually agreed upon between County and Contractor.

**(iii) Lump Sum Options.** If Contractor has reason to believe that a lump sum or unit price for a Subcontractor's performance of a portion of Extra Work authorized to be performed on a time and materials basis is available and Contractor has reason to believe such price is lower than the price that would be charged by the Subcontractor pursuant to the foregoing time and materials calculation, then Contractor has an obligation to inform County of that fact (along with the provision to the County of a complete itemized breakdown in accordance with Subparagraph 7.6.2.3(2), above) so as to afford County the opportunity, on a fully informed basis as to the component Allowable Costs and Allowable Markups that comprise such price, to avail itself of such favorable pricing.

**(b) Deleted Work.** With respect to Deleted Work (whether or not the Deleted Work involves a related Compensable Change as described in Paragraph 7.7.8, below), if none of the methods provided for in Subparagraphs 7.7.1.1 (1) through 7.7.1.1 (3), above, is applicable, then, in addition to the reduction, if any, that may be due to Owner pursuant to Subparagraph 8.2.6.2, below, (pertaining to Contract Adjustments shortening the Contract Time due to Deleted Work) and any additional reductions or credits to which County may be entitled under Paragraph 7.7.5, below, the Contract Price shall be reduced by the greater of either:

**(i)** the value assigned to the Deleted Work in the Schedule of Values attached to the Construction Contract, inclusive of all estimated markups by Contractor and any Subcontractor for overhead and profit set forth in the Schedule of Values (or, if insufficient detailed information on costs, overhead and profit for the Deleted Work is explicitly assigned in the Schedule of Values, as derived from the cost, bidding and/or estimating information that formed the basis for the establishment of the values set forth in such Schedule of Values); or

**(ii)** a reasonable estimate of the value of the Deleted Work (inclusive of all costs, overhead and profit) as of the date that the Construction Contract was executed by County and Contractor.

**.2 Changes Involving Time.** Contract Adjustments that are based on an extension of the Contract Time for Compensable Delay or a shortening of the Contract Time due to Deleted Work shall be calculated in the manner stated in the provisions of Section 3.3 of the Construction Contract and Article 8, below. Contract

Adjustments that are based on an acceleration in performance of the Work that is ordered by County in writing to overcome a Compensable Delay for which the Contractor is entitled to an extension of the Contract Time that has been properly requested and is not granted by County due to a County decision to accelerate rather than extend the Contract Time shall be calculated in the manner stated in the provisions of Article 8, below.

**7.7.2 Time and Materials Documentation.** Without limitation to any other provisions of the Contract Documents, Contractor's right to reimbursement of Allowable Costs incurred by Contractor or Subcontractors in the performance of a Compensable Change for which the Contract Adjustment is calculated pursuant to the time and materials method set forth in Subparagraph 7.7.1.1 (4), above, shall be conditioned on Contractor's compliance with the following conditions with respect to documentation of the Extra Work that is involved in the performance of the Compensable Change:

**.1 Labor.** At the close of each Day on which such Extra Work is performed, Contractor shall submit to County and, if requested, to the Inspector of Record, an Extra Work report, on forms provided by County, that sets forth with respect to each and all of the actual hours spent in performance of the Extra Work on the Day that the Extra Work was performed the following: the names of the workers, their classifications, hours worked and hourly rates. Such forms shall include a written certification by Contractor's project manager or superintendent at the time of submission that the information contained therein is complete and accurate.

**.2 Materials, Equipment.** At the close of each Day on which such Extra Work is performed, Contractor shall submit to County and, if requested, to the Inspector of Record, an Extra Work report, on forms provided by County, that sets forth with respect to each and all of the materials and equipment used or consumed in the performance of the Extra Work on the Day that the Extra Work was performed, the following: a list of the materials and equipment, prices or rates charged, in the case of equipment a description of the type of equipment, identification number, and hours of operation (including loading and transportation), and copies of delivery tickets, invoices or other documentation confirmatory of the foregoing.

**.3 Other Expenditures.** At the close of each Day on which such Extra Work is performed, Contractor shall submit to County and, if requested, to the Inspector of Record, an Extra Work report, on forms provided by County, that sets forth a list of other expenditures constituting Allowable Costs incurred in performance of the Extra Work on the Day that the Extra Work was performed, along with documentation verifying the amounts thereof in such detail as County may require.

**.4 Subsequent Documentation.** Documentation not available on any Day that a portion of the Extra Work is performed shall be submitted as soon as they are available but not later than twenty-one (21) Days after the earlier of the Day of delivery or incorporation of the particular item of Extra Work at the Site.

**.5 Subcontractor Costs.** Extra Work performed by Subcontractors on a time and materials basis shall be documented in the same manner as required of Contractor under this Paragraph 7.7.2. If Owner approves of a lump sum price for a Subcontractor's performance of Extra Work, then Contractor shall submit in lieu of the documentation otherwise required by this Subparagraph 7.7.2.5, such documentation as may be requested by Owner confirming the Extra Work performed on any given Day.

**.6 Authentication.** In addition to the foregoing, County may require that Contractor comply with other reasonable requirements pertaining to observation and verification of time and materials work and authentication of time and materials tickets and invoices by persons designated by County for such purpose.

**.7 WAIVER BY CONTRACTOR.**

**THE FAILURE OF CONTRACTOR TO SUBMIT AUTHENTICATION OF COSTS IN THE MANNER REQUIRED BY THIS PARAGRAPH 7.7.2 SHALL, IF COUNTY ELECTS IN ITS REASONABLE DISCRETION TO TREAT IT AS SUCH, CONSTITUTE A WAIVER BY CONTRACTOR OF ANY RIGHT TO A CONTRACT ADJUSTMENT FOR THE ALLOWABLE COSTS INCURRED FOR PERFORMANCE OF THAT PORTION OF THE EXTRA WORK FOR WHICH CONTRACTOR HAS FAILED TO PROVIDE SUCH AUTHENTICATION.**

**7.7.3 Allowable Costs.** The term "Allowable Costs" (1) means the costs that are listed in this Paragraph 7.7.3 and (2) excludes costs that do not constitute Allowable Costs under Paragraph 7.7.4, below:



**.1 Labor.** Straight-time wages and, if specifically authorized by County in writing, overtime wages for employees employed at the Site, including wages for employees of Subcontractors performing engineering or fabrication detailing at locations other than at the Site. The use of a labor classification which would increase the Allowable Costs for Extra Work will not be permitted unless Contractor establishes the necessity for the use of such labor classification. Overtime wages and salaries shall only constitute an Allowable Cost to the extent permitted by the Contract Documents and only as specifically authorized by County in writing setting forth the amount of overtime anticipated, which amount shall be deemed the maximum amount of overtime reimbursable as an Allowable Cost. As part of the Allowable Costs permitted by this Subparagraph 7.7.3.1, Contractor shall be entitled to be reimbursed wages paid to a "time and materials clerk" employed by Contractor to track and document Compensable Changes that are authorized or permitted to be performed on a time and materials basis pursuant to Subparagraph 7.7.1.1 (4), above, provided that the time expended by such employee is verified by contemporaneously maintained time sheets maintained by such clerk showing the actual time spent tracking and documenting the performance of Compensable Changes separately from other tasks or functions performed by such clerk.

**.2 Benefits.** To the extent based on wages reimbursable under Subparagraph 7.7.3.1, above, net actual employer costs of payroll taxes (FICA, Medicare, SUTA, FUTA), insurance (as adjusted for experience modifiers, premium discounts, dividends, rebates, expense constants, assigned risk pool costs, net cost reductions due to policies with deductibles for self-insured losses, assigned risk rebates, or the like), health and welfare, pension, vacation, apprenticeship funds and benefits required by lawful collective bargaining agreements.

**.3 Materials.** Costs of materials used or consumed in the Work. Such costs for Extra Work shall be at a price that is competitive to the price charged for similar materials delivered within the general vicinity of the Site by other subcontractors, suppliers, manufacturers and distributors. The cost for any such item that is not new shall mean "fair market value" based on the estimated price a reasonable purchaser would pay to purchase the used material at the time it was used or consumed for the Work, which fair market value must be declared by Contractor and approved by County prior to such use or consumption.

**.4 Taxes.** Sales taxes on the costs of the materials described in Subparagraph 7.7.3.3, above.

**.5 Equipment Rental.** Rental charges for necessary machinery and equipment, exclusive of hand tools, whether rented from Contractor or others. No charge shall be allowed or credit required for items which have a replacement value of One Hundred Dollars (\$100) or less. The allowable rental rates shall include the cost of fuel, oil, lubrication, supplies, small tools, necessary attachments, loading, transportation, repairs and maintenance of any kind, depreciation, storage, insurance and all incidentals. If equipment used for Extra Work is used intermittently and, when not in use, could be returned to its rental source at less expense to County than holding it at the Site, it shall be returned, unless Contractor elects to keep it at the Site at no expense to County. Under no circumstances shall the aggregate rentals chargeable for any item of equipment exceed the following percentages of the fair market value of the item at the time of its first use for the Work, which fair market value must be declared by Contractor and approved by County prior to the first use of such item in or for the Work: (1) if the item is owned by the Contractor or any company affiliated with Contractor, the aggregate rentals shall not exceed 75% of such fair market value; and (2) if the item is not owned by the Contractor or any company affiliated with Contractor, the aggregate rentals shall not exceed 100% of such fair market value. All equipment shall be acceptable to County, in good working condition, and suitable for the purpose for which it is to be used. Manufacturer's ratings and manufacturer's approved modifications shall be used to classify equipment, and it shall be powered by a unit of at least the minimum rating recommended by the manufacturer. The cost of major repairs or overhauls of rented equipment or machinery shall be deemed a cost of business of the lessor of such equipment or machinery and shall not be reimbursable as an Allowable Cost.

**.6 Subcontractors.** Payments made by Contractor to Subcontractors; provided, however, that: (1) such payments are not otherwise precluded from reimbursement by the terms of the Contract Documents; (2) such payments are for Work performed in accordance with the requirements of the Contract Documents; (3) such payments are for amounts properly due and owing by Contractor under the terms of the governing contract between Contractor and such Subcontractor; and (4) in the case of payments for extra work performed by a Subcontractor pursuant to a change order executed between Contractor and a Subcontractor the change order was executed under circumstances in which the Subcontractor was entitled under the terms of its contract with Contractor to receive the amount of additional compensation agreed to in the change order.

**.7 Royalties, Permits.** Costs of royalties and permits.

**.8 Bonds.** Costs of bonds required to be furnished by Contractor (not Subcontractors) under the terms of the Contract Documents; provided, however, that such additional costs chargeable for Extra Work or credited for Deleted Work shall not exceed two percent (2%) of the costs described in Subparagraphs 7.7.3.1 through 7.7.3.7, above.

**7.7.4 Costs Not Allowed.** Allowable Costs shall not include any of the costs associated with any of the following (whether incurred by Contractor or a Subcontractor):

- .1** superintendent(s);
- .2** assistant superintendent(s);
- .3** project engineer(s);
- .4** project manager(s);
- .5** scheduler(s);
- .6** estimator(s);
- .7** drafting or detailing (except as otherwise permitted by Paragraph 7.7.3.1, above)
- .8** vehicles not dedicated solely to the performance of the Work;
- .9** small tools with a replacement value not exceeding One Hundred Dollars (\$100);
- .10** office expenses, including staff, materials and supplies;
- .11** on-Site and off-Site trailer and storage rental and expenses;
- .12** Site fencing not added solely due to the performance of Extra Work;
- .13** utilities, including gas, electric, sewer, water, telephone, telefax and copier equipment;
- .14** computer and data-processing personnel, equipment and software;
- .15** federal, state or local business, income and franchise taxes;
- .16** insurance (including, without limitation, general liability, automobile and worker's compensation);
- .17** without limitation to Contractor's right to liquidated damages under Section 3.3 of the Construction Contract, Losses, of any kind, incurred by Contractor or a Subcontractor, of any Tier, that arise from or relate to Delay (including Excusable Delay, Compensable Delay or Unexcused Delay) or acceleration to overcome the effects of such Delay; and
- .18** costs and expenses of any kind or item not specifically and expressly included in Paragraph 7.7.3, above.

**7.7.5 Allowable Markups.** Allowable Markups consist of the percentages set forth provided for by this Paragraph 7.7.5. Allowable Markups are deemed to cover, without limitation, the following: (1) direct and indirect overhead (including, without limitation, consumables, small tools and cleanup) and profit of the Contractor; (2) direct and indirect overhead (including, without limitation, consumables, small tools and cleanup) and profit of the Subcontractors, of every Tier; and (3) all costs that are not reimbursable to Contractor under Paragraph 7.7.4, above. Subject to the exclusions and limitations set forth in Paragraph 7.7.7, below, or elsewhere in the Contract Documents, Allowable Markups include and are limited to the following:

**.1 Self-Performed Work**

(1) **Compensable Change.** With respect to all or that portion of a Compensable Change involving Self-Performed Work, the Allowable Markup to Contractor shall be not more than five percent (5%), which percentage shall for purposes of calculating the Contract Adjustment be multiplied times the Allowable Costs incurred by Contractor in the performance thereof, including, without limitation, Allowable Costs for materials or equipment purchased by Contractor from a first-Tier Subcontractor that is not an Installation Subcontractor.

(2) **Deleted Work.** With respect to all or that portion of Deleted Work involving Self-Performed Work, County shall be entitled to a credit equal to five percent (5%) of the amount of the credit for the savings to Contractor for the Self-Performed Work as calculated pursuant to Subparagraph 7.7.1.1 (4), (b), above.

**.2 Installation Subcontractors (First-Tier)**

(1) **Compensable Change.** With respect to all or that portion of a Compensable Change that is performed by a first-Tier Installation Subcontractor, the Allowable Markups to the first-Tier Installation Subcontractor and the Contractor shall be as follows:

(a) The Allowable Markup to the first-Tier Installation Subcontractor shall be not more than fifteen percent (15%), which percentage shall for purposes of calculating the Contract Adjustment be multiplied times the Allowable Costs incurred by such first-Tier Installation Subcontractor in the performance of such Compensable Change.

(b) The Allowable Markup to Contractor shall be five percent (5%), which percentage shall for purposes of calculating the Contract Adjustment be multiplied times the sum of (i) the Allowable Costs incurred by such first-Tier Subcontractor in the performance of such Compensable Change and (ii) the amount which results when the Allowable Markups thereon that are permitted pursuant to preceding Clause (a) of this Subparagraph 7.7.5.2 (1) are multiplied times such Allowable Costs.

(2) **Deleted Work.** With respect to all or that portion of Deleted Work that was to have been performed by a first-Tier Installation Subcontractor, the Contract Price shall be reduced as provided in Subparagraph 7.7.1.1 (4), (b), above. In addition, a credit shall be due from Contractor of five percent (5%) of the amount of the total credit due pursuant to Subparagraph 7.7.1.1 (4), (b), above.

**.3 Installation Subcontractors (Second-Tier)**

(1) **Compensable Change.** With respect to all or that portion of a Compensable Change that is performed by a second-Tier Installation Subcontractor, the Allowable Markups to such second-Tier Installation Subcontractor, to the first-Tier Installation Subcontractor that is above and in the same vertical contractual line of Tiers with such second-Tier Installation Subcontractor and to the Contractor, shall be as follows:

(a) The Allowable Markup to the second-Tier Installation Subcontractor shall be not more than five percent (5%), which percentage shall for purposes of calculating the Contract Adjustment be multiplied times the Allowable Costs incurred by such second-Tier Installation Subcontractor in the performance of such Compensable Change.

(b) The Allowable Markup to the first-Tier Installation Subcontractor that is above and in the same vertical contractual line of Tiers with such second-Tier Installation Subcontractor shall be not more than fifteen percent (15%), which percentage shall for purposes of calculating the Contract Adjustment be multiplied times the sum of (i) the Allowable Costs incurred by such second-Tier Installation Subcontractor in the performance of such Compensable Change and (ii) the amount which results when the Allowable Markups thereon pursuant to preceding Clause (a) of this Subparagraph 7.7.5.3 (1) are multiplied times such Allowable Costs.

(c) The Allowable Markup to Contractor shall be five percent (5%), which percentage shall for purposes of calculating the Contract Adjustment be multiplied times the sum of (i) the Allowable Costs incurred by the second-Tier Installation Subcontractor in the performance of such Compensable Change and (ii)

the amounts which result when the Allowable Markups thereon that are permitted pursuant to Clauses (a) and (b) of this Subparagraph 7.7.5.3 (1) are multiplied times such Allowable Costs.

(2) **Deleted Work.** With respect to all or that portion of Deleted Work that was to have been performed by a second-Tier Installation Subcontractor, the Contract Price shall be reduced as provided in Subparagraph 7.7.1.1 (4), (b), above. In addition, a credit shall be due from Contractor of five percent (5%) of the amount of the total credit due pursuant to Subparagraph 7.7.1.1 (4), (b), above.

**.4 Other Subcontractors.**

(1) **Compensable Changes:** With respect to any other Subcontractor, of any Tier, performing all or a portion of a Compensable Change who is not an Installation Subcontractor or who is an Installation Subcontractor below the second-Tier, the following shall apply:

(a) No markup shall be allowed to such other Subcontractor.

(b) The Subcontractor that is positioned in the Tier immediately above such other Subcontractor shall be entitled to an Allowable Markup of not more than five percent (5%) upon the Allowable Costs incurred by such other Subcontractor in the performance thereof.

(c) No other Allowable Markup by any Subcontractor of any Tier above such other Subcontractor shall be permitted.

(d) Contractor shall be entitled to an Allowable Markup of five percent (5%) of the sum of (i) the Allowable Costs of such other Subcontractor incurred in the performance of such Compensable Change and (ii) the amount which results when the Allowable Markup permitted by Clause (b) of this Subparagraph 7.7.5.4 (1) is multiplied times such Allowable Costs.

(2) **Deleted Work.** With respect to all or that portion of Deleted Work that was to have been performed by such other Subcontractor who is not an Installation Subcontractor or who is an Installation Subcontractor below the second-Tier, the Contract Price shall be reduced as provided in Subparagraph 7.7.1.1 (4), (b), above. In addition, a credit shall be due from Contractor of five percent (5%) of the amount of the total credit due pursuant to Subparagraph 7.7.1.1 (4), (b), above.

**7.7.6 Review of Markups.** It is Contractor's responsibility to review information submitted by Subcontractors to ensure that all markups comply with the requirements of the Contract Documents. Payment by the County of markups that exceed Allowable Markups shall not be considered as a waiver by County of the right to require repayment by Contractor of any markup charged that is in excess of Allowable Markups and such excess amounts shall be promptly paid by Contractor to County.

**7.7.7 Exclusions and Limitations.** Allowable Markups are not permitted:

.1 on agreed unit prices;

.2 on materials, products or equipment furnished by County;

.3 on liquidated damages payable to Contractor pursuant to Section 3.3 of the Construction Contract for Compensable Delay;

.4 to a Subcontractor who contracts to perform a Compensable Change that is in fact wholly performed by another Subcontractor (for purposes of this Paragraph 7.7.7, "wholly performed" means that all of the Compensable Change, other than supervision or minor labor or materials, are furnished by such other Subcontractor); or

.5 on any cost or compensation with respect to which the Contract Documents state that there shall be "no Allowable Markup", "no markup for overhead and profit" or words of similar meaning.

**7.7.8 Net Calculations.** If any one Change or collection of Changes in the same or related portions of the Work, or in multiple portions of Work covered by a single bulletin or instruction by County, involve both Compensable Change and Deleted Work, and if the added Allowable Costs resulting from the Compensable Change exceed the reduction calculated in accordance with Subparagraph 7.7.1.1 (4), (b), above, (excluding any Allowable Markup to the Contractor) then the calculation of Allowable Markups to Contractor shall be based on and limited to the resulting net increase in the Allowable Costs.

**7.7.9 Unit Prices.** Unless otherwise stated in the Contract Documents, unit prices stated in the Contract Documents or subsequently agreed upon by County and Contractor shall be deemed to include and encompass all costs of performance, overhead and profit, including, without limitation, all Allowable Costs and Allowable Markups. If the unit price stated in the Contract Documents is based on an estimated quantity established by County in the Construction Contract and the actual quantity of such unit-priced item varies by more than 25% above or below the estimated quantity, an equitable adjustment in the Contract Price shall be made upon demand of either County or Contractor. Such equitable adjustment shall be based solely upon any increase or decrease in Allowable Costs (without any Allowable Markups), due solely to the variation above 125% or below 75% of the estimated quantity.

**7.7.10 Discounts.** For purposes of determining Allowable Costs of a Compensable Change, all trade discounts, rebates, refunds, and returns from the sale of surplus materials and equipment shall accrue and be credited to County, and Contractor shall take all necessary steps to ensure that such discounts, rebates, refunds, and returns are secured.

**7.7.11 Prompt Pricing.** It is fundamental to the County's objective of controlling costs that performance of Compensable Changes on a time and materials basis of compensation and without a not-to-exceed price be curtailed. Contractor recognizes that prompt pricing by Contractor is critical to this objective. Accordingly, in addition to and without limitation on any of the County's other rights or remedies, including, without limitation, its right to enforce a waiver under Subparagraph 7.6.2.4, above, it is agreed that if Contractor fails to timely submit a complete Change Order Request in accordance with Paragraph 7.6.2, above, with respect to any circumstance, event or occurrence constituting a Compensable Change then: (1) any Delay to the performance of the Work associated with the performance, delayed performance or nonperformance of such Compensable Change shall be conclusively deemed to be an Unexcused Delay; and (2) the County shall have the option, exercised in its sole discretion, to unilaterally fix and determine the amount of the Contract Adjustment to the Contract Price for such Compensable Change based on the "estimating guide" method set forth in Subparagraph 7.7.1.1 (3), above, which determination shall be conclusively final and binding upon Contractor.

**7.7.12 Final Payment.** No Claim by Contractor for a Contract Adjustment shall be allowed if asserted after Final Payment.

**7.7.13 Full Resolution.** Except as otherwise stated in Paragraph 7.7.14, below, the signing of a Change Order by Contractor and the County shall be conclusively deemed to be a full resolution, settlement and accord and satisfaction with respect to any and all Loss and Delay, whether known or unknown at the time of execution of the Change Order, related to the subject matter of the Change Order, including, without limitation, all rights to recovery of costs, expenses or damages for delay, disruption, hindrance, interference, extended or extraordinary (direct and indirect) overhead, multiplicity of changes, loss of productivity, labor, wage or material cost escalations, inefficiency, legal expenses, consultant costs, interest, lost profits or revenue, bond and insurance costs, changes in taxes and other similar and related Losses. The foregoing provisions of this Paragraph 7.7.13 shall, whether or not they are expressly stated or referenced on the face of a Change Order, be deemed to be part of the terms of the Change Order and shall be deemed to supersede and govern over any other provision contained in any proposal, estimate or other documents attached to or referenced in such Change Order that conflicts with the provisions of this Paragraph 7.7.13. **ANY RIGHT OR CLAIM BY CONTRACTOR FOR ANY ADDITIONAL COMPENSATION OR EXTENSION OF TIME RELATING DIRECTLY OR INDIRECTLY TO A COMPENSABLE CHANGE DESCRIBED IN A FULLY EXECUTED CHANGE ORDER SHALL BE CONCLUSIVELY DEEMED WAIVED BY CONTRACTOR, EVEN IF THE CIRCUMSTANCES GIVING RISE TO SUCH ADDITIONAL COMPENSATION OR EXTENSION OF TIME WERE NOT SUSPECTED BY OR KNOWN TO THE CONTRACTOR AT THE TIME OF EXECUTION OF THE CONSTRUCTION CHANGE DIRECTIVE AND IF SUSPECTED OR KNOWN WOULD HAVE BEEN CONSIDERED BY CONTRACTOR TO HAVE BEEN MATERIAL TO CONTRACTOR'S AGREEMENT TO THE CONTRACT ADJUSTMENT SET FORTH IN THE CHANGE ORDER.**

**7.7.14 Reserved Rights.** Change Orders shall be executed by Contractor without any express reservation of rights by Contractor to reserve for the future the assertion of any right of recovery from the County for Loss or Delay arising out of or relating to the subject matter of the Change Order. Execution of a Change Order, Unilateral Change Order or Construction Change Directive shall not be interpreted as a waiver, release or settlement of any rights or claims that the County may have for any of the following: (1) Defective Work; (2) liquidated damages or actual Losses for Delay; or (3) recoupment by County (by way of withholding of funds, set off or recovery from Contractor) of amounts paid by County for costs or markups on costs that the County discovers, following payment of such amounts to Contractor, do not constitute proper charges to County, or that constitute charges that are not properly substantiated, under the terms of the Contract Documents.

**7.7.15 No "Total Cost" Calculations.** Contractor represents and warrants that it has the ability to generate and maintain complete and accurate cost accounting records that, if required, will reflect the actual costs of the Work incurred or avoided for multiple Compensable Changes and, on an event-by-event basis, the effect of multiple and concurrently occurring or caused Compensable Delays on the progress of the Work. Accordingly, Contractor agrees that all Change Order Requests and Claims shall be itemized in a manner that, with reasonable mathematical certainty and without reliance upon probabilities or inferences, segregates on a discrete, event-by-event basis the direct, actual Allowable Costs associated with each individual Compensable Change or Compensable Delay. Unless otherwise agreed to by County in writing in the exercise of its sole discretion, Change Order Requests and Claims shall not be based, in whole or in part, upon any methodology (such as "total cost" or "modified total cost" methodologies) that purports to establish Contractor's entitlement to additional compensation inferentially based, solely or principally, on the difference between Contractor's total costs for the Work or a portion of the Work and its original Bid.

**7.7.16 Multiple Changes.** The County reserves the absolute right to make whatever Changes, including, without limitation, Compensable Changes or Deleted Work, that it determines, in its sole discretion, are necessary or otherwise desirable. Under no circumstances shall the individual or cumulative number, value or scope of such Changes, or their individual and cumulative impact on the Work, become a basis for Contractor to assert any claim for breach of contract, abandonment, rescission, termination, cardinal change or reformation of the Construction Contract, nor shall such circumstances be the basis for Contractor, or any of the Subcontractors, of any Tier, to assert a right of recovery of any Loss if such right is not permitted by, or is in excess of that allowed under, the Contract Documents.

**7.7.17 Continuous Performance.** Subject to Contractor's rights under Section 15.4, below, no dispute or disagreement with respect to any Changes or Delay, including, without limitation, disputes over Contractor's right to or the terms of a Contract Adjustment, shall relieve or excuse Contractor from the obligation to proceed with and maintain continuous, expeditious and uninterrupted performance of the Work, including performance of any disputed Changes.

## **ARTICLE 8 CONTRACT TIME**

### **8.1 COMMENCEMENT AND COMPLETION**

**8.1.1 Date of Commencement.** The Date of Commencement shall not be postponed by the failure of Contractor or of persons or entities for whom Contractor is responsible to perform an obligation. Contractor shall not knowingly, except by agreement or instruction of the County in writing, commence operations on the Site or elsewhere prior to receipt of a Notice to Proceed. Contractor shall not commence any Work at the Site prior to its obtaining the insurance required by Article 11, below, and the Performance Bond and Payment Bond required by Article 12, below, and the Date of Commencement of the Work shall not be changed by the effective date of such insurance or bonds.

**8.1.2 Substantial, Final Completion.** Contractor shall proceed expeditiously with adequate forces and shall achieve Substantial Completion and Final Completion within the Contract Time, as adjusted for extensions of time duly permitted, authorized and noticed pursuant to Section 8.2, below.

**8.1.3 Adjustments to Contract Time.** Subject to the limitations set forth in this Article 8 and elsewhere in the Contract Documents, the Contract Time shall be extended for Compensable Delays and Excusable Delays and shall, where appropriate, be shortened for Deleted Work.

**8.1.4 Early Completion.** Nothing stated in these General Conditions or elsewhere in the Contract Documents shall be interpreted as creating any contractual right, express or implied, on the part of Contractor to finish

the Work earlier than the Contract Time. Contractor has included in its Contract Price the costs of all Contractor's and its Subcontractors' direct and indirect overhead, including but not limited to all staff, temporary facilities, temporary utilities and home office overhead for the entire duration of the Contract Time. These costs have been included in the Contract Price notwithstanding Contractor's anticipation of possibly completing the Work in fewer Days than established by the Contract Time. Under no circumstances (including, without limitation, circumstances in which the County has approved in writing of Contractor completing early) shall the County be liable to Contractor for any Losses, of any kind, due to the inability of Contractor to complete the Work earlier than the Contract Time, regardless of the cause, including, without limitation, Delays due to acts or omissions (intentional or negligent) of the County, Inspectors of Record, County Consultants, Separate Contractors or others. If the Contractor anticipates completing early, it must obtain in advance County's approval in writing of such early completion. Approval by County of such early completion may be granted or withheld in the County's sole and absolute discretion.

## 8.2 DELAYS AND EXTENSIONS OF TIME

### 8.2.1 Adjustments to Contract Time

**.1 Extensions.** Provided that Contractor has complied with the provisions of this Section 8.2 (including, without limitation, the requirements pertaining to timely delivery of a Notice of Delay and Request for Extension), if, as a result of Excusable Delay or Compensable Delay to the actual, as-built critical path of activities leading to achievement of Substantial Completion, Contractor is unable to achieve Substantial Completion within the Contract Time for Substantial Completion, then the Contract Time for Substantial Completion and Final Completion shall be extended, either by Change Order or Unilateral Change Order, for the length of the proven, resulting Delay to Contractor's ability to so complete the Work. The Contract Time shall not be adjusted for Unexcused Delays.

**.2 Shortening.** Contractor shall within ten (10) Days after receiving notice of Deleted Work prepare and deliver to County a Time Impact Analysis of the impact of the Deleted Work upon the critical path to determine if the Contract Time should be shortened thereby and if so the duration of the shortening. If the County and Contractor are unable to agree upon the duration of the shortening, then County shall make a Good Faith Determination of the reasonable amount of time that the Contract Time shall be shortened on account of such Deleted Work.

### **.3 Prescribed Calculations.**

**(1) Work Day Lost Calculations.** Contractor may claim an Excusable Delay or a Compensable Delay for a full Day only if all Work on a critical path activity is stopped for more than six (6) hours of a normal eight (8) hour Work Day and for a half-Day only if all Work on a critical path activity is stopped for three (3) to six (6) hours of such a normal Work Day. No Excusable Delay or Compensable Delay may be claimed if all Work on a critical path activity is stopped for less than three (3) hours of such a normal work Day. Similarly, where Deleted Work results in the projected avoidance of the need to perform more than six (6), or between three (3) and six (6) hours of all Work on a critical path activity on such a normal work day, the Contract Time shall be contracted by a full Day or half Day, respectively.

**(2) Dry Out Time Calculations.** Contract Adjustments to the Contract Time that are based upon unusual precipitation that is an Act of God as defined in Paragraph 1.1.2, above, shall include, in addition to the number of Days of Excusable Delay to which Contractor is entitled due to a cessation of Work that occurs at the Site while the unusual precipitation is occurring, an additional extension for the Delay to the critical path of activities affecting Substantial Completion that is the result of Contractor being unable, after cessation of the unusual precipitation at the Site, to proceed with performance of Work due to wet or muddy conditions at the Site (hereinafter referred to as "dry out" time); provided, however, that the amount of dry out time for which Contractor is entitled to an extension of time in any given calendar month shall not exceed the number of Days that is the product derived by multiplying (a) the number of Days of Excusable Delay to which Contractor is entitled due to a cessation of Work that occurs at the Site while such unusual precipitation is occurring, by (b) a fraction, the (i) numerator of which is the number of Days of Excusable Delay due to measurable unusual precipitation occurring at the Site during such calendar month that constitutes an Act of God as defined in Paragraph 1.1.2, above, and (ii) the denominator of which is the total number of Days of measurable precipitation occurring at the Site during said calendar month (including both the number of Days comprising the normal, 10-year monthly average of measurable precipitation recorded by NOAA and the excess, or unusual precipitation that constitutes an Act of God as defined in Paragraph 1.1.2, above).

### 8.2.2 Notice of Delay.

**.1 Submission.** Contractor shall submit written Notice of Delay to County if any instruction, request, drawing, specification, action, condition, omission, default or other circumstance occurs that constitutes an Excusable Delay or Compensable Delay or other matter that may involve or require a Contract Adjustment extending the Contract Time. Such notice shall be provided prior to performance of the Work affected or involved and no later than seven (7) Days after the Discovery Date of such circumstance.

**.2 Form.** Notices of Delay shall be provided using forms furnished by County or, if requested by County, using forms furnished by Contractor that are approved by County. Failure by County to request or approve a particular form shall not relieve Contractor of its obligation to provide Notice of Delay in a written form that complies with the requirements of this Paragraph 8.2.2.

**.3 Content.** Each Notice of Delay in order to be considered complete shall include:

(1) a general statement of the circumstances giving rise to the Notice of Delay (including, without limitation, identification of any related Construction Change Directive);

(2) a Reasonable Order of Magnitude Estimate by Contractor of any related Contract Adjustments extending the Contract Time; and

(3) if such circumstances involve a right to a Contract Adjustment to the Contract Price for Compensable Change that has not been waived by Contractor, Contractor shall include, if not previously provided, a complete and timely Notice of Change.

### **.4 WAIVER BY CONTRACTOR.**

**FAILURE BY CONTRACTOR TO PROVIDE A COMPLETE AND TIMELY NOTICE OF DELAY UNDER CIRCUMSTANCES WHERE A NOTICE OF DELAY INVOLVING A DELAY IS REQUIRED BY THIS PARAGRAPH 8.2.2 SHALL, IN ACCORDANCE WITH THE PROVISIONS OF SECTION 4.6 OF THE GENERAL CONDITIONS, CONSTITUTE A WAIVER BY CONTRACTOR OF THE RIGHT TO A CONTRACT ADJUSTMENT ON ACCOUNT OF SUCH CIRCUMSTANCES AND A WAIVER OF ANY RIGHT TO FURTHER RECOURSE OR RECOVERY BY REASON OF OR RELATED TO SUCH DELAY.**

**.5 No County Notice.** Failure by Contractor to submit a timely or proper Notice of Delay under circumstances in which a Notice of Delay is required shall in no way affect County's right to a Contract Adjustment shortening the Contract Time on account of such circumstances.

### 8.2.3 Request for Extension.

**.1 Submission.** With respect to any matter that may involve or require an adjustment extending the Contract Time, Contractor shall, within fourteen (14) Days after receipt by County of a Notice of Delay pursuant to Paragraph 8.2.2, above, submit to County a written Request for Extension.

**.2 Form.** Requests for Extension shall be provided using forms furnished by County or, if requested by County, using forms furnished by Contractor that are approved by County. Failure by County to request or approve a particular form shall not relieve Contractor of its obligation to provide Requests for Extension in a written form that complies with the requirements of this Paragraph 8.2.3.

**.3 Content.** Each Request for Extension in order to be considered complete shall include:

(1) a detailed description of the circumstances giving rise to the request for Contract Adjustment to the Contract Time and a Time Impact Analysis (a Request for Extension that seeks an extension for more than one Delay shall be supported by a separate Time Impact Analysis for each separate Delay); and



(2) if such circumstances involve a right to a Contract Adjustment of the Contract Price on account of Compensable Change that has not been waived by Contractor, Contractor shall include, if not previously provided, a complete and timely Change Order Request.

**.4 WAIVER BY CONTRACTOR.**

**FAILURE BY CONTRACTOR TO PROVIDE A COMPLETE AND TIMELY REQUEST FOR EXTENSION UNDER CIRCUMSTANCES WHERE A REQUEST FOR EXTENSION INVOLVING A DELAY IS REQUIRED BY THIS PARAGRAPH 8.2.3 SHALL, IN ACCORDANCE WITH THE PROVISIONS OF SECTION 4.6 OF THE GENERAL CONDITIONS, CONSTITUTE A WAIVER BY CONTRACTOR OF THE RIGHT TO A CONTRACT ADJUSTMENT ON ACCOUNT OF SUCH CIRCUMSTANCES AND A WAIVER OF ANY RIGHT TO FURTHER RECOURSE OR RECOVERY BY REASON OF OR RELATED TO SUCH DELAY.**

**.5 Adjustments Shortening Time.** Failure by Contractor to submit a timely or proper Request for Extension under circumstances in which a Request for Extension is required shall in no way affect County's right to a Contract Adjustment shortening the Contract Time on account of such circumstances.

**8.2.4 Response by County.** After receipt of a timely and complete Request for Extension, County shall investigate the facts concerning the cause and extent of such Delay and, depending on whether the Request for Extension is justified, will notify Contractor of its approval or disapproval of all or a portion of Contractor's request. Extensions of time approved by County shall apply only to that portion of the Work affected by the Delay, and shall not apply to other portions of Work not so affected.

**8.2.5 Formal Notice of Essence.** Contractor recognizes and acknowledges that timely submission of a formal Notice of Delay and a formal Request for Extension, whether or not the circumstances of a Delay may be known to County or available to County through other means, are not mere formalities but are of crucial importance to the ability of County to promptly identify, prioritize, evaluate and mitigate the potential effects of Delay. Any forms of informal notice, whether verbal or written (including, without limitation, statements at regular job meetings or entries in monthly reports, daily logs, job meeting minutes, updated Construction Schedules or look-ahead schedules), that do not strictly comply with the formal requirements of Paragraph 8.2.2, above, and Paragraph 8.2.3, above, shall accordingly be deemed insufficient to satisfy the notice requirements of this Article 8.

**8.2.6 Compensation for Delay.**

**.1 Compensable Delay.** Contract Adjustments to the Contract Price for a Compensable Delay that involve an extension of the Contract Time shall be based, without duplication to any other Contract Adjustments to the Contract Price, on the terms of Section 3.3 of the Construction Contract. Contractor agrees to accept such right of Contract Adjustment in lieu of any other right that may exist under Applicable Laws for recovery of Losses due to Compensable Delay, whether incurred by Contractor or its Subcontractors, of any Tier.

**.2 Deleted Work.** The Contract Time and Contract Price shall be reduced by Contract Adjustment for Deleted Work (including, without limitation, Deleted Work associated with a termination by County of a portion of the Construction Contract or a deletion of portion of Work for the convenience of the County or due to an Event of Contractor Default) that results in a shortening of the Contract Time.

**(1) Contract Time.** The Contract Adjustment shortening the Contract Time for Substantial Completion shall be the number of Days that Contractor at the time of contracting would have reasonably expected to expend in performance of the Deleted Work and that, based on the Contractor's original Construction Schedule prepared on or about the time of contracting, were reasonably expected by Contractor to be critical to Substantial Completion of the Work within the Contract Time for Substantial Completion.

**(2) Contract Price.** The Contract Adjustment reducing the Contract Price shall be the product of (1) the number of Days that the Contract Time for Substantial Completion is shortened pursuant to preceding Clause (1) of this Subparagraph 8.2.6.2 multiplied times (2) the amount of liquidated damages set forth in Paragraph 3.3.2 of the Construction Contract, without any additional credit to County for Allowable Markups.

**8.2.7 Acceleration of the Work.**

**.1 Due to Unexcused Delay.** If County makes a Good Faith Determination based on County's observations of progress in performance of the Work by Contractor that Contractor will not achieve Substantial Completion of the Work within the Contract Time as adjusted pursuant to Paragraph 8.2.1, above, then Contractor shall, following receipt of a written request by County to accelerate, immediately respond in writing setting forth a detailed plan for accelerating the Work. All measures necessary, including working overtime, additional shifts, Saturdays, Sundays and holidays, to accelerate performance to ensure that the Work is performed within the Contract Time shall be taken by Contractor and the cost thereof shall be paid for by Contractor at Contractor's Own Expense. County may also take all other necessary measures to ensure no further Delays affect achievement of Substantial Completion and Final Completion of the Work within the Contract Time and the Contractor shall reimburse County, or County may withhold from payment due to Contractor, for Losses incurred by County in taking such measures.

**.2 Due to Excusable Delay.** Contractor shall have the right, exercised in its sole discretion, to accelerate performance of the Work to overcome time lost due to Excusable Delay. Such acceleration, if performed other than at the written direction of County, shall be deemed a voluntary acceleration and the cost of such accelerated performance shall be paid for by Contractor at Contractor's Own Expense. If County directs in writing that the Work be accelerated to overcome an Excusable Delay that is not concurrent with an Unexcused Delay, then Contractor shall be entitled to a Contract Adjustment to the Contract Price for such acceleration on and subject to the same terms as provided for in Subparagraph 8.2.7.3, below, in the case of an acceleration to overcome a Compensable Delay.

**.3 Due to Compensable Delay.** County shall have the right, exercised in its sole and absolute discretion, in lieu of granting a Contract Adjustment to the Contract Time for Compensable Delay, to direct in writing the acceleration of the Work by Contractor in order to recapture time lost due to such Compensable Delay. County and Contractor shall endeavor prior to commencement of such acceleration to mutually agree upon the amount of compensation to be paid therefor. County shall have the right, in the absence of such an agreement, to direct in writing that Contractor accelerate. Contractor shall comply with such directive. Contractor's right to a Contract Adjustment to the Contract Price on account of such acceleration shall be limited to (1) the premium time portion of any overtime paid for labor provided by Contractor or any Subcontractor, plus (2) additional supervision costs for additional shifts of supervision provided at the Site by Contractor only (not by Subcontractors), plus (3) Allowable Markup thereon as provided in Paragraph 7.7.5, above. Except as directed by County in the manner stated in this Subparagraph 8.2.7.3, no statements, conduct or actions by County will be construed as creating an obligation on the part of County to agree to a Contract Adjustment to the Contract Price on account of any cost of overtime or other costs associated with an acceleration of the Work to recapture time lost due to Compensable Delay.

**8.2.8 Concurrent Delays.** For purposes of the calculations provided for in this Paragraph 8.2.8, the words "concurrent delay", "concurrently delay" or "occur concurrently" mean the portion of two or more Delays affecting the critical path to Substantial Completion that are overlapping or co-existent. Contractor's right to a Contract Adjustment of the Contract Time (pursuant to Subparagraphs 8.2.8.1, 8.2.8.2 and 8.2.8.3, below) and Contract Price (pursuant to Subparagraphs 8.2.8.4, 8.2.8.5 and 8.2.8.6, below) shall, in the case of concurrent delays, be calculated in accordance with the following:

**.1** If an Excusable Delay and a Compensable Delay occur concurrently, the maximum extension of the Contract Time shall be the number of Days from the commencement of the first Delay to the cessation of the Delay which ends last.

**.2** If an Unexcused Delay occurs concurrently with either an Excusable Delay or a Compensable Delay, the maximum extension of the Contract Time shall be the number of Days, if any, by which such Excusable Delay or Compensable Delay exceeds the number of Days of such Unexcused Delay.

**.3** If an Unexcused Delay occurs concurrently with both an Excusable Delay and a Compensable Delay, the maximum extension of the Contract Time shall be the number of Days, if any, by which such Excusable Delay and Compensable Delay, as determined pursuant to Subparagraph 8.2.8.1, above, exceeds the number of Days of such Unexcused Delay.

**.4** If an Unexcused Delay occurs concurrently with a Compensable Delay, the maximum period of time for which Contractor shall be entitled to a Contract Adjustment to the Contract Price in accordance with Section 3.3 of the Construction Contract shall be the number of Days, if any, by which such Compensable Delay exceeds the number of Days of such Unexcused Delay.

.5 If a Compensable Delay occurs concurrently with an Excusable Delay, the maximum period of time for which Contractor shall be entitled to a Contract Adjustment to the Contract Price in accordance with Section 3.3 of the Construction Contract shall be the number of Days, if any, by which such Compensable Delay exceeds the number of Days of such Excusable Delay.

.6 If an Unexcused Delay occurs concurrently with both an Excusable Delay and a Compensable Delay, the maximum period of time for which Contractor shall be entitled to a Contract Adjustment to the Contract Price in accordance with Section 3.3 of the Construction Contract shall be the number of Days, if any, by which such Compensable Delay exceeds the number of Days of such Unexcused Delay.

8.2.9 **Delay Claims.** Claims by Contractor relating to disputed Contract Adjustments due to Delay shall be made in accordance with applicable provisions of Section 4.3, above.

8.2.10 **Exercise of County Rights.** Notwithstanding any other provision of the Contract Documents to the contrary, County's exercise in accordance with the Contract Documents of any of its rights or remedies permitted by Applicable Laws or the Contract Documents in response to a failure by Contractor or any Subcontractor to comply with the Contract Documents shall not, under any circumstances, entitle Contractor to a Contract Adjustment.

## ARTICLE 9 PAYMENTS AND COMPLETION

### 9.1 PAYMENT BY COUNTY

9.1.1 **Time for Payment.** County shall make payment of undisputed sums due to the Contractor upon Applications for Payment requesting Progress Payment not later than thirty (30) Days after receipt of an Application for Payment requesting Progress Payment that has been properly and timely prepared and submitted by Contractor, and approved by County, in accordance with the requirements of the Contract Documents.

9.1.2 **Not Acceptance.** No approval, inspection or use of, or payment for, the Work by County or by any person or entity acting on County's behalf shall constitute acceptance of Work that is not in accordance with the Contract Documents or a waiver of any of County's rights under the Contract Documents.

9.1.3 **Interest.** If County fails to make payment of an undisputed sum due as a Progress Payment to the Contractor as required by this Article 9, County shall pay interest to the Contractor equivalent to the legal rate set forth in subdivision (a) of California Code of Civil Procedure §685.010. The number of Days available to the County to make payment without incurring such interest shall be reduced by the number of Days by which the County exceeds the seven (7) Day response time applicable to the County set forth in Section 9.5, below. The foregoing is the County's sole obligation with respect to payment of interest earned or accrued on an amount claimed due prior to the commencement by Contractor of legal proceedings for recovery of such amount.

9.1.4 **Disputed Payments.** Subject to Contractor's rights under Section 9.8, below, no good faith dispute or disagreement between County and Contractor with respect to the amount of any payment claimed due by Contractor shall relieve or excuse Contractor from the obligation to proceed with and maintain continuous, expeditious and uninterrupted performance of the Work.

### 9.2 APPLICATIONS FOR PAYMENTS

9.2.1 **Submission by Contractor.** Applications for Payment requesting Progress Payment shall be properly prepared and submitted by Contractor to County once a month on the twenty-fifth (25<sup>th</sup>) Day of the month. If the twenty-fifth (25<sup>th</sup>) Day of the month is a weekend or Holiday, the Application for Payment shall be submitted on the next working day.

9.2.2 **Period of Application.** The period covered by each such Application for Payment requesting Progress Payment shall be not more than thirty (30) Days ending on the twenty-fifth (25<sup>th</sup>) Day of the month in which such Application for Payment is submitted.

9.2.3 **Schedule of Values.** Each Application for Payment shall be accompanied by a Schedule of Values prepared and submitted in accordance with the requirements of the Contract Documents, including, without limitation, the provisions of Section 9.3, below.

9.2.4 **Changes in Work.** Applications for Payment may include requests for payment on account of Compensable Changes in the Work which have been properly authorized by Change Order or Unilateral Change Order.

9.2.5 **Progress Payments.** Applications for Payment requesting Progress Payments shall be based on amounts calculated in accordance with the provisions of Section 9.4, below.

9.2.6 **Percentage Completion.** Applications for Payment requesting Progress Payments shall indicate the Contractor's estimate of the percentage of completion of each line item listed in the Schedule of Values as of the end of the period covered by the Application for Payment.

9.2.7 **Projected Work.** Unless approved by County in writing in advance of an Application for Payment being submitted, which approval may be granted or denied in the sole and absolute discretion of County, Applications for Payment shall only include amounts for Work performed to the twenty-fifth (25<sup>th</sup>) Day of the month in which the Application for Payment was submitted and shall not include request for payment of amounts for Work projected to be performed, stored or delivered beyond that date.

9.2.8 **Disagreements.** In the event of a disagreement between County and Contractor over the accuracy or reasonableness of the Contractor's statement of percentage of progress achieved that is contained in the Application for Payment, the County shall make a Good Faith Determination of the percentage, which percentage shall then be inserted by Contractor in the Application for Payment and the Application for Payment submitted, or resubmitted, incorporating such revision.

9.2.9 **Substantial Completion.** For the sole purpose of the percentage calculation set forth in Paragraph 9.2.6, above, and for no other purpose, the Work shall be deemed one hundred percent complete upon Substantial Completion and the amount released to Contractor shall, subject to County's right to withhold pursuant to Section 9.6, below, be a sum sufficient to increase the total of Progress Payments to Contractor to ninety-five percent (95%) of the Contract Price.

9.2.10 **Certification by Contractor.** Each Application for Payment that is submitted by Contractor shall be signed by Contractor with a certification by Contractor to County that: (1) the data comprising the Application for Payment is accurate and the Work has progressed to the point indicated; (2) to the best of Contractor's knowledge, information and belief, the Work is in accordance with the Contract Documents; (3) Contractor is entitled to payment in the amount certified; and (4) all sums previously applied for by Contractor on account of the Work performed by the Subcontractors and that have been paid by County have been paid to the Subcontractors performing such Work, without any retention, withholding or back charge by Contractor.

9.2.11 **Stored Materials.** County may, in the exercise of its sole and absolute discretion, approve or disapprove for inclusion in Contractor's Application for Payment the cost of materials to be incorporated, but not yet incorporated, in the Work and delivered and suitably stored either at the Site or at some other appropriate location acceptable to the County. As part of any request for such approval, Contractor shall furnish evidence satisfactory to County: (1) of the cost of such materials; (2) that such materials are under the exclusive control of Contractor, or if not, that title to the materials is in the County, free of any lien or encumbrance; and (3) with respect to materials stored off-Site, that the materials are safely and suitably stored in a bonded warehouse with appropriate insurance coverage satisfactory to County. No payment or approval by County pursuant to this Paragraph 9.2.11 shall (a) be construed as an inspection or acceptance of the materials; (b) relieve Contractor of its continuing and sole responsibility for the care and protection of, and sole responsibility for any Loss to, such materials, from any cause whatsoever; or (c) operate as a waiver of rights by County.

9.2.12 **Title.** Contractor warrants that title to all the Work covered by an Application for Payment will pass to County no later than the time of payment. Contractor further warrants that upon submittal of an Application for Payment all Work for which approval for payment has been previously issued by County shall, to the best of Contractor's knowledge, information and belief, be free and clear of liens, claims, security interests or encumbrances in favor of

Contractor, the Subcontractors, material suppliers, or other persons or entities making a claim by reason of having provided labor, materials or equipment for the Work.

### 9.3 SCHEDULE OF VALUES

9.3.1 **Initial Submission.** Within twenty-one (21) Days after issuance by County of the Notice of Intent to Award, Contractor shall submit to County a Schedule of Values, prepared in a form and incorporating a level of detail satisfactory to County, that allocates the Contract Price to various portions of the Work, including, without limitation, each portion of the Work to be performed by a Subcontractor, self-performed Work, discrete categories of direct (i.e., on-Site) overhead costs (sometimes referred to as “general conditions costs”), Contractor home office and indirect overhead and profit and amounts reserved for contingencies.

9.3.2 **Balanced Allocation.** The Schedule of Values shall be balanced, reflecting in each line item Contractor's estimated or actual cost commitments for the category of Work included in the line item and a proportionate share of Contractor's overhead and profit. Techniques, such as “front-end loading”, designed to create an imbalanced cash flow are strictly prohibited.

9.3.3 **Line Estimates.** Line item values stated in the Schedule of Values that are based on Contractor's estimates, rather than actual subcontract prices, shall be identified as such and replaced with actual subcontract prices when they become available as the subcontracting process progresses.

9.3.4 **Updating.** The Schedule of Values shall be updated by Contractor each month as necessary to reflect the Contractor's actual progress in subcontracting the Work. An updated Schedule of Values shall be attached to each Application for Payment.

9.3.5 **Substantiation.** Contractor shall provide such data as County may reasonably require to substantiate that the Schedule of Values has been prepared in conformance with the requirements of the Contract Documents. Failure to provide such substantiation shall result in the Schedule of Values being deemed incomplete and unapproved by County for use by Contractor in submitting its Applications for Payment.

9.3.6 **Corrections.** If corrections are required in order to make the Schedule of Values comply with the requirements of the Contract Documents, such corrections shall be made as a condition of the Contractor's Application for Payment being considered properly prepared, submitted and complete.

9.3.7 **Changes to Work.** Costs involved in the performance of Work covered by Change Orders, Unilateral Change Orders or Construction Change Directives shall be, at the option of County, either separately scheduled or incorporated as adjustments to the respective trade lines of Work to which they apply. Except as otherwise expressly required by Article 7, above, the Schedule of Values shall not be utilized by Contractor as a basis for calculating Contract Adjustments.

9.3.8 **Applications for Payment.** The Schedule of Values prepared by Contractor in accordance with the requirements of the Contract Documents shall be used as a basis for County's review and approval or disapproval of Applications for Payment.

### 9.4 PROGRESS PAYMENT CONDITIONS

9.4.1 **Progress Payment Amount.** Subject to the other provisions of the Contract Documents, the amount of each Progress Payment requested in an Application for Payment shall be computed as follows:

.1 take that portion of the Contract Price properly allocable to Work (other than materials, products or equipment furnished by County) permanently incorporated at the Site as part of the Work, based on the product derived by multiplying (1) the percentage completion of each such portion of the Work times (2) the portion of the total Contract Price allocated to that portion of the Work in the Schedule of Values, less a retention of five percent (5%) thereof;

.2 add that portion of the Contract Price that is allocable to materials and equipment (other than materials, products or equipment furnished by County) approved by County pursuant to Paragraph 9.2.11, above, and suitably stored at the Site or at a location off-Site, less a retention of five percent (5%) thereof;

.3 subtract the aggregate of previous payments made by the County; and

.4 subtract amounts, if any, that County has determined will be withheld pursuant to an exercise of the County's right to withhold pursuant to Section 9.6, below.

**9.4.2 Other Conditions and Documentation.** Contractor shall submit its Applications for Payment requesting Progress Payments to County using such forms as required by County. Without limitation to any other conditions to payment set forth elsewhere in the Contract Documents, the following shall be conditions precedent to a proper submission, and to County's approval, of each Application for Payment:

.1 submission of a Schedule of Values that complies with Section 9.3, above;

.2 submission of Contractor's certification required by Paragraph 9.2.10, above;

.3 submission of: (1) forms of conditional releases of stop payment notice and bond rights upon progress payment, complying with California Civil Code §8132, for all Work performed during the time period covered by the current Application for Payment, signed by Contractor and the Subcontractors, of every Tier; and (2) forms of unconditional releases of stop payment notice and bond rights upon progress payment, complying with California Civil Code §8134, for all Work performed during the time period covered by the previous Application for Payment, signed by Contractor and the Subcontractors, of every Tier;

.4 compliance by Contractor with its obligation for daily maintenance of Record Drawings and Specifications as required by Paragraph 3.10.1, above;

.5 compliance by Contractor with its obligation for submission of daily reports as required by Paragraph 3.10.2, above;

.6 compliance by Contractor with its obligations for submission of scheduling information and updating of the Construction Schedule as required by Section 3.9, above, and other provisions of the Contract Documents pertaining to preparation or updating of schedules and scheduling information;

.7 proper payment of prevailing wages as defined in California Labor Code §1720, et seq.;

.8 timely submission of adequate and complete certified payroll records for any time period that Work was performed and for which payment is being requested;

.9 submission of certifications by Contractor and the Subcontractors as required by Applicable Laws certifying that all employee benefit contributions due and owing have been paid in full;

.10 submission of sales tax information as required by Paragraph 3.6.3, above; and

.11 compliance by Contractor with all of its other obligations for submission of documentation or performance of conditions which, by the terms of the Contract Documents, constitute conditions to Contractor's right to receive payment for Work performed.

## 9.5 COUNTY APPROVAL/REJECTION OF APPLICATIONS FOR PAYMENT

**9.5.1 Review by County.** Subject to County's rights under Paragraph 9.5.4, below, County shall promptly review Applications for Payment submitted by Contractor and provide its approval or disapproval, in whole or part, within (1) seven (7) Days after receipt of an Application for Payment requesting Progress Payment, and (2) within fourteen (14) Days after receipt of an Application for Payment requesting Final Payment.

9.5.2 **Disapproval by County.** Disapproval by County disapproving of an Application for Payment shall be accompanied by an explanation of the reasons for such disapproval. Failure by County to specify in its disapproval a particular grounds for disapproval of an Application for Payment shall not waive the County's right to assert such grounds as a basis for any future disapproval, or nullification of its prior approval, of that or any other Application for Payment.

9.5.3 **Re-submittal by Contractor.** An Application for Payment that is disapproved by County shall be corrected and re-submitted by Contractor after receipt by Contractor of the notice of disapproval. A re-submitted Application for Payment shall be reviewed and responded to by County in the same manner as provided in Paragraphs 9.5.1 and 9.5.2, above. If re-submitted, the re-submitted Application for Payment shall be reviewed and responded to by County in the same manner as provided in Paragraph 9.5.1 and Paragraph 9.5.2, above. If not re-submitted, only the amount, if any, that is approved for payment shall be paid until such time as a proper Application for Payment that includes the disapproved amount has been submitted in another Application for Payment and, upon such re-submittal, approved for payment.

9.5.4 **Approval Nullification.** County reserves the right to nullify any prior approval of an Application for Payment that is later found to not be in compliance with the requirements of the Contract Documents, whether or not such noncompliance was previously actually observed or apparent on the face of the Application for Payment, and based on such nullification County may take either of the following actions, as applicable: (1) if the Application for Payment has not yet been paid by County, disapprove of that portion of the Application for Payment that is not in compliance and withhold payment of that sum until the noncompliance is fully rectified; or (2) if the Application for Payment has been paid by County, nullify the County's prior approval and withhold payment of such disputed amounts in response to future Applications for Payment; provided, however, that in either case the amount of the County's nullification shall be limited to that portion of the amount requested in the Application for Payment that is in dispute and the amount of its withholding from the current or any future Application for Payment shall be limited to the amount nullified plus any additional withholding permitted under Section 9.6, below.

9.5.5 **No Waiver by County.** Neither approval by County or Architect of, failure by County to exercise its right of nullification with respect to, nor payment by County upon, an Application for Payment or any portion thereof shall be interpreted as or constitute a waiver or release of any of County's rights to require Contractor's full compliance with the Contract Documents.

9.5.6 **No Representation.** Neither approval by County or Architect of, failure by County to exercise its right of nullification with respect to, nor payment by County upon, an Application for Payment or any portion thereof shall be interpreted as a representation that County or Architect has: (1) made exhaustive or continuous on-Site inspections to check the quality or quantity of the Work, (2) reviewed Contractor's construction means, methods, techniques, sequences or procedures, (3) reviewed copies of requisitions received from the Subcontractors and other data requested by County or Architect to substantiate Contractor's right to payment, or (4) made examination to ascertain how or for what purpose Contractor has used money previously paid on account of the Contract Price.

## 9.6 WITHHOLDING OF PAYMENT

9.6.1 **Grounds for Withholding.** County may decline to approve an Application for Payment and withhold payment requested under any unpaid Application for Payment, in whole or in part, to such extent that County makes a Good Faith Determination that withholding is necessary, in the sole discretion of County, because of any of the following circumstances:

**.1 Third-Party Claims.** Third-party claims or stop payment notices filed or reasonable evidence (including, without limitation, failure by Contractor to submit conditional releases of stop payment notice and bond rights required by the Contract Documents) indicating the possible filing of such claims or stop payment notices.

**.2 Defective Work.** Defective Work not remedied.

**.3 Nonpayment.** Failure of Contractor to make proper payments to a Subcontractor for services, labor, materials or equipment or other Work.

**.4 Inability to Complete.** Reasonable doubt that the Work can be completed for the then unpaid balance of the Contract Price or within the Contract Time.

**.5 Violation of Applicable Laws.** Failure of Contractor or a Subcontractor to comply with Applicable Laws.

**.6 Penalty.** Any penalty asserted against County by virtue of Contractor's failure to comply with Applicable Laws.

**.7 Lack of Progress.** Failure by Contractor to maintain progress in accordance with the Construction Schedule.

**.8 Setoff.** Any reason specified elsewhere in the Contract Documents as grounds for a withholding, offset or setoff or that would legally entitle County to a setoff or recoupment.

**.9 Consultant Services.** Additional professional, consultant or inspection services required due to Contractor's failure to comply with the Contract Documents.

**.10 Liquidated Damages.** Liquidated damages payable to County pursuant to Section 3.2 of the Construction Contract or that there is a reasonable basis to believe will be payable to County based upon the Contractor's project date for Substantial Completion based on its update Construction Schedule or based upon other evidence available to County of the probable date that the Work will be Substantially Completed.

**.11 Damage.** Loss caused to County, a Separate Contractor or any other person or entity under contract to County, by Contractor or a Subcontractor.

**.12 Cleanup.** Cleanup performed by County and chargeable to Contractor pursuant to the terms of the Contract Documents.

**.13 Employee Benefits.** Failure of Contractor to pay contributions due and owing to employee benefits funds pursuant to any applicable collective bargaining agreement or trust agreement.

**.14 Required Documents.** Failure of Contractor to submit on a timely basis, proper and complete documentation required by the Contract Documents, including, without limitation, schedule updates, 'look ahead' schedules, pricing information, certifications and other required reports or documentation.

**.15 Labor Compliance.** Failure of Contractor or any Subcontractor to properly pay prevailing wages as defined in California Labor Code §§1720 et seq.

**.16 Nullification.** Nullification by County pursuant to Paragraph 9.5.4, above, of its prior approval of an Application for Payment.

**.17 Releases.** Failure by Contractor to submit any conditional release of stop payment notice and bond rights that is required pursuant to Subparagraph 9.4.2.3, above or Subparagraph 9.10.4.4, below.

**.18 Other Breach.** A breach by Contractor of any obligation or provision of the Contract Documents.

**9.6.2 Application of Withholding.** Sums properly withheld pursuant to Paragraph 9.6.1, above, may be used by County without a prior judicial determination of County's actual rights with respect to the grounds on which such withholding is based. Contractor agrees and hereby designates County as its agent for such purposes, and agrees that such payments shall be considered as payments made under the Construction Contract by County to Contractor. County shall submit to Contractor an accounting of such funds disbursed on behalf of Contractor. As an alternative to such payment, County may, in its sole and absolute discretion, elect to exercise its right to adjust the Contract Price as provided in Section 13.4, below.



9.6.3 **Final Payment.** In accordance with California Public Contract Code §7107, the amount to be withheld from Contractor's Final Payment pursuant to a withholding asserted pursuant to Paragraph 9.6.1, above, shall be limited to one hundred fifty percent (150%) of the disputed amount.

9.6.4 **Release of Withholding.** When the reasons for withholding of payment as set forth in Paragraph 9.6.1, above, are removed, approval by County will be promptly issued to Contractor for amounts previously withheld and payment of amounts withheld will be made by County within thirty (30) Days thereafter.

9.6.5 **Additional Rights.** The County's right of withholding set forth in this Section 9.6 is in addition to, and not a limitation upon, any other rights of withhold that County may have under the Contract Documents or Applicable Laws.

## 9.7 PAYMENTS BY CONTRACTOR

9.7.1 **Payments to Subcontractors.** Contractor shall not include in its Applications for Payment sums on account of any Subcontractor's portion of the Work that it does not intend to pay to such Subcontractor. Upon receipt of payment from County, Contractor shall pay the Subcontractors performing the Work, out of the amount paid to Contractor on account of such Subcontractors' portions of the Work, the amount to which said Subcontractors are entitled in accordance with the terms of their contracts with Contractor and Applicable Laws, including, without limitation, California Public Contract Code §7107. Contractor shall remain responsible, notwithstanding a withholding by County pursuant to the terms of these General Conditions, to promptly satisfy from its own funds sums due to all the Subcontractors who have performed the Work that is included in Contractor's Application for Payment. Contractor shall, by appropriate agreement, require each Subcontractor to make payments to its sub-subcontractors and suppliers in similar manner. County shall have no obligation to pay or be responsible in any way for payment to the Subcontractors, of any Tier.

9.7.2 **Payments in Trust.** Any funds that Contractor receives in payment for services or Work performed by a Subcontractor shall constitute assets of a trust, which trust funds shall be used for the exclusive benefit of the Subcontractor for the purpose of discharging Contractor's financial obligations on account of labor, services, materials or equipment furnished to the Project by the Subcontractor, provided that such labor, services, materials or equipment were performed in accordance with the Contract Documents, were included in an Application for Payment to County, and were paid by the County to Contractor. Contractor shall be the trustee of the trust and shall be required to deal with the trust assets for the benefit of the Subcontractor. Contractor shall not be a beneficiary of the trust. Nothing herein shall be construed as an intent to require that Contractor maintain trust funds in separate bank accounts, specifically designate any third party as a beneficiary of the trust created herein, or otherwise give rise to any cause of action against the County by any third party beneficiary of the trust created herein.

9.7.3 **Payment Information.** County will, on request, furnish to any of the Subcontractors, if practicable, information for such Subcontractor's review regarding percentages of completion or amounts applied for by Contractor and action taken thereon by County on account of portions of the Work done by such Subcontractor.

9.7.4 **Joint Payment.** County shall have the right, if deemed necessary in its sole discretion, to issue joint checks made payable to Contractor and any of the Subcontractors, of any Tier. The joint check payees shall be solely responsible for the allocation and disbursement of funds included as part of any such joint payment. Endorsement on such check by a payee shall be conclusively presumed to constitute receipt of payment by such payee. In no event shall any joint check payment be construed to create: (1) any contract between County and any of the Subcontractors, of any Tier; (2) any obligation from County to any of the Subcontractors; or (3) any third-party rights against County or Architect.

9.7.5 **Direct Negotiation of Stop Payment Notices.** County shall have the right to directly discuss, negotiate, settle or pay, without notice to or participation by Contractor, any stop payment notice claims asserted by the Subcontractors, of any Tier, and to deduct such sums paid from sums due to Contractor.

9.7.6 **Release of Stop Payment Notices.** With the exception of that portion, and only that portion, of a stop payment notice or other claim that arises as a result of a failure by the County to make payment to Contractor under circumstances constituting a breach of the Construction Contract by County, if any stop payment notice or other claim, whether invalid or valid, is filed with, served upon or made or asserted against the County or the Site by any

Subcontractor, of any Tier, or their agent or employee, for money claimed due, then Contractor shall within five (5) Days after written notice by the County procure, furnish and record appropriate releases or other instruments which under Applicable Laws will fully release, extinguish and remove such stop payment notice or claim, as well as any notices of pending action or other notices recorded against the Site in connection with the enforcement thereof. All costs of such actions by Contractor shall be paid for by Contractor at Contractor's Own Expense. Unless and until fully released as aforesaid, the County shall have the right to retain from any payment then due, or thereafter to become due, to Contractor an amount equal to one hundred and fifty percent (150%) of the amount necessary to satisfy, discharge and defend against any such stop payment notice or claim and any action or proceeding thereon, including, without limitation, an amount for anticipated attorney's fees and costs. If the amount to be paid, or the amount retained, is insufficient to satisfy, discharge and defend against any such stop payment notice or claim and any action or proceeding thereon, then Contractor shall be liable for the difference and upon demand shall immediately deposit the same with the County. The provisions of this Paragraph 9.7.6 are in addition to such other rights as the County may have against Contractor under the Contract Documents or Applicable Laws.

**9.7.7 No County Obligation.** Neither County nor Architect shall have any obligation to pay or to see to the payment of money to any of the Subcontractors except as may otherwise be required by Applicable Laws.

## **9.8 FAILURE OF PAYMENT**

If, through no fault of Contractor or failure by Contractor to comply with its obligations under the Contract Documents either: (1) approval or disapproval by County of an Application for Payment properly prepared and submitted by Contractor and requesting payment that is otherwise undisputed by County is not issued within the time period required therefor by the terms of this Article 9; or (2) the County does not (a) upon an Application for Payment properly prepared and submitted by Contractor pay to Contractor, within the time period required for payment by County, an undisputed amount approved by County as earned, which approval has not been, and is not thereafter, nullified by County, or (b) pay to Contractor an amount that has been awarded by arbitration or judgment of a court of competent jurisdiction, then Contractor may, following delivery to County of a written "10-day stop work order", stop the Work until, as applicable, an approval or disapproval by County, or payment by County, is received by Contractor. Promptly upon receipt of such approval or disapproval, or payment, as applicable, Contractor shall resume the Work. Any resulting Delay associated with the shut down and start up of the Work as a result of Contractor's proper exercise of its right to stop work under this Section 9.8 shall constitute a Compensable Delay.

## **9.9 SUBSTITUTION OF SECURITIES FOR RETENTION**

**9.9.1 Public Contract Code.** Pursuant to the requirements of California Public Contract Code §22300, upon the Contractor's request, the County will make payment to the Contractor of any funds withheld from payments to ensure performance under the Contract Documents if the Contractor deposits with the County, or in escrow with a California or federally chartered bank in California acceptable to the County ("Escrow Agent"), securities eligible for the investment of State Funds under Government Code §16430, or bank or savings and loan certificates of deposit, interest-bearing demand deposit accounts, standby letters of credit, or any other security mutually agreed to by the Contractor and the County, upon the following conditions:

**.1** The Contractor shall be the beneficial owner of any securities substituted for monies withheld for the purpose of receiving any interest on such securities.

**.2** All expenses relating to the substitution of securities under said §22300 and under this Section 9.9, including, but not limited to the County's overhead and administrative expenses and expenses of Escrow Agent, shall be the responsibility of the Contractor.

**.3** Securities or certificates of deposit substituted for monies withheld shall be of a value of at least equivalent to the amounts of the retention to be paid to the Contractor pursuant to the Contract Documents.

**.4** If the Contractor shall choose to deposit securities in lieu of monies withheld with an Escrow Agent, the Contractor, the County and Escrow Agent shall, as a prerequisite to such deposit, enter into an escrow agreement. Such escrow agreement shall be substantially in the form "Escrow Agreement for Security Deposits in Lieu of Retention" set forth in California Public Contract Code §22300(f).

.5 The Contractor shall obtain the written consent of Surety to such agreement.

.6 Securities, if any, shall be returned to the Contractor only upon satisfactory Final Completion of the Work.

9.9.2 **Substitute Security.** To minimize the expense caused by such substitution of securities, the Contractor shall, prior to or at the time the Contractor requests to substitute security, deposit sufficient security to cover the entire amount to be withheld. Should the current market value of such substituted security at any time fall below the amount for which it was substituted, or any other amount which the County withholds pursuant to the Contract Documents, the Contractor shall immediately and at the Contractor's Own Expense deposit additional security qualifying under said §22300 until the current market value of the total security deposited is no less than the amount subject to withholding under the Contract Documents. Securities shall be valued as often as conditions of the securities market warrant, but in no case less frequently than once per month.

9.9.3 **Deposit of Retentions.** Alternatively, subject to the conditions set forth in Paragraph 9.9.1, above, upon request of the Contractor, the County shall make payment of retentions directly to Escrow Agent at the expense of the Contractor, provided that the Contractor, the County and Escrow Agent shall, as a prerequisite to such payment, enter into an escrow agreement in the same form as prescribed in Subparagraph 9.9.1.4, above. At the Contractor's Own Expense, the Contractor may direct the investment of the payments into securities and interest bearing accounts and the Contractor shall receive the interest earned on the investments. Escrow Agent shall hold such direct payments by the County under the same terms provided herein for securities deposited by the Contractor. Upon satisfactory Final Completion of the Work, the Contractor shall receive from Escrow Agent all securities, interest and payments received by Escrow Agent from the County, less escrow fees and charges of the Escrow Account, according to the terms of said §22300 and the Contract Documents.

#### 9.10 FINAL PAYMENT

9.10.1 **Payment by County.** Subject to the County's right of withholding as set forth in Section 9.6, above, or elsewhere in the Contract Documents, Final Payment shall be made by County not more than sixty (60) Days after completion of the Work as defined in Clauses (1), (2), (3) or (4) of California Public Contract Code § 7107(c), whichever definition is earliest satisfied.

9.10.2 **Application for Final Payment.** Upon issuance by County of the Notice of Final Completion pursuant to Paragraph 9.13.5, below, Contractor shall submit to County its Application for Payment requesting Final Payment.

9.10.3 **Review by County.** County will review and approve or disapprove of the Application for Payment requesting Final Payment as provided in Section 9.5, above.

9.10.4 **Conditions to Final Payment.** Without limitation to any other conditions to payment set forth elsewhere in the Contract Documents, the following shall be conditions to a proper submission, and to County's approval, of Contractor's Application for Payment requesting Final Payment:

.1 submission of Contractor certification as required by Paragraph 9.2.10, above;

.2 submission of consent of Surety, if any, to Final Payment;

.3 submission of a certificate evidencing that the insurance required by the Contract Documents is in force;

.4 submission of conditional releases and waivers of stop payment notice and bond rights upon final payment in the form required by California Civil Code §8136 executed by Contractor and by all the Subcontractors, of every Tier;

.5 submission of all Close-Out Documents (including, without limitation, complete, accurate Record Drawings and Specifications certified by Contractor as required by Paragraph 3.10.1, above);

.6 timely submission of adequate and complete certified payroll records for any time period that Work was performed, which have not been submitted by Contractor in connection with its previous Applications for Payment;

.7 proper payment of prevailing wages as defined in California Labor Code §§1720, et seq.;

.8 submission of certifications by Contractor and each Subcontractor, as required by any applicable collective bargaining agreement or trust agreement or Applicable Laws, certifying that all employee benefit contributions due and owing have been paid in full; and

.9 submission of any other documents or information required by the Contract Documents as a condition of Final Payment or Final Completion.

9.10.5 **Disputed Amounts.** Pursuant to California Public Contract Code § 7107, County may deduct and withhold from Final Payment an amount of up to one hundred fifty percent (150%) of any disputed amounts, including, without limitation, amounts to protect County against any Loss caused or threatened as a result of Contractor's failing to fully satisfy the conditions of Final Completion and Final Payment.

9.10.6 **No Waiver by County.** The making of Final Payment by County shall not constitute a waiver by County of any rights or claims, including, without limitation, any right or claim for reimbursement of Allowable Costs or Allowable Markup paid to Contractor that is determined by County, either before or after Final Payment, to have been not due to Contractor.

#### 9.10.7 **WAIVER BY CONTRACTOR.**

**ACCEPTANCE OF FINAL PAYMENT BY CONTRACTOR OR A SUBCONTRACTOR SHALL CONSTITUTE A WAIVER OF ALL RIGHTS BY THAT PAYEE AGAINST COUNTY FOR RECOVERY OF ANY LOSS, EXCEPTING ONLY THOSE CLAIMS THAT HAVE BEEN SUBMITTED BY CONTRACTOR IN THE MANNER REQUIRED BY SECTION 4.3, ABOVE, PRIOR TO, OR AT THE TIME OF CONTRACTOR'S SUBMISSION TO COUNTY OF, ITS APPLICATION FOR PAYMENT REQUESTING FINAL PAYMENT.**

#### 9.11 **SUBSTANTIAL COMPLETION**

9.11.1 **Contract Time.** Contractor shall achieve Substantial Completion of the Work, or such portion of the Work as may be designated at any time by County for separate delivery, in accordance with the requirements of the Contract Time and other provisions of the Contract Documents.

9.11.2 **Request for Inspection.** Contractor shall notify the County when Contractor believes that the Work, or portion thereof designated by the County in the Contract Documents or otherwise for separate delivery, is Substantially Complete.

9.11.3 **Substantial Completion Inspection.** When Contractor gives notice to County that it has achieved Substantial Completion of the Work, or a County designated portion thereof, unless the County determines that the Work or County designated portion thereof is not sufficiently complete to warrant an inspection to determine Substantial Completion, County, Inspector of Record, Architect and such others as may be designated by County will inspect the Work, or such County designated portion thereof.

9.11.4 **Substantial Completion Punch List.** At the conclusion of such inspection, County shall prepare and give to Contractor (or, Owner may request that Contractor prepare and provide to County) a Substantial Completion Punch List of items, if any, to be completed or corrected for Substantial Completion. If Contractor disputes any of the items included, it shall so note its objection on the Substantial Completion Punch List. Contractor shall proceed within forty-eight (48) hours after preparation of the Substantial Completion Punch List to commence correction or completion of the items on the Substantial Completion Punch List, including, without limitation, any disputed items, and all such items of Work shall be completed promptly by Contractor before the Work will be considered as Substantially Complete. Failure by County, Architect, Inspector of Record or Contractor to include an item on the Substantial Completion Punch List does not alter the responsibility of Contractor to perform the Work in accordance with the Contract Documents. Items of Work necessary for Substantial Completion that, for any reason, have been omitted from the Substantial

Completion Punch List shall be added to the Substantial Completion Punch List and Contractor shall, at the request of County, Architect or Inspector of Record made at any time prior to Final Payment commence correction or completion of such items within forty-eight (48) hours and all such items of Work shall be completed by Contractor promptly and before the Work will be considered as Substantially Complete.

**9.11.5 Re-Inspection.** Contractor shall notify County when the items of Work shown on the Substantial Completion Punch List are completed. County, Inspector of Record, Architect and such others as County deems necessary or appropriate will then make a further inspection to determine whether such Work is Substantially Complete. If such inspection, or any subsequent re-inspection required pursuant hereto, discloses any item, whether or not included on the Substantial Completion Punch List, which must be completed or corrected before Substantial Completion, Contractor shall, as a condition of Substantial Completion, complete or correct such item, which shall then be re-inspected to confirm that such Work is Substantially Complete. Contractor shall reimburse County, or County may at its option withhold from Contractor's payments, amounts incurred by County to the Inspector of Record, Architect, County Consultants or others whose services, for reasons within the control or responsibility of Contractor or the Subcontractors, are necessary for more than two (2) such re-inspections to determine Substantial Completion.

**9.11.6 Notice of Substantial Completion.** When County determines that the Work, or such designated portion thereof, is Substantially Complete, County will prepare a Notice of Substantial Completion on the County's form, which shall state the date of Substantial Completion. If the Notice of Substantial Completion is for the entire Work, then the County will attach to it the Final Completion Punch List prepared in accordance with Paragraph 9.13.2, below. Regardless of the date the Notice of Substantial Completion is issued, Substantial Completion shall be deemed to have occurred on the date stated in the Notice of Substantial Completion.

## **9.12 PARTIAL OCCUPANCY OR USE**

County reserves the right to beneficially occupy all or any portion of the Work at any time before Substantial Completion of the entire Work. Beneficial occupancy means that County has assumed physical occupancy and use of all or such portion of the Work. Commencement of improvements or other work by Separate Contractors in order to ready the Work for use or occupancy by County shall be unconditionally permitted in all cases prior to Substantial Completion and shall not constitute a taking of beneficial occupancy by County. Exercise by County in accordance with the provisions of this Section 9.12 of its right to take beneficial occupancy shall not constitute grounds for a Contract Adjustment. The County's right of beneficial occupancy of all or a portion of the Work prior to Substantial Completion shall be subject to the following conditions:

**9.12.1** County and such others as County deems necessary will make an inspection of the portion of the Work to be beneficially occupied and prepare a list of items to be completed or corrected in the same manner as required by and subject to the same conditions as set forth in Section 9.11, above.

**9.12.2** Beneficial occupancy by County shall not be construed as Acceptance of that portion of the Work which is to be occupied.

**9.12.3** Except as otherwise provided in this Section 9.12, beneficial occupancy by County shall not constitute a waiver of rights of the County against Contractor. Notwithstanding anything stated in this Section 9.12 or elsewhere in the Contract Documents to the contrary, beneficial occupancy by County shall not constitute a waiver of rights of County relating to Defective Work in the area beneficially occupied or in any other portion of the Work.

**9.12.4** Prior to the County's taking beneficial occupancy, Contractor shall submit to County an itemized list of each piece of equipment located in or serving the area to be occupied stating the date operation of such piece of equipment commenced, together with operating instructions, manuals and other information required by the Contract Documents. Contractor shall provide, in the areas beneficially occupied, on a continual basis, utility services, elevator service, and heating and cooling systems in operable condition commencing at the time of beneficial occupancy and until Final Completion of the entire Work. County shall be responsible, from and after taking occupancy, for utility consumption, regular operation and regular maintenance of such systems or equipment.

**9.12.5** County shall pay all normal operating and maintenance costs resulting from its use of equipment in areas beneficially occupied.

9.12.6 County shall pay all utility costs that arise out of its beneficial occupancy.

9.12.7 Contractor shall not be responsible for providing security in areas beneficially occupied.

9.12.8 County shall use its best efforts to prevent its beneficial occupancy from interfering with the conduct of Contractor's remaining Work.

9.12.9 Contractor shall not be required to repair damage caused solely by County's beneficial occupancy.

9.12.10 Contractor shall continue to maintain all insurance required by the Contract Documents in full force and effect.

### 9.13 FINAL COMPLETION

9.13.1 **Contract Time.** Contractor shall expeditiously and diligently perform the Work after Substantial Completion, including, without limitation, all items of Work on the Final Completion Punch List that accompanies the Notice of Substantial Completion, so as to achieve Final Completion within the requirements of the Contract Time for Final Completion.

9.13.2 **Final Completion Punch List.** Contractor shall prepare and submit to County at the time that Contractor requests inspection for Substantial Completion of the entire Work pursuant to Paragraph 9.11.2, above, a draft proposed Final Completion Punch List of items of Work that will be required to be completed or corrected for Final Completion. Items identified in the course of any inspection for Substantial Completion that are required to Finally Complete the Work following Substantial Completion shall be added to the proposed Final Completion Punch List and the revised Final Completion Punch List attached to the Notice of Substantial Completion. If Contractor disputes any of the items included, it shall so note its objection on the Final Completion Punch List. When Contractor considers the Final Completion Punch List to be complete, it shall promptly sign and deliver the Final Completion Punch List to the County. Failure by County, Architect, Inspector of Record or Contractor to include an item on the Final Completion Punch List does not alter the responsibility of Contractor to perform the Work in accordance with the Contract Documents. Items of Work necessary for Final Completion that, for any reason, have been omitted from the Final Completion Punch List shall be added to the Final Completion Punch List upon request by the County made at any time prior to Final Payment and completion of such items shall be made promptly and before the Work will be considered Finally Complete.

9.13.3 **Performance of Punch List.** Contractor shall proceed promptly and in accordance with the Contract Time to correct and complete the items on the Final Completion Punch List, including, without limitation, any disputed items, and all such items of Work shall be completed by Contractor before the Work will be considered as Finally Complete.

9.13.4 **Request for Final Inspection.** Contractor shall notify County when Contractor believes that the Work is Finally Complete. County, Inspector of Record, Architect and such others as County deems necessary or appropriate will then make a further inspection to determine whether such Work is Finally Complete. If such inspection, or any subsequent re-inspection required pursuant hereto, discloses any item, whether or not included on the Final Completion Punch List, which must be completed or corrected before Final Completion, Contractor shall, as a condition of Final Completion, complete or correct such item, which shall then be re-inspected to confirm that such Work is Finally Completed. Contractor shall reimburse County, or County may at its option withhold from Contractor's payments, amounts incurred by County to the Inspector of Record, Architect, County Consultants or others whose services, for reasons within the control or responsibility of Contractor or the Subcontractors, are necessary for more than two (2) inspections to determine Final Completion.

9.13.5 **Notice of Final Completion.** When County determines that the Work is Finally Complete, County will prepare a Notice of Final Completion on the County's form, which shall state the date of Final Completion. Regardless of the date the Notice of Final Completion is issued, Final Completion shall be deemed to have occurred on the date stated in the Notice of Final Completion.

9.13.6 **Acceptance by County.** Acceptance may be exercised by County, in its sole and absolute discretion, either after Final Completion or, without waiving or releasing Contractor from any of its obligations under the Contract Documents, at any time after Substantial Completion and prior to Final Completion.

9.13.7 **Notice of Completion.** In addition to issuance of the Notice of Substantial Completion and Notice of Final Completion, County shall have the right, exercised in its sole and absolute discretion, to record a Notice of Completion pursuant to California Civil Code §9204.

9.13.8 **No Waiver by County.** No inspections conducted pursuant to this Article 9 nor any approvals or certificates issued by County, Architect or Inspector of Record shall be deemed to be a waiver or limitation on County's right to insist on Final Completion and full performance of all other conditions to Final Payment under the Contract Documents prior to issuance of Final Payment to Contractor.

## **ARTICLE 10 INSPECTIONS, SAFETY AND HAZARDOUS SUBSTANCES**

### **10.1 INSPECTIONS**

10.1.1 **General.** One or more Inspectors of Record, including special inspectors as required, may be employed by County and assigned to the Work. The fees of Inspectors of Record shall be directly paid for by County. IF INSPECTORS OR RECORD ARE ASSIGNED TO THE WORK, THEN NO WORK SHALL BE CARRIED ON EXCEPT UNDER THE INSPECTION, AND WITH THE KNOWLEDGE, OF THE APPROPRIATE INSPECTOR(S) OF RECORD, and Contractor shall be responsible, at Contractor's Own Expense, to remove and replace any Work performed without such inspection by the appropriate Inspector of Record.

10.1.2 **Coordination.** Contractor shall schedule, arrange, and coordinate its activities with the activities of the County, Inspectors of Record, Architect, County Consultants and others designated by County to inspect or observe the Work. When, in order to comply with the intent of the Contract Documents, inspection or observation must be made at the plant or mill of the manufacturer or fabricator of material or equipment, Contractor shall notify the County, as well as any other persons identified by County as assigned by it to inspect or observe the Work, a sufficient length of time in advance to allow for arrangements to be made for such inspection or observation.

10.1.3 **Uncovering of Work.** County or an Inspector of Record shall have the right to request that any portion of the Work be uncovered by Contractor for inspection. Except as otherwise provided in Paragraph 10.1.1, above, if such Work is found to be in accordance with the Contract Documents, then all of the additional costs incurred in uncovering, replacing and re-covering the Work shall constitute grounds for Contractor, upon proper notice and request pursuant to Article 7, above, to receive a Contract Adjustment for Compensable Change and if such uncovering, replacing and re-covering of the Work causes a Delay, such Delay shall constitute grounds for Contractor, upon proper and timely notice and request pursuant to Article 8, above, to receive a Contract Adjustment for Compensable Delay. If such Work is not in accordance with the Contract Documents, then such costs of uncovering, replacing and re-covering shall be paid for by Contractor at Contractor's Own Expense and any resulting Delay shall be consider an Unexcused Delay.

10.1.4 **Off-Hours Inspections.** Contractor shall request approval by County before arranging any inspections either: (1) before 7:00 am or after 3:00 pm on Monday through Friday, or (2) on any Saturday, Sunday, holiday or any other time when Work is not usually in progress. Such request shall be delivered to County at least two (2) working days in advance of the inspection being performed. Approval or disapproval of such request is in the sole and absolute discretion of County. Except where such off-hours inspections are due to a breach by County of an obligation under the Contract Documents, the additional cost (over and above that which would be required for inspections during regular business hours) to County of the inspection shall be paid for by Contractor at Contractor's Own Expense.

10.1.5 **Access to the Work.** Contractor shall make available for use by County, Inspectors of Record, Architect, County Consultants and others assigned to inspect or observe the Work, any equipment (wheelbarrow, shovel, ladder, man-lift, etc.) that is available or in use on Site, and is required to assist in such inspections or observations.

10.1.6 **Right to Stop Work.** County shall have the right, but not the obligation, to order Contractor to stop performance of Work. Inspectors of Record shall, only if and to the extent permitted by Applicable Laws or if they are given written authority to do so by County, have the authority, but not the obligation, to stop the Work whenever provisions of Contract Documents are not being complied with, or the conduct of the Work poses a probable risk of harm to persons or property.

10.1.7 **No County Duty.** No authority of the County, Inspectors of Record, Architect, County Consultants or others designated by County to inspect the Work that is conferred by the Contract Documents nor any decision made by any of them in good faith either to exercise or not exercise such authority, nor any recommendation by any of them, shall give rise to a duty or responsibility on the part of any of them to Contractor or to the Subcontractors, of any Tier.

10.1.8 **Contractor Responsibility.** Inspections or observations by the County, Inspectors of Record, County Consultants or others shall not in any way relieve Contractor from its sole responsibility for full compliance with all of the terms and conditions of the Contract Documents, nor be construed to lessen, to any degree, Contractor's responsibility for providing efficient and capable superintendence as required herein or for incorporating into the Work only those items of the Work that conform to the Contract Documents.

10.1.9 **Reimbursement to County.** Without limitation to any other provisions of the Contract Documents, Contractor shall reimburse the County at Contractor's Own Expense, or County shall have the right, at its option, to withhold from payments due to Contractor, costs of inspections, observations or testing and other Losses that are incurred for any of the following reasons: (1) Contractor has failed to execute the Work in accordance with the Contract Documents; (2) materials or equipment have been substituted by Contractor, without prior approval by the County and Architect; (3) Defective Work; or (4) to conduct load testing of certain portions of the structure that have not fully met the requirements of the Contract Documents.

## 10.2 SAFETY PRECAUTIONS AND PROGRAMS

10.2.1 **General Safety Obligation.** Contractor shall, notwithstanding the activities of others (such as, but not limited to, the County, Architect, Inspectors of Record, County Consultants or others designated by County to prepare safety recommendations or inspect or observe the Work), be solely responsible, on a twenty-four (24) hours a Day, seven (7) Days a week basis, for initiating, maintaining and supervising all safety precautions and programs on the Site in connection with the preparation, performance, observation or inspection of the Work, including all necessary precautions to protect and safeguard all persons and property from loss, injury, death or damage resulting, directly or indirectly, from the activities of Contractor or the Subcontractors, including, without limitation, all of the following:

- .1 persons in and around the Site, as well as their personal property and vehicles;
- .2 the Work, materials and equipment to be incorporated therein under care, custody or control of Contractor or the Subcontractors, of any Tier, whether in storage on or off the Site, including, without limitation, the provision of temperature control, covering and enclosures necessary to prevent Loss due to adverse weather conditions;
- .3 other property at the Site or adjacent thereto, such as trees, shrubs, lawns, walks, pavements, curbs, roadways, structures (including, without limitation, protection from settlement or loss of lateral support) and utilities not designated for removal, relocation or replacement in the course of construction; and
- .4 construction and operations by the County, Architect and Inspectors of Record.

10.2.2 **Contractor's Safety Program.** Prior to starting the Work, Contractor shall prepare and submit to County a Safety Program, which shall comply with the requirements of the Contract Documents and shall include, at a minimum, guidelines, requirements and procedures for the following: safety management policy; emergency response plan; illness and injury prevention procedures; safety meetings; accident investigation; basic accident causes; safety inspection checklist; fire prevention and control; report forms; and employee safety manual and procedures for achieving compliance with safety requirements of insurers. A copy of the Safety Program shall be maintained on Site at all times and provided to the County upon request. Contractor is solely responsible for monitoring activities at the Site for compliance with the Safety Program and for the enforcement thereof.



10.2.3 **Safety Orders.** Contractor shall comply with all Applicable Laws, including, without limitation, all safety laws, standards, orders, rules, regulations and building codes, to prevent accidents or injury to persons on, about or adjacent to the Site and to provide a safe and healthful place of employment. Contractor shall, at Contractor's Own Expense, correct any violations of Applicable Laws occurring or threatened by conditions on the Site.

10.2.4 **Safety Representative.** Contractor shall designate a responsible member of its organization on the Site, who meets the qualification and competency requirements of Applicable Laws and whose sole duty shall be giving safety instructions, prevention of accidents and overall job site safety (including, without limitation, posting of information and other notices regarding safety that are required under occupational safety and health laws and compliance with reporting and other occupational safety requirements pertaining to the protection of the life, safety and health of the workers). The name of the person so designated shall be reported to the County by Contractor prior to the commencement of any Work on the Site.

10.2.5 **Protection.** Contractor shall take reasonable precautions to protect the Work and all building materials, equipment, temporary field offices, storage sheds, and other public and private real and personal property that might be affected, directly or indirectly, by Contractor's activities associated with performance of the Work, and shall make good, at Contractor's Own Expense, all Loss due to failure to provide such reasonable precautions.

10.2.6 **Safeguards, Disabled Access.** Contractor shall erect and maintain, as required by existing conditions and performance of the Work, all necessary safeguards for safety and protection, including, without limitation, safety devices, belts, nets, barriers, safety rails, canopies, danger signs, fire protection, no smoking prohibitions, warnings against hazards, safety regulations postings and notifications to owners and users of adjacent sites and utilities, and shall, as required by Applicable Laws, make provision for access for, and provide assistive devices to, persons with disabilities, including, without limitation, providing safe pathways of travel around areas where construction is being performed so that occupants, visitors, the public and others on the Site with disabilities are afforded reasonably direct and barrier-free access to areas of the Site and Existing Improvements.

10.2.7 **Fire, Explosives, Hazardous Substances.** Contractor shall take all necessary precautions to guard against and eliminate possible fire hazards. Explosives may be used or stored only when authorized in writing by the County. Explosives shall be handled, used and stored in accordance with Applicable Laws. When use or storage of explosives or other Hazardous Substances or methods of construction involving use of dangerous materials or equipment are necessary for execution of the Work, Contractor shall exercise utmost care and carry on such activities under supervision of properly qualified personnel.

10.2.8 **First Aid.** Contractor shall maintain emergency first aid treatment for all workers and other persons on the Project which complies with the Federal Occupational Safety and Health Act of 1970 (29 U.S.C.A. §§651 et seq.) and all other Applicable Laws.

10.2.9 **Unsafe Conditions.** Contractor shall immediately correct any condition that exists on the Site, or that County, in its reasonable judgment, determines to exist on the Site, that is unsafe or potentially unsafe to persons or property.

10.2.10 **Responsibility for Loss.** Contractor shall promptly remedy Loss to any property or person caused in whole or in part by the failure of Contractor, the Subcontractors, of any Tier, or anyone directly or indirectly employed by any of them, or by anyone for whose acts they may be liable to fully comply with the requirements of this [Article 10](#), except Loss attributable solely to the negligent acts or omissions of the County, Inspectors of Record, Architect, County Consultants or anyone directly or indirectly employed by any of them, or by anyone for whose acts any of them may be liable, and not attributable, in whole or in part, to the negligence, willful misconduct or violation of Applicable Laws by Contractor or a Subcontractor, of any Tier, or the failure by Contractor to comply with the Contract Documents. The foregoing obligations of Contractor are in addition to and not a limitation upon Contractor's indemnity obligations under [Section 3.18](#), above.

10.2.11 **Loading, Storage.** Contractor shall be responsible for coordinating the storage and staging of materials and equipment on-Site and off-Site and shall not load or store or permit any part of the Work or the Site to be loaded or stored so as to endanger the safety of persons or risk loss or damage to property.

10.2.12 **Emergency.**

**.1 Contractor Responsibility.** In an emergency involving safety or protection of persons or property, Contractor shall act immediately, either at County's direction or as otherwise necessary under the circumstances, to prevent any Loss. In such cases, Contractor shall immediately notify County, which notice may be oral, followed within twenty-four (24) hours after occurrence of the incident by written confirmation of the occurrence of such emergency and Contractor's action in response thereto.

**.2 County Action.** If, in the sole discretion of County, the condition is immediately threatening life or property, County may, with or without notice to Contractor, take whatever immediate action is necessary to correct the life-threatening condition, and the costs thereof, including, without limitation, any fees or costs of Architect, Inspectors of Record, County Consultants or others to whom County may be liable, shall be borne by Contractor at the Contractor's Own Expense.

**10.2.13 No County Responsibility.** Nothing set forth in this Section 10.2 or elsewhere in the Contract Documents shall be interpreted as an assumption of any responsibility on the part of County or other persons or entities other than the Contractor and the Subcontractors, to report such conditions to Contractor nor as relieving Contractor of any of its responsibilities under the Contract Documents.

**10.2.14 Separate Contractors.** With respect to work of a Separate Contractor being performed within an area of the Site that is under the responsibility or control of the Contractor, Contractor shall: (1) provide copies of the Safety Program to the Separate Contractors and advise the Separate Contractors of the areas of the Site to which the Safety Program applies and where compliance with the Safety Program is expected; (2) protect the Separate Contractors' work and workers from Loss due to the actions or inactions of Contractor and the Subcontractors; and (3) notify the Separate Contractor and County of any observed violation by the Separate Contractor of the Safety Program or of any violations by the Separate Contractor of Applicable Laws governing safety on the Site. Nothing herein shall be interpreted as relieving the Separate Contractors from their obligations to comply with the Contractor's Safety Program, as excusing any failure by a Separate Contractor from performing its obligations under its contracts with County or Applicable Laws or as obligating Contractor to directly supervise or enforce the obligations of the Separate Contractors to comply with the requirements of the Safety Program or Applicable Laws relating to safety.

### 10.3 HAZARDOUS SUBSTANCES, MOLD

#### 10.3.1 Hazardous Substances.

##### .1 On Site Conditions.

**(1) Existing Conditions.** In the event Contractor or its Subcontractors encounter materials existing or otherwise present at the Site that are reasonably believed to be Hazardous Substances that have not been rendered harmless, Contractor and Subcontractors shall, except in cases where the removal, encapsulation or abatement of such Hazardous Substances is indicated by the Contract Documents to be part of the Work to be performed by Contractor, immediately stop Work in the area affected and report the condition to County in writing. Contractor and Subcontractors shall continue Work in unaffected areas reasonably believed safe. County shall then promptly arrange for the sampling, testing and profiling of such suspected Hazardous Substances to confirm the nature, quantity or concentration thereof. In the event that such suspected Hazardous Substances are determined not to be Hazardous Substances or to be Hazardous Substances but not of sufficient nature, quantity or concentration to trigger handling and manifesting of the same as a hazardous waste upon disturbance and removal, then Contractor and its Subcontractors shall, without any Contract Adjustment, be obligated to resume the portion of the Work that was suspended and shall proceed to handle and dispose of such materials pursuant to the Contract Documents, taking all reasonable precautions that are applicable under the circumstances. If, alternatively, the suspected Hazardous Substances are determined to be Hazardous Substances of sufficient nature, quantity or concentration to trigger handling and manifesting of the same as hazardous waste upon disturbance and removal, the parties shall determine what, if any, action to take with respect to such Hazardous Substances, whether to resume Work with respect to such Hazardous Substances, taking all reasonable precautions that are applicable under the circumstances, and what, if any, Contract Adjustment is appropriate and mutually agreed in order to account for any increased cost of, or Delay in connection with, handling or disposal of Hazardous Substances not already contemplated and provided for in the Contract Documents.

**(2) Contractor Release.** Contractor and its Subcontractors shall not cause the discharge, release, emission, spill, storage, treatment or disposal of any Hazardous Substance on or adjacent to the Site, except as required and permitted by the Contract Documents and Applicable Laws in connection with Contractor's performance of an obligation to remove Hazardous Substances as part of the Work agreed to be performed under the Contract Documents or as otherwise required under the provisions of this Subparagraph 10.3.1.1. Should Contractor or its Subcontractors discharge, release, emit, spill, treat, store or dispose of any Hazardous Substance on the Site in violation of the foregoing obligation or otherwise in violation of Applicable Laws, Contractor shall at Contractor's Own Expense and without limitation to County's other rights or remedies for default immediately (a) inform County in writing of such event, (b) advise County with respect to any release reporting or notification requirement that may apply as a result of such event, (c) assist County in complying with any such reporting or notification requirement as determined by County, and (d) perform any investigation, remediation, removal or other response that is necessary or desirable in order to abate or clean up the condition resulting from such event to the full satisfaction of County and any applicable Governmental Authority. Such Hazardous Substances shall be removed and properly disposed of as soon as they can be accepted at an appropriate disposal facility, and in no event later than sixty (60) Days after such waste is generated, unless a longer time is approved by County.

## **.2 Remediation by Contractor.**

**(1) Application.** The provisions of this Paragraph 10.3.1.2 shall apply only if the Work to be performed by Contractor includes within its scope the removal, abatement, moving, handling, containment, disposal or transport of Hazardous Substances

**(2) Advance Submissions to County.** Before Contractor or any of its Subcontractors moves, removes, or transports Hazardous Substances to a facility for the receipt, treatment, storage or disposal of the Hazardous Substances ("Hazardous Substances Facility"), Contractor shall cause the person or entity who will be moving, removing or transporting the Hazardous Substances to provide to County the following: (a) verification of the Hazardous Substance Facility's or other transporter's licensed status to haul such materials; (b) verification of the Hazardous Substance Facility's licensed status, including a current permit to receive the specific materials to be transported there; (c) certification that the Hazardous Substance Facility is not under enforcement action by the U.S. Environmental Protection Agency ("EPA") or applicable State Governmental Authority or listed on any applicable EPA or applicable State Government Authority list of violating facilities; (d) verification of the Hazardous Substances Facility's EPA Identification Number (if applicable); and (e) original executed letter(s) of indemnity from the Hazardous Substances Facility bearing the Hazardous Substance Facility's letterhead. Contractor further warrants that the selected Hazardous Substance Facility is appropriately licensed and permitted to store, treat and dispose of Hazardous Substances waste in connection with the Work.

**(3) Contractor Responsibility.** Contractor warrants that it is aware of and understands the hazards which are presented to persons, property and the environment in performance of the transportation, storage and disposal of the Hazardous Substances described in the Contract Documents. Contractor and its Subcontractors and agents shall be responsible for the following: (a) processing the application for, and receiving on behalf of the County or appropriate entity, an EPA or state-equivalent generator identification number (if required); (b) preparing manifests and other shipping documents; (c) making all necessary arrangements (after consultation with County) for any off-Site transportation, treatment, storage and disposal of such Hazardous Substances in accordance with Applicable Laws; (d) ensuring the proper and lawful transportation and disposal of such Hazardous Substances, even if such services are performed by other entities under contract with Contractor or its Subcontractors; and (e) taking any necessary actions to ensure such proper transport and disposal in the event of any contingency, such as the rejection of the Hazardous Substances as nonconforming by any waste disposal facility. Contractor shall promptly provide to County copies of all manifests and other shipping documents confirming the receipt and proper disposal of all Hazardous Substances at the Hazardous Substances Facility, even if such services are performed by other entities under contract with Contractor or its Subcontractors.

**(4) Reporting Requirements.** Contractor shall comply with any Hazardous Substances release reporting requirements to Governmental Authorities directly applicable to Contractor. Notice of such reporting must be provided in advance to County or concurrently in the event of an emergency.

**(5) Samples.** Contractor and its Subcontractors shall retain all media samples for the longer of (a) the longest holding period specified in any federal, state or local laboratory analytical procedures or

guidance for the analyses performed; or (b) three months for soil samples and thirty (30) Days for water samples. Further storage or transfer of samples will be made at County's expense upon County's written request of Contractor. Contractor shall require by contract that each and every Subcontractor and agent of Contractor or a Subcontractor who performs testing of samples in connection with the Work properly disposes of such samples in accordance with Applicable Laws after completion of testing and notice to County. Regarding any such samples which may remain on-Site, provided County has approved of such on-Site storage in advance, County agrees to pay all costs associated with the storage, transport, and disposal of such samples.

**(6) Verification.** Upon Final Completion of the Work, Contractor shall confirm to County in writing that: (a) all Hazardous Substances specified for removal in the Contract Documents have been removed; and (b) all Hazardous Substances wastes removed from the Site as part of the Work have been disposed of in accordance with this Subparagraph 10.3.1.2 and Applicable Laws in a Hazardous Substances Facility.

**10.3.2 Mold.** Contractor is responsible to immediately notify County in writing if any conditions in the construction materials incorporated or to be incorporated into the Work or present in Existing Improvements are encountered at the Site that Contractor or any Subcontractor knows or, in the exercise of due care of a Contractor and not that of a consultant with special or technical expertise in the subject of Mold, should know indicate the presence of Mold or if untreated are likely to result in the growth of Mold. Contractor shall thereafter take such precautions as are reasonably required to prevent the exposure of persons to such conditions until they have been evaluated. Except as otherwise authorized by the Contract Documents or as are usual and customary according to prevailing standards of the construction industry in the vicinity of the Project, Contractor shall not allow water or moisture to come into contact with materials in Existing Improvements or with materials located at the Site that are incorporated or to be incorporated into the Work and if such contact occurs, the areas affected shall be inspected by Contractor, using appropriate consultants experienced in testing and evaluating Mold, for the presence of Mold and evaluated for the potential of future growth of Mold. All portions thereof that are found to indicate the presence of Mold, or that are found to be in a condition that has the potential for becoming a source of Mold, shall be removed and replaced. Costs incurred by Contractor due to its failure to perform its obligation under this Paragraph 10.3.2 shall be borne by Contractor at Contractor's Own Expense.

**10.3.3 Release of County.** Contractor assumes the risk that its employees or the employees of its Subcontractors, and other persons that they cause or permit to be present on the Site, may be exposed to known or unknown Hazardous Substances or Mold. Under no circumstances shall County be liable for, and Contractor hereby fully and unconditionally releases County and the other Indemnitees from, and agrees to defend and indemnify County and the other Indemnitees on the terms set forth in Section 3.18, above, against, any and all known and unknown Losses resulting from or relating to the exposure of any employee of Contractor or its Subcontractors, or other person that they cause or permit to be present on the Site, to: (1) Hazardous Substances or Mold encountered in connection with or as a result of the performance of the Work, or (2) Hazardous Substances or Mold not necessarily encountered in connection with the performance of the Work, but to which any of them may nevertheless be exposed as a result of their being present on the Site.

**10.3.4 Communications with Governmental Authorities.** Contractor shall provide to County copies of all written communications with Governmental Authorities or others relating to Hazardous Substances or Mold (other than privileged communications); provided, however, that non-disclosure of privileged communications shall not limit Contractor's obligation to otherwise comply with the terms of the Contract Documents, including, without limitation, this Section 10.3.

**10.3.5 Subcontractors.** Contractor shall include provisions in all contracts it enters into with Subcontractors for the Work requiring them to assume toward Contractor and County the same obligations that Contractor assumes toward County under this Section 10.3. Contractor shall require the Subcontractors to ensure that such provisions are included in all contracts they enter into with all lower-Tier Subcontractors.

## ARTICLE 11 INSURANCE

### 11.1 INSURANCE

11.1.1 **Contractor's Insurance Requirements.** Without limiting or diminishing any of the Contractor's obligations to defend, indemnify or hold the County harmless as set forth elsewhere in the Contract Documents, Contractor shall procure and maintain or cause to be maintained throughout the performance of the Work and for the duration of any guarantee or warranty provided under the Contract Documents, at Contractor's Own Expense, the following insurance coverages:

**.1 Workers' Compensation.** If the Contractor has "employees", as defined by the State of California, the Contractor shall provide a policy of statutory Workers' Compensation Insurance (Coverage A) as prescribed by the laws of the State of California. Such policy shall include Employers' Liability (Coverage B) including Occupational Disease with limits not less than \$1,000,000 per person per accident. Such policy shall be endorsed to waive subrogation in favor of the County and, if applicable, to provide a Borrowed Servant/Alternate Employer Endorsement. Pursuant to §3700 of the California Labor Code, Contractor shall file with the County before commencing the Work the following signed certification:

*"I am aware of the provisions of Section 3700 of the Labor Code, which requires every employer to be insured against liability for workers' compensation or to undertake self-insurance in accordance with the provisions of that Code, and I shall comply with such provisions before commencing the performance of the Work of this Construction Contract."*

**.2 Commercial General Liability.** Contractor shall provide a policy of Commercial General Liability insurance coverage, including but not limited to, premises liability, contractual liability, products and completed operations liability, personal and advertising injury, and cross liability coverage, covering claims which may arise from or out of Contractor's performance of its obligations hereunder. Such policy shall name the County, its agencies, districts, special districts and departments, and their respective directors, officers, elected or appointed officials, agents, employees and representatives, including, without limitation, the members of the Board of Supervisors, and all other Indemnitees, as "additional insureds" and contain a waiver of subrogation in favor of the County and all other such additional insureds. Such policy's limit of liability shall not be less than \$1,000,000 per occurrence combined single limit. If such policy contains a general aggregate limit, it shall apply separately to the Construction Contract or be no less than two (2) times the occurrence limit.

**.3 Vehicle Liability.** If vehicles or mobile equipment are used in the performance of the Work or other obligations under the Contract Documents, then Contractor shall provide a policy of liability insurance coverage for all owned, non-owned or hired vehicles so used in an amount not less than \$1,000,000 per occurrence combined single limit. If such policy contains a general aggregate limit, it shall apply separately to the Construction Contract or be no less than two (2) times the occurrence limit. Such policy shall name the County, its agencies, districts, special districts and departments, and their respective directors, officers, elected or appointed officials, agents, employees and representatives, including, without limitation, the members of the Board of Supervisors, and all other Indemnitees, as "additional insureds" and contain a waiver of subrogation in favor of the County and all other such additional insureds.

**.4 Property (Physical Damage).** Contractor shall provide a policy of all-risk property insurance coverage for the full replacement value of all Contractor's equipment, improvements/alterations, temporary structures, and systems, including without limitation, items owned by others in the Contractor's care, custody or control, used on the Site or other County-owned property, or used in any way connected with the performance of the Work.

**.5 Builder's All Risk (Course of Construction) Insurance.** The Bid Form utilized by Contractor to prepare its Bid states whether the Contractor shall include Builder's All Risk (Course of Construction) Insurance for the Project. If the Bid Form states that such insurance shall be included by the Bidder in its Bid, then Contractor shall provide a policy of Builder's All Risk (Course of Construction) insurance coverage including (if the Work is located in an earthquake or flood zone or if required on financed or bond financing arrangements) coverage for earthquake and flood, covering the County, Contractor and every Subcontractor, of every Tier, for the entire Project, including property to be used in the construction of the Work while such property is at off-Site storage locations or while in transit or temporary

off-Site storage. Such policy shall include, but not be limited to, coverage for fire, collapse, faulty workmanship, debris removal, expediting expense, fire department service charges, valuable papers and records, trees, grass, shrubbery and plants. If scaffolding, falsework and temporary buildings are insured separately by the Contractor or others, evidence of such separate coverage shall be provided to County prior to the start of the Work. Such policy shall be written on a completed value form. Such policy shall also provide coverage for temporary structures (on-Site offices, etc.), fixtures, machinery and equipment being installed as part of the Work. Contractor shall be responsible for any and all deductibles under such policy. Upon request by County, Contractor shall declare all terms, conditions, coverages and limits of such policy. NOTWITHSTANDING THE FOREGOING, COUNTY RETAINS THE RIGHT EXERCISED AT ANY TIME PRIOR TO AWARD TO ELECT TO USE ITS OWN BUILDER'S ALL RISK (COURSE OF CONSTRUCTION) INSURANCE and in the event County so elects to deduct the price for such insurance that is stated in Contractor's Bid, or if not so stated the amount included by Contractor for such insurance in the preparation of the Contractor's Bid, from the Contract Price by means of a Contract Adjustment pursuant to Change Order or Unilateral Change Order. If the County so provides the All Risk (Course of Construction) insurance for the Project, then Contractor shall assume the cost of any and all applicable policy deductibles (currently, \$50,000 per occurrence) and shall insure its own machinery, equipment, tools, etc. from any loss of any nature whatsoever.

**11.1.2 Other Mandatory Insurance Requirements.** The Contractor shall comply with the following requirements, which shall be deemed applicable to all carriers and insurance policies provided pursuant to Paragraph 11.1.1, above:

**.1 Insurer Rating.** Any and all insurance carrier(s) providing insurance coverage under any and all policy(ies) of insurance provided by Contractor pursuant to Paragraph 11.1.1, above, shall be admitted to the State of California and have an A M BEST rating of not less than A: VIII (A:8) (unless such requirements are waived in writing by the County Risk Manager, and if the County's Risk Manager waives such requirement for a particular insurer such waiver is only valid for that specific insurer and only for one policy term);

**.2 Self Insured Retentions.** Contractor shall advise County in writing the dollar amount of any "self insured retention" maintained by the Contractor that exceeds \$500,000 per occurrence. Each such self insured retention must have the prior written consent of the County Risk Manager before the commencement of any Work or operations or activities relating to the Work. If Contractor is notified that a self insured retention is unacceptable to the County, then at the election of the County, exercised in the County's sole and absolute discretion, by means of the written approval of the County's Risk Manager, the insurance carriers affected shall either: (1) reduce or eliminate such self-insured retention as respects the Construction Contract; or (2) procure a bond, satisfactory to County and approved by County in writing, which guarantees payment of losses and related investigations, claims administration, and defense costs and expenses.

**.3 Evidence of Insurance.** Contractor shall cause Contractor's insurance carrier(s) to furnish to the County either: (1) properly executed original certificate(s) of insurance and certified original copy(ies) of endorsement(s) effecting the coverage(s) required by this Section 11.1, or (2) if requested to do so orally or in writing by the County Risk Manager, provide original, certified copy(ies) of policy(ies) including all endorsement(s) and all attachment(s) thereto, showing such insurance is in full force and effect. Such certificate(s) and all policies of insurance provided by Contractor pursuant to this Section 11.1 shall contain the covenant of the insurance carrier(s) that thirty (30) Days' written notice shall be given to the County prior to any material modification, cancellation, expiration or reduction in coverage of such insurance. Each certificate of insurance and endorsement shall be signed by an individual expressly authorized by the insurance carrier to do so on the carrier's behalf. Contractor shall, if requested, provide written proof of such authorization. ***Contractor shall not commence any Work or any activities or operations related to the performance of the Work unless and until Contractor has complied with all of the requirements of this Section 11.1.***

**.4 Modification, Cancellation, Changes in Limits.** A material modification, cancellation, expiration, or reduction in coverage, shall constitute an Event of Contractor Default for which County shall have right, without limitation to its other rights or remedies provided for in the Contract Documents or under Applicable Laws, to terminate this Construction Contract. Such Event of Contractor Default may only be deemed cured if the County receives, prior to the effective date of such material modification, cancellation, expiration or reduction in coverage, properly executed original certificate(s) of insurance and original, certified copy(ies) of policy(ies) and endorsement(s), including all attachment(s) thereto, evidencing that the coverage(s) required by this Section 11.1 is(are) and will

continue, without any gap in coverage, in full force and effect in accordance with all of the requirements of this Section 11.1

**.5 Primary Coverage.** It is understood and agreed to by County and Contractor that the Contractor's insurance coverage(s) provided under this Section 11.1 shall be construed as primary insurance, and the County's insurance and/or deductibles and/or self-insured retentions or self-insured programs shall not be construed as contributory.

**.6 Additional Coverages.** County reserves the right to modify, adjust, add to and/or increase the types, amounts and terms of any insurance required under this Section 11.1 if the County Risk Manager determines, in the exercise of his/her sole and absolute discretion, that the type, amount or terms of the insurance required by this Section 11.1 has(have) become inadequate or that additional risk or exposure exists (such as, without limitation, the use of aircraft, watercraft, cranes, etc.) due to: (1) a Change in the Work; (2) the period of time of Contractor's actual performance of the Work continuing for longer than five (5) years from the Date of Commencement, whether due to Contract Adjustment or for any for any other reason; or (3) other circumstances not reasonably foreseeable to County.

**.7 Subcontractors.** Contractor shall include provisions in its subcontracts requiring each Subcontractor to assume an obligation toward Contractor to furnish insurance that complies with all of the requirements of this Section 11.1 as apply to Contractor's insurance provided to Owner and requiring such Subcontractors to furthermore include provisions in their contracts with lower-Tier Subcontractors likewise requiring such lower Tier Subcontractors assume the same obligations for providing such insurance and for passing through all such obligations to all lower Tier Subcontractors.

**.8 Self-Insurance.** If approved by County, in the exercise of its sole and absolute discretion, the insurance requirements contained in this Section 11.1 may be met with a program(s) of self-insurance provided that such program has been submitted to County and approved in writing by County prior to commencement of the Work or of any activity or operation related to the performance of the Work.

**.9 Notice of Claim.** Contractor agrees to notify County of any claim by a third party or any incident or event that may give rise to a claim arising from the performance of the Work.

## **ARTICLE 12 BONDS**

### **12.1 PERFORMANCE BOND AND PAYMENT BOND**

**12.1.1 Performance and Payment Bonds.** Within ten (10) Days after the issuance of the Notice of Intent to Award and prior to commencing Work, Contractor shall deliver to County a good and sufficient labor and materials payment bond ("Payment Bond") and a good and sufficient performance bond ("Performance Bond"), each in the amount of one hundred percent (100%) of the Contract Price.

**12.1.2 Changes.** The penal amounts of the Performance Bond and Payment Bond shall be increased on account of Change Orders and Unilateral Change Orders increasing the Contract Price. If requested by County, Contractor shall deliver to County evidence of such increases.

**12.1.3 Replacement.** Should any bond required hereunder or any Surety on such bond become or be determined by County to be insufficient, it shall be replaced within ten (10) Days by a bond that fully complies with the requirements of this Section 12.1.

**12.1.4 Duration.** The Payment Bond shall remain in effect until Acceptance of the Work and all Claims of Contractor and the Subcontractors, of any Tier, have been fully and finally resolved. The Performance Bond shall remain in effect and assure faithful performance of all Contractor's obligations under the Contract Documents, including, without limitation, all warranty obligations.

**12.1.5 Condition of Payment.** No payments to Contractor for Work performed shall be made or due until there has been full compliance with the requirements of this Section 12.1.

12.1.6 **Surety Rating.** Any Surety company issuing the Payment Bond or Performance Bond shall be, at all times while such bond is in effect, an Admitted Surety. The Surety company issuing the Performance Bond shall additionally have at all such times a current A.M. Best rating of A VIII (A:8) or better.

12.1.7 **Premiums.** The premiums for the Performance Bond and Payment Bond are included in the Contract Price and shall be paid by Contractor at Contractor's Own Expense.

12.1.8 **Obligee.** The Performance Bond shall name County as obligee. All performance bonds, if any, purchased by Subcontractors shall name County as a dual obligee with Contractor.

12.1.9 **No Exoneration.** The Performance Bond and Payment Bond shall contain provisions to the effect that Changes, Change Orders, Unilateral Change Orders, Construction Change Directives, Modifications, Changes and Contract Adjustments shall in no way release or exonerate Contractor or its Surety from their obligations and that notice thereof is waived by the Surety.

12.1.10 **Communications.** County shall have the right to communicate with Surety with respect to matters that are related to performance of the Work. Contractor shall be provided with a copy of all such communications that are in writing. Such communications shall not create or be interpreted as creating any contractual obligation of County to Surety.

12.1.11 **No Limitation.** The requirements of this Section 12.1 pertaining to the Performance Bond and the Payment Bond shall be without limitation to any other obligations Contractor may have under Applicable Laws to provide bonding for the benefit of, and to assure payment to the Subcontractors performing the Work for, the Project.

12.1.12 **Subcontractor Bonds.** Each performance bond, if any, furnished by a first-Tier Subcontractor shall include a provision whereby the Surety consents to the contingent assignment of Contractor's rights under such bond to County as provided in Section 5.3, above.

12.1.13 **Claims.** By incorporation of the Construction Contract into the Performance Bond issued by Surety, Surety shall be deemed, subject to the other terms of the Performance Bond, to be bound by all of the obligations assumed by Contractor under the Contract Documents, including, without limitation, bound by any determination, resolution, award or judgment entered or made upon any Claim by or against Contractor.

## **ARTICLE 13 UNCOVERING AND CORRECTION OF THE WORK**

### **13.1 UNCOVERING OF THE WORK**

If a portion of the Work is covered contrary to the request or direction of County, Inspector of Record or Architect, or contrary to the requirements of the Contract Documents, it must, if required by the any of them, be uncovered for observation and be re-covered by Contractor at Contractor's Own Expense.

### **13.2 CORRECTION OF THE WORK**

Contractor shall promptly correct Defective Work, whether discovered before or after Substantial Completion and whether or not fabricated, installed or completed. All such Defective Work shall be either: (1) replaced and all the Work disturbed thereby made good by Contractor at Contractor's Own Expense; or (2) County may exercise its option pursuant to Section 13.4, below, to accept such Work and adjust the Contract Price.

### **13.3 GUARANTEE TO REPAIR PERIOD**

13.3.1 **Guarantee To Repair Period.** Besides guarantees and warranties required elsewhere in the Contract Documents, Contractor guarantees the Work as provided hereinbelow. The period of this guarantee, termed the "Guarantee To Repair Period," is for one (1) year commencing as follows:



.1 for any portion of the Work that, upon Substantial Completion of the overall Work, is fully and finally complete and usable in all respects independent of other portions of the Work that are not fully and finally complete, on the date of Substantial Completion of such portion of the Work;

.2 for space beneficially occupied or for separate systems fully utilized prior to Substantial Completion, from the first date of such beneficial occupancy or full utilization, as established by an appropriate written notice by County of intent to take beneficial occupancy; or

.3 for all Work other than that described in Subparagraph 13.3.1.1, above or Subparagraph 13.3.1.2, above, from the date of Final Completion of the Work.

**13.3.2 Repair by Contractor.** Subject to the provisions of Paragraph 13.3.3, below, Contractor shall do the following: (1) correct, repair, replace, remove and restore, to the County's satisfaction, any Defective Work that becomes apparent during the progress of the Work or during the Guarantee To Repair Period; (2) correct, repair, replace, remove and restore, to the County's satisfaction, any other parts of the Work and any other real or personal property which is damaged or destroyed as a result of Defective Work or the correction of Defective Work; and (3) remove from the Site all the Work identified by the County as Defective Work, whether incorporated or not and whether discovered before or after Substantial or Final Completion. Ordinary wear and tear, abuse, or neglect by County or by County employees, its staff, visitors, public or others (except for those under the control or responsibility of Contractor or its Subcontractors) who are authorized or admitted by County to enter, use or occupy the Work, or who enter, use or occupy the Work after Final Completion, are excepted from the foregoing guarantee. All Losses resulting from Defective Work, including, without limitation, all costs of such correction, repair, replacement, removal and restoration, additional testing, inspection and additional service fees and costs of the Inspector of Record, Architect, County Consultants or others whose services may be made necessary thereby as well as any Loss to any other parts of the Work and any other real or personal property which is damaged or destroyed as a result of Defective Work or the correction, repair, replacement, removal or restoration of Defective Work, shall be paid for by Contractor at Contractor's Own Expense. Contractor shall correct, repair, replace, remove and restore Defective Work at such times as are acceptable to the County and in such a manner as to avoid, to the greatest extent practicable, disruption to the activities of the County, its staff, visitors, the public or others. Contractor shall notify the County in writing upon the completion of such correction, repair, replacement, removal and restoration.

**13.3.3 Notice by County.** Except as otherwise provided in this Paragraph 13.3.3 where immediate corrections are needed due to dangerous conditions or risk of imminent Loss or interruption of County operations, the County will give notice to Contractor of Defective Work observed prior to Final Completion in accordance with the provision of Section 15.1, below, governing the occurrence of an Event of Contractor Default and the Contractor shall proceed to cure such Event of Contractor Default in accordance with the requirements of Section 15.1, below, and Paragraph 13.3.2, above. With respect to Defective Work observed after Final Completion, the County will give notice to Contractor with reasonable promptness and Contractor shall commence the correction, repair, replacement, removal and restoration as required by Paragraph 13.3.2, above, no later than ten (10) Days after mailing of such notice to Contractor and Contractor shall thereupon diligently and continuously prosecute such correction, replacement, repair, or restoration to completion. Notwithstanding the foregoing, if in the County's opinion the presence of Defective Work, whether observed prior to Final Completion or after Final Completion and during the Guarantee To Repair Period, poses a risk or threat: (1) to life, safety or the protection of property; (2) of imminent Loss to the County or to any other person or entity; or (3) of causing an interruption in the operations of the County, then County will have the right, in the exercise of its sole and absolute discretion, to proceed with correction or replacement of the Defective Work without prior notice to Contractor, but in such cases will attempt to notify Contractor as soon as possible of the conditions encountered and the action taken by County. Such action by County without prior notice to Contractor shall not relieve Contractor of its responsibility for the costs of such County action or for any Loss occasioned by the Defective Work or necessitated by the County's action, whether such Loss occurs before or after such County action is implemented or completed.

**13.3.4 Correction by County.** If Contractor fails to perform any of its obligations under Paragraph 13.3.2, above, to correct, repair, replace, remove or restore then County, or Separate Contractors under the County's direction, may, notwithstanding any other provisions of this Article 13, proceed to do so and all costs associated therewith (including, without limitation, the cost to store any materials removed) shall be the responsibility of and paid by Contractor at Contractor's Own Expense. Such action by County will not relieve Contractor of the guarantees provided in this Article 13 or elsewhere in the Contract Documents. In addition to Contractor's other obligations under Paragraph 13.3.2, above, Contractor shall correct, repair, replace, remove and restore, to the County's satisfaction and at

Contractor's Own Expense any other parts of the Work and any other real or personal property that are damaged or destroyed as a result of such actions by County or the Separate Contractors.

13.3.5 **Sale.** If Contractor does not pay the costs of, or any of the Losses associated with, the correction, repair, replacement, removal or restoration required by the provisions of Paragraph 13.3.2 through Paragraph 13.3.4, above, then within five (5) Days after notice by the County, County may sell any materials or other items of Work removed at auction or at private sale or otherwise dispose of such materials or items and shall account for the net proceeds thereof, after deducting all such costs and Losses, and all costs of sale. If such net proceeds of sale do not cover the Losses for which Contractor is liable to the County, the County may at its option reduce the Contract Price or any payments due to Contractor by such deficiency or recover such deficiency from Contractor.

13.3.6 **No Limitation.** Contractor's obligations under this Article 13 are in addition to, and not in limitation of, its warranty obligations under Section 3.5, above, and any other obligation, guaranty or warranty of Contractor or any other third party under the Contract Documents. Nothing contained in this Article 13 shall be construed to shorten any periods of limitation with respect to other obligations of Contractor under the Contract Documents that are for longer specified periods. Establishment of the Guarantee To Repair Period in no way limits either Contractor's liability for Defective Work or the time within which proceedings may be commenced to enforce Contractor's obligations under the Contract Documents.

#### 13.4 ACCEPTANCE OF NONCONFORMING WORK

Notwithstanding any other provisions of the Contract Documents to the contrary, the County shall have the option, exercised in its sole and absolute discretion after notice to Contractor, in lieu of requiring that Defective Work be remedied or corrected, to reduce the Contract Price to reflect the reduced value of the performance received by County. Such option shall be exercised solely by written notice to Contractor and shall not be implied from any act or omission by County. If there are no remaining payments of the Contract Price to be made to Contractor, or if the remaining payments and retention are insufficient to cover the amount of the reduction of the Contract Price, Contractor shall promptly pay to County the amount of any such deficiency.

### ARTICLE 14 MISCELLANEOUS PROVISIONS

#### 14.1 GOVERNING LAW

The interpretation and enforcement of the Construction Contract and other Contract Documents and of the performance by the parties thereunder shall, notwithstanding application of the principles of conflicts of laws, be governed by the laws of the State of California. The Superior Court for the County of Riverside shall have exclusive jurisdiction and venue over any legal proceedings arising out of or involving the interpretation or enforcement of, or other matters relating to, the Construction Contract, the other Contract Documents or the performance of the parties thereunder.

#### 14.2 TIME OF ESSENCE

All time limits stated in the Contract Documents relative to Contractor's performance of its obligations under the Contract Documents are of the essence.

#### 14.3 SUCCESSORS AND ASSIGNS

The Construction Contract and other Contract Documents shall be binding on successors, assigns and legal representatives of County and Contractor, respectively. Contractor shall not assign, sublet or transfer an interest in or claim under this Construction Contract without advance written approval of County, which approval may be granted or withheld by County in its sole and absolute discretion, and any assignment, subletting or transfer without written approval by County shall be deemed void from its inception. Any assignment, subletting or transfer, whether or not approved by County, will not release Contractor from any of its obligations under the Contract Documents to County. County shall have the right to assign, sublet or transfer its interest in or any claim under the Construction Contract upon written notice to Contractor.

#### 14.4 WRITTEN NOTICE

Any notice from one party to the other or otherwise under the Contract Documents shall be in writing and shall be dated and signed by the party giving such notice or by a duly authorized representative of such party. Any such notice shall be deemed to have been duly served if served in the following manner, and in accordance with Civil Code §8100 et seq.:

**14.4.1 Notice to County.** If notice is given to County: (1) by personal delivery thereof to County; or (2) by depositing same in United States mail, enclosed in a sealed envelope addressed to County at Facilities Management, 3450 14<sup>th</sup> Street, 2nd Floor, Riverside CA 92501, and to such other address as set forth in the Bidding Documents as the location for submission of Bids and sent by registered or certified mail with postage prepaid, or express mail or overnight delivery by an express mail carrier; or (3) by leaving the notice and mailing a copy in the manner provided in Code of Civil Procedure §415.20.

**14.4.2 Notice to Contractor.** If notice is given to Contractor: (1) by personal delivery thereof to Contractor; or (2) by depositing same in United States mails, enclosed in a sealed envelope addressed to Contractor at its address stated in the Construction Contract, or if none is so stated at the address on the records of the Contractor's State License Board and sent by registered or certified mail with postage prepaid or express mail or overnight delivery by an express mail carrier; or (3) by leaving the notice and mailing a copy in the manner provided in Code of Civil Procedure §415.20.

**14.4.3 Notice to Claimant.** If notice is given to a claimant as defined in Civil Code §8004: (1) by personal delivery thereof to claimant; or (2) by depositing same in United States mail, enclosed in a sealed envelope addressed to claimant at its address stated in: a preliminary notice, stop payment notice, or claim against a payment bond; or on the records of the Contractor's State License Board; and sent by registered or certified mail with postage prepaid or express mail or overnight delivery by an express mail carrier; or (3) by leaving the notice and mailing a copy in the manner provided in code of Civil Procedure §415.20.

**14.4.4 Notice to Surety.** If notice is given to the Surety: (1) by personal delivery to the Surety; or (2) by depositing same in United States mail, enclosed in a sealed envelope, addressed to the Surety at the address of the Surety shown in the applicable Performance Bond or Payment Bond, or if none is shown, the address on the records of the Department of Insurance, and sent by registered or certified mail with postage prepaid or express mail or overnight delivery by an express mail carrier; or (3) by leaving the notice and mailing a copy in the manner provided in Code of Civil Procedure §415.20.

#### 14.5 RIGHTS AND REMEDIES

**14.5.1 County Rights.** Rights and remedies available to the County under the Contract Documents are in addition to and not a limitation of County's rights and remedies otherwise available under other provisions of the Contract Documents or Applicable Laws.

**14.5.2 Writing Required.** Provisions of the Contract Documents may be waived by County only in writing signed by the Director stating expressly that it is intended as a waiver of specified provisions of the Contract Documents.

**14.5.3 Subsequent Breach.** A waiver by either party of any breach of any term, covenant, or condition contained in the Contract Documents shall not be deemed to be a waiver of any subsequent breach of the same or any other term, covenant, or condition contained therein whether of the same or a different character.

#### 14.6 NO NUISANCE

Contractor shall not maintain, commit or permit the maintenance or commission of any nuisance in connection with the performance of Work.

#### **14.7 EXTENT OF AGREEMENT**

The Contract Documents represent the full and complete understanding of every kind or nature between the parties and all preliminary negotiations and prior representations, proposals and contracts, of whatever kind or nature, are merged herein and superseded hereby. No verbal agreement or implied covenant shall be held to vary the provisions of the Contract Documents. Any modification of this Construction Contract or the other Contract Documents will be effective only by written instrument signed by both County and Contractor and shall, if required by Applicable Laws, be formally approved or ratified by the Board of Supervisors.

#### **14.8 NO THIRD-PARTY RIGHTS**

Nothing contained in the Construction Contract or the other Contract Documents is intended to make any person or entity who is not a signatory to this Construction Contract a third-party beneficiary of any right of Contractor (including, without limitation, any right of Contractor to a benefit derived from, or to the enforcement of, an obligation assumed by County) that is expressly or impliedly created by the terms of the Contract Documents or by operation of Applicable Laws.

#### **14.9 SEVERABILITY**

Should any part, term, portion or provision of the Construction Contract or the other Contract Documents, or the application thereof to any party or circumstance, be held to be illegal, invalid or in conflict with Applicable Laws, or otherwise be rendered unenforceable or ineffectual, the validity of the remaining parts, terms, portions or provisions, or the application thereof to any other party or circumstances, shall be deemed severable and the same shall remain enforceable and valid to the fullest extent permitted by Applicable Laws.

#### **14.10 PROVISIONS REQUIRED BY APPLICABLE LAWS**

Each and every provision of law and clause required by Applicable Laws to be inserted in the Construction Contract or other Contract Documents shall be deemed to be inserted in the Contract Documents shall be read and enforced as though it were included herein, and if through mistake or otherwise any such provision is not inserted or if inserted and requires correction, then upon request of either party these General Conditions shall forthwith be amended by the parties to the Construction Contract to make such insertion or correction.

#### **14.11 SURVIVAL**

All provisions of the Contract Documents that either expressly, or by their nature, require performance or assumption by Contractor of an obligation that extends beyond termination of the Construction Contract or Final Completion of the Work, including, without limitation, Contractor's obligations of, or relating to, indemnification, insurance, ownership of documents, retention and audit of books and records, warranties and guaranties and resolution of Claims shall be deemed to survive either termination of the Construction Contract or Final Completion of the Work.

#### **14.12 FEDERAL GRANTS**

In the event of a federal grant or other federal financing participation in the funding of the Project, Contractor shall, as required in connection with, or as a condition to, such federal grant or other federal financing participation, permit access to and grant the right to examine its books covering its services performed and expenses incurred under the Construction Contract or other Contract Documents by the federal agency and comply with all applicable federal agency requirements including, without limitation, those pertaining to work hours, overtime compensation, non-discrimination, and contingent fees.

#### **14.13 PROHIBITED INTERESTS**

Contractor agrees not to accept any employment or representation which will, or is likely to, make Contractor "financially interested" (as provided in California Government Code §§1090 and 87100, hereinafter "financially interested") in any decision made by County on any matter in connection with which Contractor has been retained in connection with the Project. Without limitation to the foregoing, transactions and interests prohibited by this Section 14.13 include the

following: (1) no official or employee of County who is authorized in such capacity and on behalf of County to negotiate, make, accept, or approve, or to take part in negotiating, making, accepting or approving any architectural, engineering, inspection, construction or material supply contract or any subcontract in connection with construction of the Project, shall become directly or indirectly financially interested in the performance of the Construction Contract or in any part thereof; (2) no officer, employee, architect, attorney, engineer or inspector of or for County who is authorized in such capacity and on behalf of County to exercise any executive, supervisory or other similar functions in connection with Construction Contract or in any part thereof; and (3) Contractor shall receive no compensation hereunder, and shall repay County for any compensation received by Contractor hereunder, should Contractor or any of the Subcontractors aid, abet or knowingly participate in violation of this Section 14.13.

#### 14.14 **ASSIGNMENT OF ANTI-TRUST ACTIONS**

California Public Contract Code §7103.5(b), which is hereby incorporated by this reference, provides:

"In entering into a public works contract or a subcontract to supply goods, services, or materials pursuant to a public works contract, contractor or the subcontractor offers and agrees to assign to the awarding body all rights, title, and interest in and to all causes of action it may have under Section 4 of the Clayton Act, (15 U.S.C. Sec. 15) or under the Cartwright Act (Chapter 2 (commencing with Section 16700) of Part 2 of Division 7 of the Business and Professions Code), arising from purchases of goods, services, or materials pursuant to the public works contract or the subcontract. This assignment shall be made and become effective at the time the awarding body tenders final payment to Contractor, without further acknowledgement by the parties."

Contractor for itself and all the Subcontractors agrees to assign to County all rights, title and interest in and to all such causes of action Contractor and all the Subcontractors may have in connection with purchases related to or under the Contract Documents. This assignment shall become effective at the time County tenders Final Payment to Contractor, and Contractor shall require assignments from all the Subcontractors to comply herewith.

#### 14.15 **NO WAIVER**

County's approval, acceptance, use or payment for any or part of Contractor's performance of the Work shall not in any way alter Contractor's obligations, or waive any of County's rights, under Contract Documents.

#### 14.16 **CONSENT TO PHOTOGRAPHING**

Contractor is advised that County intends, from time to time, to take photographs, videotapes and/or motion pictures of the Work, and workers located on the Site and proximate settings. Contractor consents to the use of Contractor's name and likeness in instructional or training uses, news releases, advertising and/or publicity throughout the world in perpetuity, in all media now known or hereafter invented. Contractor shall include in its contracts with its Subcontractors a consent by the Subcontractor to the use of Subcontractor's name and the likenesses of its employees on the same terms as provided for herein applicable to such consent by Contractor.

### **ARTICLE 15 DEFAULT, TERMINATION AND SUSPENSION**

#### 15.1 **COUNTY REMEDIES FOR DEFAULT**

15.1.1 **Event of Default.** Each and any of the following shall be considered an Event of Contractor Default:

- .1 Contractor files a petition, or has filed against it a petition, for bankruptcy or is adjudged bankrupt;
- .2 Contractor makes a general assignment for the benefit of its creditors;
- .3 a receiver is appointed on account of Contractor's insolvency;

.4 Contractor defaults, by failing or refusing to perform any obligation set forth in the Construction Contract, General Conditions or elsewhere in the Contract Documents (including, without limitation, the performance or installation of Defective Work) and thereafter: (1) fails to commence to cure such default within two (2) working days after receipt of written notice of default; (2) if the default can be cured within three (3) Days, Contractor fails or refuses after commencing to cure in accordance with Clause (1) hereof to fully cure such default within three (3) Days after receipt of written notice of default; or (3) if the default cannot be fully cured within three (3) Days, Contractor fails after commencing to cure in accordance with Clause (1) hereof to diligently and continuously prosecute and fully cure such default within ten (10) Days after receipt of such written notice;

.5 Contractor fails or refuses to perform an obligation set forth in the Construction Contract, General Conditions or other Contract Documents that either (1) cannot be cured, or (2) cannot be cured within the 10-Day cure period set forth in Subparagraph 15.1.1.4, above;

.6 a breach of any other agreement between County and Contractor as provided in Paragraph 15.1.9, below; or

.7 if Contractor was previously prequalified as a condition for its bidding the Project pursuant to a Prequalification conducted by County, Contractor's prequalification status has been revoked or cancelled due to any of the following: (1) receipt by County of new information indicating that a statement made in Contractor's Prequalification Submittal (as defined in the Prequalification Documents) was false or misleading; (2) ownership of 50% or more of the stock or assets Contractor has changed; (3) if Contractor is a Project Joint Venture, its Principal Managing Partner (as those terms are defined in the Prequalification Documents) has ceased to function, or fully function, in the capacity of a Principal Managing Partner; or (4) Contractor has failed to comply with the requirements of the Prequalification Documents pertaining to minimum safety Prequalification requirements for Subcontractors.

**15.1.2 County's Remedies.** Without limitation to the County's other rights or remedies under the Contract Documents or Applicable Laws, if there is an Event of Contractor Default, County shall have the right to exercise any one or more of the following remedies:

**.1 Take Over Work.** County may, without terminating the Construction Contract and without incurring any additional liability or responsibility to Contractor (including, without limitation, any obligation to agree to a Contract Adjustment for any portion of the taken-over or non-taken-over Work), take over and perform, or engage others to perform, all or a portion of the Work.

**.2 Suspend Work.** County may, without terminating the Construction Contract and without incurring any additional liability or responsibility to Contractor (including, without limitation, any obligation to agree to a Contract Adjustment for any portion of the suspended or non-suspended Work), suspend Contractor's performance of all or a portion of the Work for as long a period of time as the County determines, in its sole discretion, is appropriate.

**.3 Termination.** County may, without incurring any additional liability or responsibility to Contractor, terminate the Construction Contract, the Work or any portion thereof.

**.4 Surety.** If there is an Event of Contractor Default pursuant to any of Subparagraphs 15.1.1.1 through 15.1.1.5, above, County may, with or without terminating the Construction Contract and without incurring any additional liability or responsibility to Contractor or Surety (including, without limitation, any obligation to agree to a Contract Adjustment), exercise its rights under the Performance Bond furnished by Contractor by giving Surety ten (10) Days' written notice of demand to perform; provided, however, that if the Surety fails, within seven (7) Days after receipt by Surety of written demand, to deliver to the County written notice of its unconditional intention to perform or does not commence performance of the Work within ten (10) Days from receipt of such notice of demand, the County may, at Contractor's Own Expense and/or the expense of the Surety, and with or without terminating the Construction Contract, proceed to complete the Work by any other means County deems expedient. By executing its Performance Bond incorporating the terms of the Construction Contract, Surety shall be deemed to have agreed, without limitation, to the provisions of this Paragraph 15.1.2 as constituting a binding obligation of Surety under its Performance Bond that shall control over any conflicting provisions set forth in the Performance Bond. Neither delivery by Surety of such written notice of unconditional intention to perform nor its timely performance of the Work in accordance with the terms of the Contract Documents and Performance Bond shall constitute waiver by Surety of any rights it may have under the Performance Bond and Applicable Laws to limit its liability to the penal amount of the Performance Bond.

**15.1.3 Contractor Tools, Equipment.** Upon County's exercise of one or more of its remedies following an Event of Contractor Default, County shall have the right, but not the obligation, to perform or complete all or any portion of the Work using any means that County may deem expedient, including, without limitation, taking possession and utilization of any or all of the materials, equipment, appliances, tools, plant and other property not owned by Contractor that are on the Site for County's use in performing the Work.

**15.1.4 Contractor Obligations.** Upon exercise by County of its remedies following an Event of Contractor Default, Contractor shall, unless County directs in writing otherwise, do the following:

.1 immediately discontinue performance of the Work to the extent specified in writing by County;

.2 remove no materials, equipment or tools (other than those owned by Contractor and not necessary for performance of a portion of the Work not terminated or discontinued) from the Site unless directed to do so by County and take all actions necessary or appropriate, or that the County may direct in writing, for the protection and preservation of the Work, any materials, equipment or tools at the Site and any materials or equipment in transit to the Site;

.3 place no further orders or subcontracts for materials, equipment, services or facilities, except as may be necessary for Contractor to continue performance of such portion, if any, of the Work that is not discontinued or terminated by County in its written notice;

.4 provide to the County, in writing, no later than two (2) Days after request by County, a statement listing or providing: (1) all subcontract agreements, purchase orders and contracts that are outstanding, as well as any change orders, amendments and modifications thereto; (2) the status of invoicing, payments and balance owing under each such subcontract agreement, purchase order and contract; (3) the status of performance and any claims asserted under each such subcontract agreement, purchase order and contract; and (4) providing such other information as the County may determine to be necessary in order to decide whether to accept assignment of any such subcontract agreement, purchase order or contract;

.5 promptly following and in accordance with County's written direction: (1) assign to the County or its designee those subcontract agreements, purchase orders or contracts, or portions thereof, that the County elects in writing to accept by assignment; (2) cancel, on the most favorable terms reasonably possible, any subcontract agreement, purchase order or contract, or portion thereof, that the County does not elect to accept by assignment; and (3) if requested by County, settle, with the prior written approval of County of the terms of settlement, outstanding liabilities to Subcontractors with respect to the Work terminated or discontinued;

6. not terminate any insurance required by the Contract Documents;

7. thereafter continue only such performance as may be directed by County;

8. deliver to the County the documents required to delivered pursuant to Paragraph 1.3.6, above;

and

9. at the written request and option of County, exercised in its sole discretion, deliver to the County, and transfer title to the County of, any completed items, materials, products, equipment or other unincorporated parts of the Work that have not been previously delivered to the Site.

#### **15.1.5 Accounting and Payment**

##### **.1 Full Termination or Discontinuance.**

(1) **Further Payment.** In the event an exercise by County of any of its remedies following an Event of Contractor Default results in a termination or discontinuance of the entire Work, then no further payment shall be due to Contractor for the Work until an accounting has been conducted in accordance with this Paragraph 15.1.5.

**(2) Time for Accounting.** Within forty-five (45) Days after Final Completion of the Work by Contractor, Surety, County or others at request of County, an accounting shall be made pursuant to this Paragraph 15.1.5 of the amount due to Contractor or County.

**(3) Payment Amount.** If, based on the accounting conducted pursuant to this Paragraph 15.1.5, the Contractor Amount exceeds the County Amount, then the difference shall be paid by County to Contractor within fifteen (15) Days after demand by Contractor following completion of such accounting. If the County Amount exceeds the Contractor Amount, then the difference shall be paid by Contractor to County within fifteen (15) Days after demand by County following completion of such accounting. Payment by Contractor of the amount due to County pursuant to such accounting shall not be construed as a release of Contractor's obligation to County for, or County's right to recover from Contractor, any Losses, of any kind whatsoever, not part of the calculation of the County Amount (including, without limitation, additional Losses related to circumstances that formed the basis for calculation of the County Amount) that may be then or thereafter owing to or recoverable by County under Applicable Laws or the Contract Documents.

**(4) Contractor Amount.** The Contractor Amount used as the basis for payment pursuant to the accounting under this Paragraph 15.1.5 shall be calculated as follows:

**(a)** take a portion of the Contract Price determined by multiplying (i) the Contract Price, by (ii) the County's Good Faith Determination of the percentage of the Work properly performed by Contractor and (A) in permanent place, (B) previously fabricated and delivered to the Site or (C) fabricated and en route for delivery to the Site and delivered to the Site within a reasonable time after Contractor's receipt of such written notice; and

**(b)** subtract therefrom all amounts previously paid by County to Contractor or to Subcontractors.

**(5) County Amount.** The County Amount used as the basis for payment pursuant to the accounting under this Paragraph 15.1.5 shall be calculated based on the sum of all past, present and future Losses to County resulting or reasonably certain to result, directly or indirectly, from any or all of the following: (a) any negligence, willful misconduct, or Defective Work on the part of Contractor or any Subcontractor; (b) any Event of Contractor Default, whether or not constituting the basis of the County's termination or discontinuance; (c) the County's exercise of its rights and remedies under and in accordance with the Contract Documents or Applicable Laws following the occurrence of an Event of Contractor Default; and (d) the payment by County of amounts to Contractor or any Subcontractor that were not owing to Contractor or that were in excess of the amount to which Contractor was entitled under the Contract Documents.

**.2 Partial Termination or Discontinuance.** In the event an exercise by County of its remedies for an Event of Contractor Default results in a discontinuance or termination of only a portion of the Work, then the Contract Price and Contract Time shall be adjusted under the provisions of Article 7 and Article 8, above, applicable to Deleted Work. Contractor shall thereafter continue to be paid for its performance of the other portions of the Work in accordance with the terms of the Contract Documents, less any amounts that County is entitled to withhold under the terms of the Contract Documents.

**.3 Exclusive Compensation.** Contractor agrees to accept such amounts, if any, as allowed under this Paragraph 15.1.5 as its sole and exclusive compensation in the event of an exercise by County of its remedies permitted by the Contract Documents or Applicable Laws following an Event of Contractor Default.

**15.1.6 Surety.** Without limitation to any of the County's other rights or remedies under a Performance Bond furnished by Contractor, Contract Documents or Applicable Laws, the County has the right to suspend, take over or terminate the performance of the Work by Surety in the event of any of the following: (1) failure of Surety or its contractors to begin the Work within a reasonable time in such manner as to ensure full compliance with the Contract Documents within the Contract Time; (2) abandonment of the Work by Surety or its contractors; (3) if at any time the County makes a Good Faith Determination that the Work is unnecessarily or unreasonably delayed by Surety or its contractors; (4) violation by Surety or its contractors of any terms of the Contract Documents, Performance Bond or Applicable Laws; or (5) failure by Surety or its contractors to follow instructions of the County for performance of the Work or for performance of the Work within the Contract Time. By executing its Performance Bond incorporating the terms of the Construction Contract, Surety shall be deemed to have agreed, without limitation, to the provisions of this



Paragraph 15.1.6 as constituting a binding obligation of Surety under its Performance Bond that shall control over any conflicting provisions set forth in the Performance Bond.

**15.1.7 Conversion.** In the event a termination for cause by the County is adjudged by a court or by binding arbitration conducted in accordance with the Contract Documents to have been wrongful, such termination shall be deemed converted to a termination for convenience pursuant to Section 15.3, below, in which case Contractor agrees to accept such amount, if any, as permitted by Paragraph 15.3.3, below, as its sole and exclusive compensation and agrees to waive any right to recovery of any other compensation or Loss, including, but not limited to, loss of anticipated profits, loss of revenue, lost opportunity or other consequential, direct, indirect or incidental damages, of any kind.

**15.1.8 Substantial Performance Waived.** The legal doctrine that a contractor may recover for substantial performance of a building contract is to have no application to the Construction Contract. Any Event of Contractor Default, whether occurring before or after the Work is Substantially Completed, shall be deemed material and shall give rise to the right of County to exercise its remedies permitted under the Contract Documents or Applicable Laws.

**15.1.9 Cross Default.** Contractor agrees that a breach of any other agreement between Contractor and County, whether related or unrelated to the Project, that is not cured in accordance with the terms of such other agreement constitutes an Event of Contractor Default under the Construction Contract, thereby entitling County to assert all its rights and remedies hereunder including, but not limited to, a specific right of off set by County against any amounts otherwise payable to Contractor under the Construction Contract or any other agreement between Contractor and County.

**15.1.10 Rights Cumulative.** All of County's rights and remedies under the Contract Documents are cumulative, and shall be in addition to and not a limitation upon those rights and remedies available under Applicable Laws.

**15.1.11 Materiality.** Designation in the Contract Documents of certain defaults as "material" shall not be construed as implying that other defaults not so designated are not material nor as limiting County's right to terminate or exercise its other rights or remedies for default to only material defaults.

**15.1.12 County Action.** No termination or action taken by County after termination shall prejudice any rights or remedies of County provided by Applicable Laws or by the Contract Documents, including, without limitation, the right of County to proceed against Contractor to recover all Losses suffered by reason of Contractor's default.

## **15.2 SUSPENSION BY COUNTY FOR CONVENIENCE**

**15.2.1 Suspension Order.** Without limitation to the County's rights under Section 15.1, above, County may, at any time, for its convenience and without the occurrence of any Event of Contractor Default, order Contractor, in writing, to suspend, delay or interrupt performance of the Work, in whole or in part. Upon receipt of such an order, Contractor shall comply with its terms and take all reasonable steps to minimize additional costs that are incurred applicable to the portion of the Work suspended, delayed or interrupted by County.

**15.2.2 Resumption.** If an order issued by the County pursuant to this Section 15.2 is canceled or expires, Contractor shall resume and continue with the previously affected portion of the Work. In such event, Contractor shall be entitled to a Contract Adjustment for additional Allowable Costs necessarily caused by such order and compensation allowed under Section 3.3 of the Construction Contract for Compensable Delay; provided, however, that no such Contract Adjustment shall be made: (1) to the extent that performance either is, was or would have been so suspended, delayed or interrupted by another cause for which Contractor or any of the Subcontractors is responsible or for which Contractor would not be entitled to a Contract Adjustment; (2) to the extent that a Contract Adjustment on account thereof is made or denied under another provision of the Contract Documents; or (3) for any general or specific escalation in prices of the Work.

**15.2.3 Limitation.** The provisions of this Section 15.2 shall not apply unless a written order is issued by County pursuant to this Section 15.2.

### 15.3 TERMINATION BY COUNTY FOR CONVENIENCE

15.3.1 **Right to Terminate for Convenience.** Without limitation upon any of County's other rights or remedies under the Contract Documents or Applicable Laws, County shall have the option, at its sole discretion and without the occurrence of any Event of Contractor Default or any other cause, to terminate the Construction Contract or Work, in whole or in part, for its convenience by giving five (5) Days written notice to Contractor.

15.3.2 **Contractor Obligations.** Upon receipt of notice of termination for convenience pursuant to this Section 15.3, Contractor shall, unless such notice directs otherwise, comply with all of the provisions of Paragraph 15.1.4, above.

15.3.3 **Contractor Compensation.** Following a termination for convenience pursuant to this Section 15.3 and within sixty (60) Days after receipt of a complete and timely Application for Payment from Contractor, an accounting shall be conducted in accordance with the process set forth in Paragraph 15.1.5, above. In such event, the amount due to Contractor shall be the Contractor Amount as calculated in the same manner provided for in Paragraph 15.1.5, above, except that there shall be added to the calculation of the Contractor Amount an amount for: (1) the reasonable, actual and direct Allowable Costs incurred and paid by Contractor (and not by Subcontractors) for (a) demobilizing Contractor's facilities from the Site, and (b) Contractor's administering the close out of its participation in the Project for a period of no longer than fifteen (15) Days; plus (2) a markup to Contractor on the Contractor's Allowable Costs incurred under Clause (1) of this Paragraph 15.3.4 that is based on the percentage for Allowable Markup that Contractor is permitted to charge pursuant to Article 7, above, for Compensable Changes involving Extra Work that is Self-Performed Work.

15.3.4 **Exclusive Compensation.** Contractor agrees to accept the compensation allowed under Paragraph 15.3.3, above, as its sole and exclusive compensation in the event of a termination by County for convenience and waives any claim for Loss related to County's termination for convenience, including, but not limited to, loss of anticipated profits, loss of revenue, lost opportunity, or other consequential, direct, indirect, or incidental damages, of any kind.

15.3.5 **Subcontractors.** Contractor shall include provisions in all of its subcontracts, purchase orders and other contracts with the Subcontractors permitting termination for convenience by Contractor on terms that are consistent with, and that afford no greater rights of recovery against Contractor for termination than are afforded to Contractor under, this Section 15.3.

### 15.4 TERMINATION BY CONTRACTOR

15.4.1 **Contractor's Remedies.** Subject to the provisions of Paragraph 15.4.2, below and Paragraph 15.4.3, below, Contractor's sole right to terminate the Construction Contract shall be its right to terminate, for cause only, upon the occurrence of either of the following:

.1 the entire Work is stopped for one hundred sixty (160) consecutive Days, through no act or fault of Contractor or any of the Subcontractors, of any Tier, or any employee or agent of any of them, due to issuance of an order of a court or other Governmental Authority or due to a declaration of a national emergency making material unavailable; or

.2 the entire Work is suspended by Contractor, in accordance with a proper exercise by Contractor of its rights under Section 9.8, above, for a continuous period of thirty (30) Days.

15.4.2 **Notice of Intention to Terminate.** If one of the reasons to terminate as described in Paragraph 15.4.1, above, exists, Contractor may, upon thirty (30) Days written notice to County, terminate the Construction Contract and recover from County as its sole and exclusive compensation such sums as are permitted under Paragraph 15.3.3, above.

15.4.3 **Continuous Performance.** Provided that Contractor is paid undisputed sums due in accordance with the requirements of the Construction Contract, Contractor shall not stop, delay or interrupt continuous performance of the Work by reason of any dispute or disagreement with County, including, without limitation, any disputes or disagreements over payments of money claimed due under the Contract Documents.

## 15.5 WARRANTIES

All obligations of Contractor and the Subcontractors under the Contract Documents with respect to warranties and guarantees of the Work will continue in force and shall apply, notwithstanding a termination or other discontinuance of the Work by County or Contractor pursuant to an exercise of rights by either under this Article 15, to any portion of the Work that at the time of such termination or discontinuance has been completed or partially completed by Contractor to the point that it is substantially ready (exclusive of any incidental work that may be needed to connect such portion to other Work to other Work or Existing Improvements or to energize such portion of the Work for operation) for use or occupancy by County.

## ARTICLE 16 NON-DISCRIMINATION

### 16.1 NON-DISCRIMINATION IN SERVICES

**16.1.1** Contractor must, in accordance with Applicable Laws, not discriminate in the provision of services hereunder because of race, color, religion, national origin, ancestry, sex, age, sexual orientation, marital status, AIDS or disability. For the purpose of this Section 16.1, discrimination in the provision of services may include, but is not limited to the following:

- .1 denying any person any service or benefit or the availability of a facility;
- .2 providing any service or benefit to any person which is not equivalent to, or is in a non-equivalent manner or at a non-equivalent time from, that provided to others;
- .3 subjecting any person to segregation or separate treatment in any manner related to the receipt of any service;
- .4 restricting any person in any way in the enjoyment of any advantage or privilege enjoyed by others receiving any service or benefit; or
- .5 treating any person differently from others in determining admission, enrollment, eligibility, membership, or any other requirement or condition which persons must meet in order to be provided any service or benefit.

**16.1.2** Contractor shall ensure that services are provided without regard to race, color, religion, national origin, ancestry, sex, age, sexual orientation, marital status, AIDS or disability.

**16.1.3** Contractor shall establish and maintain written procedures under which any person applying for, performing or receiving services hereunder, may seek resolution from Contractor of a complaint with respect to any alleged discrimination. Such persons shall be advised by Contractor of these procedures. A copy of such procedures shall be posted by Contractor in a conspicuous place, available and open to the public, in each of Contractor's facilities where services are provided hereunder.

### 16.2 NON-DISCRIMINATION IN EMPLOYMENT

Contractor must, in accordance with Applicable Laws, not discriminate against any employee or applicant for employment because of race, color, religion, national origin, ancestry, sex, age, sexual orientation, marital status, AIDS or disability. Without limitation to any other provisions of this Section 16.2, in the performance of the obligations under the Contract Documents, Contractor and the Subcontractors shall comply with all applicable provisions of the California Fair Employment Practices Act (California Government Code §§12940-48) and the applicable equal employment provisions of the Civil Rights Act of 1964 (42 U.S.C. §§200e - 217), whichever is more restrictive. Contractor and the Subcontractors shall ensure that qualified applicants are employed and that employees are treated during employment without regard to race, color, religion, national origin, ancestry, sex, age, sexual orientation, marital status, AIDS or disability, in accordance with requirements of Applicable Laws. Such shall include, but not be limited to, the following:

.1 employment, promotion, demotion, transfer, recruitment or recruitment advertising, layoff or termination, rates of pay or other forms of compensation; or

.2 selection for training, including apprenticeship.

**16.2.1** Contractor agrees to post in conspicuous places in each of Contractor's facilities providing services hereunder, available and open to employees and applicants for employment, notices setting forth the provisions of this Section 16.2.

**16.2.2** Contractor shall, in all solicitations or advertisements for employees placed by or on behalf of Contractor, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, national origin, ancestry, sex, age, sexual orientation, marital status, AIDS or disability, in accordance with requirements of Applicable Laws.

**16.2.3** Contractor shall send to each labor union, or workers' representative with which it has a collective bargaining agreement or other contract or understanding, a notice advising the labor union or the workers' representative of Contractor's commitments under this Section 16.2.

**16.2.4** Contractor certifies and agrees that it will deal with the Subcontractors, bidders and vendors without regard to race, color, religion, national origin, ancestry, sex, age, sexual orientation, marital status, AIDS or disability, in accordance with the requirements of Applicable Laws.

**16.2.5** In accordance with Applicable Laws, Contractor shall allow duly authorized representatives of the County, State, and Federal government access to its employment records during regular business hours in order to verify compliance with the provisions of this Section 16.2. Contractor shall provide such other information and records as such representatives may require in order to verify compliance with the provisions of this Section 16.2.

**16.2.6** If County finds that any of the provisions of this Section 16.2 have been violated by Contractor or any of the Subcontractors, such violation shall constitute a material breach of the Construction Contract for which County may cancel, terminate or suspend the Construction Contract. While County reserves the right to determine independently that the anti-discrimination provisions of the Construction Contract have been violated, a determination by the California Fair Employment and Housing Commission or the Federal Equal Employment Opportunity Commission that Contractor or the Subcontractor has violated State or Federal anti-discrimination laws shall constitute a finding by County that Contractor or the Subcontractor has violated the provisions of this Section 16.2.

**16.2.7** Contractor hereby agrees that it will comply with §504 of the Rehabilitation Act of 1973, as amended (29 U.S.C. §794) and similar Applicable Laws relating to employment of or access to persons with disabilities, all requirements imposed by applicable Federal Regulations, and all guidelines and interpretations issued pursuant thereto, to the end that no qualified disabled person shall, on the basis of disability, be excluded from participation in, be denied the benefits of, or otherwise be subjected to discrimination under any program or activity of Contractor receiving Federal Financial Assistance.

**END OF GENERAL CONDITIONS**

**SECTION 00 01 01  
PROJECT TITLE PAGE**

**WESTERN EMERGENCY OPERATIONS CENTER (EOC) PARKING LOT EXPANSION  
(FM08200012205)**

**COUNTY OF RIVERSIDE, FACILITIES MANAGEMENT  
3450 14TH STREET, SUITE 200, RIVERSIDE CA 92501  
951.955.1000**

**PROJECT LOCATION**

**WESTERN EMERGENCY OPERATIONS CENTER  
450 E ALESSANDRO BOULEVARD  
RIVERSIDE, CALIFORNIA 92508**

**PREPARED BY:**

**ARCHITECT**

**RUHNAU CLARKE ARCHITECTS**

3775 Tenth Street, Riverside CA 92501 - 5751 Palmer Way, Suite C, Carlsbad, CA 92010

951.684.4664 - 760.438.5899

[www.ruhnaucclarke.com](http://www.ruhnaucclarke.com)

Architect's Project Number: 3-75-80.

County of Riverside, Facilities Management <b>EOC Parking Lot Expansion (FM08200012205)</b> RCA Project No. 3-75-80		Project Title Page 00 01 01 - 1
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NOTICE: This Project Manual, is an unpublished instrument of service of the authors. It is prepared for use only on this Project and in conjunction with the authors' interpretations, observations, decisions and administration, as described in the Conditions of the Contract. Desired results without these services cannot be assured. Use in whole or in part, without the authors' services and expressed written consent may violate Act 17 U.S.C. par. 301 (1991).

**END OF PROJECT TITLE PAGE**

County of Riverside, Facilities Management <b>EOC Parking Lot Expansion (FM08200012205)</b> RCA Project No. 3-75-80		Project Title Page 00 01 01 - 2
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**SECTION 00 01 02  
PROJECT INFORMATION**

**PART 1 GENERAL**

**1.01 PROJECT IDENTIFICATION**

- A. Project Name: Western Emergency Operations Center (EOC) Parking Lot Expansion, located at:
1. Architect's Project Number: 3-75-80.  
County Project Number: FM08200012205.  
**Western Emergency Operations Center.**  
450 E Alessandro Boulevard.  
Riverside, California 92508.
- B. The Owner, hereinafter referred to as County:  
**County of Riverside, Facilities Management**  
3450 14th Street, Suite 200, Riverside CA 92501  
951.955.1000

**1.02 NOTICE TO PROSPECTIVE BIDDERS**

- A. These documents constitute an Invitation to Bid to and request for qualifications from General Contractors for the construction of the project described below.

**1.03 PROJECT DESCRIPTION**

- A. Summary Project Description: Parking expansion for an existing facility.  
B. Contract Scope: Construction, demolition, and renovation.  
C. Contract Terms: Lump sum (fixed price, stipulated sum).

**1.04 PROJECT CONSULTANTS**

- A. The Architect, hereinafter referred to as Architect: **Ruhnau Clarke Architects**  
3775 Tenth Street, Riverside CA 92501 - 5751 Palmer Way, Suite C, Carlsbad, CA 92010  
www.ruhnauclarke.com  
951.684.4664 - 760.438.5899

**1.05 PROCUREMENT DOCUMENTS**

- A. Availability of Documents: Complete sets of procurement documents may be obtained:
1. From County at the Project Manager's address listed above.

County of Riverside, Facilities Management <b>EOC Parking Lot Expansion (FM08200012205)</b> RCA Project No. 3-75-80		Project Information 00 01 02 - 1
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**PART 2 PRODUCTS (NOT USED)**

**PART 3 EXECUTION (NOT USED)**

**END OF SECTION**

County of Riverside, Facilities Management <b>EOC Parking Lot Expansion (FM08200012205)</b> RCA Project No. 3-75-80		Project Information 00 01 02 - 2
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**SECTION 00 31 00  
AVAILABLE PROJECT INFORMATION**

**PART 1 GENERAL**

**1.01 EXISTING CONDITIONS**

- A. Certain information relating to existing surface and subsurface conditions and structures is available to bidders but will not be part of Contract Documents, as follows:
- B. Geotechnical Report: Entitled Geotechnical Report, West County EOC Facility, Riverside, California, LCI Report No. LP19017, dated March 2019.
  - 1. Landmark Engineering, Amended Memo April 20, 2023.
  - 2. This report identifies properties of below grade conditions and offers recommendations for the design of foundations, prepared primarily for the use of Architect.
    - a. Soil and subsurface investigations conducted at site by an independent testing laboratory and report with log of borings prepared.
  - 3. Interpretation:
    - a. The County, Architect and Engineers disclaim all responsibility for the accuracy of information prepared by others.
      - 1) The County, Architect and Engineers disclaim all responsibility for the information to be completely representative of conditions and materials which may be encountered and as being adequate for the purposes of construction.
      - 2) Variations in kind, depth, quantity, and condition of soils may occur.
      - 3) The County, Architect and Engineers further disclaim responsibility for interpretation by Bidding Contractors and others of soil and subsurface investigation information, such as in projecting soil-bearing values, rock profiles, presence and scope of boulders and cobbles, soil stability and the presence, level and extent of underground water.
  - 4. The recommendations described shall not be construed as a requirement of this Contract, unless specifically referenced in Contract Documents.
  - 5. This report, by its nature, cannot reveal all conditions that exist on the site. Should subsurface conditions be found to vary substantially from this report, changes in the design and construction of foundations will be made, with resulting credits or expenditures to the Contract Sum accruing to County.
    - a. If variances from Geotechnical Report are found, make written report to County Representative.
    - b. Claims for conditions found to be not as indicated in soil investigation data not permitted, unless otherwise indicated in County-Contractor Agreement.
      - 1) This applies only to conditions found after execution of the Agreement to be materially different from those reported and which are not customarily encountered in the geographic area.

County of Riverside, Facilities Management <b>EOC Parking Lot Expansion (FM08200012205)</b> RCA Project No. 3-75-80		Available Project Information 00 31 00 - 1
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**1.02 BIDDER'S INVESTIGATIONS**

- A. Bidder's Investigation: Bidder shall visit site and become familiar with site conditions.
  - 1. Bidder may, at Bidder's own expense and prior to bidding, make soil surveys and investigations Bidder considers necessary.
  - 2. Bidder assumes risk that soil and underground conditions may be other than that indicated in soil investigation data.
- B. Procedures:
  - 1. Obtain authorization from County Representative prior to start of borings or subsurface investigations.
  - 2. Immediately upon completion of Bidder's subsurface investigation, return site areas affected by investigations to condition existing prior to start of Bidder subsurface investigations as directed by County Representative.

**PART 2 PRODUCTS (NOT USED)**

**PART 3 EXECUTION (NOT USED)**

**END OF SECTION**

County of Riverside, Facilities Management <b>EOC Parking Lot Expansion (FM08200012205)</b> RCA Project No. 3-75-80		Available Project Information 00 31 00 - 2
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**SECTION 01 10 00  
SUMMARY**

**PART 1 GENERAL**

**1.01 PROJECT**

- A. Project Name: Western Emergency Operations Center, EOC Parking Lot Expansion (FM08200012205)
- B. County's Name: County of Riverside, Facilities Management.
- C. Architect's Name: Ruhnau Clarke Architects.
- D. The Project consists of the alteration of an existing parking lot located at Western Emergency Operations Center.

**1.02 CONTRACT DESCRIPTION**

- A. Contract Type: A single prime contract based on a Stipulated Price as described in Owner-Contractor Agreement.

**1.03 CONTRACT DOCUMENTS**

- A. Contract Requirements:
  - 1. Conditions of the Contract and other Contract documents have been included in the Project Manual, as indicated in the Table of Contents.
    - a. Such documents are not Specifications.
  - 2. Specifications are found in Divisions 01 through 33 of the Project Manual.
- B. Contract Drawings: The Drawings provided with and identified in the Project Manual are the Drawings referenced in the Agreement.
  - 1. The location, extent and configuration of the required construction and improvements are shown and noted on Drawings.
    - a. The Drawings are referenced in the Agreement.
    - b. An index of Drawings is included in the set of Drawings.
  - 2. Drawings are arranged into series according to design discipline. Such organization and all references to trades, subcontractor, specialty contractor or supplier shall not control the Contractor in dividing the Work among subcontractors or in establishing the extent of the Work to be performed by any trade.
  - 3. Where the terms "as shown", "as indicated", "as noted", "as detailed", "as scheduled", or terms of like meaning, are used in the Drawings or Specifications, it shall be understood that reference is being made to the Drawings referenced in the Agreement.
  - 4. Where reference to the word "plans" is made anywhere in Drawings, Specifications and related Contract Documents, it shall be understood to mean the Drawings referenced in the Agreement.
- C. Contract Specifications: The Specifications provided in the Project Manual are the Specifications referenced in the Agreement.

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1. Specifications are organized by Divisions and Sections in accordance with the recommended practices of the Construction Specifications Institute.
  - a. Such organization shall not control the Contractor in dividing the Work among subcontractors or in establishing the extent of Work to be performed by any trade.
2. Specifications are included in the Project Manual, which may also include other Bidding and Contract Documents.
  - a. Contents of the Project Manual are listed in Document 00 01 10 - Table of Contents, in the Project Manual.

**1.04 WORK BY OWNER**

- A. Concurrent Work Under Separate Contracts:
  1. Work Under Separate Contracts: County will award separate contracts for products and installation for interior improvements and other work as may be indicated on Drawings as NIC (Not in Contract).
  2. Relationship to Work Under the Contract:
    - a. Work under the Contract shall include all provisions necessary to make such concurrent work under separate contracts complete in every respect and fully functional, including field finishing.
    - b. Provide necessary backing, supports, piping, conduit, conductors and other such provisions from point of service to point of connection, as shown on Drawings and specified herein.
  3. Related Contract Documents:
    - a. County will make available, in a timely manner, drawings and specifications of work under separate contracts for coordination and further description of that work.
    - b. Such drawings and other data required for the coordination of the work of separate contracts with the Work of this Contract may be included with the Contract Documents.
    - c. If so, they are provided for convenience only and are not to be considered Contract Documents produced by Architect or Architect's consultants.
  4. Permits, Notices and Fees:
    - a. Permits, Notices and Fees: Notices required by and approvals required of authorities having jurisdiction for work under separate contracts and related fees will be solely the responsibility of County.
- B. Items noted NIC (Not in Contract) will be supplied and installed by County before Substantial Completion.

**1.05 PERMITS, LICENSES AND FEES**

- A. Permits:
  1. For Work included in the Contract, Contractor shall obtain all permits from authorities having jurisdiction and from serving utility companies and agencies.
  2. County will reimburse Contractor for amount charged for such permits, without mark-up.

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3. For Work performed under design/build basis, plan check and permit fees shall be included in the Contract Sum.
- B. Licenses:
1. Contractor shall obtain and pay all licenses associated with construction activities, such as business licenses, contractors' licenses and vehicle and equipment licenses.
  2. All costs for licenses shall be included in the Contract Sum.
- C. Assessments:
1. County will pay all assessments and utility service connection fees. Costs of assessments shall not be included in the Contract Sum.
- D. Test and Inspection Fees:
1. Contractor shall pay all fees charged by authorities having jurisdiction and from serving utility companies and agencies, for tests and inspections conducted by those authorities, companies and agencies.
  2. County will reimburse Contractor for actual amount of such fees, without mark-up.
  3. Refer to Section 01 40 00 - Quality Requirements for additional information on tests and inspections and responsibility for payment of fees.

**1.06 OWNER OCCUPANCY**

- A. County intends to continue to occupy adjacent portions of the existing site during the entire construction period.
- B. County intends to occupy the Project at all times; County EOC will remain operational and must have at a minimum of 35 parking stalls available throughout.
- C. Cooperate with County to minimize conflict and to facilitate County's operations.
- D. Schedule the Work to accommodate County occupancy.

**1.07 CONTRACTOR USE OF SITE AND PREMISES**

- A. Construction Operations: Limited to areas noted on Drawings.
- B. Arrange use of site and premises to allow:
  1. County occupancy.
  2. Work by Others.
  3. Work by County.
  4. Use of site and premises by the public.
- C. Provide access to and from site as required by law and by County:
  1. Emergency Building Exits During Construction: Keep all exits required by code open during construction period; provide temporary exit signs if exit routes are temporarily altered.
  2. Site Access:
    - a. Limit access to site to indicated routes and access points as indicated.
    - b. If routes and access points are not indicated, access shall be as approved by County.

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- c. Do not restrict access to adjacent properties and do not restrict access for those performing work under separate contracts for the County.
- 3. Do not obstruct roadways, sidewalks, or other public ways without permit.
- 4. Construction Limit:
  - a. Limit construction activities to areas indicated on Drawings as Project Area or, if not indicated, to areas within the parcel as described in the legal description on the Drawings.
  - b. Refer also to Section 01 50 00 - Temporary Construction Facilities and Controls for additional requirements.
- D. Existing building spaces may not be used for storage.
- E. Time Restrictions:
  - 1. Limit conduct of especially noisy malodorous and dusty exterior work to the hours of 8 AM to 6 PM.
  - 2. Limit conduct of especially noisy interior work to the hours of 9 AM to 4 PM.
- F. Utility Outages and Shutdown:
  - 1. Limit disruption of utility services to hours the site is unoccupied.
  - 2. Do not disrupt or shut down life safety systems, including but not limited to fire sprinklers and fire alarm system, without 7 days notice to County and authorities having jurisdiction.
  - 3. Prevent accidental disruption of utility services to other facilities.

**1.08 CONSTRUCTION WASTE MANAGEMENT**

- A. Construction and waste management, complying with Section 01 74 19 - Construction Waste Management and Disposal, is a requirement for this project.
- B. The Contractor, Prime Contractors, and subcontractors all have obligations in meeting the requirements of this specification.

**END OF SECTION**

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**SECTION 01 20 00  
PRICE AND PAYMENT PROCEDURES**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. Procedures for preparation and submittal of applications for progress payments.
- B. Documentation of changes in Contract Sum and Contract Time.
- C. Change procedures.
- D. Correlation of Contractor submittals based on changes.
- E. Procedures for preparation and submittal of application for final payment.

**1.02 RELATED REQUIREMENTS**

- A. Section 01 78 00 - Closeout Submittals: Project record documents.

**1.03 SCHEDULE OF VALUES**

- A. Use Schedule of Values Form:
  - 1. Form provided by County.
- B. Electronic media printout including equivalent information will be considered in lieu of standard form specified; submit draft to Architect for approval.
- C. Forms filled out by hand will not be accepted.
- D. Submit Schedule of Values in duplicate within 15 days after date established in Notice to Proceed.
- E. Format: Utilize the Table of Contents of this Project Manual. Identify each line item with number and title of the specification section. Identify site mobilization.
- F. Include in each line item, the amount of Allowances specified in this section. For unit cost Allowances, identify quantities taken from Contract Documents multiplied by the unit cost to achieve the total for the item.
- G. Include separately from each line item, a direct proportional amount of Contractor's overhead and profit.
- H. Revise schedule to list approved Change Orders, with each Application For Payment.
  - 1. List each authorized Change Order as an extension on the continuation sheet, listing the Change Order number and dollar value as for an original portion of Work.

**1.04 APPLICATIONS FOR PROGRESS PAYMENTS**

- A. Payment Period: Submit at intervals stipulated in the Agreement.
  - 1. Substantiating information will normally be required only for those portions of Work whose completion state cannot be readily determined by observation of the completed Work.

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- B. Electronic media printout including equivalent information will be considered in lieu of standard form specified; submit sample to Architect for approval.
- C. Forms filled out by hand will not be accepted.
- D. For each item, provide a column for listing each of the following:
  - 1. Item Number.
  - 2. Description of work.
  - 3. Scheduled Values.
  - 4. Previous Applications.
  - 5. Work in Place and Stored Materials under this Application.
  - 6. Authorized Change Orders.
  - 7. Total Completed and Stored to Date of Application.
  - 8. Balance to Finish.
  - 9. Retainage.
- E. Execute certification by signature of authorized officer.
- F. Use data from approved Schedule of Values. Provide dollar value in each column for each line item for portion of work performed and for stored products.
- G. List each authorized Change Order as a separate line item, listing Change Order number and dollar amount as for an original item of work.
  - 1. No Change Orders shall be included with Application for Payment until approved in writing by County and Architect.
- H. Submit one electronic and three hard-copies of each Application for Payment.
- I. Include the following with the application:
  - 1. Transmittal letter as specified for submittals in Section 01 30 00.
  - 2. Construction progress schedule, revised and current as specified in Section 01 30 00.
  - 3. Current construction photographs specified in Section 01 30 00.
  - 4. Partial release of liens from major subcontractors and vendors.
    - a. Provide with each Application for Payment lien releases from all subcontractors, workers and materials suppliers employed for the Project covering their portion of Work to date for which payment application is made. Lien release forms will be provided by County and shall be completed in accordance with directions provided.
  - 5. Project record documents as specified in Section 01 78 00, for review by County which will be returned to the Contractor.
  - 6. Affidavits attesting to off-site stored products.
- J. When Architect requires substantiating information, submit data justifying dollar amounts in question. Provide one copy of data with cover letter for each copy of submittal. Show application number and date, and line item by number and description.

**1.05 MODIFICATION PROCEDURES**

- A. Construction Changes, General:

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1. The following describe administrative procedures to be followed in compliance with provisions of the Conditions of the Contract for Architect's Supplemental Instructions, Construction Change Directives, and Contract Change Orders.
  2. The Architect will prepare and issue: Architect's Supplemental Instructions, a Construction Change Directive or a Request for Proposal to be presented to the Contractor for action.
- B. Submit name of the individual authorized to receive change documents and who will be responsible for informing others in Contractor's employ or subcontractors of changes to Contract Documents.
- C. Contract Change Order Forms: Form as directed by County.
- D. For minor changes not involving an adjustment to the Contract Sum or Contract Time, Architect will issue instructions directly to Contractor.
1. Architect's Supplemental Instructions:
    - a. Minor changes in the Work, not involving an adjustment in either the Contract Sum or Contract Time, as authorized by the Conditions of the Contract, will be presented by the Architect using the Architect's Bulletin form.
    - b. Should the Architect's Supplemental Instructions result in disputed costs and time adjustments, such dispute shall be resolved in accordance with the provisions of the Conditions of the Contract.
- E. For other required changes, Architect will issue a document signed by County instructing Contractor to proceed with the change, for subsequent inclusion in a Change Order.
1. The document will describe the required changes and will designate method of determining any change in Contract Sum or Contract Time.
  2. Promptly execute the change.
  3. Construction Change Directives: In accordance with provisions of the Conditions of the Contract, the County may direct the Contractor to proceed with a change in the Work prior to formal preparation, review and agreement of a Contract Change Order, in order to not delay construction.
    - a. The Architect will prepare and issue a change document containing a Construction Change Directive which, when signed by the County and the Architect, shall instruct the Contractor to proceed with a change in the Work, for subsequent inclusion in a Contract Change Order.
    - b. Should the Construction Change Directive result in disputed costs and time adjustments, such dispute shall be resolved in accordance with the provisions of the Conditions of the Contract.
    - c. Construction Change Directives shall follow procedures specified below for Contract Change Orders except that Contractor shall immediately proceed with the change upon receipt of the signed Change Directive.

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- F. For changes for which advance pricing is desired, Architect will issue a document that includes a detailed description of a proposed change with supplementary or revised drawings and specifications, a change in Contract Time for executing the change with a stipulation of any overtime work required and the period of time during which the requested price will be considered valid. Contractor shall prepare and submit a fixed price quotation within 10 days.
  - 1. Such Request for Proposal may include an estimate of additions or deductions in Contract Time and Contract Sum for executing the change and may include stipulations regarding overtime work and the period of time the requested response from the Contractor shall be considered valid.
- G. Contractor may propose a change by submitting a request for change to Architect, describing the proposed change and its full effect on the work, with a statement describing the reason for the change, and the effect on the Contract Sum and Contract Time with full documentation and a statement describing the effect on work by separate or other contractors. Document any requested substitutions in accordance with Section 01 6000.
  - 1. After review of the request and with the County's approval, the Architect will prepare a change document containing a Request for Proposal, as described above.
  - 2. Issuance of such a request by the Architect shall not indicate authorization of the Contractor to proceed with the proposed change.
  - 3. Changes will be approved only by an approved Construction Change Directive and Contract Change Order.
- H. Computation of Change in Contract Amount: As specified in the Agreement and Conditions of the Contract.
  - 1. For change requested by Architect for work falling under a fixed price contract, the amount will be based on Contractor's price quotation.
  - 2. For change requested by Contractor, the amount will be based on the Contractor's request for a Change Order as approved by Architect.
  - 3. For pre-determined unit prices and quantities, the amount will be based on the fixed unit prices.
  - 4. For change ordered by Architect without a quotation from Contractor, the amount will be determined by Architect based on the Contractor's substantiation of costs as specified for Time and Material work.
- I. Substantiation of Costs: Provide full information required for evaluation.
  - 1. On request, provide the following data:
    - a. Quantities of products, labor, and equipment.
    - b. Taxes, insurance, and bonds.
    - c. Overhead and profit.
    - d. Justification for any change in Contract Time.
    - e. Credit for deletions from Contract, similarly documented.
  - 2. Support each claim for additional costs with additional information:
    - a. Origin and date of claim.
    - b. Dates and times work was performed, and by whom.

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- c. Time records and wage rates paid.
  - d. Invoices and receipts for products, equipment, and subcontracts, similarly documented.
3. For Time and Material work, submit itemized account and supporting data after completion of change, within time limits indicated in the Conditions of the Contract.
- a. Cost and Time Resolution: If amounts for changes in Contract Sum and Contract Time cannot be agreed upon by County and Contractor, amounts shall be resolved in accordance with provisions of the Conditions of the Contract for resolution of disputes and the following:
    - 1) Contractor shall keep accurate records of time, both labor and calendar days, and cost of materials and equipment.
    - 2) Contractor shall prepare and submit an itemized account and supporting data after completion of changed Work, within the time limits indicated in the Conditions of the Contract.
    - 3) Contractor shall provide full information as required and requested, for County and Architect to evaluate and substantiate proposed costs and time for the change in the Work.
    - 4) When County and Contractor determine mutually acceptable amounts for changes in Contract Sum and Contract Time, a Contract Change Order shall be executed for these amounts.
    - 5) County shall have the right to audit Contractor's invoices and bid quotations to substantiate costs for Contract Change Orders.
- J. Construction Changes Based on Stipulated Sum or Time: Based on the Contractor's response to a Request for Proposal or Construction Change Directive, the County and Architect will review the response.
- 1. The County and Contractor shall negotiate a mutually acceptable adjustment in Contract Sum and Contract Time, as appropriate, prior to performance of the changed Work.
  - 2. A Contract Change Order for the stipulated amounts shall be prepared based on the stipulated sum and change in time.
- K. Execution of Change Orders: Architect will issue Change Orders for signatures of parties as provided in the Conditions of the Contract.
- 1. When agreement is reached on changes, if any, in the Contract Time and the Contract Sum, the Contractor shall prepare a Contract Change Order using a form as directed by the County, with supplementary documents as necessary to describe the change and the associated costs and schedule impacts.
  - 2. Construction Change Document approval is required from AHJ prior to fabrication and installation.
  - 3. Submit Contract Change Orders to County through the Architect.
  - 4. Contractor shall prepare and submit five original sets of documents for each Change Order. County, Architect and AHJ shall sign the Change Order indicating acceptance and approval of the change.
    - a. Structural Engineer shall also sign the Change Order, when applicable.

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- 5. All Change Orders must be approved by AHJ prior to fabrication and installation.
- 6. Upon approval of the Change Order, Contractor shall promptly execute the change in the Work.
- L. After execution of Change Order, promptly revise Schedule of Values and Application for Payment forms to record each authorized Change Order as a separate line item and adjust the Contract Sum.
- M. Promptly revise progress schedules to reflect any change in Contract Time, revise sub-schedules to adjust times for other items of work affected by the change, and resubmit.
  - 1. Contractor shall submit revised schedules at the next Application for Payment following approval and acceptance of the Contract Change Order.
- N. Promptly enter changes in Project Record Documents.

**1.06 APPLICATION FOR FINAL PAYMENT**

- A. Prepare Application for Final Payment as specified for progress payments, identifying total adjusted Contract Sum, previous payments, and sum remaining due.
- B. Application for Final Payment will not be considered until the following have been accomplished:
  - 1. All closeout procedures specified in Section 01 70 00.

**PART 2 PRODUCTS - NOT USED**

**PART 3 EXECUTION - NOT USED**

**END OF SECTION**

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**SECTION 01 25 00  
SUBSTITUTION PROCEDURES**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. Procedural requirements for proposed substitutions.

**1.02 RELATED REQUIREMENTS**

- A. Section 01 30 00 - Administrative Requirements: Submittal procedures, coordination.
- B. Section 01 60 00 - Product Requirements: Fundamental product requirements, product options, delivery, storage, and handling.
- C. Section 01 61 16 - Volatile Organic Compound (VOC) Content Restrictions: Restrictions on emissions of indoor substitute products.

**1.03 DEFINITIONS**

- A. Substitutions: Changes from Contract Documents requirements proposed by Contractor to materials, products, assemblies, and equipment.
  - 1. Substitutions for Cause: Proposed due to changed Project circumstances beyond Contractor's control.
    - a. Unavailability.
    - b. Regulatory changes.
  - 2. Substitutions for Convenience: Proposed due to possibility of offering substantial advantage to the Project.
    - a. Substitution requests offering advantages solely to the Contractor will not be considered.

**PART 2 PRODUCTS - NOT USED**

**PART 3 EXECUTION**

**3.01 GENERAL REQUIREMENTS**

- A. Requests by Contractor to deviate from specified requirements for products, materials, equipment, and methods, or to provide products other than those specified, shall be considered requests for substitutions except under the following conditions:
  - 1. Substitutions are requested during the bidding period, and accepted prior to execution of the Contract. Acceptance shall be in the form of written Addendum to the Bidding documents or revision to the Drawings or Specifications for use as Construction Contract Documents.
  - 2. Changes in products, materials, equipment, and methods of construction are directed by the County or Architect.

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3. Contractor options for provision of products and construction methods are specifically stated in the Contract Documents.
  4. Change in products, materials, equipment, and methods of construction is required for compliance with Codes, ordinances, regulations, orders and standards of authorities having jurisdiction.
- B. Substitution Provisions: Refer to substitution provisions of the Conditions of the Contract, in addition to the requirements specified herein. Provisions for consideration and acceptance of substitutions shall be as follows:
1. Documentation:
    - a. Substitutions will not be considered if they are indicated or implied on shop drawing, product data or sample submittals.
    - b. All requests for substitution shall be made by separate written request from Contractor.
  2. Cost and Time Considerations: Substitutions will not be considered unless a net reduction in Contract Sum or Contract Time results to the County's benefit, including redesign costs, life cycle costs, changes in related Work and overall performance of building systems.
  3. Design Revision:
    - a. Substitutions will not be considered if acceptance will require substantial revision of the Contract Documents or will substantially change the intent of the design, in the opinion of the Architect.
    - b. The intent of the design shall include functional performance and aesthetic qualities.
  4. Data: It shall be the responsibility of the Contractor to provide adequate data demonstrating the merits of the proposed substitution, including cost data and information regarding changes in related Work.
  5. Determination by Architect:
    - a. Architect will determine the acceptability of proposed substitutions and will notify Contractor, in writing within a reasonable time, of acceptance or rejection.
    - b. The determination by the Architect regarding functional performance and aesthetic quality shall be final.
  6. Non-Acceptance: If a proposed substitution is not accepted, provide the specified product.
    - a. If, in the opinion of the Architect, the substitution request is incomplete or has insufficient data to enable a full and thorough review of the intended substitution, the substitution may be summarily refused and determined to be unacceptable.
  7. Substitution Limitation: Only one request for substitution will be considered for each product.
- C. A Substitution Request for products, assemblies, materials, and equipment constitutes a representation that the submitter:
1. Has investigated proposed product and determined that it meets or exceeds the quality level of the specified product, equipment, assembly, or system.
    - a. Include a signed certification that the Contractor has:

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- 1) Reviewed the proposed substitution and has determined that the substitution is equivalent or superior in every respect to product requirements indicated or product specified in the Contract Documents.
  - 2) Certify the proposed substitution is suited for and can perform the purpose or application of the specified product indicated or specified in the Contract Documents.
2. Agrees to provide the same warranty for the substitution as for the specified product.
  3. Agrees to provide same or equivalent maintenance service and source of replacement parts, as applicable.
  4. Agrees to coordinate installation and make changes to other work that may be required for the work to be complete, with no additional cost to County.
  5. Waives claims for additional costs or time extension that may subsequently become apparent.
    - a. Include a signed waiver by the Contractor for changes in the Contract Time or Contract Sum because of the following:
      - 1) Substitution failed to perform adequately.
      - 2) Substitution required changes in on other elements of the Work.
      - 3) Substitution caused problems in interfacing with other elements of the Work.
      - 4) Substitution was determined to be unacceptable by authorities having jurisdiction.
  6. Agrees to reimburse County and Architect for review or redesign services associated with re-approval by authorities.
- D. A Substitution Request for specified installer constitutes a representation that the submitter:
1. Has acted in good faith to obtain services of specified installer, but was unable to come to commercial, or other terms.
- E. Document each request with complete data substantiating compliance of proposed substitution with Contract Documents. Burden of proof is on proposer.
1. Note explicitly any non-compliant characteristics.
- F. Content: Include information necessary for tracking the status of each Substitution Request, and information necessary to provide an actionable response.
1. Forms indicated and included in the Project Manual are adequate for this purpose, and must be used.
  2. No specific form is required. Contractor's Substitution Request documentation must include the following:
    - a. Project Information:
      - 1) Official project name and number, and any additional required identifiers established in Contract Documents.
      - 2) County's, Architect's, and Contractor's names.
    - b. Substitution Request Information:

- 1) Discrete and consecutive Substitution Request number, and descriptive subject/title.
  - 2) Indication of whether the substitution is for cause or convenience.
  - 3) Issue date.
  - 4) Reference to particular Contract Document(s) specification section number, title, and article/paragraph(s).
  - 5) Description of Substitution.
  - 6) Reason why the specified item cannot be provided.
  - 7) Differences between proposed substitution and specified item.
  - 8) Description of how proposed substitution affects other parts of work.
- c. Attached Comparative Data: Provide point-by-point, side-by-side comparison addressing essential attributes specified, as appropriate and relevant for the item:
- 1) Physical characteristics.
  - 2) In-service performance.
  - 3) Expected durability.
  - 4) Visual effect.
  - 5) Sustainable design features.
  - 6) Warranties.
  - 7) Other salient features and requirements.
  - 8) Include, as appropriate or requested, the following types of documentation:
    - (a) Product Data:
    - (b) Samples.
    - (c) Certificates, test, reports or similar qualification data.
    - (d) Drawings, when required to show impact on adjacent construction elements.
  - 9) Include a detailed description, in written or graphic form as appropriate, indicating all changes or modifications needed to other elements of the Work and to construction to be performed by the County and by others under separate Contract with County, that will be necessary if the proposed substitution is accepted.
- d. Impact of Substitution:
- 1) Savings to County for accepting substitution.
    - (a) Include detailed cost data, including a proposal for the net change, if any, in the Contract Sum.
  - 2) Change to Contract Time due to accepting substitution.
    - (a) Indicate the substitution's effect on the Construction Schedule. Indicate the effect of the proposed substitution on overall Contract Time and, as applicable, on completion of portions of the Work for use by County or for work under separate contract by County.

G. Limit each request to a single proposed substitution item.

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1. Submit an electronic document, combining the request form with supporting data into single document.

### **3.02 SUBSTITUTION PROCEDURES DURING PROCUREMENT**

- A. Instructions to Bidders specifies time restrictions for submitting requests for substitutions during the bidding period, and the documents required.
- B. Pursuant to Section 3400 of the Public Contract Code, requests for substitution will be considered only if received up to 7 days prior to the bid date. Subsequent requests will be considered only in the case of product unavailability, through no fault of the Contractor , or for reasons of cost reducing value analysis requested by the County .

### **3.03 SUBSTITUTION PROCEDURES DURING CONSTRUCTION**

- A. After Contract award, requests will be considered for cause only; in the case of product unavailability, through no fault of the Contractor , or for reasons of cost reducing value analysis requested by the County.
  1. Substitutions will be considered when a product, through no fault of the Contractor, becomes unavailable or unsuitable due to regulatory change.
  2. Product Availability Waiver:
    - a. Substitutions will be considered after 35 day time limit only when a product becomes unavailable due to no fault of Contractor.
    - b. Failure to place orders for specified products sufficiently in advance of required date for incorporation into the Work will not be considered as a valid reason for which Contractor may request a substitution or deviation from requirements of the Drawings and Specifications.
  3. Waiver: At the discretion of the County, limitations on substitutions may be waived.
- B. Submit request for Substitution for Cause within 14 days of discovery of need for substitution, but not later than 14 days prior to time required for review and approval by Architect, in order to stay on approved project schedule.
- C. Submit request for Substitution for Convenience immediately upon discovery of its potential advantage to the project, but not later than 14 days prior to time required for review and approval by Architect, in order to stay on approved project schedule.
  1. In addition to meeting general documentation requirements, document how the requested substitution benefits the County through cost savings, time savings, greater energy conservation, or in other specific ways.
  2. Document means of coordinating of substitution item with other portions of the work, including work by affected subcontractors.
  3. Bear the costs engendered by proposed substitution of:
    - a. County's compensation to the Architect for any required redesign, time spent processing and evaluating the request.
    - b. Other construction by County.
    - c. Other unanticipated project considerations.
- D. Substitutions will not be considered under one or more of the following circumstances:

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1. When they are indicated or implied on shop drawing or product data submittals, without having received prior approval.
2. Without a separate written request.
3. When acceptance will require revisions to Contract Documents.

**3.04 CONTRACT DOCUMENT REVISIONS:**

- A. Should a Contractor-proposed substitution or alternative sequence or method of construction require revision of the Contract Drawings or Specifications;
  1. Including revisions for the purposes of determining feasibility, scope or cost, or revisions for the purpose of obtaining review and approval by authorities having jurisdiction.
  2. Revisions will be made by Architect or other consultant of County who is the responsible design professional, as approved in advance by County.
- B. Services of Architect or other consultant of the County, including time spent in researching and reporting on proposed substitutions or alternative sequence and method of construction, shall be paid by Contractor when such activities are considered additional services to the design services contracts of the Architect or other responsible design professional with the County.
- C. Costs of services by Architect or other responsible design professional of the County shall be paid on a time and materials basis, based on current hourly fee schedules, with reproduction, long distance telephone and shipping costs reimbursable at cost plus usual and customary mark-up for handling and billing.
- D. Such fees shall be paid whether or not the proposed substitution or alternative sequence or method of construction is ultimately accepted by County and a Change Order is executed.
- E. Such fees shall be paid from Contractor's portion of savings, if a net reduction in Contract Sum results. If fees exceed Contractor's portion of net reduction, Contractor shall pay all remaining fees unless otherwise agreed in advance by the County.
- F. Such fees owed shall be deducted from the amount owed Contractor on the Application for Payment next made following completion of revised Contract Drawings and Specifications or completion of research and other services. County will then pay Architect or other consultant of the County.
- G. Certain substitutions require approval from AHJ.

**3.05 RESOLUTION**

- A. Architect may request additional information and documentation prior to rendering a decision. Provide this data in an expeditious manner.
- B. Architect will notify Contractor in writing of decision to accept or reject request.
  1. Architect's decision following review of proposed substitution will be noted on the submitted form.

**3.06 ACCEPTANCE**

- A. Accepted substitutions change the work of the Project. They will be documented and incorporated into work of the project by Change Order, Construction Change Directive, Architectural Supplementary Instructions, or similar instruments provided for in the Conditions of the Contract.

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**3.07 CLOSEOUT ACTIVITIES**

- A. See Section 01 78 00 - Closeout Submittals, for closeout submittals.
- B. Include completed Substitution Request Forms as part of the Project record. Include both approved and rejected Requests.

**3.08 ATTACHMENTS**

- A. A facsimile of the Substitution Request Form (During Construction) required to be used on the Project is included after this section.

**END OF SECTION**

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**SECTION 01 30 00  
ADMINISTRATIVE REQUIREMENTS**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. General administrative requirements.
- B. Electronic document submittal service.
- C. Preconstruction meeting.
- D. Site mobilization meeting.
- E. Progress meetings.
- F. Construction progress schedule.
- G. Contractor's daily reports.
- H. Progress photographs.
- I. Submittals for review, information, and project closeout.
- J. Number of copies of submittals.
- K. Requests for Interpretation or Information (RFI) procedures.
- L. Submittal procedures.

**1.02 RELATED REQUIREMENTS**

- A. Section 01 60 00 - Product Requirements: General product requirements.
- B. Section 01 70 00 - Execution and Closeout Requirements: Additional coordination requirements.
- C. Section 01 78 00 - Closeout Submittals: Project record documents; operation and maintenance data; warranties and bonds.
- D. Technical Product Sections: Procedures for specific submittals specified in those Sections to be made at Contract closeout.

**1.03 DEFINITIONS**

- A. Action Submittals: Written and graphic information that requires responsive action by County Representative and Architect or other responsible design professional.
- B. Informational Submittals: Written information that does not require responsive action by County Representative and Architect or other responsible design professional.
- C. Unsolicited Submittals: Action or informational submittals not required by the Contract Documents or not requested by the reviewer. Unsolicited submittals may be returned with notation "not reviewed."
- D. Product Data: Standard published information ("catalog cuts") and specially prepared data for the Work of the Contract, including standard illustrations, schedules, brochures, diagrams, performance charts, instructions and other information to illustrate a portion of the Work.

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- E. Request for Interpretation or Information (RFI): A document submitted by the Contractor requesting clarification of a portion of the Contract Documents, hereinafter referred to as an RFI.
- F. Samples: Physical examples that demonstrate the materials, finishes, features, workmanship and other characteristics of a portion of the Work. Accepted samples shall serve as quality basis for evaluating the Work.
- G. Shop Drawings, Product Data and Samples: Instruments prepared and submitted by Contractor, for Contractor's benefit, to communicate to Architect the Contractor's understanding of the design intent, for review and comment by Architect on the conformance of the submitted information to the general intent of the design. Shop drawings, product data and samples are not Contract Documents.
- H. Shop Drawings: Drawings, diagrams, schedules and illustrations, with related notes, specially prepared for the Work of the Contract, to illustrate a portion of the Work.
- I. Other Submittals: Technical data, test reports, calculations, surveys, certifications, special warranties and guarantees, operation and maintenance data, extra stock and other submitted information and products shall not be considered as Contract Documents but shall be information from Contractor to Architect to illustrate a portion of the Work for confirmation of understanding of design intent.

**1.04 GENERAL ADMINISTRATIVE REQUIREMENTS**

- A. Comply with requirements of Section 01 70 00 - Execution and Closeout Requirements for coordination of execution of administrative tasks with timing of construction activities.
- B. Make the following types of submittals to Architect:
  - 1. Requests for Interpretation or Information (RFI).
  - 2. Requests for substitution.
  - 3. Shop drawings, product data, and samples.
  - 4. Test and inspection reports.
  - 5. Design data.
  - 6. Manufacturer's instructions and field reports.
  - 7. Applications for payment and change order requests.
  - 8. Progress schedules.
  - 9. Coordination drawings.
  - 10. Correction Punch List and Final Correction Punch List for Substantial Completion.
  - 11. Closeout submittals.

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**PART 2 PRODUCTS - NOT USED**

**PART 3 EXECUTION**

**3.01 ELECTRONIC DOCUMENT SUBMITTAL SERVICE**

- A. All documents transmitted for purposes of administration of the contract are to be in electronic (PDF, MS Word, or MS Excel) format, as appropriate to the document, and transmitted via an Internet-based submittal service that receives, logs and stores documents, provides electronic stamping and signatures, and notifies addressees via email.
  - 1. Besides submittals for review, information, and closeout, this procedure applies to Requests for Interpretation or Information (RFIs), progress documentation, contract modification documents (e.g. supplementary instructions, change proposals, change orders), applications for payment, field reports and meeting minutes, Contractor's correction punchlist, and any other document any participant wishes to make part of the project record.
  - 2. Contractor and Architect are required to use this service.
  - 3. It is Contractor's responsibility to submit documents in allowable format.
  - 4. Subcontractors, suppliers, and Architect's consultants are to be permitted to use the service at no extra charge.
  - 5. Users of the service need an email address, internet access, and PDF review software that includes ability to mark up and apply electronic stamps (such as Adobe Acrobat, [www.adobe.com](http://www.adobe.com), or Bluebeam PDF Revu, [www.bluebeam.com](http://www.bluebeam.com)), unless such software capability is provided by the service provider.
  - 6. Unless specifically requested, paper document transmittals will not be reviewed; emailed electronic documents will not be reviewed.
  - 7. All other specified submittal and document transmission procedures apply, except that electronic document requirements do not apply to samples or color selection charts.
- B. Submittal Service: The selected service is:
  - 1. Bluebeam Software Inc.; Bluebeam Revu Studio: [www.bluebeam.com](http://www.bluebeam.com).
  - 2. Other Service acceptable to both County and Architect.
    - a. Direct email with PDF copies.
- C. Training: One, one-hour, web-based training session will be arranged for all participants, with representatives of Architect and Contractor participating; further training is the responsibility of the user of the service.
  - 1. Representatives of County are scheduled and included in this training.
- D. Project Closeout: Architect will determine when to terminate the service for the project and is responsible for obtaining archive copies of files for County.

**3.02 SITE MOBILIZATION AND PRECONSTRUCTION MEETING**

- A. Schedule meeting at the Project site prior to Contractor occupancy.
- B. Attendance Required:

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1. Contractor.
  2. County.
  3. Architect.
  4. Contractor's superintendent.
  5. Major subcontractors.
- C. Agenda:
1. Distribute and discuss list of subcontractors and suppliers.
  2. Project Communication Procedures: Review requirements and administrative requirements for written and oral communications.
    - a. Review requirements and administrative procedures Contractor may wish to institute for identification and reporting purposes.
  3. Change Procedures: Review requirements and administrative procedures for Change Orders, Construction Change Directives, Architect's supplemental instructions and Contractor's Requests for Interpretation or Information.
  4. County's requirements.
  5. Construction facilities and controls provided by County.
  6. Temporary utilities provided by County.
  7. Survey and building layout.
  8. Security and housekeeping procedures.
  9. Schedules.
    - a. Distribute and discuss initial construction schedule and critical work sequencing of major elements of Work;
    - b. Include coordination of County Furnished / Contractor Installed (OFCl) products;
  10. Application for payment procedures.
  11. Procedures for testing.
  12. Procedures for maintaining record documents.
  13. Requirements for start-up of equipment.
  14. Inspection and acceptance of equipment put into service during construction period.
- D. Record minutes and distribute copies within two days after meeting to participants, with two copies to Architect, County, participants, and those affected by decisions made.

**3.03 PROGRESS MEETINGS**

- A. Schedule and administer meetings throughout progress of the work at maximum bi-weekly intervals.
- B. Meeting Time and Location: As mutually agreed by County, Architect, and Contractor, at on-site location.
- C. Special Meetings: As necessary, County Representative may convene special meetings to discuss specific construction issues in detail and to plan specific activities.
  1. See Section 01 70 00 - Execution and Closeout Requirements.

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- D. Attendance Required:
  - 1. Contractor.
  - 2. County.
  - 3. Architect.
  - 4. Contractor's superintendent.
  - 5. Major subcontractors.
- E. Agenda:
  - 1. Review minutes of previous meetings.
  - 2. Review of work progress.
  - 3. Field observations, problems, and decisions.
  - 4. Identification of problems that impede, or will impede, planned progress.
  - 5. Review of submittals schedule and status of submittals.
  - 6. Review of RFIs log and status of responses.
  - 7. Review of off-site fabrication and delivery schedules.
  - 8. Maintenance of progress schedule.
  - 9. Corrective measures to regain projected schedules.
    - a. Develop corrective measures and procedures, including but not necessarily limited to additional personnel loading to regain planned schedule.
  - 10. Planned progress during succeeding work period.
  - 11. Coordination of projected progress.
  - 12. Maintenance of quality and work standards.
  - 13. Effect of proposed changes on progress schedule and coordination.
  - 14. Other business relating to work.
- F. Record minutes and distribute copies within two days after meeting to participants, with copies to Architect, County, participants, and those affected by decisions made.

**3.04 DAILY CONSTRUCTION REPORTS**

- A. Include only factual information. Do not include personal remarks or opinions regarding operations and/or personnel.
- B. In addition to transmitting electronically a copy to County and Architect, submit two printed copies at weekly intervals.
  - 1. Submit in format acceptable to County.
  - 2. Submit using required form, a sample of which is appended to this section.
- C. Prepare a daily construction report recording the following information concerning events at Project site and project progress:
  - 1. Date.
  - 2. High and low temperatures, and general weather conditions.
  - 3. List of subcontractors at Project site.

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4. List of separate contractors at Project site.
5. Approximate count of personnel at Project site.
  - a. Include a breakdown for supervisors, laborers, journeymen, equipment operators, and helpers.
6. Major equipment at Project site.
7. Material deliveries.
8. Safety, environmental, or industrial relations incidents.
9. Meetings and significant decisions.
10. Unusual events (submit a separate special report).
11. Stoppages, delays, shortages, and losses. Include comparison between scheduled work activities (in Contractor's most recently updated and published schedule) and actual activities. Explain differences, if any. Note days or periods when no work was in progress and explain the reasons why.
12. Meter readings and similar recordings.
13. Emergency procedures.
14. Directives and requests of Authority(s) Having Jurisdiction (AHJ).
15. Change Orders received and implemented.
16. Testing and/or inspections performed.
17. List of verbal instruction given by County and/or Architect.
18. Signature of Contractor's authorized representative.

### **3.05 PROGRESS PHOTOGRAPHS**

- A. Submit photographs with each application for payment, taken not more than 3 days prior to submission of application for payment.
- B. Maintain one set of all photographs at project site for reference; same copies as submitted, identified as such.
- C. Photography Type: Digital; electronic files.
- D. Provide photographs of site and construction throughout progress of work produced by an experienced photographer, acceptable to Architect.
- E. In addition to periodic, recurring views, take photographs of each of the following events:
  1. Completion of site clearing.
  2. Excavations in progress.
  3. Foundations in progress and upon completion.
  4. Structural framing in progress and upon completion.
  5. Enclosure of building, upon completion.
  6. Final completion, minimum of ten (10) photos.
- F. Take photographs as evidence of existing project conditions as follows:
  1. Interior views: each elevation, floor and ceilings prior to demolition.

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2. Exterior views: each elevation, roof and areas adjacent to construction limits.
- G. Views:
1. Provide non-aerial photographs from four cardinal views at each specified time, until date of Substantial Completion.
  2. Consult with Architect for instructions on views required.
  3. Provide factual presentation.
  4. Provide correct exposure and focus, high resolution and sharpness, maximum depth of field, and minimum distortion.
  5. Point of View Sketch: Provide sketch identifying point of view of each photograph.
- H. Digital Photographs: 24 bit color, minimum resolution of 1600 by 1200 ("2 megapixel"), in JPG format; provide files unaltered by photo editing software.
1. Delivery Medium: Electronic means.
  2. File Naming: Include project identification, date and time of view, and view identification.
  3. Point of View Sketch: Include digital copy of point of view sketch with each electronic submittal; include point of view identification in each photo file name.
  4. Hard Copy: Printed hardcopy (grayscale) of PDF file and point of view sketch.

### **3.06 REQUESTS FOR INTERPRETATION OR INFORMATION (RFI)**

- A. Definition: A request seeking one of the following:
1. An interpretation, amplification, or clarification of some requirement of Contract Documents arising from inability to determine from them the exact material, process, or system to be installed; or when the elements of construction are required to occupy the same space (interference); or when an item of work is described differently at more than one place in the Contract Documents.
  2. A resolution to an issue which has arisen due to field conditions and affects design intent.
- B. Whenever possible, request clarifications at the next appropriate project progress meeting, with response entered into meeting minutes, rendering unnecessary the issuance of a formal RFI.
- C. Preparation: Prepare an RFI immediately upon discovery of a need for interpretation of Contract Documents. Failure to submit a RFI in a timely manner is not a legitimate cause for claiming additional costs or delays in execution of the work.
1. Prepare a separate RFI for each specific item.
    - a. Review, coordinate, and comment on requests originating with subcontractors and/or materials suppliers.
    - b. Do not forward requests which solely require internal coordination between subcontractors.
  2. Prepare in a format and with content acceptable to County.
  3. Combine RFI and its attachments into a single electronic file. PDF format is preferred.

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- D. Reason for the RFI: Prior to initiation of an RFI, carefully study all Contract Documents to confirm that information sufficient for their interpretation is definitely not included.
1. Include in each request Contractor's signature attesting to good faith effort to determine from Contract Documents information requiring interpretation.
    - a. Submit RFIs from subcontractors and material suppliers through, be reviewed by and be attached to an RFI prepared, signed and submitted by Contractor.
      - 1) RFIs from subcontractors and material suppliers are to be:
        - (a) Reviewed by Contractor.
        - (b) Corrected and rewritten to clarify as required by Contractor.
        - (c) Placed on the proper form, then signed, and submitted by Contractor.
        - (d) RFIs submitted directly by subcontractors or material suppliers will be returned unanswered to the Contractor.
      - 2) RFIs submitted directly by subcontractors or material suppliers will be returned unanswered to the Contractor.
    - b. Review all subcontractor- and supplier-initiated RFIs and take actions to resolve issues of coordination, sequencing and layout of the Work.
      - 1) RFIs submitted to request clarification of issues related to means, methods, techniques and sequences of construction or for establishing trade jurisdictions and scopes of subcontracts will be returned without response.
        - (a) Such issues are solely the Contractor's responsibility.
      - 2) Contractor is responsible for delays resulting from the necessity to resubmit an RFI due to insufficient or incorrect information presented in the RFI.
  2. Unacceptable Uses for RFIs: Do not use RFIs to request the following::
    - a. Approval of submittals (use procedures specified elsewhere in this section).
    - b. Approval of substitutions (see Section - 01 60 00 - Product Requirements)
    - c. Changes that entail change in Contract Time and Contract Sum (comply with provisions of the Conditions of the Contract).
    - d. Different methods of performing work than those indicated in the Contract Drawings and Specifications (comply with provisions of the Conditions of the Contract).
  3. Improper RFIs: Requests not prepared in compliance with requirements of this section, and/or missing key information required to render an actionable response. They will be returned without a response, with an explanatory notation.
  4. Frivolous RFIs: Requests regarding information that is clearly indicated on, or reasonably inferable from, Contract Documents, with no additional input required to clarify the question. They will be returned without a response, with an explanatory notation.
    - a. The County reserves the right to assess the Contractor for the costs (on time-and-materials basis) incurred by the Architect, and any of its consultants, due to processing of such RFIs.
- E. Content: Include identifiers necessary for tracking the status of each RFI, and information necessary to provide an actionable response.

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1. Official Project name and number, and any additional required identifiers established in Contract Documents.
  2. County's, Architect's, and Contractor's names.
  3. Discrete and consecutive RFI number, and descriptive subject/title.
  4. Issue date, and requested reply date.
  5. Reference to particular Contract Document(s) requiring additional information/interpretation. Identify pertinent drawing and detail number and/or specification section number, title, and paragraph(s).
  6. Annotations: Field dimensions and/or description of conditions which have engendered the request.
    - a. Inability to determine from the Contract Documents the exact material, process, or system to be installed;
    - b. Or when the elements of construction are required to occupy the same space (interference);
    - c. Or when an item of Work is described differently at more than one place in the Contract Documents.
  7. Contractor's suggested resolution: A written and/or a graphic solution, to scale, is required in cases where clarification of coordination issues is involved, for example; routing, clearances, and/or specific locations of work shown diagrammatically in Contract Documents. If applicable, state the likely impact of the suggested resolution on Contract Time or the Contract Sum.
    - a. In all cases, furnish all information required for the Architect to analyze and/or understand the circumstances causing the RFI and prepare a clarification or direction as to proceed for RFIs issued to request clarification of issues related to:
      - 1) Means, methods, techniques and sequences of construction, for example
      - 2) Pipe and duct routing, clearances;
      - 3) Specific locations of Work shown diagrammatically;
      - 4) Apparent interferences and similar items.
      - 5) If information included with this type RFI by the Contractor is insufficient, the RFI will be returned unanswered.
- F. Attachments: Include sketches, coordination drawings, descriptions, photos, submittals, and other information necessary to substantiate the reason for the request.
- G. RFI Log: Prepare and maintain a tabular log of RFIs for the duration of the project.
1. Indicate current status of every RFI. Update log promptly and on a regular basis.
  2. Note dates of when each request is made, and when a response is received.
  3. Highlight items requiring priority or expedited response.
  4. Highlight items for which a timely response has not been received to date.
  5. Identify and include improper or frivolous RFIs.

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- H. Review Time: Architect will respond and return RFIs to Contractor within seven calendar days of receipt. For the purpose of establishing the start of the mandated response period, RFIs received after 12:00 noon will be considered as having been received on the following regular working day.
  - 1. Response period may be shortened or lengthened for specific items, subject to mutual agreement, and recorded in a timely manner in progress meeting minutes.
- I. Responses: Content of answered RFIs will not constitute in any manner a directive or authorization to perform extra work or delay the project. If in Contractor's belief it is likely to lead to a change to Contract Sum or Contract Time, promptly issue a notice to this effect, and follow up with an appropriate Change Order request to County.
  - 1. Response may include a request for additional information, in which case the original RFI will be deemed as having been answered, and an amended one is to be issued forthwith. Identify the amended RFI with an R suffix to the original number.
  - 2. Do not extend applicability of a response to specific item to encompass other similar conditions, unless specifically so noted in the response.
  - 3. Upon receipt of a response, promptly review and distribute it to all affected parties, and update the RFI Log.
  - 4. Notify Architect within seven calendar days if an additional or corrected response is required by submitting an amended version of the original RFI, identified as specified above.

**3.07 SUBMITTAL SCHEDULE**

- A. Submit to Architect for review a schedule for submittals in tabular format.
  - 1. Submit at the same time as the preliminary schedule.
    - a. Submit initial Submittals Schedule within 14 days of date of Notice of Award of construction.
    - b. After review and return by Architect, resubmit Submittals Schedule within 10 days and thereafter submit updated Submittals Schedules at each Construction Progress Meeting.
    - c. Submit one copy each to Owner and Architect.
  - 2. Coordinate with Contractor's construction schedule and schedule of values.
  - 3. Format schedule to allow tracking of status of submittals throughout duration of construction.
    - a. Prepare schedules in Gantt format using software at Contractor's option, providing clear indication of sequencing and scheduling of Work, for determination of "critical path" of construction progress.
      - 1) Submittals shall be connected to the related construction element by a graphically indicated critical path on the same page.
      - 2) Present schedules using opaque reproductions on substantial paper, with sheet size a multiple of 8-1/2 by 11 inches and large enough to clearly read characters.

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4. Arrange information to include scheduled date for initial submittal, specification number and title, submittal category (for review or for information), description of item of work covered, and role and name of subcontractor.
5. Account for time required for preparation, review, manufacturing, fabrication and delivery when establishing submittal delivery and review deadline dates.

**3.08 SUBMITTALS FOR REVIEW**

- A. When the following are specified in individual sections, submit them for review:
  1. Product data.
  2. Shop drawings.
  3. Samples for selection.
  4. Samples for verification.
- B. Submit to Architect for review for the limited purpose of checking for compliance with information given and the design concept expressed in Contract Documents.
- C. Samples will be reviewed for aesthetic, color, or finish selection.
- D. After review, provide copies and distribute in accordance with SUBMITTAL PROCEDURES article below and for record documents purposes described in Section 01 78 00 - Closeout Submittals.

**3.09 SUBMITTALS FOR INFORMATION**

- A. When the following are specified in individual sections, submit them for information:
  1. Design data.
  2. Certificates.
  3. Test reports.
  4. Inspection reports.
  5. Manufacturer's instructions.
  6. Manufacturer's field reports.
  7. Other types indicated.
- B. Submit for Architect's knowledge as contract administrator or for County.

**3.10 SUBMITTALS FOR PROJECT CLOSEOUT**

- A. Submit Correction Punch List for Substantial Completion.
- B. Submit Final Correction Punch List for Substantial Completion.
- C. When the following are specified in individual sections, submit them at project closeout in compliance with requirements of Section 01 78 00 - Closeout Submittals:
  1. Project record documents.
  2. Operation and maintenance data.
    - a. Include operation and maintenance data submittals in Submittals Schedule specified above.

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- b. Provide space for review action stamps and, if required by governing authorities having jurisdiction, license seal of design Professional, if applicable.
  - 3. Warranties.
  - 4. Bonds.
  - 5. Other types as indicated.
- D. Submit for County's benefit during and after project completion.

**3.11 NUMBER OF COPIES OF SUBMITTALS**

- A. Electronic Documents: Submit one electronic copy in PDF format with renderable text; an electronically-marked up file will be returned. Create PDFs at native size and right-side up; illegible files will be rejected.
- B. Small Size Sheets, Not Larger Than 11 by 17 inch: Submit one copy; the Contractor shall make his own copies from original returned by the Architect after making his own file copy.
- C. Extra Copies at Project Closeout: See Section 01 78 00.
- D. Samples: Submit the number specified in individual specification sections; one of which will be retained by Architect.
  - 1. After review, produce duplicates.
  - 2. Retained samples will not be returned to Contractor unless specifically so stated.
  - 3. Quantity:
    - a. Submit minimum of four (4) samples of each of color, texture and pattern.
    - b. Submit one item only of actual assembly or product.
    - c. Unless otherwise noted, full-size and complete samples will be returned and may be incorporated into field mock-ups and the Work.

**3.12 SUBMITTAL PROCEDURES**

- A. General Requirements:
  - 1. Use a separate transmittal for each item.
  - 2. Submit separate packages of submittals for review and submittals for information, when included in the same specification section.
  - 3. Transmit using approved form.
  - 4. Sequentially identify each item. For revised submittals use original number and a sequential numerical suffix.
  - 5. Identify: Project; Contractor; subcontractor or supplier; pertinent drawing and detail number; and specification section number and article/paragraph, as appropriate on each copy.
    - a. For example:
      - 1) 09 21 16-1 - First submittal for Section 09 21 16 - Gypsum Board Assemblies.
      - 2) 09 21 16-2 - Second submittal for Section 09 21 16 - Gypsum Board Assemblies.
    - b. Use same number for resubmittals as original submittal, followed by a letter indicating sequential resubmittal. For example:

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- 1) 09 21 16-2A - Resubmission of second submittal for Section 09 21 16 - Gypsum Board Assemblies.
  - 2) 09 21 16-2B - Second resubmission of second submittal for Section 09 21 16 - Gypsum Board Assemblies.
6. Apply Contractor's stamp, signed or initialed certifying that review, approval, verification of products required, field dimensions, adjacent construction work, and coordination of information is in accordance with the requirements of the work and Contract Documents.
    - a. Submittals from sources other than the Contractor, or without Contractor's stamp will not be acknowledged, reviewed, or returned.
    - b. Field measurements have been determined and verified.
    - c. Conformance with requirements of Contract Drawings and Specifications is confirmed.
    - d. Catalog numbers and similar data are correct.
    - e. Work being performed by various subcontractors and trades is coordinated.
    - f. Field construction criteria have been verified, including confirmation that information submitted has been coordinated with the work being performed by others for County and actual site conditions.
    - g. All deviations from requirements of Drawings and Specifications have been identified and noted.
  7. Deliver each submittal on date noted in submittal schedule, unless an earlier date has been agreed to by all affected parties, and is of the benefit to the project.
    - a. Send submittals in electronic format via email to Architect.
    - b. Upload submittals in electronic form to Electronic Document Submittal Service website.
  8. Schedule submittals to expedite the Project, and coordinate submission of related items.
    - a. For each submittal for review, allow 15 days excluding delivery time to and from the Contractor.
    - b. For sequential reviews involving Architect's consultants, County, or another affected party, allow an additional 7 days.
  9. Identify variations from Contract Documents and product or system limitations that may be detrimental to successful performance of the completed work.
    - a. Changes in the Work shall not be authorized by submittals review actions.
    - b. No review action, implicit or explicit, shall be interpreted to authorized changes in the Work.
    - c. Changes shall only be authorized by separate written Contract Change Order or Construction Change Directive, in accordance with the Conditions of the Contract and Section 01 20 00 - Price and Payment Procedures.
  10. Provide space for Contractor and Architect review stamps.
  11. When revised for resubmission, identify all changes made since previous submission.

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12. Distribute reviewed submittals. Instruct parties to promptly report inability to comply with requirements.
  13. Incomplete submittals will not be reviewed, unless they are partial submittals for distinct portion(s) of the work, and have received prior approval for their use.
  14. Submittals not requested will be recognized, but will be returned without comment,
- B. Product Data Procedures:
1. Submit only information required by individual specification sections.
  2. Collect required information into a single submittal.
  3. Submit concurrently with related shop drawing submittal.
  4. Do not submit (Material) Safety Data Sheets for materials or products.
- C. Shop Drawing Procedures:
1. Prepare accurate, drawn-to-scale, original shop drawing documentation by interpreting Contract Documents and coordinating related work.
  2. Use of reproductions of Contract Documents in digital data form to create shop drawings is only permitted as defined in Division 01 and individual product sections.
  3. Coordination: Show all field dimensions and relationships to adjacent or critical features of Work.
  4. Generic, non-project-specific information submitted as shop drawings do not meet the requirements for shop drawings.
- D. Samples Procedures:
1. Transmit related items together as single package.
  2. Samples will be reviewed for aesthetic, color, or finish selection.
  3. Identify each item to allow review for applicability in relation to shop drawings showing installation locations.
  4. Color Selection Samples: Architect will review and select colors for Project only after all colors are received, so that colors may be properly coordinated.
  5. Copies: Submit actual samples. Photographic or printed reproductions will not be accepted.
  6. Review of Field Samples: Review by Architect of field samples will be made for the following example products, as applicable, if not otherwise required and if requested by Contractor.
    - a. Concrete wall finishes and detailing (edges, corners and reveals).
    - b. Concrete paving colors and textures.
    - c. Gypsum board textures and finishes.
    - d. Field-applied paint colors and finishes.

### 3.13 SUBMITTAL REVIEW

- A. Submittals for Review: Architect will review each submittal, and approve, or take other appropriate action.

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- B. Submittals for Information: Architect will acknowledge receipt and review. See below for actions to be taken.
- C. Architect's actions will be reflected by marking each returned submittal using virtual stamp on electronic submittals.
  - 1. Notations may be made directly on submitted items and/or listed on appended Submittal Review cover sheet.
- D. Architect's and consultants' actions on items submitted for review:
  - 1. Authorizing purchasing, fabrication, delivery, and installation:
    - a. "Approved", or language with same legal meaning.
    - b. "Approved as Noted, Resubmission not required", or language with same legal meaning.
      - 1) At Contractor's option, submit corrected item, with review notations acknowledged and incorporated.
    - c. "Approved as Noted, Resubmit for Record", or language with same legal meaning.
      - 1) Resubmit corrected item, with review notations acknowledged and incorporated. Resubmit separately, or as part of project record documents.
      - 2) Non-responsive resubmittals may be rejected.
  - 2. Not Authorizing fabrication, delivery, and installation:
    - a. "Revise and Resubmit".
      - 1) Resubmit revised item, with review notations acknowledged and incorporated.
      - 2) Non-responsive resubmittals may be rejected.
    - b. "Rejected".
      - 1) Submit item complying with requirements of Contract Documents.
- E. Architect's and consultants' actions on items submitted for information:
  - 1. Items for which no action was taken:
    - a. "Received" - to notify the Contractor that the submittal has been received for record only.
  - 2. Items for which action was taken:
    - a. "Reviewed" - no further action is required from Contractor.

**END OF SECTION**

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**SECTION 01 30 00.01  
REQUEST FOR INTERPRETATION OR INFORMATION**

**RFI NUMBER:** \_\_\_\_\_ **DATE:** \_\_\_\_\_

**PROJECT NAME: EOC PARKING LOT EXPANSION (FM08200012205)      PROJECT NO.: 3-75-80**

**TO:      RUHNAU CLARKE ARCHITECTS**

County Representative  
Attention: \_\_\_\_\_  
Contractor: \_\_\_\_\_  
Address: \_\_\_\_\_

**BRIEF SUMMARY OF RFI:** \_\_\_\_\_

Drawing No. \_\_\_\_\_ Detail No. \_\_\_\_\_  
Specification Section \_\_\_\_\_ Title \_\_\_\_\_  
Page \_\_\_\_\_ Paragraph \_\_\_\_\_

**DETAILS OF THIS RFI:** \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**SUGGESTED SOLUTION:** \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

Response required by: \_\_\_\_\_ (min. 3 full days)      Submitted By: \_\_\_\_\_  
Organization: \_\_\_\_\_

**RESPONSE:** \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Attachments: \_\_\_\_\_  
Response By: \_\_\_\_\_      Date: \_\_\_\_\_  
Organization: \_\_\_\_\_

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Copies:  File  County  Structural  Mechanical  Plumbing  Electrical  
 Civil  Landscape  other consultants

**END OF RFI**

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# SUBMITTAL / SHOP DRAWING TRANSMITTAL

To:	Ruhnau Clarke Architects	Contractor's Submittal No.	
Attn:	<b>Construction Dept.</b>		
Contractor:		Project Name:	
Street:		RCA's Project No.	
City, State:		Subcontractor:	

CONTRACTOR TO FILL OUT THE FOLLOWING COVERING ONE COMPLETE SECTION OF THE SPECIFICATIONS ONLY:

Specification Section #:	Section Title:
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<input type="checkbox"/>	Initial Submittal	Scheduled Date of Submittal	
<input type="checkbox"/>	1st Resubmittal	Scheduled Date of Submittal Return	
<input type="checkbox"/>	___ Resubmittal	Date Sent	
<input type="checkbox"/>	Submittal was a previously approved substitution.	Number of Copies	
<input type="checkbox"/>	Approved Substitution Request Transmittal Form is enclosed.	Number of Samples	

CONTRACTOR COMPLETE EITHER (A) OR (B) FOLLOWING, <u>CHECK ONE</u> :	CONSTRUCTION MANAGERS CERTIFICATION
(A) WE HAVE VERIFIED THAT THE MATERIAL OR EQUIPMENT CONTAINED IN THIS SUBMITTAL MEETS ALL THE REQUIREMENTS SPECIFIED OR SHOWN (NO EXCEPTIONS). <input type="checkbox"/>	THIS IS TO CERTIFY THAT THE CONSTRUCTION MANAGER IS REASONABLY CERTAIN THAT THE MATERIAL SPECIFIED IN THIS SUBMITTAL MEETS THE REQUIREMENTS OF THE CONTRACT DOCUMENTS, AND THE SUBMITTAL IS COMPLETE PER THE CONTRACT DOCUMENTS.  SIGNATURE: _____
	CONTRACTORS CERTIFICATION
(B) WE HAVE VERIFIED THAT THE MATERIAL OR EQUIPMENT CONTAINED IN THIS SUBMITTAL MEETS ALL THE REQUIREMENTS SPECIFIED OR SHOWN, EXCEPT FOR THE FOLLOWING DEVIATIONS (LIST DEVIATIONS ON AN ATTACHED SHEET OR INDICATE DEVIATIONS CLEARLY ON SHOP DRAWINGS OR SUBMITTALS). <input type="checkbox"/>	THIS IS TO CERTIFY THAT THE CONTRACTOR IS REASONABLY CERTAIN THAT THE MATERIAL SPECIFIED IN THIS SUBMITTAL MEETS THE REQUIREMENTS OF THE CONTRACT DOCUMENTS.  SIGNATURE: _____

**ARCHITECT'S USE ONLY BELOW THIS LINE.**

Action:

No Exception Taken    
  Make Corrections Noted    
  Rejected/Resubmit    
  Revise and Resubmit

Comments:	Date Received By RRC:
	Date Sent to Consultant:
	Structural _____
	Mechanical _____
	Electrical _____
	Other _____
Date Received From:	
Consultant _____	
No. of Copies Received _____	

Final Distribution: Contractor \_\_\_\_\_ Inspector \_\_\_\_\_ District/P.M. \_\_\_\_\_ Architect \_\_\_\_\_

Final Distribution Date: \_\_\_\_\_

**SECTION 01 35 50  
REQUESTS FOR ELECTRONIC FILES**

**PART 1 - GENERAL**

**1.01 SECTION INCLUDES**

- A. Requirements to request electronic construction document files from Architect.
- B. Hold Harmless Agreement form.

**1.02 RELATED SECTIONS**

- A. Section 01 30 00 - Administrative Requirements: Shop Drawings, Product Data and Samples.
- B. Section 01 70 00 - Execution and Closeout Requirements.
- C. Divisions 31 through 33 - Site Work.

**1.03 REQUIREMENTS**

- A. Electronic files have legal ramifications as information therein can be modified.
- B. In order to receive this electronic information, the following Hold Harmless Agreement form must be executed in its entirety, including signature by a company officer.
- C. Costs for processing and handling electronic files, however limited, will be \$250.00

**PART 2 - PRODUCTS - (NOT APPLICABLE TO THIS SECTION.)**

**PART 3 - EXECUTION**

**3.01 ELECTRONIC FILE TRANSFER PROCEDURE**

- A. Submit a check in the amount of \$250.00 along with a list of the requested sheet numbers and an acknowledged copy of this waiver to the office of the Architect, Ruhnau Clarke Architects, 3775 Tenth Street, Riverside CA 92501 - 5751 Palmer Way, Suite C, Carlsbad, CA 92010.
- B. In order to expedite the transfer, upon receipt of a PDF copy of this acknowledgement, the requested CAD/Revit/BIM files will be sent in the form of a compact disc, DVD, or thumb drive to the recipient, as requested, by UPS, similar delivery service, or other method of electronic transfer after payment is received.
- C. It is expressly understood that any transfer is done as a courtesy and can be revoked at any time by the Architect.

Agreement is on next page

County of Riverside, Facilities Management <b>EOC Parking Lot Expansion (FM08200012205)</b> RCA Project No. 3-75-80		Requests for Electronic Files 01 35 50 - 1
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**HOLD HARMLESS AGREEMENT**

**ARCHITECT'S PROJECT: EOC PARKING LOT EXPANSION (FM08200012205)**

**ARCHITECT'S PROJECT NUMBER: 3-75-80**

We, \_\_\_\_\_, understand that we may be receiving electronic media containing design information, not necessarily intended for construction. We agree to hold Ruhnau Clarke Architects harmless for any defects in this data. We agree that it shall be our responsibility to reconcile this electronic data with the paper plans, and that only the paper plans shall be regarded as legal documents for the referenced project.

Further, the Contractor acknowledges that the Architect's reports, drawings, specifications, field data, field notes, laboratory test data, calculations, estimates and other similar documents are instruments of professional service, not products. In accepting and utilizing any drawings or other data on any form of electronic media generated and provided by the Design Professionals, the Parties listed above covenant and agree that all such drawings and data are instruments of service of the Design Professionals, who shall be deemed the author of the drawings and data, and shall retain all common law, statutory law and other rights, including copyrights.

The Parties agree that in accepting and utilizing any drawings and other data, that the Design Professionals waive all responsibility for any subsequent use of these data, the accuracy of dimensions, and the interpretation of information contained herein.

The Parties further agree not to use these drawings and data, in whole or in part, for any purpose or project other than the project which is the subject of this Agreement. The Parties further agree to waive all claims against the Design Professionals resulting in any way from any unauthorized changes of the drawings and data or any other use other than for the project which is the subject of this Agreement.

The Contractor shall indemnify, defend and hold harmless the Design Professionals and its subconsultants and their officers, agents, employees from any claims, damages, losses, liabilities or expenses (including attorneys' fees) arising out of use of such documents without Consultant's prior written authorization.

Under no circumstances shall transfer of the drawings and other data be deemed a sale by the Design Professionals, and the Design Professionals make no warranties, either express or implied of the merchantability and fitness of the data for any particular purpose.

Sheet numbers or discipline requested: \_\_\_\_\_  
\_\_\_\_\_

Acknowledged by: Company Name \_\_\_\_\_

\_\_\_\_\_  
Signature of Company Officer                      Print or Type Name                      Date  
Street Address \_\_\_\_\_  
City, State, Zip Code \_\_\_\_\_  
E-mail Address \_\_\_\_\_

**END OF SECTION**

County of Riverside, Facilities Management <b>EOC Parking Lot Expansion (FM08200012205)</b> RCA Project No. 3-75-80		Requests for Electronic Files 01 35 50 - 2
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**SECTION 01 40 00  
QUALITY REQUIREMENTS**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. Contractor Quality assurance submittals.
- B. Quality assurance.
- C. Inspection agencies and services.
- D. Contractor's construction-related professional design services.
- E. Contractor's design-related professional design services.
- F. Control of installation.
- G. Mock-ups.
- H. Tolerances.
- I. Manufacturers' field services.
- J. Defect Assessment.

**1.02 RELATED REQUIREMENTS**

- A. Section 01 30 00 - Administrative Requirements: Submittal procedures.
- B. Section 01 41 00 - Regulatory Requirements: Compliance with applicable codes, ordinances and standards.
- C. Section 01 42 19 - Reference Standards.
- D. Section 01 45 33 - Code-Required Special Inspections: Testing laboratory services and inspections required by County Building Division (AHJ), during the course of construction.
- E. Section 01 60 00 - Product Requirements: Requirements for material and product quality.
  - 1. Product options, substitutions, transportation and handling requirements, storage and protection requirements, and system completeness requirements.

**1.03 REFERENCE STANDARDS**

- A. ASTM C1021 - Standard Practice for Laboratories Engaged in Testing of Building Sealants.
- B. ASTM C1077 - Standard Practice for Agencies Testing Concrete and Concrete Aggregates for Use in Construction and Criteria for Testing Agency Evaluation.
- C. ASTM C1093 - Standard Practice for Accreditation of Testing Agencies for Masonry.
- D. ASTM D3740 - Standard Practice for Minimum Requirements for Agencies Engaged in Testing and/or Inspection of Soil and Rock as Used in Engineering Design and Construction.
- E. ASTM E329 - Standard Specification for Agencies Engaged in Construction Inspection, Testing, or Special Inspection.
- F. ASTM E543 - Standard Specification for Agencies Performing Nondestructive Testing.

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- G. ASTM E699 - Standard Specification for Agencies Involved in Testing, Quality Assurance, and Evaluating of Manufactured Building Components.
- H. IAS AC89 - Accreditation Criteria for Testing Laboratories.

**1.04 DEFINITIONS**

- A. Contractor's Quality Control Plan: Contractor's management plan for executing the Contract for Construction.

**1.05 CONTRACTOR'S CONSTRUCTION-RELATED PROFESSIONAL DESIGN SERVICES**

- A. Coordination: Contractor's professional design services are subject to requirements of project's Conditions for Construction Contract.
- B. Provide such engineering design services as may be necessary to plan and safely conduct certain construction operations, pertaining to, but not limited to the following:
  - 1. Temporary sheeting, shoring, or supports.
  - 2. Temporary scaffolding.
  - 3. Temporary bracing.
  - 4. Temporary falsework for support of spanning or arched structures.
  - 5. Temporary hoist(s) and rigging.
  - 6. Investigation of soil conditions to support construction equipment.

**1.06 CONTRACTOR'S DESIGN-RELATED PROFESSIONAL DESIGN SERVICES**

- A. Coordination: Contractor's professional design services are subject to requirements of project's Conditions for Construction Contract.
- B. Base design on performance and/or design criteria indicated in individual specification sections.
- C. Scope of Contractor's Professional Design Services: Provide for the following items of work:
  - 1. Structural Design of Formwork: As described in Section 03 10 00 - Concrete Forming and Accessories.
  - 2. Concrete Mix Design: As described in Section 03 30 00 - Cast-in-Place Concrete. No specific designer qualifications are required.

**1.07 SUBMITTALS**

- A. See Section 01 30 00 - Administrative Requirements, for submittal procedures.
- B. Designer's Qualification Statement: Submit for Architect's knowledge as contract administrator, or for County's information.
  - 1. Include information for each individual professional responsible for producing, or supervising production of, design-related professional services provided by Contractor.
    - a. Full name.
    - b. Professional licensure information.
    - c. Statement addressing extent and depth of experience specifically relevant to design of items assigned to Contractor.

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- C. Quality Control Submittals Schedule
  - 1. Schedule Format: Include quality control submittals on Submittals Schedule specified in accordance with General Conditions
  - 2. Schedule Content: List all tests, inspections and reports specified to be submitted, indicating submittal number, submittal type (field test, field inspection, fabrication inspection, etcetera), scheduled date of quality control activity and date report should be made.
- D. Design Data: Submit for Architect's knowledge as contract administrator for the limited purpose of assessing compliance with information given and the design concept expressed in the Contract Documents, or for County's information.
  - 1. Include calculations that have been used to demonstrate compliance to performance and regulatory criteria provided, and to determine design solutions.
  - 2. Include required product data and shop drawings.
  - 3. Include a statement or certification attesting that design data complies with criteria indicated, such as building codes, loads, functional, and similar engineering requirements.
  - 4. Include signature and seal of design professional responsible for allocated design services on calculations and drawings.
- E. Test Reports: After each test/inspection, promptly submit two copies of report to Architect and to Contractor.
  - 1. Include:
    - a. Date issued.
    - b. Project title and number.
    - c. Name of inspector.
    - d. Date and time of sampling or inspection.
    - e. Identification of product and specifications section.
    - f. Location in the Project.
    - g. Type of test/inspection.
    - h. Date of test/inspection.
    - i. Results of test/inspection.
    - j. Compliance with Contract Documents.
    - k. When requested by Architect, provide interpretation of results.
  - 2. Test report submittals are for Architect's knowledge as contract administrator for the limited purpose of assessing compliance with information given and the design concept expressed in the Contract Documents, or for County's information.
- F. Certificates: When specified in individual specification sections, submit certification by the manufacturer and Contractor or installation/application subcontractor to Architect, in quantities specified for Product Data.
  - 1. Indicate material or product complies with or exceeds specified requirements. Submit supporting reference data, affidavits, and certifications as appropriate.

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2. Certificates may be recent or previous test results on material or product, but must be acceptable to Architect.
- G. Manufacturer's Instructions: When specified in individual specification sections, submit printed instructions for delivery, storage, assembly, installation, start-up, adjusting, and finishing, for the County's information. Indicate special procedures, perimeter conditions requiring special attention, and special environmental criteria required for application or installation.
- H. Manufacturer's Field Reports: Submit reports for Architect's benefit as contract administrator or for County.
1. Submit report in duplicate within 30 days of observation to Architect for information.
  2. Submit for information for the limited purpose of assessing compliance with information given and the design concept expressed in the Contract Documents.
- I. Erection Drawings: Submit drawings for Architect's benefit as contract administrator or for County.
1. Submit for information for the limited purpose of assessing compliance with information given and the design concept expressed in the Contract Documents.
  2. Data indicating inappropriate or unacceptable Work may be subject to action by Architect or County.

**1.08 QUALITY ASSURANCE**

- A. Testing Agency Qualifications:
1. Prior to start of work, submit agency name, address, and telephone number, and names of full time registered Engineer and responsible officer.
  2. Submit copy of report of laboratory facilities inspection made by NIST Construction Materials Reference Laboratory during most recent inspection, with memorandum of remedies of any deficiencies reported by the inspection.
  3. Qualification Statement: Provide documentation showing testing laboratory is approved by County Building Division.
  4. Qualification Statement: Provide documentation showing testing laboratory is accredited under IAS AC89.
- B. Designer Qualifications: Where professional engineering design services and design data submittals are specifically required of Contractor by Contract Documents, provide services of a Professional Engineer experienced in design of this type of work and licensed in California.
- C. Contractor's Quality Control (CQC) Plan:
1. Prior to start of work, submit a comprehensive plan describing how contract deliverables will be produced. Tailor CQC plan to specific requirements of the project. Include the following information:
    - a. Management Structure: Identify personnel responsible for quality. Include a chart showing lines of authority.
      - 1) Include qualifications (in resume form), duties, responsibilities of each person assigned to CQC function.

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- b. Management Approach: Define, describe, and include in the plan specific methodologies used in executing the work.
    - 1) Management and control of documents and records relating to quality.
    - 2) Communications.
    - 3) Coordination procedures.
    - 4) Resource management.
    - 5) Process control.
    - 6) Inspection and testing procedures and scheduling.
    - 7) Control of noncomplying work.
    - 8) Tracking deficiencies from identification, through acceptable corrective action, and verification.
    - 9) Control of testing and measuring equipment.
    - 10) Project materials certification.
    - 11) Managerial continuity and flexibility.
  - c. County will not make a separate payment for providing and maintaining a Quality Control Plan. Include associated costs in Bid price.
  - d. Acceptance of the plan is required prior to start of construction activities not including mobilization work. County's acceptance of the plan will be conditional and predicated on continuing satisfactory adherence to the plan. County reserves the right to require Contractor to make changes to the plan and operations, including removal of personnel, as necessary, to obtain specified quality of work results.
- D. Quality-Control Personnel Qualifications. Engage a person with requisite training and experience to implement and manage quality assurance (QA) and quality control (QC) for the project.

**1.09 REFERENCES AND STANDARDS - SEE SECTION 01 42 19**

**1.10 REGULATORY REQUIREMENTS FOR TESTING AND INSPECTION**

- A. Inspections, testing and approvals as required by authorities having jurisdiction. Refer to Section 01 41 00 - Regulatory Requirements and Section 01 45 33 - Code-Required Special Inspections.
- B. Standards and Code Compliance and Manufacturer's Instructions and Recommendations: Unless more stringent requirements are indicated or specified, comply with manufacturer's instructions and recommendations, reference standards and building code research report requirements in preparing, fabricating, erecting, installing, applying, connecting and finishing Work.
- C. Deviations from Standards and Code Compliance and Manufacturer's Instructions and Recommendations: Document and explain all deviations from reference standards and building code research report requirements and manufacturer's product installation instructions and recommendations, including acknowledgement by the manufacturer that such deviations are acceptable and appropriate for the Project.

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**1.11 TESTING AND INSPECTION AGENCIES AND SERVICES**

- A. As indicated in individual specification sections, County or Contractor shall employ and pay for services of an independent testing agency to perform specified testing.
- B. Employment of agency in no way relieves Contractor of obligation to perform Work in accordance with requirements of Contract Documents.
- C. Contractor Employed Agency:
  - 1. Testing agency: Comply with requirements of ASTM E329, ASTM E543, ASTM E699, ASTM C1021, ASTM C1077, ASTM C1093, and ASTM D3740.
  - 2. Laboratory Qualifications: Accredited by IAS according to IAS AC89.
  - 3. Laboratory: Authorized to operate in California.
  - 4. Laboratory Staff: Maintain a full time registered Engineer on staff to review services.
  - 5. Testing Equipment: Calibrated at reasonable intervals either by NIST or using an NIST established Measurement Assurance Program, under a laboratory measurement quality assurance program.

**PART 2 PRODUCTS - NOT USED**

**PART 3 EXECUTION**

**3.01 CONTRACTOR'S QUALITY ASSURANCE**

- A. Quality Requirements: Work shall be accomplished in accordance with quality requirements of the Drawings and Specifications, including, by reference, all Codes, laws, rules, regulations and standards. When no quality basis is prescribed, the quality shall be in accordance with the best accepted practices of the construction industry for the locale of the Project, for projects of this type.
- B. Quality Control Personnel: Contractor shall employ and assign knowledgeable and skilled personnel as necessary to perform quality control functions to ensure that the Work is provided as required.

**3.02 CONTROL OF INSTALLATION**

- A. Quality of Products: Unless otherwise indicated or specified, all products shall be new, free of defects and fit for the intended use.
- B. Monitor quality control over suppliers, manufacturers, products, services, site conditions, and workmanship, to produce work of specified quality.
- C. Comply with manufacturers' instructions, including each step in sequence.
- D. Should manufacturers' instructions conflict with Contract Documents, request clarification from Architect before proceeding.
- E. Comply with specified standards as minimum quality for the work except where more stringent tolerances, codes, or specified requirements indicate higher standards or more precise workmanship.
- F. Have work performed by persons qualified to produce required and specified quality.

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- G. Verify that field measurements are as indicated on shop drawings or as instructed by the manufacturer.
- H. Secure products in place with positive anchorage devices designed and sized to withstand stresses, vibration, physical distortion, and disfigurement.
- I. Quality of Installation: All Work shall be produced plumb, level, square and true, or true to indicated angle, and with proper alignment and relationship between the various elements.
- J. Protection of Existing and Completed Work: Take all measures necessary to preserve and protect existing and completed Work free from damage, deterioration, soiling and staining, until Acceptance by the County.
- K. Verification of Quality: Work shall be subject to verification of quality by County, or Architect in accordance with provisions of the General Conditions of the Contract.
  - 1. Contractor shall cooperate by making Work available for inspection by County, Architect or their designated representatives.
  - 2. Such verification may include mill, plant, shop, or field inspection as required.
  - 3. Provide access to all parts of the Work, including plants where materials or equipment are manufactured or fabricated.
  - 4. Provide all information and assistance as required, including that by and from subcontractors, installers, fabricators, materials suppliers and manufacturers, for verification of quality by County, or Architect.
  - 5. Contract modifications, if any, resulting from such verification activities shall be governed by applicable provisions in the General Conditions.

**3.03 MOCK-UPS**

- A. Before installing portions of the Work where mock-ups are required, construct mock-ups in location and size indicated for each form of construction and finish required to comply with the following requirements, using materials indicated for the completed Work. The purpose of mock-up is to demonstrate the proposed range of aesthetic effects and workmanship.
- B. Accepted mock-ups establish the standard of quality the Architect will use to judge the Work.
- C. Notify Architect fifteen (15) working days in advance of dates and times when mock-ups will be constructed.
- D. Provide supervisory personnel who will oversee mock-up construction. Provide workers that will be employed during the construction at Project.
- E. Tests shall be performed under provisions identified in this section and identified in the respective product specification sections.
- F. Assemble and erect specified items with specified attachment and anchorage devices, flashings, seals, and finishes.
- G. Obtain Architect's approval of mock-ups before starting work, fabrication, or construction.
  - 1. Architect will issue written comments within seven (7) working days of initial review and each subsequent follow up review of each mock-up.
  - 2. Make corrections as necessary until Architect's approval is issued.
- H. Architect will use accepted mock-ups as a comparison standard for the remaining Work.

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- I. Where mock-up has been accepted by Architect and is specified in product specification sections to be removed, protect mock-up throughout construction, remove mock-up and clear area when directed to do so by Architect.
- J. Where possible salvage and recycle the demolished mock-up materials.

**3.04 TOLERANCES**

- A. Monitor fabrication and installation tolerance control of products to produce acceptable Work. Do not permit tolerances to accumulate.
- B. Comply with manufacturers' tolerances. Should manufacturers' tolerances conflict with Contract Documents, request clarification from Architect before proceeding.
- C. Adjust products to appropriate dimensions; position before securing products in place.

**3.05 TESTING AND INSPECTION**

- A. See individual specification sections for testing required.
- B. Testing Agency Duties:
  - 1. Test samples of mixes submitted by Contractor.
  - 2. Provide qualified personnel at site. Cooperate with Architect and Contractor in performance of services.
  - 3. Perform specified sampling and testing of products in accordance with specified standards.
  - 4. Ascertain compliance of materials and mixes with requirements of Contract Documents.
  - 5. Promptly notify Architect and Contractor of observed irregularities or non-compliance of Work or products.
  - 6. Perform additional tests and inspections required by Architect.
  - 7. Submit reports of all tests/inspections specified.
- C. Limits on Testing/Inspection Agency Authority:
  - 1. Agency may not release, revoke, alter, or enlarge on requirements of Contract Documents.
  - 2. Agency may not approve or accept any portion of the Work.
  - 3. Agency may not assume any duties of Contractor.
  - 4. Agency has no authority to stop the Work.
- D. Contractor Responsibilities:
  - 1. Deliver to agency at designated location, adequate samples of materials proposed to be used that require testing, along with proposed mix designs.
  - 2. Cooperate with laboratory personnel, and provide access to the Work and to manufacturers' facilities.
  - 3. Provide incidental labor and facilities:
    - a. To provide access to Work to be tested/inspected.
    - b. To obtain and handle samples at the site or at source of Products to be tested/inspected.

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- c. To facilitate tests/inspections.
- d. To provide for storage and curing of test samples.
- 4. Notify Architect and laboratory 24 hours prior to expected time for operations requiring testing/inspection services.
- 5. Employ services of an independent qualified testing laboratory and pay for additional samples, tests, and inspections required by Contractor beyond specified requirements.
- 6. Arrange with County's agency and pay for additional samples, tests, and inspections required by Contractor beyond specified requirements.
- 7. Inspections and Tests by Authorities Having Jurisdiction:
  - a. Contractor shall cause all tests and inspections to be made for Work under this Contract, as required by Building Departments, Department of Public Works, Fire Department, Health Department and similar agencies having jurisdiction.
  - b. Excepted as specifically noted, scheduling, conducting and paying for such inspections shall be solely the Contractor's responsibility.
- 8. Inspections and Tests by Serving Utilities:
  - a. Contractor shall cause all tests and inspections required by serving utilities to be made for Work under this Contract.
  - b. Scheduling, conducting and paying for such inspections shall be solely the Contractor's responsibility.
- E. Re-testing required because of non-compliance with specified requirements shall be performed by the same agency on instructions by Architect.
- F. Costs of re-testing required because of non-compliance with specified requirements are to be paid for by Contractor.

**3.06 MANUFACTURERS' FIELD SERVICES**

- A. When specified in individual specification sections, require material or product suppliers or manufacturers to provide qualified staff personnel to observe site conditions, conditions of surfaces and installation, quality of workmanship, start-up of equipment, test, adjust, and balance equipment as applicable, and to initiate instructions when necessary.
- B. Submit qualifications of observer to Architect 30 days in advance of required observations.
  - 1. Observer subject to approval of Architect.
  - 2. Observer subject to approval of County.
- C. Report observations and site decisions or instructions given to applicators or installers that are supplemental or contrary to manufacturers' written instructions.

**3.07 FIELD QUALITY CONTROL SUBMITTALS**

- A. Administration: Make all submittals to the Architect, unless otherwise directed.
- B. Submittal Identification: Identify each submittal by Specification Section number followed by a number indicating sequential submittal for that Section. Coordinate submittal numbers with submittals specified in Section 01 30 00 - Administrative Requirements.

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1. Resubmittals shall use same number as original submittal, followed by a letter indicating sequential resubmittal.

03 30 00 - 1	First submittal for Section 03 30 00 - Cast in Place Concrete.
03 30 00 - 2	Second submittal for Section 03 30 00 - Cast in Place Concrete.
03 30 00 - 2A	Resubmittal of second submittal for Section 03 30 00 - Cast in Place Concrete.
03 30 00 - 2B	Second resubmittal of second submittal for Section 03 30 00 - Cast in Place Concrete.

- C. Project Identification: Title each submittal with Project name, submittal date and Architect's Project number.
- D. Copies: Provide PDF copies electronically transmitted or submit 6 copies, minimum, of reports of quality control reports on dry-process xerographic copies only.
- E. Contractor's Review:
  1. Submittals shall be made in accordance with requirements specified herein and in individual Sections.
  2. Indicate clearly on each submittal the specified or referenced values for each quality control activity and the values obtained.
  3. Note clearly and sign each submittal certifying that reported quality control activity "Conforms" or "Does Not Conform".
- F. Changes and Deviations:
  1. Identify all deviations from requirements of Drawings and Specifications.
  2. Changes in the Work shall not be authorized by submittals review actions.
  3. No review action, implicit or explicit, shall be interpreted to authorized changes in the Work.
  4. Changes shall only be authorized by separate written Change Order or Construction Change Directive, in accordance with the General Conditions and 01 20 00 - Price and Payment Procedures.
- G. Record Submittals: When record submittals are specified, submit three copies or sets only. Record submittals will not be reviewed but will be retained for historical and maintenance purposes.
- H. Unsolicited Submittals: Unsolicited submittals will be returned unreviewed.

### 3.08 ARCHITECT'S REVIEW

- A. General:
  1. Submitted Report review by Architect and Architect's consultants shall be only for general conformance with the design concept and requirements based on the information presented.
  2. Neither Architect nor Architect's consultants shall verify submitted quality control data.

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- B. Contract Requirements:
  1. Review by Architect and Architect's consultants shall not relieve the Contractor from compliance with requirements of the Drawings and Specifications.
  2. Changes shall only be authorized by separate written Change Order or Construction Change Directive, in accordance with the General Conditions and 01 20 00 - Price and Payment Procedures.
- C. Observations by Architect and Architect's Consultants: Periodic and occasional observations of Work in progress will be made by Architect and Architect's consultants as deemed necessary to review progress of Work and general conformance with design intent.

**3.09 DEFECT ASSESSMENT**

- A. Replace Work or portions of the Work not conforming to specified requirements, at no change in Contract Sum or Contract Time.
- B. If, in the opinion of Architect, it is not practical to remove and replace the work, Architect will direct an appropriate remedy or adjust payment.
- C. Architect's Acceptance and Rejection of Work: Architect reserves the right to reject all Work not in conformance to the requirements of the Drawings and Specifications.
- D. Acceptance of Non-Conforming Work: Acceptance of non-conforming Work, without specific written acknowledgement and approval of the County, shall not relieve the Contractor of the obligation to correct such Work.
  1. Acceptance of structurally related non-conforming work shall be submitted to AHJ for review and approval.
- E. Contract Adjustment for Non-conforming Work:
  1. Should Architect or County determine that it is not feasible or in County's interest to require non-conforming Work to be repaired or replaced, an equitable reduction in Contract Sum shall be made by agreement between County and Contractor.
  2. If equitable amount cannot be agreed upon, a Construction Change Directive will be issued and the amount in dispute resolved in accordance with applicable provisions of the General Conditions.
- F. Non-Responsibility for Non-Conforming Work: Architect and Architect's consultants disclaim any and all responsibility for Work produced not in conformance with the Drawings and Specifications.

**END OF SECTION**

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**SECTION 01 41 00  
REGULATORY REQUIREMENTS**

**PART 1 GENERAL**

**1.01 AUTHORITY AND PRECEDENCE OF CODES, ORDINANCES AND STANDARDS**

- A. Authority: All codes, ordinances and standards referenced in the Drawings and Specifications shall have the full force and effect as though printed in their entirety in the Specifications.
- B. Precedence:
  - 1. Where specified requirements differ from the requirements of applicable codes, ordinances and standards, the more stringent requirements take precedence.
  - 2. Where the Drawings or Specifications require or describe products or execution of better quality, higher standard or greater size than required by applicable codes, ordinances and standards, the Drawings and Specifications take precedence so long as such increase is legal.
  - 3. Where no requirements are identified in the Drawings or Specifications, comply with all requirements of applicable codes, ordinances and standards of authorities having jurisdiction.
- C. Applicable Codes, Laws and Ordinances: Refer also to Section 01 10 00 - Summary, regarding permits and licenses.
  - 1. Performance of the Work is be governed by all applicable laws, ordinances, rules and regulations of Federal, State and local governmental agencies and jurisdictions having authority over the Project, including accessibility requirements.
  - 2. Performance of the Work shall be accomplished in conformance with all rules and regulations of public utilities, utility districts and other agencies serving the development.
  - 3. Where such laws, ordinances, rules and regulations require more care or greater time to accomplish Work, or require better quality, higher standards or greater size of products, Work shall be accomplished in conformance to such requirements with no change to the Contract Time and Contract Sum, except where changes in laws, ordinances, rules and regulations occur subsequent to the execution date of the Agreement.
- D. Applicable Building Codes: References on the Drawings or in the Specifications to "code" or "building code" not otherwise identified shall mean the codes specified below, together with all additions, amendments, changes, and interpretations adopted by code authorities of the jurisdiction having authority over the Project.
- E. Performance of the Work shall meet or exceed the minimum regulatory requirements applicable to this project are summarized in this section, as adopted by County Building Division:
  - 1. Part 1, Title 24 CCR - 2022 California Administrative Code.
  - 2. Part 2, Title 24 CCR - 2022 California Building Code (CBC); Volumes 1 and 2.
    - a. Based on ICC (IBC) - ICC International Building Code, 2021.

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- b. Effective dates of referenced standards are according to Chapter 35.
  - 3. Part 3, Title 24 CCR - 2022 California Electrical Code.
    - a. 2023 is current NFPA 70, use the CEC based on the NFPA 70-NEC 2020 edition as modified.
  - 4. Part 4, Title 24 CCR - 2022 California Mechanical Code (CMC).
    - a. Based on IAPMO (UMC) - Uniform Mechanical Code, 2021.
  - 5. Part 5, Title 24 CCR - 2022 California Plumbing Code (CPC).
    - a. Based on IAPMO (UPC) - Uniform Plumbing Code, 2021.
  - 6. Part 6, Title 24 CCR - 2022 California Energy Code.
  - 7. Part 8, Title 24 CCR - 2022 California Historical Building Code.
  - 8. Part 9, Title 24 CCR - 2022 California Fire Code (CFC).
    - a. Based on ICC (IFC) - International Fire Code; 2021.
  - 9. Part 10, Title 24 CCR - 2022 California Existing Buildings Code.
    - a. Based on ICC (IEBC) - ICC International Existing Buildings Code, 2021.
  - 10. Part 11, Title 24 CCR - 2022 California Green Building Standards Code (CalGreen).
  - 11. Part 12, Title 24 CCR - 2022 California Referenced Standards Code.
  - 12. Title 19 CCR, Public Safety
- F. Erosion and Sedimentation Control Regulations:
- 1. California Codes and Regulations; Title 24, California Building Code, Parts 1 & 2.
  - 2. State of California State Water Resources Control Board Regulations.
  - 3. EPA (NPDES) - National Pollutant Discharge Elimination System (NPDES), Construction General Permit; current edition.
- G. Maintain on site during construction, a copy of California Codes and Regulations; Title 24, California Building Code, Parts 1 through 5.

**1.02 SUMMARY OF REFERENCE STANDARDS**

- A. Regulatory requirements applicable to this project are the following:
- B. California Referenced Standards Code: Chapter 12-7-4 Fire Resistive Standards, for fire rated doors.
- C. National Fire Protection Association (NFPA): (Partial List of Applicable Standards)
  - 1. Reference CBC for applicable NFPA Standards - 2022 CBC (SFM) Chapter 35.
  - 2. NFPA 241 - Standard for Safeguarding Construction, Alteration, and Demolition Operations; 2019.
- D. 28 CFR 35 - Nondiscrimination on the Basis of Disability in State and Local Government Services; Final Rule; Department of Justice.
- E. 28 CFR 36 - Nondiscrimination by Public Accommodations and in Commercial Facilities; Final Rule; Department of Justice.
- F. 36 CFR 1191 - Americans with Disabilities Act (ADA) Accessibility Guidelines for Buildings and Facilities; Architectural Barriers Act (ABA) Accessibility Guidelines.

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- G. ADA Standards - Americans with Disabilities Act (ADA) Standards for Accessible Design.
- H. 29 CFR 1910 - Occupational Safety and Health Standards.

**1.03 RELATED REQUIREMENTS**

- A. Section 01 40 00 - Quality Requirements.

**PART 2 PRODUCTS - NOT USED**

**PART 3 EXECUTION - NOT USED**

**END OF SECTION**

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**SECTION 01 42 19  
REFERENCE STANDARDS**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. Requirements relating to referenced standards.
- B. Reference standards full title and edition date.

**1.02 QUALITY ASSURANCE**

- A. For products or workmanship specified by reference to a document or documents not included in the Project Manual, also referred to as reference standards, comply with requirements of the standard, except when more rigid requirements are specified or are required by applicable codes.
- B. Conform to reference standard of date of issue specified in the individual specification sections, except where a specific date is established by applicable code.
- C. Obtain copies of standards when required by Contract Documents.
- D. Maintain copy at project site during submittals, planning, and progress of the specific work, until Date of Final Inspection.
- E. Should specified reference standards conflict with Contract Documents, request clarification from the Architect before proceeding.
- F. Neither the contractual relationships, duties, or responsibilities of the parties in Contract nor those of the Architect shall be altered by Contract Documents by mention or inference otherwise in any reference document.

**PART 2 CONSTRUCTION INDUSTRY ORGANIZATION DOCUMENTS**

**2.01 CAL -- STATE OF CALIFORNIA**

- A. CAL TITLE 24 P6 - California Code of Regulations, Title 24, Part 6 (California Energy Code).
- B. CAL (CDPH SM) - Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers Version 1.2.
- C. CAL (OSHA) TITLE 8 SC 7 - California Code of Regulations, Title 8, Subchapter 7, General Industry Safety Orders.
- D. CEC-500-2013-045 - Advanced Automated HVAC Fault Detection and Diagnostics Commercialization Program.

**2.02 CARB -- CALIFORNIA AIR RESOURCES BOARD**

- A. CARB (ATCM) - Airborne Toxic Control Measure to Reduce Formaldehyde Emissions from Composite Wood Products; California Air Resources Board.
- B. CARB (SCM) - Suggested Control Measure for Architectural Coatings; California Air Resources Board.

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**2.03 TMS -- THE MASONRY SOCIETY**

- A. TMS 402/602 - Building Code Requirements and Specification for Masonry Structures.

**PART 3 UNITED STATES GOVERNMENT AND RELATED AGENCIES DOCUMENTS**

**3.01 CFR -- CODE OF FEDERAL REGULATIONS**

- A. ADA Standards - Americans with Disabilities Act (ADA) Standards for Accessible Design.
- B. 16 CFR 260.13 - Guides for the Use of Environmental Marketing Claims; Federal Trade Commission; Recycled Content.
- C. 16 CFR 1201 - Safety Standard for Architectural Glazing Materials.
- D. 28 CFR 36 - Nondiscrimination by Public Accommodations and in Commercial Facilities; Final Rule; Department of Justice.
- E. 29 CFR 1910 - Occupational Safety and Health Standards.
- F. 29 CFR 1910, Subpart D - Walking-Working Surfaces, 1910.21-1910.30.
- G. 29 CFR 1910.23 - Ladders.
- H. 29 CFR 1910.38 - Emergency action plans.
- I. 29 CFR 1910.132-138 - Personal Protective Equipment.
- J. 29 CFR 1910.134 - Respiratory protection.
- K. 29 CFR 1926.62 - Lead.
- L. 29 CFR 1926.1101 - Asbestos.
- M. 36 CFR 1191 - Americans with Disabilities Act (ADA) Accessibility Guidelines for Buildings and Facilities; Architectural Barriers Act (ABA) Accessibility Guidelines.
- N. 39 CFR 111 - U.S. Postal Service Standard 4C.
- O. 40 CFR 59, Subpart D - National Volatile Organic Compound Emission Standards for Architectural Coatings; U.S. Environmental Protection Agency.
- P. 40 CFR 60 - Standards of Performance for New Stationary Sources.
- Q. 40 CFR 273 - Standards For Universal Waste Management.
- R. 40 CFR 280 - Technical Standards and Corrective Action Requirements for Owners and Operators of Underground Storage Tanks.
- S. 40 CFR 761 - Polychlorinated Biphenyls (PCBs) Manufacturing, Processing, Distribution In Commerce, And Use Prohibitions.
- T. 47 CFR 15 - Radio Frequency Devices.
- U. 47 CFR 68 - Connection of Terminal Equipment to the Telephone Network.
- V. 49 CFR 37 - Transportation Services for Individuals with Disabilities (ADA).
- W. 49 CFR 178 - Specifications for Packaging.
- X. 49 CFR 192.285 - Plastic Pipe: Qualifying Persons to Make Joints.

**3.02 CPSC -- CONSUMER PRODUCTS SAFETY COMMISSION**

- A. CPSC Pub. No. 325 - Public Playground Safety Handbook.

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**3.03 EPA -- ENVIRONMENTAL PROTECTION AGENCY**

- A. EPA (NPDES) - National Pollutant Discharge Elimination System (NPDES), Construction General Permit.
- B. EPA 600/4-90/010 - Compendium of Methods for the Determination of Air Pollutants in Indoor Air.
- C. EPA 600-4-790-20 - Methods for Chemical Analysis of Water and Wastes.
- D. EPA 625/1-86/021 - Design Manual: Municipal Wastewater Disinfection.
- E. EPA 625/R-96/010b - Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air.
- F. EPA 712-C-02-190 - Health Effects Test Guidelines OPPTS 870.1100 Acute Oral Toxicity.

**3.04 FDA -- FOOD AND DRUG ADMINISTRATION**

- A. FDA Food Code - Chapter 6 - Physical Facilities.

**3.05 FEMA -- U.S. FEDERAL EMERGENCY MANAGEMENT AGENCY**

- A. FEMA (MAPS) - FEMA Map Service Center.
- B. FEMA 412 - Installing Seismic Restraints for Mechanical Equipment.
- C. FEMA 413 - Installing Seismic Restraints for Electrical Equipment.
- D. FEMA 414 - Installing Seismic Restraints for Duct and Pipe.
- E. FEMA E-74 - Reducing the Risks of Nonstructural Earthquake Damage.

**3.06 FS -- FEDERAL SPECIFICATIONS AND STANDARDS (GENERAL SERVICES ADMINISTRATION)**

- A. FED-STD-595C - Colors Used in Government Procurement (Fan Deck)..
- B. FS L-F-001641 - Floor Covering Translucent or Transparent Vinyl Surface with Backing; 1971, and Amendment 2, 1982.
- C. FS L-S-125 - Screening, Insect, Nonmetallic.
- D. FS RR-P-1352 - Partitions, Toilet, Complete; Revision C, 1989.
- E. FS RR-T-650 - Treads, Metallic and Nonmetallic, Skid Resistant.
- F. FS RR-W-365 - Wire Fabric (Insect Screening); 1980, Rev. A (Amended 1986).
- G. FS SS-T-312 - Tile, Floor: Asphalt, Rubber, Vinyl, and Vinyl Composition; Revision B, 1974, and Amendment 1, 1979.
- H. FS TT-B-1325 - Beads (Glass Spheres) Retro-Reflective.
- I. FS TT-P-115 - Paint, Traffic (Highway, White and Yellow); Revision F, 1984.
- J. FS TT-P-1952 - Paint, Traffic and Airfield Marking, Waterborne.
- K. FS W-C-375 - Circuit Breakers, Molded Case; Branch Circuit and Service.
- L. FS W-C-596 - Connector, Electrical, Power, General Specification for.
- M. FS W-S-896 - Switches, Toggle (Toggle and Lock), Flush Mounted (General Specification).

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- N. STATE STD 01.01 - Certification Standard Forced Entry and Ballistic Resistance of Structural Systems; Physical Security Division, Office of Physical Security Programs, Bureau of Diplomatic Security, United States Department of State.
- O. UFC 4-010-01 - DoD Minimum Antiterrorism Standards for Buildings.
- P. USPS Handbook AS-503 - Standard Design Criteria; United States Postal Service.

**3.07 GSA -- U.S. GENERAL SERVICES ADMINISTRATION**

- A. GSA PBS-P100 - Facilities Standards for the Public Buildings Service.

**3.08 NIJ -- NATIONAL INSTITUTE OF JUSTICE (DEPT. OF JUSTICE)**

- A. NIJ 0108.01 - Standard for Ballistic Resistant Protective Materials.

**3.09 PS -- PRODUCT STANDARDS**

- A. PS 1 - Structural Plywood.
- B. PS 2 - Performance Standard for Wood Structural Panels.
- C. PS 20 - American Softwood Lumber Standard.

**3.10 USDA -- UNITED STATES DEPARTMENT OF AGRICULTURE**

- A. USDA TR-55 - Urban Hydrology for Small Watersheds; USDA Natural Resources Conservation Service.

**3.11 USGS -- UNITED STATES GEOLOGICAL SURVEY**

- A. USGS (FMWQ) - National Field Manual for the Collection of Water-Quality Data; United States Geological Survey.

**END OF SECTION**

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**SECTION 01 45 33  
CODE-REQUIRED SPECIAL INSPECTIONS**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. Code-required special inspections.
- B. Testing services incidental to special inspections.
- C. Submittals.
- D. Manufacturers' field services.
- E. Fabricators' field services.

**1.02 RELATED REQUIREMENTS**

- A. Document 00 31 00 - Available Project Information: Soil investigation data.
- B. Section 01 30 00 - Administrative Requirements: Submittal procedures.
- C. Section 01 40 00 - Quality Requirements.
- D. Section 01 42 19 - Reference Standards.
- E. Section 01 60 00 - Product Requirements: Requirements for material and product quality.

**1.03 DEFINITIONS**

- A. Code or Building Code: California Building Code and, more specifically, Chapter 17 - Structural Tests and Special Inspections, of same.
- B. Authority Having Jurisdiction (AHJ): Agency or individual officially empowered to enforce the building, fire and life safety code requirements of the permitting jurisdiction in which the Project is located. AHJ for this Project is County Building Division.
- C. Special Inspection:
  - 1. Special inspections are inspections and testing of materials, installation, fabrication, erection or placement of components and connections mandated by the CBC that also require special expertise to ensure compliance with the approved contract documents and the referenced standards.
  - 2. Special inspections are separate from and independent of tests and inspections conducted by County or Contractor for the purposes of quality assurance and contract administration.

**1.04 REFERENCE STANDARDS**

- A. ACI CODE-318 - Building Code Requirements for Structural Concrete and Commentary.
- B. ASTM C31/C31M - Standard Practice for Making and Curing Concrete Test Specimens in the Field.
- C. ASTM C172/C172M - Standard Practice for Sampling Freshly Mixed Concrete.

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- D. ASTM D1556/D1556M - Standard Test Method for Density and Unit Weight of Soil in Place by Sand-Cone Method.
- E. ASTM D1557 - Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 ft-lbf/ft<sup>3</sup> (2,700 kN m/m<sup>3</sup>)).
- F. ASTM D3740 - Standard Practice for Minimum Requirements for Agencies Engaged in Testing and/or Inspection of Soil and Rock as Used in Engineering Design and Construction.
- G. ASTM E329 - Standard Specification for Agencies Engaged in Construction Inspection, Testing, or Special Inspection.
- H. ASTM E543 - Standard Specification for Agencies Performing Nondestructive Testing.
- I. ICC-ES AC308 - Acceptance Criteria for Post-Installed Adhesive Anchors in Concrete Elements.
- J. TMS 402/602 - Building Code Requirements and Specification for Masonry Structures.

**1.05 SUBMITTALS**

- A. See Section 01 30 00 - Administrative Requirements, for submittal procedures.
- B. Special Inspection Agency Qualifications: Prior to the start of work, the Special Inspection Agency is required to:
  - 1. Submit agency name, address, and telephone number, names of full time registered Engineer and responsible officer.
  - 2. Submit copy of report of laboratory facilities inspection made by NIST Construction Materials Reference Laboratory during most recent inspection, with memorandum of remedies of any deficiencies reported by the inspection.
  - 3. Submit certification that Special Inspection Agency is acceptable to AHJ.
- C. Testing Agency Qualifications: Prior to the start of work, the Testing Agency is required to:
  - 1. Submit agency name, address, and telephone number, and names of full time registered Engineer and responsible officer.
  - 2. Submit certification that Testing Agency is acceptable to AHJ.
- D. Manufacturer's Qualification Statement: Manufacturer is required to submit documentation of manufacturing capability and quality control procedures. Include documentation of AHJ approval.
- E. Fabricator's Qualification Statement: Fabricator is required to submit documentation of fabrication facilities and methods as well as quality control procedures.
- F. Distribution List: The Testing Laboratory will make the following distribution of test and inspection reports:
  - 1 County
  - 2 Architect
  - 1 Structural Engineer
  - 1 Contractor
  - 1 County's Project Inspector
  - 1 County Building Division

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- G. Special Inspection Reports: After each special inspection, Special Inspector is required to promptly submit at least two copies of report; one to Architect and one each to the distribution list.
  - 1. Include:
    - a. Date issued.
    - b. Project title and number.
    - c. Name of Special Inspector.
    - d. Date and time of special inspection.
    - e. Identification of product and specifications section.
    - f. Location in the Project.
    - g. Type of special inspection.
    - h. Date of special inspection.
    - i. Results of special inspection.
    - j. Compliance with Contract Documents.
  - 2. Final Special Inspection Report: Document special inspections and correction of discrepancies prior to the start of the work.
  
- H. Fabricator Special Inspection Reports: After each special inspection of fabricated items at the Fabricator's facility, Special Inspector is required to promptly submit at least two copies of report; one to Architect and one each to the distribution list.
  - 1. Include:
    - a. Date issued.
    - b. Project title and number.
    - c. Name of Special Inspector.
    - d. Date and time of special inspection.
    - e. Identification of fabricated item and specification section.
    - f. Location in the Project.
    - g. Results of special inspection.
    - h. Verification of fabrication and quality control procedures.
    - i. Compliance with Contract Documents.
    - j. Compliance with referenced standard(s).
  
- I. Test Reports: After each test or inspection, promptly submit at least two copies of report; one to Architect and one each to the distribution list.
  - 1. Include:
    - a. Date issued.
    - b. Project title and number.
    - c. Name of inspector.
    - d. Date and time of sampling or inspection.
    - e. Identification of product and specifications section.

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- f. Location in the Project.
  - g. Type of test or inspection.
  - h. Date of test or inspection.
  - i. Results of test or inspection.
  - j. Compliance with Contract Documents.
2. Test reports shall include all tests made, regardless of whether such tests indicate that the material is satisfactory or unsatisfactory.
- a. Samples taken but not tested shall also be reported.
  - b. Records of special sampling operations as required shall also be reported.
  - c. Reports shall show that the material or materials were sampled and tested in accordance with the requirements of the CBC, and with the approved specifications.
  - d. They shall also state definitely whether or not the material or materials tested comply with requirements.
  - e. Test reports shall be issued within 14 days of finding being known, to all parties listed above.
- J. Certificates: When specified in individual special inspection requirements, Special Inspector shall submit certification by the manufacturer, fabricator, and installation subcontractor to Architect and AHJ, in quantities specified for Product Data.
- 1. Indicate material or product complies with or exceeds specified requirements. Submit supporting reference data, affidavits, and certifications as appropriate.
  - 2. Certificates may be recent or previous test results on material or product, but must be acceptable to Architect and AHJ.
- K. Manufacturer's Field Reports: Submit reports to Architect.
- 1. Submit report in duplicate within 7 days of observation to Architect for information.
  - 2. Submit for information for the limited purpose of assessing compliance with information given and the design concept expressed in Contract Documents.
- L. Fabricator's Field Reports: Submit reports to Architect and AHJ.
- 1. Submit report in duplicate within 30 days of observation to Architect for information.
  - 2. Submit for information for the limited purpose of assessing compliance with information given and the design concept expressed in Contract Documents.

**1.06 SPECIAL INSPECTION AGENCY**

- A. County will employ services of a Special Inspection Agency to perform inspections and associated testing and sampling in accordance with ASTM E329 and required by the building code.
- B. The Special Inspection Agency may employ and pay for services of an independent testing agency to perform testing and sampling associated with special inspections and required by the building code.
- C. Employment of agency in no way relieves Contractor of obligation to perform work in accordance with requirements of Contract Documents.

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**1.07 TESTING AND INSPECTION AGENCIES**

- A. County may employ services of an independent testing agency to perform additional testing and sampling associated with special inspections but not required by the building code.
- B. Employment of agency in no way relieves Contractor of obligation to perform work in accordance with requirements of Contract Documents.

**1.08 QUALITY ASSURANCE**

- A. Testing and inspection services which are performed shall be in accordance with requirements of the CBC, and as specified herein. Testing and inspection services shall verify that work meets the requirements of the Construction Documents.
- B. In general, tests and inspections for structural materials shall include all items enumerated on the Structural Tests and Inspections list for this project as prepared and distributed by the Architect.
- C. Copies of Documents at Project Site: Maintain at the project site a copy of each referenced document.

**1.09 INSPECTION BY THE COUNTY**

- A. The County shall have the right to reject materials and workmanship which are defective, or to require their correction.
  - 1. Rejected workmanship shall be satisfactorily corrected and rejected materials shall be removed from the premises without charge to the County.
  - 2. If the Contractor does not correct such rejected work within a reasonable time, the County may correct such rejected work and charge the expense to the Contractor.
- B. Should it be considered necessary or advisable by the County at any time before final acceptance of the entire work to make an examination of work already completed by removing or tearing out the completed work; the Contractor shall on request promptly furnish necessary facilities, labor and materials.
  - 1. If such work is found to be defective in any respect due to fault of the Contractor or his subcontractor, he shall defray all expenses of such examinations and of satisfactory reconstruction. .
  - 2. If, however, such work is found to meet the requirements of the Contract, the additional cost of labor and material necessarily involved in the examination and replacement shall be allowed the Contractor.

**PART 2 PRODUCTS - NOT USED**

**PART 3 EXECUTION**

**3.01 SCHEDULE OF SPECIAL INSPECTIONS, GENERAL**

- A. Frequency of Special Inspections: Special Inspections are indicated as continuous or periodic.

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1. Continuous Special Inspection: Special Inspection Agency is required to be present in the area where the work is being performed and observe the work at all times the work is in progress.
  2. Periodic Special Inspection: Special Inspection Agency is required to be present in the area where work is being performed and observe the work part-time or intermittently and at the completion of the work.
- B. Tests and inspections for the following will be required in accordance with the current CBC, unless otherwise specified.

**3.02 SPECIAL INSPECTIONS FOR CONCRETE CONSTRUCTION (CHAPTER 17 AND 19)**

- A. Inspection:
1. Job Site Inspection: CBC 1705.3 and 1901.4.
- B. Reinforcing Steel, Including: Verify compliance with approved contract documents and ACI CODE-318, Sections 20.2, 25.2 through 25.7, and 26.6.
1. Reinforcing Bars: CBC 1901.4.
- C. Anchors Cast in Concrete: Verify compliance with ACI CODE-318; periodic.
- D. Bolts Installed in Concrete: Where allowable loads have been increased or where strength design is used, verify compliance with approved Contract Documents and ICC-ES AC308 approved report prior to and during placement of concrete; continuous.
- E. Anchors Post-Installed in Hardened Concrete: Verify compliance with ACI CODE-318.
- F. Anchors Installed in Hardened Concrete: Verify compliance with ACI CODE-318; periodic.
- G. Design Mix: Verify plastic concrete complies with the design mix in approved contract documents and with CBC Chapter 19, ACI CODE-318, Sections 26.4.3, 26.4.4; periodic.
1. Proportions of Concrete: CBC 1904 (Durability) and 1905 (Modifications to ACI CODE-318).
- H. Concrete Sampling Concurrent with Strength Test Sampling: Each time fresh concrete is sampled for strength tests, verify compliance with ASTM C172/C172M, ASTM C31/C31M, and ACI CODE-318, Chapter 26.5, 26.12, and record the following, continuous:
1. Slump.
  2. Air content.
  3. Temperature of concrete.
- I. Concrete Placement: Verify application techniques comply with approved Contract Documents and ACI CODE-318, Chapter 26.5; continuous.
- J. Specified Curing Temperature and Techniques: Verify compliance with ACI CODE-318, Chapter 26.5.3-26.5.5; continuous.
- K. Formwork Shape, Location and Dimensions: Verify compliance with approved Contract Documents and ACI CODE-318, Chapter 26.11.1.2(b); continuous.

**3.03 SPECIAL INSPECTIONS FOR MASONRY CONSTRUCTION (CHAPTER 21)**

- A. Masonry Structures Subject to Special Inspection:
1. Masonry construction when required by the quality assurance program of TMS 402/602.

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2. Engineered masonry in structures classified as "low hazard..." and "substantial hazard to human life in the event of failure".
- B. Verify each item below complies with approved Contract Documents and the applicable articles of TMS 402/602.
1. Inspections and Approvals:
    - a. Verify compliance with the required inspection provisions of the approved Contract Documents; periodic.
    - b. Verify approval of submittals required by Contract Documents; periodic.
  2. Compressive Strength of Masonry: Verify compressive strength of masonry units prior to start of construction unless specifically exempted by code; periodic.
    - a. Comply with CBC 2105A.2 Compressive Strength.
  3. Slump Flow and Visual Stability Index (VSI): Verify compliance as self consolidating grout arrives on site; continuous.
  4. Joints and Accessories: When masonry construction begins, verify:
    - a. Proportions of site prepared mortar; periodic.
    - b. Construction of mortar joints; periodic.
    - c. Location of reinforcement, connectors, prestressing tendons, anchorages, etc; periodic.
  5. Structural Elements, Joints, Anchors, Protection: During masonry construction, verify:
    - a. Size and location of structural elements; periodic.
    - b. Type, size and location of anchors, including anchorage of masonry to structural members, frames or other construction; periodic.
    - c. Size, grade and type of reinforcement, anchor bolts and prestressing tendons and anchorages; periodic.
    - d. Welding of reinforcing bars; continuous.
    - e. Preparation, construction and protection of masonry against hot weather above 90 degrees F and cold weather below 40 degrees F; periodic.
  6. Grouting Preparation: Prior to grouting, verify:
    - a. Grout space is clean; periodic.
    - b. Correct placement of reinforcing, connectors, prestressing tendons and anchorages; periodic.
    - c. Correctly proportioned site prepared grouts and prestressing grout for bonded tendons; periodic.
    - d. Correctly constructed mortar joints; periodic.
  7. Preparation of Grout Specimens, Mortar Specimens and Prisms: Observe preparation of specimens; periodic.

**3.04 SPECIAL INSPECTIONS FOR SOILS**

- A. Materials and Placement: Verify each item below complies with approved construction documents and approved geotechnical report.

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1. Design bearing capacity of material below shallow foundations; periodic.
  2. Design depth of excavations and suitability of material at bottom of excavations; periodic.
  3. Materials, densities, lift thicknesses; placement and compaction of backfill: continuous.
  4. Subgrade, prior to placement of compacted fill verify proper preparation; periodic.
- B. Testing: Classify and test excavated material; periodic.
- C. Excavations, Foundations and Retaining Walls (Chapters 17, 18, and 33):
1. Earth Compaction: CBC 1705.6; Table 1705.6, periodic; 1804.6.
  2. Verify use of proper materials, densities, and lift thicknesses during placement and compaction of compacted fill: CBC 1705.6; Table 1705.6, continuous; 1804.6.
- D. The Geotechnical Engineer of record or a Geotechnical Engineer selected by the County will provide continuous inspection of fill and will field test fill and earth backfill as placed and compacted, and inspect excavations and subgrade before concrete is placed and provide periodic inspection of open excavations, embankments, and other cuts or vertical surfaces of earth.
1. The Geotechnical Engineer will submit a Verified Report indicating observations, tested fills, and opinion the fills were placed in accordance with the project specifications.
- E. Contractor shall remove unsatisfactory material, re-roll, adjust moisture, place new material, or in the case of excavations, provide proper protective measures, perform other operations necessary, as directed by the Geotechnical Engineer whose decisions and directions will be considered final.
- F. Soils Test and Inspection Procedure:
1. Allow sufficient time for testing, and evaluation of results before material is needed. The Geotechnical Engineer shall be sole and final judge of suitability of all materials.
  2. Laboratory compaction tests to be used will be in accordance with ASTM D1557.
  3. Field density tests will be made in accordance with ASTM D1556/D1556M.
  4. Number of tests will be determined by Geotechnical Engineer. Materials in question may not be used pending test results.
  5. Excavation and embankment inspection procedure. Geotechnical Engineer will visually or otherwise examine such areas for bearing values, cleanliness and suitability.
  6. Earthwork Test Reports: In order to avoid misinterpretations by the reviewing agencies, all retest results shall be reported on the same sheet, immediately following the previous failure test to which it is related. Retests shall be clearly noted as such.

**3.05 SPECIAL ARCHITECTURAL INSPECTIONS**

- A. Signs and/or identification devices:
1. Prior to issuance of a final Certificate of Occupancy, Enforcing Agency shall verify installation of signs for information content, appearance, location and Braille per CBC 11B-703.1.1.2.
    - a. Inspection shall include, but not limited to:

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- 1) Braille dots and cells are properly spaced and the size proportion and type raised characters are in compliance with these regulations.
- 2) Tactile exit signage per CBC 1013.4 and 11B-216.4.1 Exit doors.
- 3) Tactile floor designation signs in stairways per CBC 1023.9 Stairway identification signs.
- 4) Tactile special egress control device signs per CBC 1010.1.9.7 Delayed Egress Locks, item 5.1.
- 5) Elevator car control identification per CBC 11B-407.4.6-8 Elevator car controls.
- 6) Sanitary facilities signage per CBC 11B-216.8 Toilet rooms and bathing rooms; and 11B-703.7.2.6 Toilet and bathing facilities geometric symbols.

**3.06 SPECIAL INSPECTION AGENCY DUTIES AND RESPONSIBILITIES**

- A. Special Inspection Agency shall:
  1. Verify samples submitted by Contractor comply with the referenced standards and the approved Contract Documents.
  2. Provide qualified personnel at site. Cooperate with Architect and Contractor in performance of services.
  3. Perform specified sampling and testing of products in accordance with specified reference standards.
  4. Ascertain compliance of materials and products with requirements of Contract Documents.
  5. Promptly notify Architect and Contractor of observed irregularities or non-conformance of work or products.
  6. Perform additional tests and inspections required by Architect.
  7. Attend preconstruction meetings and progress meetings.
  8. Submit reports of all tests or inspections specified.
- B. Limits on Special Inspection Agency Authority:
  1. Agency may not release, revoke, alter, or enlarge on requirements of Contract Documents.
  2. Agency may not approve or accept any portion of the work.
  3. Agency may not assume any duties of Contractor.
  4. Agency has no authority to stop the work.
- C. Re-testing required because of non-compliance with specified requirements shall be performed by the same agency on instructions by Architect.
- D. Re-testing required because of non-compliance with specified requirements shall be included in a deductive change order to the Contractor.

**3.07 TESTING AGENCY DUTIES AND RESPONSIBILITIES**

- A. Testing Agency Duties:

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1. Provide qualified personnel at site. Cooperate with Architect and Contractor in performance of services.
  2. Perform specified sampling and testing of products in accordance with specified standards.
  3. Ascertain compliance of materials and mixes with requirements of Contract Documents.
  4. Promptly notify Architect and Contractor of observed irregularities or non-compliance of work or products.
  5. Perform additional tests and inspections required by Architect.
  6. Attend preconstruction meetings and progress meetings.
  7. Submit reports of all tests or inspections specified.
- B. Limits on Testing or Inspection Agency Authority:
1. Agency may not release, revoke, alter, or enlarge on requirements of Contract Documents.
  2. Agency may not approve or accept any portion of the work.
  3. Agency may not assume any duties of Contractor.
  4. Agency has no authority to stop the work.
- C. Immediately upon determination of a test failure, the Laboratory shall telephone the results to the Architect. On the same day, Laboratory shall send test results by email to the Architect and to all relevant responsible parties of the project team, and County's Inspector
- D. On instructions by Architect, perform re-testing required because of non-compliance with specified requirements, using the same agency.
- E. Contractor will pay for re-testing required because of non-compliance with specified requirements by a deductive change order.

### **3.08 CONTRACTOR DUTIES AND RESPONSIBILITIES**

- A. Contractor Responsibilities, General:
1. Deliver to agency at designated location, adequate samples of materials for special inspections that require material verification.
  2. Cooperate with agency and laboratory personnel; provide access to approved documents at project site, to the work, to manufacturers' facilities, and to fabricators' facilities.
  3. Provide incidental labor and facilities:
    - a. To provide access to work to be tested or inspected.
    - b. To obtain and handle samples at the site or at source of Products to be tested or inspected.
    - c. To facilitate tests or inspections.
    - d. To provide storage and curing of test samples.
  4. Notify Architect and laboratory 24 hours prior to expected time for operations requiring testing or inspection services.
  5. Arrange with County's agency and pay for additional samples, tests, and inspections required by Contractor beyond specified requirements.

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6. The Contractor shall notify the County's Inspector a minimum of 5 working days in advance of the manufacture of material to be supplied by him under the Contract Documents, which must be by terms of the Contract be tested, in order that the County may arrange for the testing of such material at the source of supply.
  7. Material shipped by the Contractor from the source of supply before having satisfactorily passed such testing and inspection or before the receipt of notice from said Inspector that such testing and inspection will not be required, shall not be incorporated in the Project.
  8. The County will select and pay testing laboratory costs for all tests and inspections, but may be reimbursed by the Contractor for such costs under the Contract conditions. Any direct payments by the Contractor to the testing laboratory on this project is prohibited.
- B. Contractor shall submit a written statement of responsibility to comply with CBC section 1704.4.
1. Each contractor responsible for the construction of a main wind- or seismic-force-resisting system, designated seismic system or a wind- or seismic-resisting component listed in the statement of special inspections shall submit a written statement of responsibility to the building official and the owner prior to the commencement of work on the system or component. The contractor's statement of responsibility shall contain the following:
    - a. Acknowledgment of awareness of the special requirements contained in the statement of special inspections;
    - b. Acknowledgment that control will be exercised to obtain conformance with the construction documents approved by the building official;
    - c. Procedures for exercising control within the contractor's organization, the method and frequency of reporting and the distribution of the reports; and
    - d. Identification and qualifications of the person(s) exercising such control and their position(s) in the organization.
- C. Contractor Responsibilities, Seismic Force-Resisting System, Designated Seismic System, and Seismic Force-Resisting Component: Submit written statement of responsibility for each item listed in the Statement of Special Inspections to AHJ and County prior to starting work. Statement of responsibility shall acknowledge awareness of special construction requirements and other requirements listed.
- D. Contractor Responsibilities, Wind Force-Resisting System and Wind Force-Resisting Component: Submit written statement of responsibility for each item listed in the Statement of Special Inspections to AHJ and County prior to starting work. Statement of responsibility shall acknowledge awareness of special construction requirements and other requirements listed.
- E. Unless otherwise directed, materials not conforming to the requirements of Contract Documents shall be promptly removed from the Project site.

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**3.09 MANUFACTURERS' AND FABRICATORS' FIELD SERVICES**

- A. When specified in individual specification sections, require material suppliers, assembly fabricators, or product manufacturers to provide qualified staff personnel to observe site conditions, conditions of surfaces and installation, quality of workmanship, start-up of equipment, to test, adjust, and balance equipment as applicable, and to initiate instructions when necessary.
- B. Submit qualifications of observer to Architect 30 days in advance of required observations.
  - 1. Observer subject to approval of Architect.
  - 2. Observer subject to approval of County.
- C. Report observations and site decisions or instructions given to applicators or installers that are supplemental or contrary to manufacturers' written instructions.

**END OF SECTION**

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**SECTION 01 50 00**  
**TEMPORARY FACILITIES AND CONTROLS**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. Temporary sanitary facilities.
- B. Temporary Controls: Barriers, enclosures, and fencing.
- C. Security requirements.
- D. Waste removal facilities and services.

**1.02 RELATED REQUIREMENTS**

- A. Section 01 57 19 - Temporary Environmental Controls: Filtration requirements during construction and final cleaning.
- B. Section 01 58 13 - Temporary Project Signage.

**1.03 REFERENCE STANDARDS**

**1.04 TEMPORARY UTILITIES**

- A. County will provide the following:
  - 1. Electrical power and metering, consisting of connection to existing facilities.
  - 2. Water supply, consisting of connection to existing facilities.
- B. Existing facilities may be used.
- C. Use trigger-operated nozzles for water hoses, to avoid waste of water.

**1.05 TEMPORARY SANITARY FACILITIES**

- A. Provide and maintain required facilities and enclosures. Provide at time of project mobilization.
  - 1. Provide temporary toilet facilities if maximum number of personnel on project is greater than 10.
  - 2. Submit proposed location of temporary toilet(s) to AHJ for approval.
    - a. Place on-site portable toilets away from building air intakes and entryway.
- B. Maintain daily in clean and sanitary condition.

**1.06 BARRIERS**

- A. Provide barriers to prevent unauthorized entry to construction areas, to prevent access to areas that could be hazardous to workers or the public, to allow for owner's use of site and to protect existing facilities and adjacent properties from damage from construction operations and demolition.
- B. Provide barricades and covered walkways required by governing authorities for public rights-of-way and for public access to existing building.

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- C. Protect non-owned vehicular traffic, stored materials, site, and structures from damage.

**1.07 FENCING**

- A. Construction: Contractor's option.
- B. Provide 6 foot high fence around construction site; equip with vehicular and pedestrian gates with locks.
- C. Provide temporary fencing if perimeter fencing is removed and reinstalled or replaced.

**1.08 EXTERIOR ENCLOSURES**

- A. Provide temporary weather tight closure of exterior openings to accommodate acceptable working conditions and protection for Products, to allow for temporary heating and maintenance of required ambient temperatures identified in individual specification sections, and to prevent entry of unauthorized persons. Provide access doors with self-closing hardware and locks.

**1.09 SECURITY**

- A. Provide security and facilities to protect Work, existing facilities, and County's operations from unauthorized entry, vandalism, or theft.

**1.10 CAFETERIA AND FOOD**

- A. Construction personnel shall police their own areas. All cups, cans, paper, wrappers, and discarded food must be placed in trash receptacles at end of each break.
- B. Contractor(s) shall submit to AHJ proposed location of any break areas and eating areas for approval.

**1.11 SMOKING AND TOBACCO**

- A. Smoking and vaping is not permitted on property.
- B. No chewing tobacco or spitting of tobacco is permitted.

**1.12 VEHICULAR ACCESS AND PARKING**

- A. Comply with regulations relating to use of streets and sidewalks, access to emergency facilities, and access for emergency vehicles.
- B. Coordinate access and haul routes with governing authorities and County.
- C. Provide and maintain access to fire hydrants, free of obstructions.
- D. Provide means of removing mud from vehicle wheels before entering streets.
- E. Provide temporary parking areas to accommodate construction personnel. When site space is not adequate, provide additional off-site parking.

**1.13 WASTE REMOVAL**

- A. See Section 01 74 19 - Construction Waste Management and Disposal, for additional requirements.
- B. Provide waste removal facilities and services as required to maintain the site in clean and orderly condition.

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- C. Provide containers with lids. Remove trash from site periodically.
- D. If materials to be recycled or re-used on the project must be stored on-site, provide suitable non-combustible containers; locate containers holding flammable material outside the structure unless otherwise approved by the authorities having jurisdiction.
- E. Open free-fall chutes are not permitted. Terminate closed chutes into appropriate containers with lids.

**1.14 PROJECT SIGNS - SEE SECTION 01 58 13**

**1.15 REMOVAL OF UTILITIES, FACILITIES, AND CONTROLS**

- A. Remove temporary utilities, equipment, facilities, materials, prior to Date of Substantial Completion inspection.
- B. Remove underground installations to a minimum depth of 2 feet. Grade site as indicated.
- C. Clean and repair damage caused by installation or use of temporary work.
- D. Restore existing facilities used during construction to original condition.
- E. Restore new permanent facilities used during construction to specified condition.

**PART 2 PRODUCTS - NOT USED**

**PART 3 EXECUTION - NOT USED**

**END OF SECTION**

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**SECTION 01 58 13  
TEMPORARY PROJECT SIGNAGE**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. Project identification sign.
- B. Project informational signs.

**1.02 RELATED REQUIREMENTS**

- A. Section 01 10 00 - Summary: Responsibility to provide signs.
- B. Section 01 50 00 - Temporary Facilities and Controls: Temporary wood barriers and enclosures.
- C. Section 05 50 00 - Metal Fabrications: Miscellaneous connectors.
- D. Section 06 10 00 - Rough Carpentry: General requirements for structural and non-structural rough carpentry Work.
- E. Section 09 91 13 - Exterior Painting: General requirements for paint products and painting.

**1.03 REFERENCE STANDARDS**

- A. FHWA (SHS) - Standard Highway Signs and Markings.

**1.04 QUALITY ASSURANCE**

- A. Design sign and structure to withstand 80 miles/hr wind velocity.
- B. Sign Painter: Experienced as a professional sign painter for minimum three years.
  - 1. Sign painter shall be regularly engaged and specializing in the design, execution, construction and installation of exterior signage of equivalent type, size and complexity as those required for Project.
- C. Finishes, Painting: Adequate to withstand weathering, fading, and chipping for duration of construction.

**1.05 SUBMITTALS**

- A. See Section 01 30 00 - Administrative Requirements for submittal procedures.
- B. Shop Drawing: Show content, layout, lettering, color, foundation, structure, sizes and grades of members.

**PART 2 PRODUCTS**

**2.01 SIGN MATERIALS**

- A. Structure and Framing: New, wood, structurally adequate to support sign panel and suitable for specified finish.

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- B. Sign Surfaces: Exterior grade plywood with medium or high density phenolic sheet overlay, minimum 3/4 inch thick, standard large sizes to minimize joints. Provide sheet thickness as required to span across framing members and provide even, smooth surface without waves or buckles.
- C. Rough Hardware: Galvanized steel, as specified in Section 05 50 00 - Metal Fabrications and Section 06 10 00 - Rough Carpentry..
- D. Sign Face Paint and Primers: Exterior quality, primer, two gloss enamel finish coats; sign background of color as selected. Provide paint type as customarily used for sign painting, adequate to resist weathering and fading for the scheduled construction period.
- E. Sign Structure Paint and Primers: Exterior quality, primer, one gloss enamel finish coats; color as selected. Provide paint type as customarily used for sign painting, adequate to resist weathering and fading for the scheduled construction period.
- F. Lettering: Exterior quality paint, colors as selected.

**2.02 PROJECT IDENTIFICATION SIGN**

- A. Provide painted sign of construction, design, and content shown on Drawings, location designated or agreed to by Architect.
  - 1. Graphic design, text, style of lettering, and colors shall be as directed; assume 4 colors and special graphic for Project title.
- B. Content:
  - 1. Project number, title, logo and name of County as indicated on Contract Documents.
    - a. Provide "American Rescue Plan Act Project Signage" content per the appendix following this section.
  - 2. Include organizational logos of parties identified on sign.
  - 3. Names and titles of authorities.
  - 4. Names and titles of Architect and Consultants.
  - 5. Name of Prime Contractor and major Subcontractors.
- C. Graphic Design, Colors, Style of Lettering: Designated by Architect.
  - 1. Sign Painting: Sign panels shall be shop painted and field installed.
    - a. Sign painting shall be performed by professional sign painters. Silk screen method is recommended in order to accurately depict graphics.
    - b. Paint back and edges of sign panels for complete weather resistance and finished appearance.
- D. Project Address Signs: Provide Project name and street address signs, minimum of 4 feet wide, to identify Project to facilitate deliveries.
  - 1. Graphic design and colors shall match Project Identification Sign.
  - 2. Text shall be as directed.
- E. Lettering: Standard Alphabet Series C, as specified in FHWA (SHS).

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### 2.03 PROJECT INFORMATIONAL SIGNS

- A. Restrictions: Signs other than Project Identification Sign specified above and Project Informational Signs specified below shall not be displayed without approval of Architect.
- B. Project Informational Signs: Informational signs, necessary for conduct of construction activities or required by governmental authorities having jurisdiction may be displayed when in conformance to sign construction and graphic requirements specified in this Section.
  - 1. Architect may review such signs. If so, review will be for sign construction, and graphic designs only.
  - 2. Adequacy of signage for safety and conformance to requirements of authorities having jurisdiction and trade practices shall be solely Contractor's responsibility.
- C. Painted informational signs of same colors and lettering as Project Identification sign, or standard products; size lettering to provide legibility at 100 foot distance.
  - 1. Colors shall be as required by authorities having jurisdiction and, if not otherwise required, of colors consistent with Project graphics.
  - 2. Informational signage shall be produced by professional sign painters and be of size and lettering style consistent with use.
- D. Provide at each field office, storage shed , and directional signs to direct traffic into and within site. Relocate as Work progress requires.
- E. Provide municipal traffic agency directional traffic signs to and within site.

### PART 3 EXECUTION

#### 3.01 INSTALLATION

- A. Install project identification sign within 10 days after date fixed by Notice to Proceed.
- B. Erect at location of high public visibility adjacent to main entrance to site.
- C. Erect supports and framing on secure foundation, rigidly braced and framed to resist wind loadings.
- D. Install sign surface plumb and level, with butt joints. Anchor securely.
- E. Paint exposed surfaces and edges of sign, supports, and framing for a finished appearance.
- F. Project Identification Sign Installation
  - 1. Construction: Construct sign support structure and install panels in durable manner, to resist high winds.
  - 2. Installation: Erect Sign on site at a lighted location of high public visibility, adjacent to the main entrance to the site, as approved by Architect.
    - a. Install sign at height for optimum visibility, on ground-mounted poles or attached to portable structure on skids.
    - b. Portable structure shall resist overturning force of wind.
  - 3. Street Address Signs: Locate and install signs at each access point from public streets.
- G. Project Informational Signs Installation:

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1. Construction: Construct sign support structure and install panels in durable manner, to resist high winds.
2. Project Informational Signs Installation:
  - a. Locate signs as necessary for construction activities and as required by authorities having jurisdiction.
  - b. Install informational signs for optimum visibility, on ground-mounted posts or temporarily attached to surfaces of structures.
  - c. Attachment methods shall leave no permanent disfiguration or discoloration on completed Work.

**3.02 MAINTENANCE**

- A. Maintain signs and supports neat clean condition. Repair all deterioration, weathering and damage to structure framing, and signage.
- B. Sign Relocation: Relocate signs as required by progress of the Work.

**3.03 REMOVAL**

- A. Remove signs, framing, supports, and foundations at completion of Project and restore the area prior to Substantial Completion review.

**END OF SECTION**

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# County of Riverside

## American Recue Plan Act Project Signage

Subrecipient shall include appropriate acknowledgement of credit to the County for its support when promoting the Infrastructure Projects or using any data and/or information developed under an Agreement. Signage shall be posted in a prominent location at Infrastructure Project site(s) and shall include the U.S. Department of Treasury's, and the County's color logos, along with the following disclosure statement: "Funding for this project has been provided in full or in part from the American Rescue Plan Act, and through an agreement with the County of Riverside." The Recipient shall also include in each of its contracts for work under an Agreement a provision that incorporates the requirements stated within this Paragraph.

### U.S. Department of Treasury Logo:



### County of Riverside Logo:



**SECTION 01 60 00  
PRODUCT REQUIREMENTS**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. General product requirements.
  - 1. System Completeness.
  - 2. Installation of Products.
- B. Re-use of existing products.
- C. Transportation, handling, storage and protection.
- D. Product option requirements.
- E. Substitution limitations.
- F. Procedures for County-supplied products.
- G. Maintenance materials, including extra materials, spare parts, tools, and software.

**1.02 RELATED REQUIREMENTS**

- A. Section 01 10 00 - Summary: Identification of County-supplied products.
- B. Section 01 25 00 - Substitution Procedures: Substitutions made during procurement and/or construction phases.
- C. Section 01 40 00 - Quality Requirements: Product quality monitoring.
- D. Section 01 61 16 - Volatile Organic Compound (VOC) Content Restrictions: Requirements for VOC-restricted product categories.
- E. Section 01 74 19 - Construction Waste Management and Disposal: Waste disposal requirements potentially affecting product selection, packaging and substitutions.

**1.03 REFERENCE STANDARDS**

- A. CAL (CDPH SM) - Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers Version 1.2.
- B. NFPA 70 - National Electrical Code.
  - 1. Use California Electrical Code.

**1.04 SUBMITTALS**

- A. Proposed Products List: Submit list of major products proposed for use, with name of manufacturer, trade name, and model number of each product.
  - 1. Submit within 15 days after date of Agreement.
  - 2. For products specified only by reference standards, list applicable reference standards.
- B. Product Data Submittals: Submit manufacturer's standard published data. Mark each copy to identify applicable products, models, options, and other data. Supplement manufacturers' standard data to provide information specific to this Project.

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- C. Shop Drawing Submittals: Prepared specifically for this Project; indicate utility and electrical characteristics, utility connection requirements, and location of utility outlets for service for functional equipment and appliances.
- D. Sample Submittals: Illustrate functional and aesthetic characteristics of the product, with integral parts and attachment devices. Coordinate sample submittals for interfacing work.
  - 1. For selection from standard finishes, submit samples of the full range of the manufacturer's standard colors, textures, and patterns.

**1.05 QUALITY ASSURANCE**

- A. CAL (CDPH SM) v1.1: California Department of Public Health (CDPH) Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers, v. 1.1–2010, for the emissions testing and requirements of products and materials.

**PART 2 PRODUCTS**

**2.01 GENERAL REQUIREMENTS**

- A. Drawings and Specifications:
  - 1. If a conflict exists between the Drawings and the Specifications (Project Manual), then the Contractor is to submit a Request for Interpretation from the Architect.
    - a. As noted in the General Conditions, the more stringent requirements govern, including cost of materials and/or installation.
  - 2. If a specific product is indicated on the Drawings for use, then that product is to be used without exception in the location identified.
  - 3. If the Contractor proposes the use of another product other than the item indicated, whether or not listed in these specifications, Contractor is to submit the product using the complete substitution process. See the the Article titled "SUBSTITUTIONS".
  - 4. AHJ ((Project City)) approval is also required prior to the use or installation of any substitution, on any product or location of product (requiring a revision to the Drawings or Specifications), included in these construction documents.
    - a. Installation of a non-approved product may result in the Contractor removing and replacing the non-approved product at the Contractor's own expense.
- B. General: Items purchased for incorporation in the Work, whether purchased for the Project or taken from previously purchased stock, and include materials, equipment, assemblies, fabrications and systems.
  - 1. Named Products: Items identified by manufacturer's product name, including make or model designations indicated in the manufacturer's published product data.
  - 2. Materials: Products that are shaped, cut, worked, mixed, finished, refined or otherwise fabricated, processed or installed to form a part of the Work.
  - 3. Equipment: A product with operating parts, whether motorized or manually operated, that requires connections such as wiring or piping.

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- C. Specific Product Requirements: Refer to requirements of Section 01 40 00 - Quality Requirements and individual product technical Sections for specific requirements for products.
- D. Minimum Requirements: Specified requirements for products are minimum requirements. Refer to general requirements for quality of the Work specified in Section 01 40 00 - Quality Requirements and elsewhere herein.
- E. Standard Products:
  - 1. Where specific products are not specified, provide standard products of types and kinds that are suitable for the intended purposes and that are usually and customarily used on similar projects under similar conditions.
  - 2. Products shall be as selected by Contractor and subject to review and acceptance by the County and Architect.
- F. Product Completeness:
  - 1. Provide products complete with all accessories, trim, finish, safety guards and other devices and details needed for a complete installation and for the intended use and effect.
  - 2. Comply with additional requirements specified herein in Article titled "SYSTEM COMPLETENESS".
- G. Code Compliance:
  - 1. All products, other than commodity products prescribed by Code, are to have a current ICC Evaluation Service Research Report (ICC ESR), CABO National Evaluation Report (NER), or other testing agencies as accepted by the County Building Division.
  - 2. Refer to additional requirements specified in Section 01 41 00 - Regulatory Requirements.
- H. Fire Suppression, Mechanical, and Plumbing: Comply with requirements specified in Divisions 21, 22, and 23, as included in this Project Manual and in the Drawings.
- I. Electrical, Communications, and Electronic Safety and Security: Comply with requirements specified in Divisions 26, 27, and 28, as included in this Project Manual and in the Drawings.

**2.02 SYSTEM COMPLETENESS**

- A. The Contract Drawings and Specifications are not intended to be comprehensive directions on how to produce the Work. Rather, the Drawings and Specifications are instruments of service prepared to describe the design intent for the completed Work.
- B. It is intended that all equipment, systems and assemblies be complete and fully functional even though not fully described. Provide all products and operations necessary to achieve the design intent described in the Contract Documents.
- C. Refer to related general requirements specified in Section 01 41 00 - Regulatory Requirements regarding compliance with minimum requirements of applicable codes, ordinances and standards.
- D. Omissions and Misdescriptions: Contractor shall report to Architect immediately when elements essential to proper execution of the Work are discovered to be missing or misdescribed in the Drawings and Specifications or if the design intent is unclear.

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1. Should an essential element be discovered as missing or misdescribed prior to receipt of Bids, an Addendum will be issued so that all costs may be accounted for in the Contract Sum.
2. Should an obvious omission or misdescription of a necessary element be discovered and reported after execution of the Agreement, Contractor shall provide the element as though fully and correctly described, and a no-cost Change Order shall be executed.
3. Refer to related General Requirements specified in Section 01 30 00 - Administrative Requirements and 01 31 14 - Facility Services Coordination regarding construction interfacing and coordination.

**2.03 EXISTING PRODUCTS**

- A. Do not use materials and equipment removed from existing premises unless specifically required or permitted by Contract Documents.
- B. Unforeseen historic items encountered remain the property of the County; notify County promptly upon discovery; protect, remove, handle, and store as directed by County.
- C. Existing materials and equipment indicated to be removed, but not to be re-used, relocated, reinstalled, delivered to the County, or otherwise indicated as to remain the property of the County, become the property of the Contractor; remove from site.

**2.04 NEW PRODUCTS**

- A. Provide new products unless specifically required or permitted by Contract Documents.
  1. Provide products that fully comply with the Contract Documents, are undamaged and unused at installation.
  2. Comply with additional requirements specified herein in Article titled "PRODUCT OPTIONS".
- B. See Section 01 40 00 - Quality Requirements, for additional source quality control requirements.
- C. Use of products having any of the following characteristics is not permitted:
  1. Made outside the United States, its territories, Canada, or Mexico.
  2. Containing lead, cadmium, or asbestos.
- D. Where other criteria are met, Contractor shall give preference to products that:
  1. If used on interior, have lower emissions, as defined in Section 01 61 16.
  2. If wet-applied, have lower VOC content, as defined in Section 01 61 16.
  3. Are extracted, harvested, and/or manufactured closer to the location of the project.
  4. Have longer documented life span under normal use.
  5. Result in less construction waste. See Section 01 74 19
- E. Provide interchangeable components of the same manufacture for components being replaced.
  1. To the fullest extent possible, provide products of the same kind from a single source. Products required to be supplied in quantity shall be the same product and interchangeable throughout the Work.

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2. When options are specified for the selection of any of two or more products, provide product selected to be compatible with products previously selected.
- F. Product Nameplates and Instructions:
1. Except for required Code-compliance labels and operating and safety instructions, locate nameplates on inconspicuous, accessible surfaces. Do not attach manufacturer's identifying nameplates or trademarks on surfaces exposed to view in occupied spaces or to the exterior.
  2. Provide a permanent nameplate on each item of service-connected or power-operated equipment. Nameplates shall contain identifying information and essential operating data such as the following example:
    - a. Name of manufacturer
    - b. Name of product
    - c. Model and serial number
    - d. Capacity
    - e. Operating and Power Characteristics
    - f. Labels of Tested Compliance with Codes and Standards
  3. Refer to additional requirements which may be specified in various sections, as included in this Project Manual.
  4. For each item of service-connected or power-operated equipment, provide operating and safety instructions, permanently affixed and of durable construction, with legible machine lettering. Comply with all applicable requirements of authorities having jurisdiction and listing agencies.
- G. Wiring Terminations: Provide terminal lugs to match branch circuit conductor quantities, sizes, and materials indicated. Size terminal lugs to CEC/NFPA 70, include lugs for terminal box.
- H. Cord and Plug: Provide minimum 6 foot cord and plug including grounding connector for connection to electric wiring system. Cord of longer length is specified in individual specification sections.

**2.05 PRODUCT OPTIONS**

- A. Unless the specifications state that no substitution is permitted, whenever the Contract Documents indicate any specific article, device, equipment, product, material, fixture, patented process, form, method, or type of construction or any specific name, make, trade name, or catalog number, with or without the words "or equal," such specification shall be deemed to be used for the purpose of facilitating description of the material, process, or article desired and shall be deemed to be followed by the words "or equal."
1. See Section 01 25 00 - Substitution Procedures.
- B. Products Specified by Reference Standards or by Description Only: Use any product meeting those standards or description.
1. Reference Standards:
    - a. Where Specifications require compliance with a standard, provided product shall fully comply with the standard specified.

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- b. Refer to general requirements specified in Section 01 42 19 - Reference Standards regarding compliance with referenced standards, standard specifications, codes, practices and requirements for products.
- 2. Product Description:
  - a. Where Specifications describe a product, listing characteristics required, with or without use of a brand name, provide a product that has the specified attributes and otherwise complies with specified requirements.
- 3. Performance Requirements:
  - a. Where Specifications require compliance with performance requirements, provide product(s) that comply and are recommended by the manufacturer for the intended application.
  - b. Verification of manufacturer's recommendations may be by product literature or by certification of performance from manufacturer.
- C. Products Specified by Naming One or More Manufacturers with a Provision for Substitutions: Submit a request for substitution for any manufacturer not named.
- D. Products Specified by Identification of Manufacturer and Product Name or Number:
  - 1. "Specified Manufacturer": Provide the specified product(s) of the specified manufacturer.
    - a. If only one manufacturer is specified, without "acceptable manufacturers" being identified, provide only the specified product(s) of the specified manufacturer.
    - b. If County standard is indicated make all efforts to provide that product.
    - c. If the phrase "or equal" or "approved equal" is stated or reference is made to the "or equal provision," products of other manufacturers may be provided if such products are equivalent to the specified product(s) of the specified manufacturer.
      - 1) Equivalence shall be demonstrated by submission of information in compliance with requirements of Section 01 25 00 - Substitution Procedures.
  - 2. "Acceptable Manufacturers":
    - a. Product(s) of the named manufacturers, if equivalent to the specified product(s) of the specified manufacturer, will be acceptable in accordance with the requirements of Section 01 25 00 - Substitution Procedures.
      - 1) Exception: Considerations regarding changes in Contract Time and Contract Sum will be waived if no increase in Contract Time or Contract Sum results from use of such equivalent products.
  - 3. Unnamed manufacturers: Product(s) of unnamed manufacturers will be acceptable when disclosed during the bidding period and only as follows:
    - a. Unless specifically stated that substitutions will not be accepted or considered, the phrase "or equal" shall be assumed to be included in the description of specified product(s).
    - b. Equivalent products of unnamed manufacturers will be accepted in accordance with the "or equal" provision specified herein, below.

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- c. If provided, products of unnamed manufacturers shall be subject to the requirements of Section 01 25 00 - Substitution Procedures.
- 4. Quality basis:
  - a. Specified product(s) of the specified manufacturer shall serve as the basis by which products by named acceptable manufacturers and products of unnamed manufacturers will be evaluated.
  - b. Where characteristics of the specified product are described, where performance characteristics are identified or where reference is made to industry standards, such characteristics are specified to identify the most significant attributes of the specified product(s) which will be used to evaluate products of other manufacturers.
- E. Products Specified by Combination of Methods: Where products are specified by a combination of attributes, including manufacturer's name, product brand name, product catalog or identification number, industry reference standard, or description of product characteristics, provide products conforming to all specified attributes.
- F. "Or Equal" Provision: Where the phrase "or equal" or the phrase "or approved equal" is included, equivalent product(s) of unnamed manufacturer(s) may be provided as specified above in subparagraph titled "Unnamed manufacturers" and Section 01 25 00 - Substitution Procedures with the following conditions:
  - 1. The requirements of Section 01 25 00 - Substitution Procedures applies to products provided under the "or equal" provision.
    - a. Exception: If the proposed product(s) are determined to be equivalent to the specified product(s) of the specified manufacturer, the requirement specified for substitutions to result in a net reduction in Contract Time or Contract Sum will be waived.
  - 2. Use of product(s) under the "or equal" provision shall not result in any delay in completion of the Work, including completion of portions of the Work for use by County or for work under separate contract by County.
  - 3. Use of product(s) under the "or equal" provision shall not result in any costs to the County, including design fees and permit and plan check fees.
  - 4. Use of product(s) under the "or equal" provision shall not require substantial change in the intent of the design, in the opinion of the Architect.
    - a. The intent of the design shall include functional performance and aesthetic qualities.
  - 5. The determination of equivalence will be made by the Architect and County, and such determination shall be final.
- G. Visual Matching:
  - 1. Where Specifications require matching a sample, the decision by the Architect on whether a proposed product matches shall be final.
  - 2. Where no product visually matches but the product complies with other requirements, comply with provisions for substitutions for selection of a matching product in another category.
- H. Visual Selection of Products:

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1. Where requirements include the phrase "as selected from manufacturer's standard colors, patterns and textures", or a similar phrase, selections of products will be made by indicated party or, if not indicated, by the Architect. The will select color, pattern and texture from the product line of submitted manufacturer, if all other specified provisions are met.
2. The Architect will select color, pattern and texture from the product line of submitted manufacturer, if all other specified provisions are met.

**2.06 MAINTENANCE MATERIALS**

- A. Furnish extra materials, spare parts, tools, and software of types and in quantities specified in individual specification sections.
- B. Deliver to Project site; obtain receipt prior to final payment.

**PART 3 EXECUTION**

**3.01 SUBSTITUTION LIMITATIONS**

- A. See Section 01 25 00 - Substitution Procedures.

**3.02 OWNER-SUPPLIED PRODUCTS**

- A. See Section 01 10 00 - Summary for identification of County-supplied products.
- B. County's Responsibilities:
  1. Arrange for and deliver County reviewed shop drawings, product data, and samples, to Contractor.
  2. Arrange and pay for product delivery to site.
  3. On delivery, inspect products jointly with Contractor.
  4. Submit claims for transportation damage and replace damaged, defective, or deficient items.
  5. Arrange for manufacturers' warranties, inspections, and service.
- C. Contractor's Responsibilities:
  1. Review County reviewed shop drawings, product data, and samples.
  2. Receive and unload products at site; inspect for completeness or damage jointly with County.
  3. Handle, store, install and finish products.
  4. Repair or replace items damaged after receipt.

**3.03 TRANSPORTATION AND HANDLING**

- A. Package products for shipment in manner to prevent damage; for equipment, package to avoid loss of factory calibration.
- B. If special precautions are required, attach instructions prominently and legibly on outside of packaging.
- C. Coordinate schedule of product delivery to designated prepared areas in order to minimize site storage time and potential damage to stored materials.

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1. Schedule delivery to minimize long-term storage and prevent overcrowding construction spaces.
  2. Coordinate with installation to ensure minimum holding time for items that are flammable, hazardous, easily damaged, or sensitive to deterioration, theft and other losses.
- D. Transport and handle products in accordance with manufacturer's instructions.
  - E. Transport products by methods to avoid product damage.
  - F. Transport materials in covered trucks to prevent contamination of product and littering of surrounding areas.
  - G. Promptly inspect shipments to ensure that products comply with requirements, quantities are correct, and products are undamaged.
  - H. Provide equipment and personnel to handle products by methods to prevent soiling, disfigurement, or damage, and to minimize handling.
  - I. Arrange for the return of packing materials, such as wood pallets, where economically feasible.

**3.04 STORAGE AND PROTECTION**

- A. Provide protection of stored materials and products against theft, casualty, or deterioration.
- B. Designate receiving/storage areas for incoming products so that they are delivered according to installation schedule and placed convenient to work area in order to minimize waste due to excessive materials handling and misapplication. See Section 01 74 19.
  1. Structural Loading Limitations: Handle and store products and materials so as not to exceed static and dynamic load-bearing capacities of project floor and roof areas.
- C. Inspection Provisions: Arrange storage to provide access for inspection and measurement of quantity or counting of units.
- D. Structural Considerations: Store heavy materials away from the structure in a manner that will not endanger supporting construction.
- E. Store and protect products in accordance with manufacturers' instructions.
- F. Store with seals and labels intact and legible.
- G. Arrange storage of materials and products to allow for visual inspection for the purpose of determination of quantities, amounts, and unit counts.
- H. Store sensitive products in weathertight, climate-controlled enclosures in an environment favorable to product.
- I. For exterior storage of fabricated products, place on sloped supports above ground.
  1. Place products on raised blocks, pallets or other supports, above ground and in a manner to not create ponding or misdirection of runoff.
- J. Provide bonded off-site storage and protection when site does not permit on-site storage or protection.
- K. Protect products from damage or deterioration due to construction operations, weather, precipitation, humidity, temperature, sunlight and ultraviolet light, dirt, dust, and other contaminants.

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1. Periodically inspect to ensure products are undamaged, and are maintained under required conditions.
2. Remove and replace products damaged by improper storage or protection with new products at no change in Contract Sum or Contract Time.
3. Weather-Resistant Storage:
  - a. Store moisture-sensitive products above ground, under cover in a weathertight enclosure or covered with an impervious sheet covering. Provide adequate ventilation to avoid condensation.
  - b. Maintain storage within temperature and humidity ranges required by manufacturer's instructions.
  - c. Store loose granular materials on solid surfaces in a well-drained area. Prevent mixing with foreign matter.
- L. Comply with manufacturer's warranty conditions, if any.
- M. Do not store products directly on the ground.
- N. Cover products subject to deterioration with impervious sheet covering. Provide ventilation to prevent condensation and degradation of products.
- O. Store loose granular materials on solid flat surfaces in a well-drained area. Prevent mixing with foreign matter.
- P. Prevent contact with material that may cause corrosion, discoloration, or staining.
- Q. Provide equipment and personnel to store products by methods to prevent soiling, disfigurement, or damage.
- R. Arrange storage of products to permit access for inspection. Periodically inspect to verify products are undamaged and are maintained in acceptable condition.

**3.05 INSTALLATION OF PRODUCTS**

- A. Comply with manufacturer's instructions and recommendations for installation of products, except where more stringent requirements are specified, are necessary due to Project conditions or are required by authorities having jurisdiction.
- B. Anchor each product securely in place, accurately located and aligned with other Work.
- C. Clean exposed surfaces and provide protection to ensure freedom from damage and deterioration at time of Substantial Completion review. Refer to additional requirements specified in General Conditions, Section 01 50 00 - Temporary Construction Facilities and Controls and 01 70 00 - Execution and Closeout Requirements.

**3.06 PROTECTION OF COMPLETED WORK**

- A. Provide barriers, substantial coverings and notices to protect installed Work from traffic and subsequent construction operations.
- B. Remove protective measures when no longer required and prior to Substantial Completion review of the Work.

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- C. Comply with additional requirements specified in Section 01 50 00 - Temporary Construction Facilities and Controls.

**END OF SECTION**

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**SECTION 01 61 16**  
**VOLATILE ORGANIC COMPOUND (VOC) CONTENT RESTRICTIONS**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. Requirements for Indoor-Emissions-Restricted products.
- B. Requirements for VOC-Content-Restricted products.
- C. Requirement for installer certification that they did not use any non-compliant products.

**1.02 RELATED REQUIREMENTS**

- A. Section 01 30 00 - Administrative Requirements: Submittal procedures.
- B. Section 01 40 00 - Quality Requirements: Procedures for testing and certifications.
- C. Section 01 60 00 - Product Requirements: Fundamental product requirements, substitutions and product options, delivery, storage, and handling.
- D. Section 07 92 00 - Joint Sealants: Emissions-compliant sealants.

**1.03 DEFINITIONS**

- A. Indoor-Emissions-Restricted Products: All products in the following product categories, whether specified or not:
  - 1. Interior paints and coatings applied on site.
  - 2. Interior adhesives and sealants applied on site, including flooring adhesives.
  - 3. Flooring.
  - 4. Products making up wall and ceiling assemblies.
  - 5. Thermal and acoustical insulation.
  - 6. Other products when specifically stated in the specifications.
- B. VOC-Content-Restricted Products: All products in the following product categories, whether specified or not:
  - 1. Exterior and interior paints and coatings.
  - 2. Exterior and interior adhesives and sealants, including flooring adhesives.
  - 3. Wet-applied roofing and waterproofing.
  - 4. Other products when specifically stated in the specifications.
- C. Interior of Building: Anywhere inside the exterior weather barrier.
- D. Adhesives: All gunnable, trowelable, liquid-applied, and aerosol adhesives, whether specified or not; including flooring adhesives, resilient base adhesives, and pipe jointing adhesives.
- E. Sealants: All gunnable, trowelable, and liquid-applied joint sealants and sealant primers, whether specified or not; including firestopping sealants and duct joint sealers.

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- F. Inherently Non-Emitting Materials: Products composed wholly of minerals or metals, unless they include organic-based surface coatings, binders, or sealants; and specifically the following:
  1. Concrete.
  2. Clay brick.
  3. Metals that are plated, anodized, or powder-coated.
  4. Glass.
  5. Ceramics.
  6. Solid wood flooring that is unfinished and untreated.

**1.04 REFERENCE STANDARDS**

- A. 40 CFR 59, Subpart D - National Volatile Organic Compound Emission Standards for Architectural Coatings; U.S. Environmental Protection Agency.
- B. ASTM D3960 - Standard Practice for Determining Volatile Organic Compound (VOC) Content of Paints and Related Coatings.
- C. CAL (CDPH SM) - Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers Version 1.2.
- D. CARB (ATCM) - Airborne Toxic Control Measure to Reduce Formaldehyde Emissions from Composite Wood Products; California Air Resources Board.
- E. CARB (SCM) - Suggested Control Measure for Architectural Coatings; California Air Resources Board.
- F. CHPS (HPPD) - High Performance Products Database.
- G. CRI (GL) - Green Label Testing Program - Certified Products.
- H. CRI (GLP) - Green Label Plus Testing Program - Certified Products.
- I. GreenSeal GS-36 - Standard for Adhesives for Commercial Use.
- J. SCAQMD 1113 - Architectural Coatings.
- K. SCAQMD 1168 - Adhesive and Sealant Applications.
- L. SCS (CPD) - SCS Certified Products.
- M. UL (GGG) - GREENGUARD Gold Certified Products.

**1.05 SUBMITTALS**

- A. See Section 01 30 00 - Administrative Requirements, for submittal procedures.
- B. Product Data: For each VOC-restricted product used in the project, submit evidence of compliance.
- C. Installer Certifications Regarding Prohibited Content: Require each installer of any type of product (not just the products for which VOC restrictions are specified) to certify that either 1) no adhesives, joint sealants, paints, coatings, or composite wood or agrifiber products have been used in the installation of installer's products, or 2) that such products used comply with these requirements.
  1. Use the form following this section for installer certifications.

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- D. Verification of compliance with VOC limits as specified in the CalGreen Code Section 5.504 shall be provided at the request of the Building Inspector.
  - 1. Product certification and specifications.
  - 2. Chain of custody certifications.
  - 3. Product, labeled and invoiced as meeting the Composite Wood Products regulation.
  - 4. Exterior grade products marked as meeting the PS-1 or PS-2 standards of the Engineered Wood Association, the Australian AS/NZS 2269 or European 636 3S standards
  - 5. Other methods approved by the building official.

**1.06 QUALITY ASSURANCE**

- A. Indoor Emissions Standard and Test Method: CAL (CDPH SM), using Standard Private Office exposure scenario and the allowable concentrations specified in the method, and range of total VOC's after 14 days.
  - 1. Wet-Applied Products: State amount applied in mass per surface area.
  - 2. Paints and Coatings: Test tinted products, not just tinting bases.
  - 3. Evidence of Compliance: Acceptable types of evidence are the following;
    - a. Current UL (GGG) certification.
    - b. Current SCS (CPD) Floorscore certification.
    - c. Current SCS (CPD) Indoor Advantage Gold certification.
    - d. Current listing in CHPS (HPPD) as a low-emitting product.
    - e. Current CRI (GLP) certification.
    - f. Test report showing compliance and stating exposure scenario used.
  - 4. Product data submittal showing VOC content is NOT acceptable evidence.
  - 5. Manufacturer's certification without test report by independent agency is NOT acceptable evidence.
- B. VOC Content Test Method: 40 CFR 59, Subpart D (EPA Method 24), or ASTM D3960, unless otherwise indicated.
  - 1. Evidence of Compliance: Acceptable types of evidence are:
    - a. Report of laboratory testing performed in accordance with requirements.
    - b. Published product data showing compliance with requirements.
    - c. Certification by manufacturer that product complies with requirements.
- C. Composite Wood Emissions Standard: CARB (ATCM) for ultra-low emitting formaldehyde (ULEF) resins.
  - 1. Evidence of Compliance: Acceptable types of evidence are:
    - a. Current SCS "No Added Formaldehyde (NAF)" certification; [www.scs-certified.com](http://www.scs-certified.com).
    - b. Report of laboratory testing performed in accordance with requirements.
    - c. Published product data showing compliance with requirements.
    - d. Certification by manufacturer that product complies with requirements.

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- D. Testing Agency Qualifications: Independent firm specializing in performing testing and inspections of the type specified in this section.

**PART 2 PRODUCTS**

**2.01 REGULATORY REQUIREMENTS**

- A. All VOC restricted products shall be compliant with local jurisdiction, South Coast Air Quality Management District, Air Pollution Control District, County of San Diego, and California Green Standards Code, Rules and Regulations in effect at the time of installation. Products specified in this project shall be used as a basis of design. Updated products that are compliant with the rules in force at the time of installation shall be submitted as substitutions when they become available.
  - 1. If a product is found to be non-compliant with the VOC rules at the scheduled time of installation, notify the Architect a minimum of 90 days prior to installation. Contractor shall submit a suggested compliant product that is equal to the performance and cost of the specified product using the substitution procedure.

**2.02 MATERIALS**

- A. All Products: Comply with the most stringent of federal, State, and local requirements, or these specifications.
- B. Indoor-Emissions-Restricted Products: Comply with Indoor Emissions Standard and Test Method, except for:
  - 1. Composite Wood, Wood Fiber, and Wood Chip Products: Comply with Composite Wood Emissions Standard or contain no added formaldehyde resins.
    - a. Comply with CalGreen Building Standards Section 5.504.4.5, Table 504.4.4.5 "Formaldehyde Limits".
  - 2. Inherently Non-Emitting Materials.
- C. VOC-Content-Restricted Products: VOC content not greater than required by the following:
  - 1. Adhesives, Including Flooring Adhesives: SCAQMD 1168 Rule.
  - 2. Aerosol Adhesives: GreenSeal GS-36.
  - 3. Joint Sealants: SCAQMD 1168 Rule.
  - 4. Paints and Coatings: Each color; most stringent of the following:
    - a. 40 CFR 59, Subpart D.
    - b. SCAQMD 1113 Rule.
    - c. CARB (SCM).
    - d. CalGreen Building Standards Section 5.504, Table 504.4.3 "VOC Content Limits for Architectural Coatings".
    - e. Clear Wood Finishes, Floor Coatings, Stains, Primers and Shellacs: Do not exceed the VOC content limits established in SCAQMD 1113 rule.
  - 5. Wet-Applied Roofing and Waterproofing: Comply with requirements for paints and coatings.

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- 6. Carpet, Carpet Tile, and Adhesive: Provide products having VOC content not greater than that required for CRI (GLP) certification.
  - a. Comply with CalGreen Building Standards Section 5.504, Table 504.4.1 "Adhesive VOC Limit".
- 7. Carpet Cushion: Provide products having VOC content not greater than that required for CRI (GL) certification.
  - a. Comply with CalGreen Building Standards Section 5.504, Table 504.4.1 "Adhesive VOC Limit".
- D. Other Product Categories: Comply with limitations specified elsewhere.

**PART 3 EXECUTION**

**3.01 FIELD QUALITY CONTROL**

- A. County reserves the right to reject non-compliant products, whether installed or not, and require their removal and replacement with compliant products at no extra cost to County.
- B. Additional costs to restore indoor air quality due to installation of non-compliant products will be borne by Contractor.

**END OF SECTION**

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**SECTION 01 61 16.01**  
**ACCESSORY MATERIAL VOC CONTENT CERTIFICATION FORM**

**FORM**

**1.01 IDENTIFICATION:**

- A. Project Name: EOC Parking Lot Expansion (FM08200012205)
- B. Project No.: 3-75-80
- C. Architect: Ruhnu Clarke Architects

**1.02 USE OF THIS FORM:**

- A. Because installers are allowed and directed to choose accessory materials suitable for the applicable installation, there is a possibility that such accessory materials might contain VOC content in excess of that permitted, especially where such materials have not been explicitly specified.
  - 1. Each installer of work on this project is required to certify that his/their use of these particular materials complies with the contract documents and to provide documentation showing that the products used do not contain the prohibited content.
- B. Contractor is required to obtain and submit this form from each installer of work on this project.
- C. For each product category listed, check the correct paragraph.
- D. If any of these accessory materials has been used, attach to this form product data and MSDS sheet for each such product.

**1.03 VOC CONTENT RESTRICTIONS ARE SPECIFIED IN SECTION 01 61 16.**

- A. Volatile organic compounds (VOCs) are defined by the U.S. EPA, California Air Resources Board (CARB), South Coast Air Quality Management District (SCAQMD), along with other state and local regulations applicable to this project.

**2.01 PRODUCT CERTIFICATION**

- A. I certify that the installation work of my firm on this project:
  - 1. [HAS] [HAS NOT] required the use of any ADHESIVES.
  - 2. [HAS] [HAS NOT] required the use of any JOINT SEALANTS.
  - 3. [HAS] [HAS NOT] required the use of any PAINTS OR COATINGS.
  - 4. [HAS] [HAS NOT] required the use of any COMPOSITE WOOD or AGRIFIBER PRODUCTS.
- B. Product data and MSDS sheets are attached.

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**3.01 CERTIFIED BY: (INSTALLER/MANUFACTURER/SUPPLIER FIRM)**

- A. Firm Name: \_\_\_\_\_
- B. Print Name: \_\_\_\_\_
- C. Signature: \_\_\_\_\_
- D. Title: \_\_\_\_\_ (officer of company)
- E. Date: \_\_\_\_\_

**END OF SECTION**

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**SECTION 01 70 00  
EXECUTION AND CLOSEOUT REQUIREMENTS**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. Examination, preparation, and general installation procedures.
- B. Pre-installation meetings.
- C. Cutting and patching.
- D. Surveying for laying out the work.
- E. Cleaning and protection.
- F. Starting of systems and equipment.
- G. Demonstration and instruction of County personnel.
- H. Closeout procedures, including Contractor's Correction Punch List, except payment procedures.
- I. General requirements for maintenance service.

**1.02 RELATED REQUIREMENTS**

- A. Section 01 10 00 - Summary: Limitations on working in existing building; continued occupancy; work sequence; identification of salvaged and relocated materials.
- B. Section 01 30 00 - Administrative Requirements: Submittals procedures.
- C. Section 01 40 00 - Quality Requirements: Testing and inspection procedures.
- D. Section 01 45 33 - Code-Required Special Inspections: Construction oversight procedures by AHJ regarding the execution, approval, and closeout of this building project.
- E. Section 01 74 19 - Construction Waste Management and Disposal: Additional procedures for trash/waste removal, recycling, salvage, and reuse.
- F. Section 01 78 00 - Closeout Submittals: Project record documents, operation and maintenance data, warranties, and bonds.
- G. Section 01 79 00 - Demonstration and Training: Demonstration of products and systems to be commissioned and where indicated in specific specification sections
- H. Section 02 41 00 - Demolition: Demolition of whole structures and parts thereof; site utility demolition.
- I. Individual Product Specification Sections:
  - 1. Advance notification to other sections of openings required in work of those sections.
  - 2. Limitations on cutting structural members.

**1.03 REFERENCE STANDARDS**

- A. CFC Ch. 33 - Fire Safety During Construction and Demolition.
- B. CFC Ch. 35 - California Fire Code - Chapter 35 - Welding and Other Hot Work.

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- C. NFPA 241 - Standard for Safeguarding Construction, Alteration, and Demolition Operations.

**1.04 SUBMITTALS**

- A. See Section 01 30 00 - Administrative Requirements, for submittal procedures.
- B. Survey work: Submit name, address, and telephone number of Surveyor before starting survey work.
  - 1. On request, submit documentation verifying accuracy of survey work.
  - 2. Submit a copy of site drawing signed by the Land Surveyor, that the elevations and locations of the work are in compliance with Contract Documents.
  - 3. Submit surveys and survey logs for the project record.
- C. Cutting and Patching: Submit written request in advance of cutting or alteration that affects:
  - 1. Structural integrity of any element of Project.
  - 2. Integrity of weather exposed or moisture resistant element.
  - 3. Efficiency, maintenance, or safety of any operational element.
  - 4. Visual qualities of sight exposed elements.
  - 5. Work of County or separate Contractor.
  - 6. Include in request:
    - a. Identification of Project.
    - b. Location and description of affected work. Include shop drawings as necessary to identify locations and communicate descriptions.
    - c. Necessity for cutting or alteration.
    - d. Description of proposed work and products to be used.
    - e. Effect on work of County or separate Contractor.
    - f. Effect on existing construction of County and, if applicable, work for Project being provided by County under separate contract.
    - g. Written permission of affected separate Contractor.
    - h. Date and time work will be executed.
  - 7. Include written evidence that those performing work under separate contract for County have been notified and acknowledge that cutting and patching work will be occurring. Include written permission for intended cutting and patching, included scheduled times.
- D. Project Record Documents: Accurately record actual locations of capped and active utilities.

**1.05 QUALIFICATIONS**

- A. For demolition work, employ a firm specializing in the type of work required.
  - 1. Minimum of 5 years of documented experience.
- B. For surveying work, employ a land surveyor registered in California and acceptable to Architect. Submit evidence of surveyor's Errors and Omissions insurance coverage in the form of an Insurance Certificate. Employ only individual(s) trained and experienced in collecting and recording accurate data relevant to ongoing construction activities,

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- C. For field engineering, employ a professional engineer of the discipline required for specific service on Project, licensed in California. Employ only individual(s) trained and experienced in establishing and maintaining horizontal and vertical control points necessary for laying out construction work on project of similar size, scope and/or complexity.
- D. For design of temporary shoring and bracing, employ a Professional Engineer experienced in design of this type of work and licensed in California.

**1.06 PROJECT CONDITIONS**

- A. Grade site to drain. Maintain excavations free of water. Provide, operate, and maintain pumping equipment.
- B. Protect site from puddling or running water.
- C. Ventilate enclosed areas to assist cure of materials, to dissipate humidity, and to prevent accumulation of dust, fumes, vapors, or gases.
- D. Dust Control: Execute work by methods to minimize raising dust from construction operations. Provide positive means to prevent air-borne dust from dispersing into atmosphere and over adjacent property.
  - 1. Provide dust-proof enclosures to prevent entry of dust generated outdoors.
- E. Erosion and Sediment Control: Plan and execute work by methods to control surface drainage from cuts and fills, from borrow and waste disposal areas. Prevent erosion and sedimentation.
  - 1. Minimize amount of bare soil exposed at one time.
  - 2. Provide temporary measures such as berms, dikes, and drains, to prevent water flow.
  - 3. Construct fill and waste areas by selective placement to avoid erosive surface silts or clays.
  - 4. Periodically inspect earthwork to detect evidence of erosion and sedimentation; promptly apply corrective measures.
- F. Noise Control: Provide methods, means, and facilities to minimize noise produced by construction operations.
  - 1. At All Times: Excessively noisy tools and operations will not be tolerated inside the building at any time of day; excessively noisy includes jackhammers.
  - 2. Outdoors: Limit conduct of especially noisy exterior work to the hours of 8 am to 5 pm.
- G. Pest and Rodent Control: Provide methods, means, and facilities to prevent pests and insects from damaging the work.
- H. Rodent Control: Provide methods, means, and facilities to prevent rodents from accessing or invading premises.
- I. Pollution Control: Provide methods, means, and facilities to prevent contamination of soil, water, and atmosphere from discharge of noxious, toxic substances, and pollutants produced by construction operations. Comply with federal, state, and local regulations.

**1.07 COORDINATION**

- A. See Section 01 10 00 for occupancy-related requirements.

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- B. Coordinate scheduling, submittals, and work of the various sections of the Project Manual to ensure efficient and orderly sequence of installation of interdependent construction elements, with provisions for accommodating items installed later.
- C. Notify affected utility companies and comply with their requirements.
- D. Verify that utility requirements and characteristics of new operating equipment are compatible with building utilities. Coordinate work of various sections having interdependent responsibilities for installing, connecting to, and placing in service, such equipment.
- E. Coordinate space requirements, supports, and installation of mechanical and electrical work that are indicated diagrammatically on drawings. Follow routing indicated for pipes, ducts, and conduit, as closely as practicable; place runs parallel with lines of building. Utilize spaces efficiently to maximize accessibility for other installations, for maintenance, and for repairs.
- F. In finished areas except as otherwise indicated, conceal pipes, ducts, and wiring within the construction. Coordinate locations of fixtures and outlets with finish elements.
- G. Coordinate completion and clean-up of work of separate sections.
- H. After County occupancy of premises, coordinate access to site for correction of defective work and work not in accordance with Contract Documents, to minimize disruption of County's activities.

**PART 2 PRODUCTS**

**2.01 PATCHING MATERIALS**

- A. New Materials: As specified in product sections; match existing products and work for patching and extending work.
- B. Type and Quality of Existing Products: Determine by inspecting and testing products where necessary, referring to existing work as a standard.
- C. Product Substitution: For any proposed change in materials, submit request for substitution described in Section 01 60 00 - Product Requirements.

**PART 3 EXECUTION**

**3.01 EXAMINATION**

- A. Verify that existing conditions and substrate surfaces are acceptable for subsequent work. Start of work means acceptance of existing conditions.
- B. Verify that existing substrate is capable of structural support or attachment of new work being applied or attached.
- C. Examine and verify specific conditions described in individual specification sections.
- D. Take field measurements before confirming product orders or beginning fabrication, to minimize waste due to over-ordering or misfabrication.
- E. Verify that utility services are available, of the correct characteristics, and in the correct locations.

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- F. Prior to Cutting: Examine existing conditions prior to commencing work, including elements subject to damage or movement during cutting and patching. After uncovering existing work, assess conditions affecting performance of work. Beginning of cutting or patching means acceptance of existing conditions.

**3.02 PREPARATION**

- A. Clean substrate surfaces prior to applying next material or substance.
- B. Seal cracks or openings of substrate prior to applying next material or substance.
- C. Apply manufacturer required or recommended substrate primer, sealer, or conditioner prior to applying any new material or substance in contact or bond.
- D. Temporary Supports: Provide supports to ensure structural integrity of the Work. Provide devices and methods to protect other portions of Project from damage.
- E. Weather Protection: Provide protection from elements for areas which may be exposed by uncovering Work. Maintain excavations free of water.

**3.03 PREINSTALLATION MEETINGS**

- A. When required in individual specification sections, convene a preinstallation meeting at the site prior to commencing work of the section.
- B. Require attendance of parties directly affecting, or affected by, work of the specific section.
- C. Notify Architect four days in advance of meeting date.
- D. Prepare agenda and preside at meeting:
  - 1. Review conditions of examination, preparation and installation procedures.
  - 2. Review coordination with related work.
- E. Record minutes and distribute copies within two days after meeting to participants, with two copies to Architect, County, participants, and those affected by decisions made.

**3.04 LAYING OUT THE WORK**

- A. Notify the County at least 48 hours before staking is to be started.
- B. Verify locations of survey control points prior to starting work.
- C. Promptly notify Architect of any discrepancies discovered.
- D. Contractor shall locate and protect survey control and reference points.
- E. Control datum for survey is that established by County provided survey.
- F. Protect survey control points prior to starting site work; preserve permanent reference points during construction.
- G. Promptly report to Architect the loss or destruction of any reference point or relocation required because of changes in grades or other reasons.
- H. Replace dislocated survey control points based on original survey control. Make no changes without prior written notice to Architect.
- I. Utilize recognized engineering survey practices.
- J. Establish a minimum of two permanent bench marks on site, referenced to established control points. Record locations, with horizontal and vertical data, on project record documents.

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- K. Establish elevations, lines and levels. Locate and lay out by instrumentation and similar appropriate means:
  - 1. Site improvements including pavements; stakes for grading, fill and topsoil placement; utility locations, slopes, and invert elevations.
  - 2. Grid or axis for structures.
  - 3. Building foundation, column locations, ground floor elevations.
- L. Periodically verify layouts by same means.
- M. Maintain a complete and accurate log of control and survey work as it progresses.
- N. On completion of foundation walls and major site improvements, prepare a certified survey illustrating dimensions, locations, angles, and elevations of construction and site work.

**3.05 GENERAL INSTALLATION REQUIREMENTS**

- A. Dimensions for Accessibility:
  - 1. Conventions: See CBC Figure 11B-104. Dimensions that are not stated as "maximum" or "minimum" are absolute.
  - 2. Tolerances shall be per CBC 11B-104.1.1 "Construction and manufacturing tolerances. All dimensions are subject to conventional industry tolerances except where the requirement is stated as a range with specific minimum and maximum end points."
- B. In addition to compliance with regulatory requirements, conduct construction operations in compliance with CFC Ch. 33 and NFPA 241, including applicable recommendations in Appendix A.
- C. When welding or doing other hot work, comply with CFC Ch. 35.
- D. Install products as specified in individual sections, in accordance with manufacturer's instructions and recommendations, and so as to avoid waste due to necessity for replacement.
- E. Make vertical elements plumb and horizontal elements level, unless otherwise indicated.
- F. Install equipment and fittings plumb and level, neatly aligned with adjacent vertical and horizontal lines, unless otherwise indicated.
- G. Make consistent texture on surfaces, with seamless transitions, unless otherwise indicated.
- H. Make neat transitions between different surfaces, maintaining texture and appearance.

**3.06 CUTTING AND PATCHING**

- A. Whenever possible, execute the work by methods that avoid cutting or patching.
- B. Perform whatever cutting and patching is necessary to:
  - 1. Complete the work.
  - 2. Fit products together to integrate with other work.
  - 3. Provide openings for penetration of mechanical, electrical, and other services.
  - 4. Match work that has been cut to adjacent work.
  - 5. Repair areas adjacent to cuts to required condition.
  - 6. Repair new work damaged by subsequent work.
  - 7. Remove samples of installed work for testing when requested.

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- 8. Remove and replace defective and non-complying work.
- C. Execute work by methods that avoid damage to other work and that will provide appropriate surfaces to receive patching and finishing. In existing work, minimize damage and restore to original condition.
  - 1. Coordinate installation or application of products for integrated Work.
  - 2. Uncover completed Work as necessary to install or apply products out of sequence.
  - 3. Remove and replace defective or non-conforming Work.
  - 4. Provide openings for penetration of utility services, such as plumbing, mechanical and electrical Work.
- D. After uncovering existing Work, inspect conditions affecting proper accomplishment of Work.
- E. Temporary Supports: Provide supports to ensure structural integrity of the Work. Provide devices and methods to protect other portions of Project from damage.
- F. Beginning of cutting or patching shall be interpreted to mean that existing conditions were found by Contractor to be acceptable.
- G. Employ skilled and experienced installer to perform cutting for weather exposed and moisture resistant elements, and sight exposed surfaces.
- H. Cut rigid materials using masonry saw or core drill. Pneumatic tools not allowed without prior approval.
  - 1. Use a diamond grit abrasive saw or similar cutter for smooth edges. Do not overcut corners.
- I. Restore work with new products in accordance with requirements of Contract Documents.
- J. Fit work neat and tight allowing for expansion and contraction.
- K. Fit work air tight to pipes, sleeves, ducts, conduit, and other penetrations through surfaces.
- L. At penetrations of fire rated walls, partitions, ceiling, or floor construction, completely seal voids with fire rated material , to full thickness of the penetrated element.
- M. Patching:
  - 1. Finish patched surfaces to match finish that existed prior to patching. On continuous surfaces, refinish to nearest intersection or natural break. For an assembly, refinish entire unit.
  - 2. Match color, texture, and appearance.
  - 3. Repair patched surfaces that are damaged, lifted, discolored, or showing other imperfections due to patching work. If defects are due to condition of substrate, repair substrate prior to repairing finish.
- N. Finishing: Refinish surfaces to match adjacent and similar finishes as used for the Project.
  - 1. For continuous surfaces, refinish to nearest intersection or natural break.
  - 2. For an assembly, refinish entire unit.

**3.07 PROGRESS CLEANING**

- A. Maintain areas free of waste materials, debris, and rubbish. Maintain site in a clean and orderly condition.

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- B. Remove debris and rubbish from pipe chases, plenums, attics, crawl spaces, and other closed or remote spaces, prior to enclosing the space.
- C. Broom and vacuum clean interior areas prior to start of surface finishing, and continue cleaning to eliminate dust.
- D. Collect and remove waste materials, debris, and trash/rubbish from site periodically and dispose off-site; do not burn or bury.

**3.08 PROTECTION OF INSTALLED WORK**

- A. Protect installed work from damage by construction operations.
- B. Provide special protection where specified in individual specification sections.
- C. Provide temporary and removable protection for installed products. Control activity in immediate work area to prevent damage.
- D. Provide protective coverings at walls, projections, jambs, sills, and soffits of openings.
- E. Protect finished floors, stairs, and other surfaces from traffic, dirt, wear, damage, or movement of heavy objects, by protecting with durable sheet materials.
- F. Prohibit traffic or storage upon waterproofed or roofed surfaces. If traffic or activity is necessary, obtain recommendations for protection from waterproofing or roofing material manufacturer.
- G. Remove protective coverings when no longer needed; reuse or recycle coverings if possible.

**3.09 SYSTEM STARTUP**

- A. Coordinate schedule for start-up of various equipment and systems.
- B. Notify Architect and Owner seven days prior to start-up of each item.
- C. Verify that each piece of equipment or system has been checked for proper lubrication, drive rotation, belt tension, control sequence, and for conditions that may cause damage.
- D. Verify tests, meter readings, and specified electrical characteristics agree with those required by the equipment or system manufacturer.
- E. Verify that wiring and support components for equipment are complete and tested.
- F. Execute start-up under supervision of applicable Contractor personnel and manufacturer's representative in accordance with manufacturers' instructions.
- G. When specified in individual specification Sections, require manufacturer to provide authorized representative to be present at site to inspect, check, and approve equipment or system installation prior to start-up, and to supervise placing equipment or system in operation.
- H. Submit a written report that equipment or system has been properly installed and is functioning correctly.

**3.10 PROJECT CLOSEOUT CONFERENCE**

- A. Schedule and conduct a project closeout conference, at a time convenient to County and Architect, but no later than 14 days prior to the scheduled date of Substantial Completion.
  - 1. Conduct the conference to review requirements and responsibilities related to Project closeout.

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2. Attendees: Authorized representatives of County, Architect and relevant consultants; Contractor and project superintendent; major subcontractors; suppliers; and other concerned parties shall attend the meeting. Participants at the meeting shall be familiar with Project and authorized to conclude matters relating to the Work.
3. Agenda: Discuss items of significance that could affect or delay Project closeout, including the following:
  - a. Preparation of record documents.
  - b. Procedures required prior to inspection for Substantial Completion and for final inspection for acceptance.
  - c. Submittal of written warranties.
  - d. Coordination of separate contracts.
  - e. County's partial occupancy requirements.
  - f. Installation of County's furniture, fixtures, and equipment.
  - g. Responsibility for removing temporary facilities and controls.
4. Record minutes and distribute copies within two days after meeting to participants, with two copies to Architect, County, participants, and those affected by decisions made.

**3.11 DEMONSTRATION AND INSTRUCTION**

- A. See Section 01 79 00 - Demonstration and Training.

**3.12 ADJUSTING**

- A. Adjust operating products and equipment to ensure smooth and unhindered operation.
- B. Testing, adjusting, and balancing HVAC systems: See Section 23 05 93 - Testing, Adjusting, and Balancing for HVAC.

**3.13 FINAL CLEANING**

- A. Cleaning and Disposal Requirements, General: Conduct cleaning and disposal operations in compliance with all applicable codes, ordinances and regulations, including environmental protection laws, rules and practices.
- B. Execute final cleaning prior to final project assessment.
  1. Clean areas to be occupied by County prior to final completion before County occupancy.
- C. Substantial Completion Review Cleaning, General: Execute a thorough cleaning prior to Substantial Completion review by Architect and County. Employ experienced workers or professional cleaners for cleaning operations for Substantial Completion review.
- D. Use cleaning materials that are nonhazardous.
  1. Cleaning Agents and Materials: Use only those cleaning agents and materials which will not create hazards to health or property and which will not damage or degrade surfaces.
    - a. Use only those cleaning agents, materials and methods recommended by manufacturer of the material to be cleaned.
    - b. Use cleaning materials only on surfaces recommended by cleaning agent manufacturer.

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- c. Before use, review cleaning agents and materials with AHJ for suitability and compatibility. Use no cleaning agents and materials without approval as noted above.
- 2. Cleaning Procedures: All cleaning processes, agents and materials shall be subject to Architect, County and/or AHJ review and approval. Processes and degree of cleanliness shall be as directed by Architect, County and/or AHJ.
- E. Clean interior and exterior glass, surfaces exposed to view; remove temporary labels, stains and foreign substances, polish transparent and glossy surfaces, vacuum carpeted and soft surfaces.
- F. Remove all labels that are not permanent. Do not paint or otherwise cover fire test labels or nameplates on mechanical and electrical equipment.
- G. Clean equipment and fixtures to a sanitary condition with cleaning materials appropriate to the surface and material being cleaned.
- H. Clean filters of operating equipment.
- I. Clean debris from downspouts, area drains, and drainage systems.
- J. Clean site; sweep paved areas, rake clean landscaped surfaces.
- K. Remove waste, surplus materials, trash/rubbish, and construction facilities from the site; dispose of in legal manner; do not burn or bury.

**3.14 CLOSEOUT PROCEDURES**

- A. Make submittals that are required by governing or other authorities.
  - 1. Provide copies to Architect and County.
- B. Accompany Architect and Owner Representative on preliminary inspection to determine items to be listed for completion or correction in the Contractor's Correction Punch List for Contractor's comprehensive list of items to be completed or corrected.
  - 1. As authorized by the County; Architect and Architect's and County's consultants, as appropriate, will attend a meeting at the Project site to review Contract closeout procedures and to review the list of items to be completed and corrected (punch list) to make the Work ready for acceptance by the County.
  - 2. This meeting shall be scheduled not earlier than 14 days prior to the date anticipated for the Substantial Completion review.
- C. Notify Architect when work is considered ready for Architect's Substantial Completion inspection.
- D. Submit written certification containing Contractor's Correction Punch List, that Contract Documents have been reviewed, work has been inspected, and that work is complete in accordance with Contract Documents and ready for Architect's Substantial Completion inspection.
  - 1. Final Application for Payment: In the Application for Payment that coincides with the date Substantial Completion is claimed, show 100 percent completion for the portion of the Work claimed substantially complete.

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2. Warranties, Bonds and Certificates: Submit specific warranties, guarantees, workmanship bonds, maintenance agreements, final certifications and similar documents.
  3. Locks and Keys: Change temporary lock cylinders over to permanent keying and transmit keys to the County, unless otherwise directed or specified.
  4. Tests and Instructions: Complete start-up testing of systems, and instruction of the County's personnel. Remove temporary facilities from the site, along with construction tools, mock-ups, and similar elements.
- E. Clearing and Cleaning: Prior to the Substantial Completion review, Contractor shall conduct a thorough cleaning and clearing of the Project area, including removal of construction facilities and temporary controls.
- F. Inspection and Testing: Prior to the Substantial Completion review, complete inspection and testing required for the Work, including securing of approvals by authorities having jurisdiction.
1. Complete all inspections, tests, balancing, sterilization and cleaning of plumbing and HVAC systems.
  2. Complete inspections and tests of electrical power and signal systems.
  3. Complete inspections and tests of conveying (elevator or wheelchair lift) systems.
- G. County will occupy all of the building as specified in Section 01 10 00.
- H. Conduct Substantial Completion inspection and create Final Correction Punch List containing Architect's and Contractor's comprehensive list of items identified to be completed or corrected and submit to Architect.
1. Correction (Punch) List: Contractor shall prepare and distribute at the preliminary Contract closeout review meeting, a typewritten, comprehensive list of items to be completed and corrected (punch list) to make the Work ready for acceptance by the County.
    - a. The punch list shall include all items to be completed or corrected prior to the Contractor's application for final payment.
    - b. The punch list shall identify items by location (room number or name) and consecutive number. For example, 307-5 would identify item 5 in Room 307, Roof-4 would identify item 4 on Roof.
    - c. Contractor shall prepare separate lists according to categories used for Drawings. For example, provide lists for Architectural, Structural, Plumbing, Mechanical, Electrical, Fire Protection, Civil, and Landscape.
    - d. Architect, Architect's consultants and County's consultants, if in attendance, will conduct a brief walk-through of Project with the Contractor to review scope and adequacy of the punch list.

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- e. Verbal comments will be made to the Contractor by the AHJ, the Architect and the Architect's and County's consultants, if in attendance, during the walk-through. These comments will indicate generally the additions and corrections to be made to the punch list. Such comments shall not be considered to be comprehensive; Contractor shall use the comments as guidance in preparing the punch list for the Substantial Completion review.
2. Substantial Completion Meeting: On a date mutually agreed by the County, Architect, and Contractor, a meeting shall be conducted at the Project site to determine whether the Work is satisfactory and complete for filing a Notice of Completion (Substantial Completion).
    - a. Contractor shall provide three working days notice to Architect for requested date of Substantial Completion meeting.
    - b. The AHJ, the Architect and the Architect's and County's consultants, as authorized by the County, will attend the Substantial Completion meeting.
    - c. In addition to conducting a walk-through of the facility and reviewing the punch list, the purpose of the meeting shall include submission of warranties, guarantees and bonds to the County, submission of operation and maintenance data (manuals), provision of specified extra materials to the County, and submission of other Contract closeout documents and materials as required and if not already submitted.
    - d. The AHJ, the Architect and Architect's consultants, as appropriate, will conduct a walk-through of the facility with the Contractor and review the punch list.
    - e. Contractor shall correct the punch list and record additional items as may identified during the walk-through, including notations of corrective actions to be taken.
    - f. Contractor shall retype the punch list and distribute it within three working days to those attending the meeting.
    - g. If additional site visits by the AHJ, the Architect and the Architect's and County's consultants are required to review completion and correction of the Work, the costs of additional visits shall be reimbursed to the County by the Contractor by deducting such costs from the Final Payment.
  - I. Correct items of work listed in Final Correction Punch List and comply with requirements for access to County-occupied areas.
  - J. Notify Architect when work is considered finally complete and ready for Architect's Substantial Completion final inspection.
    1. Architect's Certification of Substantial Completion:
      - a. When Architect determines that list of items to be completed and corrected (Punch List) is sufficiently complete for County to occupy Project for the use to which it is intended.
      - b. Architect will complete and issue to the County and Contractor a Certificate of Substantial Completion using:
        - 1) The American Institute of Architects Form G704 - Certificate of Substantial Completion

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- 2) or other form if directed by the County.
- K. Complete items of work determined by Architect listed in executed Certificate of Substantial Completion.

**3.15 FINAL PAYMENT**

- A. After completion of all items listed for completion and correction, after submission of all documents and products and after final cleaning, submit final Application for Payment, identifying total adjusted Contract Sum, previous payments and sum remaining due.
- B. Payment will not be made until the following are accomplished:
  - 1. All Project Record Documents have been transferred and accepted by County.
  - 2. All extra materials and maintenance stock have been transferred and received by County.
  - 3. All warranty documents and operation and maintenance data have been received and accepted by County.
  - 4. All liens have been released or bonded by Contractor.
  - 5. Contractor's surety has consented to Final Payment.
  - 6. All documentation required by AHJ has been completed.

**3.16 MAINTENANCE**

- A. Provide service and maintenance of components indicated in specification sections.
- B. Maintenance Period: As indicated in specification sections or, if not indicated, not less than one year from the Date of Substantial Completion or the length of the specified warranty, whichever is longer.
- C. Examine system components at a frequency consistent with reliable operation. Clean, adjust, and lubricate as required.
- D. Include systematic examination, adjustment, and lubrication of components. Repair or replace parts whenever required. Use parts produced by the manufacturer of the original component.
- E. Maintenance service shall not be assigned or transferred to any agent or subcontractor without prior written consent of the County.

**END OF SECTION**

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**SECTION 01 71 23  
FIELD ENGINEERING**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. Field engineering services by Contractor.
- B. Land surveying services by Contractor.

**1.02 DESCRIPTION OF SERVICES**

- A. Specific services listed in this section are in addition to, and do not supersede, general Execution and Closeout Requirements.
- B. Sole responsibility for establishing all locations, dimensions and levels of items of work.
- C. Sole responsibility for provision of all materials required to establish and maintain benchmarks and control points, including batter boards, grade stakes, structure, and pipeline elevation stakes, and other items.
- D. Having a skilled instrument person(s) available on short notice when necessary for laying out the work.
- E. Keeping a transit, theodolite, or TST (total station theodolite with electronic distance measurement device); leveling instrument; and related implements such as survey rods and other measurement devices, at the project site at all times.
- F. Provision of facilities and assistance necessary for Architect to check lines and grade points placed by Contractor.
  - 1. Performance of excavation or embankment work until after all cross-sectioning necessary for determining payment quantities for Unit Price work have been completed and accepted by Architect.
- G. Preparation and maintenance of daily reports of activity on the work. Submission of reports containing key progress indicators and job conditions to Architect.
  - 1. Number of employees at the Site.
  - 2. Number employees at the Site for each of Contractor's subcontractors.
  - 3. Breakdown of employees by trades.
  - 4. Major equipment and materials installed as part of the work.
  - 5. Major construction equipment utilized.
  - 6. Location of areas in which construction was performed.
  - 7. Materials and equipment received.
  - 8. Work performed, including field quality control measures and testing.
  - 9. Weather conditions.
  - 10. Safety.
  - 11. Delays encountered, amount of delay incurred, and the reasons for the delay.

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- 12. Instructions received from Architect or County, if any.
- H. Preparation and maintenance of professional-quality, accurate, well organized, legible notes of all measurements and calculations made while surveying and laying out the work.
- I. Prior to backfilling operations, surveying - locating, and recording on a copy of Contract Documents - an accurate representation of buried work and Underground Facilities encountered.
- J. Setting up and executing time-lapse photography of construction activities.

**1.03 REFERENCE STANDARDS**

- A. FGDC-STD-007.1 - Geospatial Positioning Accuracy Standards - Part 1: Reporting Methodology.
- B. FGDC-STD-007.2 - Geospatial Positioning Accuracy Standards - Part 2: Standards for Geodetic Networks.
- C. FGDC-STD-007.4 - Geospatial Positioning Accuracy Standards - Part 4: Architecture, Engineering, Construction, and Facilities Measurement.
- D. SMACNA (SRM) - Seismic Restraint Manual Guidelines for Mechanical Systems.
- E. State Plane Coordinate System for California.

**1.04 ADMINISTRATIVE REQUIREMENTS**

- A. Preinstallation Meeting: Conduct a preinstallation meeting one week prior to the start of the work of this section; require attendance by all affected installers.

**1.05 SUBMITTALS**

- A. See Section 01 30 00 - Administrative Requirements, for submittal procedures.
- B. Submit in addition to items required in Section 01 70 00 - Execution and Closeout Requirements.
- C. Informational Submittals: Submit the following:
  - 1. Field Engineering: Submit daily reports, with content as indicated in this section.
    - a. When requested by Architect, submit for Record documentation verifying accuracy of field engineering including, but not limited to, Contractor’s survey notes and field notes.
  - 2. Final property survey.

**1.06 QUALITY ASSURANCE**

- A. Field Engineer's Qualifications: As established in Section 01 70 00 - Execution and Closeout Requirements.
- B. Land Surveyor's Qualifications: As established in Section 01 70 00 - Execution and Closeout Requirements.
- C. Use adequate number of skilled and thoroughly-trained workers to perform the work of this section in a timely and comprehensive manner.
- D. Minimum accuracy for required work is as follows:

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1. Grade: Horizontal Tolerance: Plus or minus 0.5 feet, Vertical Tolerance: Plus or minus 0.05 feet.
2. Culverts and ditches: Horizontal Tolerance: Plus or minus 0.5 feet, Vertical Tolerance: Plus or minus 0.05 feet.
3. Structures: Horizontal Tolerance: Plus or minus 0.5 feet (location), Vertical Tolerance: Plus or minus 0.05 feet.

**PART 2 PRODUCTS - NOT USED**

**PART 3 EXECUTION**

**3.01 EXAMINATION**

- A. Verify layout information shown on Drawings, in relation to the property survey and existing benchmarks. Notify County's Representative and Architect of any discrepancies immediately in writing before proceeding to lay out the work. Locate and protect existing benchmarks and base line. Preserve permanent reference points during construction.
- B. Existing Utilities and Equipment: The existence and location of underground and other utilities and construction indicated as existing are not guaranteed. Before beginning sitework, investigate and verify existing conditions.

**3.02 FIELD ENGINEERING**

- A. Maintain field office files, drawings, specifications, and record documents.
- B. Coordinate field engineering services with Contractor's subcontractors, installers, and suppliers as appropriate.
- C. Prepare layout and coordination drawings for construction operations.
- D. Check and coordinate the work for conflicts and interferences, and immediately advise Architect and County of all discrepancies of which Contractor is aware.
- E. Cooperate as required with Architect and County in observing the work and performing field inspections.
- F. Review and coordinate work on a regular basis with shop drawings and Contractor's other submittals.
- G. In general, match existing adjacent grades and maintain existing flow lines.
- H. Check the location, line and grade of every major element as the work progresses. Notify the Architect when deviations from required lines or grades exceed allowable tolerances. Include in such notifications a thorough explanation of the problem, and a proposed plan and schedule for remedying the deviation. Do not proceed with remedial work without County's concurrence of the remediation plan.
- I. Check all formwork, reinforcing, inserts, structural steel, bolts, sleeves, piping, other materials and equipment for compliance with shop drawings and Contract Documents requirements.
- J. Check all bracing and shoring for structural integrity and compliance with designs prepared by the Contractor.

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### 3.03 LAND SURVEYING

- A. General: Follow standards for geospatial positioning accuracy.
  - 1. FGDC-STD-007.1 as amended by Authority Having Jurisdiction.
  - 2. FGDC-STD-007.2 as amended by Authority Having Jurisdiction.
  - 3. FGDC-STD-007.4 as amended by Authority Having Jurisdiction.
- B. Coordinate survey data with the State Plane Coordinate System of California.
- C. Contractor is responsible for the restoration of all property corners and control monuments damaged or destroyed by construction-related activities. Any disturbed monuments must be replaced at Contractor's expense by a surveyor licensed in California, and approved by the Architect.
  - 1. Temporarily suspend work at such points and for such reasonable times as the County may require for resetting monuments. The Contractor will not be entitled to any additional compensation or extension of time.

### 3.04 CONSTRUCTION SURVEYING

- A. General: Perform surveying as applicable to specific items necessary for proper execution of work.
  - 1. Alignment Staking: Provide alignment stakes at 50 foot intervals on tangent, and at 25 foot intervals on curves.
  - 2. Slope Staking: Provide slope staking at 50 foot intervals on tangent, and at 25 foot intervals on curves. Re-stake at every ten-foot difference in elevation.
  - 3. Structure: Stake out structures, including elevations, and check prior to and during construction.
  - 4. Pipelines: Stake out pipelines including elevations, and check prior to and during construction.
  - 5. Site Utilities: Stake out utility lines including elevations, and check prior to and during construction.
  - 6. Cross-sections: Provide original, intermediate, and final staking as required, for site work and other locations as necessary for quantity surveys.
  - 7. Easement Staking: Provide easement staking at 50 foot intervals on tangent, and at 25 foot intervals on curves. If required by project conditions, provide wooden laths with flagging at 100 foot intervals.
  - 8. Record Staking: Provide permanent stake at each blind flange and each utility cap is provided for future connections. Use stakes for record staking of material(s) acceptable to Architect.
- B. Surveying to Determine Quantities for Payment.
  - 1. For each application for progress payment, perform such surveys and computations necessary to determine quantities of work performed or placed. Perform surveys necessary for Architect to determine final quantities of work in place.

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- 2. Notify Architect at least 24 hours before performing survey services for determining quantities. Unless waived in writing by Architect, perform quantity surveys in presence of Architect.
- C. Record Log: Maintain a log of layout control work. Record any deviations from required lines and levels. Include beginning and ending dates and times of surveys, weather conditions, name and duty of each survey party member, and types of instruments and tapes used.
- D. Use by the Architect: The Architect may at any time use line and grade points and markers established by the Contractor. The Contractor's surveys are a part of the work and may be checked by the Architect at any time.
- E. Accuracy:
  - 1. Establish Contractor's temporary survey references points for Contractor's use to at least second-order accuracy (e.g., 1:10000). Set construction staking used as a guide for the work to at least third-order accuracy (e.g., 1:5000). Provide the absolute margin for error specified below on the basis established by such orders.
    - a. Horizontal accuracy of easement staking: Plus or minus 0.1 feet.
    - b. Accuracy of other staking shall be plus or minus 0.04 feet horizontally and plus or minus 0.02 feet vertically.
    - c. Include an error analysis sufficient to demonstrate required accuracy in survey calculations.
  - 2. County reserves the right to check the Contractor's survey, measurements, and calculations. The requirement for accuracy will not be waived, whether this right is exercised or not.

**3.05 SUPPORT AND BRACING**

- A. General requirements: Design all support and bracing systems, if required. Provide for attachment to portions of the building structure capable of bearing the loads imposed. Design systems to not overstress the building structure.
- B. Seismic Bracing: Design where required by authorities having jurisdiction.
  - 1. Design and install all support systems to comply with the seismic requirements of the Construction Code of California.
  - 2. Design and install seismic bracing so as not to defeat the operation on any required vibration isolation or sound isolation devices.
  - 3. For seismic bracing guidelines for mechanical, electrical and plumbing systems, refer to SMACNA (SRM).

**3.06 REPORTS**

- A. Submit two copies of Contractor's daily reports electronically to Architect and County Representative, by 9:00 AM the next working day after the day covered in the associated report. Daily report shall be signed by responsible member of Contractor's staff, such as project manager or superintendent, or foreman designated by Contractor as having authority to sign daily reports.

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### 3.07 RECORDS

- A. Maintain at the Site a complete and accurate log of control and survey work as it progresses.
  - 1. Organize and record survey data in accordance with recognized professional surveying standards, Laws and Regulations, and prevailing standards of practice in California. Record Contractor's surveyor's original field notes, computations, and other surveying data in Contractor-furnished hard-bound field books. Contractor is solely responsible for completeness and accuracy of survey work, and completeness and accuracy of survey records, including field books. Survey records,(including field books) may be rejected by County due to failure to organize and maintain survey records in a manner that allows reasonable and independent verification of calculations, and/or allows identification of elevations, dimensions, and grades of the work.
  - 2. Illegible notes or data, and erasures on any page of field books, are unacceptable. Do not submit copied notes or data. Corrections by ruling or lining out errors will be unacceptable unless initialed by the surveyor. Violation of these requirements may require re-surveying the data questioned by Architect.
- B. Submit three copies of final property survey to County. Include on the survey a certification, signed by the surveyor, that principal metes, bounds, lines, and levels of the Project are accurately positioned as shown on the survey. Include the following information:
  - 1. Structure locations from property lines, and distances to adjacent buildings.
  - 2. Dimensions and locations of drives, walks, walls, underground utilities, appurtenances, and major site features.
  - 3. Location of easements.
  - 4. Final grading topographic survey.

### 3.08 CLOSEOUT ACTIVITIES

- A. See Section 01 78 00 - Closeout Submittals, for closeout submittals.
- B. See Section 01 79 00 - Demonstration and Training, for additional requirements.

**END OF SECTION**

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**SECTION 01 74 19**  
**CONSTRUCTION WASTE MANAGEMENT AND DISPOSAL**

**PART 1 GENERAL**

**1.01 WASTE MANAGEMENT REQUIREMENTS**

- A. Comply with the requirements Section 5.408 of the California Green Building Standards Code.
  - 1. Recycle and/or salvage for reuse a minimum of 65percent of the nonhazardous construction and demolition waste in accordance with Section 504.8.1.1, 5.408.1.2, or 5.408.1.3; or meet a local construction and demolition waste management ordinance, whichever is more stringent.
- B. County requires that this project generate the least amount of trash and waste possible.
- C. Employ processes that ensure the generation of as little waste as possible due to error, poor planning, breakage, mishandling, contamination, or other factors.
- D. Minimize trash/waste disposal in landfills; reuse, salvage, or recycle as much waste as economically feasible.
- E. Required Recycling, Salvage, and Reuse: The following may not be disposed of in landfills or by incineration:
  - 1. Aluminum and plastic beverage containers.
  - 2. Corrugated cardboard.
  - 3. Wood pallets.
  - 4. Clean dimensional wood.
  - 5. Land clearing debris, including brush, branches, logs, and stumps; see Section 31 10 00 - Site Clearing for use options.
    - a. Comply with California Green Code (CGC) 5.408.3; Excavated soil and land clearing debris: 100 percent of trees, stumps, rocks and associated vegetation and soils resulting primarily from land clearing shall be reused or recycled.
      - 1) Exception: Reuse, either on-or off-site, of vegetation or soil contaminated by disease or pest infestation.
  - 6. Concrete: May be crushed and used as riprap, aggregate, sub-base material, or fill.
  - 7. Bricks: May be used on project if whole, or crushed and used as landscape cover, sub-base material, or fill.
  - 8. Concrete masonry units: May be used on project if whole, or crushed and used as sub-base material or fill.
  - 9. Asphalt paving: May be recycled into paving for project.
  - 10. Metals, including packaging banding, metal studs, sheet metal, structural steel, piping, reinforcing bars, door frames, and other items made of steel, iron, galvanized steel, stainless steel, aluminum, copper, zinc, lead, brass, and bronze.
  - 11. Glass.

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12. Gypsum drywall and plaster.
  13. Carpet, carpet cushion, carpet tile, and carpet remnants, both new and removed: DuPont (<http://flooring.dupont.com>) and Interface ([www.interfaceinc.com](http://www.interfaceinc.com)) conduct reclamation programs.
  14. Roofing.
  15. Paint.
  16. Plastic sheeting.
  17. Rigid foam insulation.
  18. Windows, doors, and door hardware.
  19. Plumbing fixtures.
  20. Mechanical and electrical equipment.
  21. Fluorescent lamps (light bulbs).
  22. Acoustical ceiling tile and panels.
  23. Materials which could be hazardous and subject to special disposal regulations include but are not limited to the following: CalGreen Section 5.408.2
    - a. Lead-Based Paint
    - b. Asbestos: Found in older pipe insulation, asphalt floor tiles, linoleum, insulation, etc.
    - c. Polychlorinated Biphenyls (PCBs):
      - 1) Found in electrical oil filled equipment manufactured prior to 1978 such as transformers, switches and fluorescent lamp ballasts.
      - 2) Also found in adhesive, sealant, caulk, glazing putty, roofing material, pesticide vehicle, ink, paper, fabric dye, gaskets, and hydraulic fluid.
    - d. HVAC Refrigerants: Containing Fluorinated and Chlorinated compounds.
    - e. Drinking Fountain Refrigerants: Containing Fluorinated and Chlorinated compounds.
    - f. Fluorescent Light Tubes: Contain mercury.
    - g. EXIT signs and Smoke Detectors: May contain unregulated, radioactive tritium. · Required to be returned to manufacturer.
    - h. Contaminated Soils.
    - i. Pressure Treated Lumber.
- F. Contractor shall submit periodic Waste Disposal Reports; all landfill disposal, recycling, salvage, and reuse must be reported regardless of to whom the cost or savings accrues; use the same units of measure on all reports.
1. Contractor's quantitative reports for construction waste materials as a condition of approval of progress payments.
- G. Contractor shall develop and follow a Waste Management Plan designed to implement these requirements. CalGreen Section 5.408.1.1.
- H. The following sources may be useful in developing the Waste Management Plan:
1. California Recycling Department, at [www.bsc.ca.gov/Home/CALGreen.aspx](http://www.bsc.ca.gov/Home/CALGreen.aspx).

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2. General information contacts regarding construction and demolition waste:
  - a. EPA Construction and demolition (C&D) debris website: [www.epa.gov/epawaste/conserve/imr/cdm/](http://www.epa.gov/epawaste/conserve/imr/cdm/).
  - b. Directory of Wood-Framed Building Deconstruction and Reused Building Materials Companies: [www.fpl.fs.fed.us/documnts/fplgtr/fpl\\_gtr150.pdf](http://www.fpl.fs.fed.us/documnts/fplgtr/fpl_gtr150.pdf).
  - c. Additional resources to be developed by Contractor with assistance from County and **Contractor, as requested.**
3. Recycling Haulers and Markets: The source list below contains local haulers and markets for recyclable materials. This list is provided for information only and is not necessarily comprehensive; other haulers and markets are acceptable.
  - a. CAL-MAX: [www.calrecycle.ca.gov](http://www.calrecycle.ca.gov).
    - 1) A free service designed to help businesses find markets for non-hazardous materials they have traditionally discarded.
  - b. General Recycling/Reuse Centers: For information on qualified local solid waste haulers contact the California Department of Resources Recycling and Recovery - CalRecycle. The website lists wastes recycling facilities in counties throughout the State of California.
- I. Methods of trash/waste disposal that are not acceptable are:
  1. Burning on the project site.
  2. Burying on the project site.
  3. Dumping or burying on other property, public or private.
  4. Other illegal dumping or burying.
  5. Incineration, either on- or off-site.
- J. Regulatory Requirements: Contractor is responsible for knowing and complying with regulatory requirements, including but not limited to Federal, state and local requirements, pertaining to legal disposal of all construction and demolition waste materials.

## 1.02 RELATED REQUIREMENTS

- A. Section 01 30 00 - Administrative Requirements: Additional requirements for project meetings, reports, submittal procedures, and project documentation.
- B. Section 01 50 00 - Temporary Facilities and Controls: Additional requirements related to trash/waste collection and removal facilities and services.
- C. Section 01 60 00 - Product Requirements: Waste prevention requirements related to delivery, storage, and handling.
- D. Section 01 70 00 - Execution and Closeout Requirements: Trash/waste prevention procedures related to demolition, cutting and patching, installation, protection, and cleaning.
- E. Section 31 10 00 - Site Clearing: Handling and disposal of land clearing debris.

## 1.03 DEFINITIONS

- A. Clean: Untreated and unpainted; not contaminated with oils, solvents, caulk, or the like.

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- B. Construction and Demolition Waste: Solid wastes typically including building materials, packaging, trash, debris, and rubble resulting from construction, remodeling, repair and demolition operations.
  - 1. Debris that is not hazardous as defined in CalGreen Section 5.408.2 and California Code of Regulations, Title 22, Section 66261.3 et seq.
  - 2. This term includes, but is not limited to, asphalt concrete, Portland cement concrete, brick, lumber, gypsum wallboard, cardboard and other associated packaging, roofing material, ceramic tile, carpeting, plastic pipe, and steel.
  - 3. The debris may be commingled with rock, soil, tree stumps, and other vegetative matter resulting from land clearing and landscaping for construction or land development projects.
- C. Disposal: Removal off-site of demolition and construction waste and subsequent sale, recycling, reuse, or deposit in landfill or incinerator acceptable to authorities having jurisdiction.
- D. Diversion: Avoidance of demolition and construction waste sent to landfill or incineration. Diversion does not include using materials for landfill, alternate daily cover on landfills, or materials used as fuel in waste-to-energy processes.
- E. Enforcement Agency (EA). Enforcement agency as defined in CA Public Resources Code 40130.
- F. Hazardous: Exhibiting the characteristics of hazardous substances, i.e., ignitibility, corrosivity, toxicity or reactivity.
- G. Landfill, Inert waste or Inert Disposal Facility:
  - 1. A disposal facility that accepts only inert waste such as soil and rock, fully cured asphalt paving, uncontaminated concrete (including fiberglass or steel reinforcing rods embedded in the concrete), brick, glass, and ceramics, for land disposal.
- H. Landfill, Class III:
  - 1. A landfill that accepts non-hazardous resources such as household, commercial, and industrial waste, resulting from construction, remodeling, repair, and demolition operations.
  - 2. A Class III landfill must have a solid waste facilities permit from the California Integrated Waste Management Board (CIWMB) and is regulated by the Enforcement Agency (EA).
- I. Mixed Debris: Loads that include commingled recyclable and non-recyclable materials generated at the construction site.
- J. Mixed Debris Recycling Facility: A processing facility that accepts loads of commingled construction and demolition debris for the purpose of recovering re-usable and recyclable materials and disposing the non-recyclable residual materials.
- K. Nonhazardous: Exhibiting none of the characteristics of hazardous substances, i.e., ignitibility, corrosivity, toxicity, or reactivity.
- L. Nontoxic: Neither immediately poisonous to humans nor poisonous after a long period of exposure.
- M. Recyclable: The ability of a product or material to be recovered at the end of its life cycle and remanufactured into a new product for reuse by others.

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- N. Recycle: To remove a waste material from the project site to another site for remanufacture into a new product for reuse by others.
- O. Recycling: The process of sorting, cleansing, treating and reconstituting solid waste and other discarded materials for the purpose of using the altered form. Recycling does not include burning, incinerating, or thermally destroying waste.
- P. Recycling Center: A facility that receives only C&D material that has been separated for reuse prior to receipt, in which the residual (disposed) amount of waste in the material is less than 10% of the amount separated for reuse by weight.
- Q. Return: To give back reusable items or unused products to vendors for credit.
- R. Reuse: To reuse a construction waste material in some manner on the project site.
- S. Salvage: To remove a waste material from the project site to another site for resale or reuse by others.
- T. Sediment: Soil and other debris that has been eroded and transported by storm or well production run-off water.
- U. Separated for Reuse:
  - 1. Materials, including commingled recyclables.
  - 2. Separated or kept separate from the solid waste stream for the purpose of:
    - a. Additional sorting or processing those materials for reuse or recycling.
      - 1) In order to return them to the economic mainstream in the form of raw material for new, reused, or reconstituted products.
    - b. Products shall meet the quality standards necessary to be used in the marketplace.
    - c. Includes materials that have been "source separated".
- V. Solid Waste:
  - 1. All putrescible and nonputrescible solid, semisolid, and liquid wastes, including:
    - a. Garbage, trash, refuse, paper, rubbish, ashes, industrial wastes, demolition and construction wastes.
    - b. Abandoned vehicles and parts thereof.
    - c. Discarded home and industrial appliances.
    - d. Dewatered, treated, or chemically fixed sewage sludge which is not hazardous waste.
    - e. Manure, vegetable or animal solid and semisolid wastes.
    - f. Other discarded solid and semisolid wastes.
  - 2. "Solid waste" does not include hazardous waste, radioactive waste, or medical waste as defined or regulated by State law.
- W. Source Separation: The act of keeping different types of waste materials separate beginning from the first time they become waste.

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1. Materials, including commingled recyclables, that have been separated or kept separate from the solid waste stream at the point of generation, for the purpose of additional sorting or processing of those materials for reuse or recycling in order to return them to the economic mainstream in the form of raw materials for new, reused, or reconstituted products which meet the quality standards necessary to be used in the marketplace.
- X. Toxic: Poisonous to humans either immediately or after a long period of exposure.
- Y. Trash: Any product or material unable to be reused, returned, recycled, or salvaged.
- Z. Waste: Extra material or material that has reached the end of its useful life in its intended use. Waste includes salvageable, returnable, recyclable, and reusable material.
- AA. Waste Hauler: A company that possesses a valid permit from the local waste management authority to collect and transport solid wastes from individuals or businesses for the purpose of recycling or disposal in the locality.

#### 1.04 SUBMITTALS

- A. See Section 01 30 00 - Administrative Requirements, for submittal procedures.
- B. Submit Waste Management Plan within 30 calendar days after receipt of Notice to Proceed, or prior to any trash or waste removal, whichever occurs sooner; submit projection of all trash and waste that will require disposal and alternatives to landfilling.
  1. Submit four copies of CWMP for review.
    - a. Contractor's Construction Waste and Recycling Plan must be approved by the Architect and Owner prior to the start of Work.
  2. Approval of the Contractor's CWMP shall not relieve the Contractor of responsibility for adequate and continuing control of pollutants and other environmental protection measures.
- C. Waste Management Plan: Include the following information:
  1. Analysis of the trash and waste projected to be generated during the entire project construction cycle, including types and quantities.
  2. Landfill Options: The name, address, and telephone number of the landfill(s) where trash/waste will be disposed of, the applicable landfill tipping fee(s), and the projected cost of disposing of all project trash/waste in the landfill(s).
  3. Landfill Alternatives: List all waste materials that will be diverted from landfills by reuse, salvage, or recycling.
    - a. List each material proposed to be salvaged, reused, or recycled.
    - b. List the local market for each material.
  4. Meetings: Describe regular meetings to be held to address waste prevention, reduction, recycling, salvage, reuse, and disposal.
  5. Materials Handling Procedures: Describe the means by which materials to be diverted from landfills will be protected from contamination and prepared for acceptance by designated facilities; include separation procedures for recyclables, storage, and packaging.

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6. Transportation: Identify the destination and means of transportation of materials to be recycled; i.e. whether materials will be site-separated and self-hauled to designated centers, or whether mixed materials will be collected by a waste hauler.
  7. Recycling Incentives: Describe procedures required to obtain credits, rebates, or similar incentives.
- D. Waste Disposal Reports: Submit at specified intervals, with details of quantities of trash and waste, means of disposal or reuse, and costs; show both totals to date and since last report.
1. Submit updated Report with each Application for Progress Payment; failure to submit Report will delay payment.
    - a. Inert materials shall achieve a construction waste diversion rate of at least 95 percent.
      - 1) These materials include, but are not limited to, concrete, asphalt and rock.
      - 2) Earthwork is not included.
      - 3) Excavated soil shall not be included in any of the calculations used to ensure compliance with this specification section.
    - b. The overall diversion rate must be based on weight.
    - c. The diversion rate of individual materials can be measured in either weight or volume, but the rate shall be converted into the units selected for calculating the overall diversion rate.
      - 1) All individual material diversions must be converted to a consistent set of units when calculating the overall diversion rate for the all reports and submittals required for the Work.
    - d. Conversion rate numbers shall be based on standard conversion rate data for construction projects provided by the California Integrated Waste Management Board (CIWMB). This data is available at the following internet location, <http://www.calrecycle.ca.gov/LGCentral/Library/dsg/ICandD.htm>.
  2. Submit Report on a form acceptable to County.
  3. Landfill Disposal: Include the following information:
    - a. Identification of material.
    - b. Amount, in tons or cubic yards, of trash/waste material from the project disposed of in landfills.
    - c. State the identity of landfills, total amount of tipping fees paid to landfill, and total disposal cost.
    - d. Include manifests, weight tickets, receipts, and invoices as evidence of quantity and cost.
  4. Recycled and Salvaged Materials: Include the following information for each:
    - a. Identification of material, including those retrieved by installer for use on other projects.
    - b. Amount, in tons or cubic yards, date removed from the project site, and receiving party.

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- c. Transportation cost, amount paid or received for the material, and the net total cost or savings of salvage or recycling each material.
  - d. Include manifests, weight tickets, receipts, and invoices as evidence of quantity and cost.
  - e. Certification by receiving party that materials will not be disposed of in landfills or by incineration.
5. Material Reused on Project: Include the following information for each:
    - a. Identification of material and how it was used in the project.
    - b. Amount, in tons or cubic yards.
    - c. Include weight tickets as evidence of quantity.
  6. Other Disposal Methods: Include information similar to that described above, as appropriate to disposal method.

**PART 2 PRODUCTS**

**2.01 PRODUCT SUBSTITUTIONS**

- A. See Section 01 60 00 - Product Requirements for substitution submission procedures.
- B. For each proposed product substitution, submit the following information in addition to requirements specified in Section 01 60 00:
  1. Relative amount of waste produced, compared to specified product.
  2. Cost savings on waste disposal, compared to specified product, to be deducted from the Contract Sum.
  3. Proposed disposal method for waste product.
  4. Markets for recycled waste product.

**PART 3 EXECUTION**

**3.01 WASTE MANAGEMENT PROCEDURES**

- A. See Section 01 30 00 for additional requirements for project meetings, reports, submittal procedures, and project documentation.
- B. See Section 01 50 00 for additional requirements related to trash/waste collection and removal facilities and services.
- C. See Section 01 60 00 for waste prevention requirements related to delivery, storage, and handling.
- D. See Section 01 70 00 for trash/waste prevention procedures related to demolition, cutting and patching, installation, protection, and cleaning.

**3.02 WASTE MANAGEMENT PLAN IMPLEMENTATION**

- A. Manager: Designate an on-site person or persons responsible for instructing workers and overseeing and documenting results of the Waste Management Plan.

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- B. Communication: Distribute copies of the Waste Management Plan to job site foreman, each subcontractor, County, and Architect.
- C. Instruction: Provide on-site instruction of appropriate separation, handling, and recycling, salvage, reuse, and return methods to be used by all parties at the appropriate stages of the project.
- D. Meetings: Discuss trash/waste management goals and issues at project meetings.
  - 1. Prebid meeting.
  - 2. Preconstruction meeting.
  - 3. Regular job-site meetings.
- E. Facilities: Provide specific facilities for separation and storage of materials for recycling, salvage, reuse, return, and trash disposal, for use by all contractors and installers.
  - 1. As a minimum, provide:
    - a. Separate area for storage of materials to be reused on-site, such as wood cut-offs for blocking.
    - b. Separate dumpsters for each category of recyclable.
    - c. Recycling bins at worker lunch area.
  - 2. Provide containers as required.
  - 3. Provide temporary enclosures around piles of separated materials to be recycled or salvaged.
  - 4. Provide materials for barriers and enclosures that are nonhazardous, recyclable, or reusable to the maximum extent possible; reuse project construction waste materials if possible.
  - 5. Locate enclosures out of the way of construction traffic.
  - 6. Provide adequate space for pick-up and delivery and convenience to subcontractors.
  - 7. If an enclosed area is not provided, clearly lay out and label a specific area on-site.
  - 8. Keep recycling and trash/waste bin areas neat and clean and clearly marked in order to avoid contamination of materials.
- F. Hazardous Wastes: Separate, store, and dispose of hazardous wastes according to applicable regulations.
- G. Recycling: Separate, store, protect, and handle at the site identified recyclable waste products in order to prevent contamination of materials and to maximize recyclability of identified materials. Arrange for timely pickups from the site or deliveries to recycling facility in order to prevent contamination of recyclable materials.
- H. Reuse of Materials On-Site: Set aside, sort, and protect separated products in preparation for reuse.
- I. Salvage: Set aside, sort, and protect products to be salvaged for reuse off-site.

**3.03 DISPOSAL OPERATIONS AND WASTE HAULING**

- A. Remove waste materials from Project Site and legally dispose of them in a landfill or incinerator acceptable to authorities having jurisdiction.

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1. Except for items or materials to be salvaged, recycled, or otherwise reused.
2. Except as otherwise specified, do not allow waste materials that are to be disposed of to accumulate on site.
3. Use a permitted waste hauler or Contractor's trucking services and personnel. To confirm valid permitted status of waste haulers, contact the local solid waste authority.
4. Become familiar with the conditions for acceptance of new construction, excavation and demolition materials at recycling facilities, prior to delivering materials.
5. Deliver to facilities that can legally accept new construction, excavation and demolition materials for purpose of re-use, recycling, composting, or disposal.
6. Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.
7. Do not burn or bury waste materials on or off site. Appropriate on-site topical application of ground gypsum or wood, or use of site paving as granulated fill is considered reuse, not waste.

**3.04 PLAN AND REPORT FORMS**

- A. See suggested forms on the following pages.

**END OF SECTION**

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**CONTRACTOR'S CONSTRUCTION WASTE AND RECYCLING PLAN**

(Submit After Award of Contract and Prior to Start of Work)

Project Title:						
Contract or Work Order No.:						
Contractor's Name:						
Street Address:						
City:			State:		Zip:	
Phone: ( )			Fax: ( )			
E-Mail Address:						
Prepared by: (Print Name)						
Date Submitted:						
Date Submitted:						
Project Period:						
Project Period:		From:		TO:		
<b>Reuse, Recycling or Disposal Processes To Be Used</b>						
Describe the types of recycling processes or disposal activities that will be used for material generated in the project. Indicate the type of process or activity by number, types of materials, and estimated quantities that will be recycled or disposed in the sections below:						
01 - Reuse of building materials or salvage items on site (i.e. crushed base or red clay brick)						
02 - Salvaging building materials or salvage items at an offsite salvage or re-use center (i.e. lighting, fixtures)						
03 - Recycling source separated materials on site (i.e. crushing asphalt/concrete for reuse or grinding for mulch)						
04 - Recycling source separated materials at an offsite recycling center (i.e. scrap metal or green materials)						
05 - Recycling commingled loads of C&D materials at an offsite mixed debris recycling center or transfer station						
06 - Recycling material as Alternative Daily Cover at landfills						
07 - Delivery of soils or mixed inerts to an inert landfill for disposal (inert fill).						
08 - Disposal at a landfill or transfer station.						
09 - Other (please describe) _____						
<b>Types of Material To Be Generated</b>						
Use these codes to indicate the types of material that will be generated on the project						
A = Asphalt		C = Concrete		M = Metals		I = Mixed Inert
D = Drywall		P/C=Paper/Cardboard		W/C = Wire/Cable		S= Soils (Non Hazardous)
M/C = Miscellaneous Construction Debris		R = Reuse/Salvage		W = Wood		O = Other (describe)
Facilities Used: Provide Name of Facility and Location (City)						
Total Truck Loads: Provide Number of Trucks Hauled from Site During Reporting Period						
Total Quantities: If scales are available at sites, report in tons. If not, quantify by cubic yards. For salvage/reuse items, quantify by estimated weight (or units).						
<b>SECTION I - RE-USED/RECYCLED MATERIALS</b>						
Include all recycling activities for source separated or mixed material recycling centers where recycling will occur.						
Type of Material	Type of Activity	Facility to be Used/Location	Total Truck Loads	Total Quantities		
				Tons	Cubic YD	Other Wt.
(ex.) M	04	ABC Metals, Los Angeles	24	355		
a. Total Diversion						

**CONTRACTOR'S CONSTRUCTION WASTE AND RECYCLING PLAN**

Continued

SECTION II - DISPOSED MATERIALS						
Include all disposal activities for landfills, transfer stations, or inert landfills where no recycling will occur.						
Type of Material	Type of Activity	Facility to be Used/Location	Total Truck Loads	Total Quantities		
				Tons	Cubic YD	Other Wt.
(ex.) D	08	DEF Landfill, Los Angeles	2	35		
<b>b. Total Disposal</b>				<b>0</b>	<b>0</b>	<b>0</b>

SECTION III - TOTAL MATERIALS GENERATED			
This section calculates the total materials to be generated during the project period (Reuse/Recycle + Disposal = Generation)			
	Tons	Cubic YD	Other Wt.
<b>a. Total Reused/Recycled</b>	0	0	0
<b>b. Total Disposed</b>	0	0	0
<b>c. Total Generated</b>	0	0	0

SECTION IV - CONTRACTOR'S LANDFILL DIVERSION RATE CALCULATION			
Add totals from Section I + Section II			
	Tons	Cubic YD	Other Wt.
<b>a. Materials Re-Used and Recycled</b>	0		
<b>b. Materials Disposed</b>	0		
<b>c. Total Materials Generated (a. + b. = c.)</b>	0	0	0
<b>d. Landfill Diversion Rate (Tonnage Only)*</b>			

\* Use tons only to calculate recycling percentages: Tons Reused/Recycled/Tons Generated = % Recycled

Contractor's Comments (Provide any additional information pertinent to planned reuse, recycling, or disposal activities):

- Notes:
- |  |  |
|--|--|
| 1. Suggested Conversion Factors: From Cubic Yards to Tons<br>(Use when scales are not available) | c. Ferrous Metals: .22 (ex. 1000 CY Ferrous Metal = 220 tons)          |
| a. Asphalt: .61 (ex. 1000 CY Asphalt = 610 tons. Applies to broken chunks of asphalt)            | d. Non-Ferrous Metals: .10 (ex. 1000 CY Non-Ferrous Metals = 100 tons) |
| b. Concrete: .93 (ex. 1000 CY Concrete = 930 tons. Applies to broken chunks of concrete)         | e. Drywall Scrap: .20  |
|  | f. Wood Scrap: .16   |

## CONTRACTOR'S REUSE, RECYCLING, AND DISPOSAL REPORT

(Submit With Each Progress Payment)

Project Title:						
Contract or Work Order No.:						
Contractor's Name:						
Street Address:						
City:			State:		Zip:	
Phone: ( )			Fax: ( )			
E-Mail Address:						
Prepared by: (Print Name)						
Date Submitted:						
Project Period: From: TO:						
Reuse, Recycling or Disposal Processes to Be Used						
Describe the types of recycling processes or disposal activities that will be used for material generated in the project. Indicate the type of process or activity by number, types of materials, and estimated quantities that will be recycled or disposed in the sections below:						
01 - Reuse of building materials or salvage items on site (i.e. crushed base or red clay brick)						
02 - Salvaging building materials or salvage items at an offsite salvage or re-use center (i.e. lighting, fixtures)						
03 - Recycling source separated materials on site (i.e. crushing asphalt/concrete for reuse or grinding for mulch)						
04 - Recycling source separated materials at an offsite recycling center (i.e. scrap metal or green materials)						
05 - Recycling commingled loads of C&D materials at an offsite mixed debris recycling center or transfer station						
06 - Recycling material as Alternative Daily Cover at landfills						
07 - Delivery of soils or mixed inerts to an inert landfill for disposal (inert fill).						
08 - Disposal at a landfill or transfer station.						
09 - Other (please describe) _____						
Types of Material To Be Generated						
Use these codes to indicate the types of material that will be generated on the project						
A = Asphalt      C = Concrete      M = Metals      I = Mixed Inert      G = Green Materials						
D = Drywall      P/C=Paper/Cardboard      W/C = Wire/Cable      S= Soils (Non-Hazardous)						
M/C = Miscellaneous Construction Debris      R = Reuse/Salvage      W = Wood      O = Other (describe)						
Facilities Used: Provide Name of Facility and Location (City)						
Total Truck Loads: Provide Number of Trucks Hauled from Site During Reporting Period						
Total Quantities: If scales are available at sites, report in tons. If not, quantify by cubic yards. For salvage/reuse items, quantify by estimated weight (or units).						
SECTION I - RE-USED/RECYCLED MATERIALS						
Include all recycling activities for source separated or mixed material recycling centers where recycling will occur.						
Type of Material	Type of Activity	Facility to be Used/Location	Total Truck Loads	Total Quantities		
				Tons	Cubic YD	Other Wt.
(ex.) M	04	ABC Metals, Los Angeles	24	355		
a. Total Diversion						

**CONTRACTOR'S REUSE, RECYCLING, AND DISPOSAL REPORT**

Continued

SECTION II - DISPOSED MATERIALS						
Include all disposal activities for landfills, transfer stations, or inert landfills where no recycling will occur.						
Type of Material	Type of Activity	Facility to be Used/Location	Total Truck Loads	Total Quantities		
				Tons	Cubic YD	Other Wt.
(ex.) D	08	DEF Landfill, Los Angeles	2	35		
<b>b. Total Disposal</b>						

SECTION III - TOTAL MATERIALS GENERATED			
This section calculates the total materials to be generated during the project period (Reuse/Recycle + Disposal = Generation)			
	Tons	Cubic YD	Other Wt.
<b>a. Total Reused/Recycled</b>			
<b>b. Total Disposed</b>			
<b>c. Total Generated</b>			

SECTION IV - CONTRACTOR'S LANDFILL DIVERSION RATE CALCULATION			
Add totals from Section I + Section II			
	Tons	Cubic YD	Other Wt.
<b>a. Materials Re-Used and Recycled</b>			
<b>b. Materials Disposed</b>			
<b>c. Total Materials Generated (a. + b. = c.)</b>			
<b>d. Landfill Diversion Rate (Tonnage Only)*</b>			

\* Use tons only to calculate recycling percentages: Tons Reused/Recycled/Tons Generated = % Recycled

Contractor's Comments (Provide any additional information pertinent to planned reuse, recycling, or disposal activities):

- Notes:
- |  |  |
|--|--|
| 1. Suggested Conversion Factors: From Cubic Yards to Tons<br>(Use when scales are not available) | c. Ferrous Metals: .22 (ex. 1000 CY Ferrous Metal = 220 tons)          |
| a. Asphalt: .61 (ex. 1000 CY Asphalt = 610 tons. Applies to broken chunks of asphalt)            | d. Non-Ferrous Metals: .10 (ex. 1000 CY Non-Ferrous Metals = 100 tons) |
| b. Concrete: .93 (ex. 1000 CY Concrete = 930 tons. Applies to broken chunks of concrete)         | e. Drywall Scrap: .20  |
|  | f. Wood Scrap: .16   |

**SECTION 01 78 00  
CLOSEOUT SUBMITTALS**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. Project Record Documents.
- B. Operation and Maintenance Data.
- C. Warranties and bonds.

**1.02 RELATED REQUIREMENTS**

- A. Owner issued Bidding Instructions and General Conditions: Performance bond and labor and material payment bonds, warranty, and correction of work.
- B. Section 01 30 00 - Administrative Requirements: Submittals procedures, shop drawings, product data, and samples.
- C. Section 01 45 33 - Code-Required Special Inspections: Construction oversight procedures by AHJ regarding the execution, approval, and closeout of this building project.
- D. Section 01 70 00 - Execution and Closeout Requirements: Contract closeout procedures.
- E. Individual Product Sections: Specific requirements for operation and maintenance data.
- F. Individual Product Sections: Warranties required for specific products or Work.
  - 1. Special Project warranty requirements for specific products or elements of the Work; commitments and agreements for continuing services to County.

**1.03 DEFINITIONS**

- A. Warranty: Assurance to County by Contractor, installer, supplier, manufacturer or other party responsible as warrantor, for the quantity, quality, performance and other representations of a product, system service of the Work, in whole or in part, for the duration of the specified period of time.
- B. Guarantee: Assurance to County by Contractor or product manufacturer or other specified party, as guarantor, that the specified warranty will be fulfilled by the guarantor in the event of default by the warrantor.
- C. Standard Product Warranty: Preprinted, written warranty published by product manufacturer for particular products and specifically endorsed by the manufacturer to the County.
- D. Special Project Warranty: Written warranty required by or incorporated into Contract Documents, to extend time limits provided by standard warranty or to provide greater rights for County.
- E. Correction Period: As defined in the Conditions of the Contract, Correction Period shall be synonymous with "warranty period", "guarantee period" and similar terms used in the Contract Specifications.

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#### 1.04 SUBMITTALS

- A. Advance Submittals: For equipment and systems, or component parts of systems, put into service during construction and operated by County, submit documents within ten days of start of operation by County.
- B. Final Completion Submittals: Prior to application for final payment, Contractor shall submit 3 copies the following:
  - 1. Agency Document Submittals: Submit to County all documents required by authorities having jurisdiction, including serving utilities and other agencies. Submit original versions of all permit cards, with final sign-off by inspectors. Submit all certifications of inspections and tests.
    - a. Contractor shall also complete all required contractor forms and obtain AHJ approval of these same forms. Comply with "Final Certification of Construction" per Title 24 Part 1 section 4-339.
      - 1) Form-6.C: Verified Report – Contractor: From each Contractor having a contract with the County.
  - 2. Final Specifications Submittals: Submit to County all documents and products required by Specifications to be submitted, including the following:
    - a. Project record drawings and specifications.
    - b. Operating and maintenance data.
    - c. Guarantees, warranties and bonds.
    - d. Keys and keying schedule.
    - e. Spare parts and extra stock.
    - f. Test reports and certificates of compliance.
  - 3. Certificates of Compliance and Test Report Submittals: Submit to County certificates and reports as specified and as required by authorities having jurisdiction, including the following:
    - a. Sterilization of water systems.
    - b. Sanitary sewer system tests.
    - c. Gas system tests.
    - d. Lighting, power and signal system tests.
    - e. Ventilation equipment and air balance tests.
    - f. Fire sprinkler system tests.
    - g. Fire detection system, smoke alarms and dampers.
    - h. Roofing inspections and tests.
  - 4. Lien and Bonding Company Releases: Submit to County, with copy to Architect, evidence of satisfaction of encumbrances on Project by completion and submission of The American Institute of Architects Forms:
    - a. G706 - Contractor's Affidavit of Payment of Debts and Claims;
    - b. G706A - Contractor's Affidavit of Release of Liens;
    - c. (if applicable) G707 - Consent of Surety;
    - d. or forms as as agreed to by the County.

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- e. Comply also with other requirements of County, as directed.
  - f. All signatures shall be notarized.
5. Subcontractor List: Submit to two copies to County and two copies to Architect of updated Subcontractor and Materials Supplier List.
  6. Warranty Documents: Prepare and submit to County all warranties and bonds as specified in Contract General Conditions and this Section.
- C. Project Record Documents: Submit documents to Architect with claim for final Application for Payment.
- D. Operation and Maintenance Data:
1. Submit two copies of preliminary draft or proposed formats and outlines of contents before start of Work. Architect will review draft and return one copy with comments.
  2. For equipment, or component parts of equipment put into service during construction and operated by County, submit completed documents within ten days after acceptance.
  3. Submit one copy of completed documents 15 days prior to final inspection. This copy will be reviewed and returned after final inspection, with Architect comments. Revise content of all document sets as required prior to final submission.
  4. Submit two sets of revised final documents in final form within 10 days after final inspection.
- E. Warranties and Bonds:
1. For equipment or component parts of equipment put into service during construction with County's permission, submit documents within 10 days after acceptance.
  2. Make other submittals within 10 days after Date of Substantial Completion, prior to final Application for Payment.
  3. For items of Work for which acceptance is delayed beyond Date of Substantial Completion, submit within 10 days after acceptance, listing the date of acceptance as the beginning of the warranty period.

**1.05 WARRANTIES AND GUARANTEES**

- A. General:
1. Provide all warranties and guarantees with County named as beneficiary.
  2. For equipment and products, or components thereof, bearing a manufacturer's warranty or guarantee that extends for a period of time beyond the Contractor's warranty and guarantee, so state in the warranty or guarantee.
- B. Provisions for Special Warranties: Refer to Conditions of the Contract for terms of the Contractor's special warranty of workmanship and materials.
- C. General Warranty and Guarantee Requirements:
1. Warranty shall be an agreement to repair or replace, without cost and undue hardship to County, Work performed under the Contract which is found to be defective during the Correction Period (warranty or guarantee) period.

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2. Repairs and replacements due to improper maintenance or operation, or due to normal wear, usage and weathering are excluded from warranty requirements unless otherwise specified.
- D. Specific Warranty and Guarantee Requirements: Specific requirements are included in product Specifications Sections of Divisions 03 through 33, including content and limitations.
- E. Disclaimers and Limitations:
1. Manufacturer's disclaimers and limitations on product warranties and guarantees shall not relieve Contractor of responsibility for warranty and guarantee requirements.
  2. This applies to the Work that incorporates such products, nor shall they relieve suppliers, manufacturers, and installers required to countersign special warranties with Contractor.
- F. Related Damages and Losses: When correcting warranted Work that has been found defective, remove and replace other Work that has been damaged as a result of such defect or that must be removed and replaced to provide access for correction of warranted Work.
- G. Reinstatement of Warranty:
1. When Work covered by a warranty has been found defective and has been corrected by replacement or rebuilding, reinstate the warranty by written endorsement.
  2. The reinstated warranty shall be equal to the original warranty with an equitable adjustment for depreciation.
- H. Replacement Cost:
1. Upon determination that Work covered by a warranty has been found to be defective, replace or reconstruct the Work to a condition acceptable to County, complying with applicable requirements of the Contract Documents.
  2. Contractor shall be responsible for all costs for replacing or reconstructing defective Work regardless of whether County has benefited from use of the Work through a portion of its anticipated useful service life.
- I. County's Recourse:
1. Written warranties made to the County shall be in addition to implied warranties, and shall not limit the duties, obligations, rights and remedies otherwise available under law, nor shall warranty periods be interpreted as limitations on time in which the County can enforce such other duties, obligations, rights, or remedies.
  2. Rejection of Warranties:
    - a. The County reserves the right to reject warranties and to limit selections to products with warranties not in conflict with requirements of the Contract Documents.
- J. Warranty as Condition of Acceptance:
1. County reserves the right to refuse to accept Work for the Project where a special warranty, certification, or similar commitment shall be required on such Work or part of the Work, until evidence is presented that entities required to countersign such commitments are willing to do so.

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**PART 2 PRODUCTS - NOT USED**

**PART 3 EXECUTION**

**3.01 PROJECT RECORD DOCUMENTS**

- A. Record Documents are to be maintained and submitted in searchable live electronic format (PDF).
  - 1. Develop in compliance with Section 01 30 00 - Administrative Requirements.
  - 2. Acceptable markup software:
    - a. Adobe Acrobat Professional.
    - b. Bluebeam Revu.
- B. Maintain on site one set of the following record documents; record actual revisions to the Work:
  - 1. Contract Drawings.
  - 2. Project Manual with Specifications.
  - 3. Addenda.
  - 4. Change Orders and other modifications to the Contract.
  - 5. Reviewed shop drawings, product data, and samples.
  - 6. Manufacturer's instruction for assembly, installation, and adjusting.
- C. Ensure entries are complete and accurate, enabling future reference by County.
- D. Store record documents separate from documents used for construction.
- E. Record information concurrent with construction progress.
- F. Specifications: Legibly mark and record at each product section description of actual products installed, including the following:
  - 1. Manufacturer's name and product model and number.
  - 2. Product substitutions or alternates utilized.
  - 3. Changes made by Addenda and modifications.
  - 4. Provide copies of all approved addenda, directives, corrections, and change orders affecting the associated project.
    - a. These copies shall be included with the "Bid Set" and/or "Record Set" listed above and formatted as detailed above.
- G. Record Drawings and Shop Drawings: Legibly mark each item to record actual construction including:
  - 1. Reproducible set of Contract Drawings will be provided to Contractor by County through Architect or AHJ.
  - 2. Measured depths of foundations in relation to finish first floor datum.
  - 3. Measured horizontal and vertical locations of underground utilities and appurtenances, referenced to permanent surface improvements.

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4. Measured locations of internal utilities and appurtenances concealed in construction, referenced to visible and accessible features of the Work.
  5. Field changes of dimension and detail.
  6. Details not on original Contract drawings.
    - a. Application of copies of details produced and provided by Architect during construction will be accepted.
- H. Submission: Submit Record Documents in searchable (live text and redlines mark-ups; not scanned) PDF format to Architect prior to final Application for Payment.
1. Maintain one additional paper copy and one in PDF format (on CD) of the fire suppression and fire protection detection system drawings and specifications at the building premises.
    - a. One copy is to be kept on site for a period of three years to comply with CFC section 901.6.2.

**3.02 OPERATION AND MAINTENANCE DATA**

- A. Source Data: For each product or system, list names, addresses and telephone numbers of Subcontractors and suppliers, including local source of supplies and replacement parts.
- B. Product Data: Mark each sheet to clearly identify specific products and component parts, and data applicable to installation. Delete inapplicable information.
- C. Drawings: Supplement product data to illustrate relations of component parts of equipment and systems, to show control and flow diagrams. Do not use Project Record Documents as maintenance drawings.
- D. Typed Text: As required to supplement product data. Provide logical sequence of instructions for each procedure, incorporating manufacturer's instructions.

**3.03 OPERATION AND MAINTENANCE DATA FOR MATERIALS AND FINISHES**

- A. For Each Product, Applied Material, and Finish:
  1. Product data, with catalog number, size, composition, and color and texture designations.
  2. Information for re-ordering custom manufactured products.
- B. Instructions for Care and Maintenance: Manufacturer's recommendations for cleaning agents and methods, precautions against detrimental cleaning agents and methods, and recommended schedule for cleaning and maintenance.
- C. Moisture protection and weather-exposed products: Include product data listing applicable reference standards, chemical composition, and details of installation. Provide recommendations for inspections, maintenance, and repair.
- D. Additional information as specified in individual product specification sections.
- E. Where additional instructions are required, beyond the manufacturer's standard printed instructions, have instructions prepared by personnel experienced in the operation and maintenance of the specific products.

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### 3.04 OPERATION AND MAINTENANCE DATA FOR EQUIPMENT AND SYSTEMS

- A. For Each Item of Equipment and Each System:
  - 1. Description of unit or system, and component parts.
  - 2. Identify function, normal operating characteristics, and limiting conditions.
  - 3. Include performance curves, with engineering data and tests.
  - 4. Complete nomenclature and model number of replaceable parts.
- B. Where additional instructions are required, beyond the manufacturer's standard printed instructions, have instructions prepared by personnel experienced in the operation and maintenance of the specific products.
- C. Panelboard Circuit Directories: Provide electrical service characteristics, controls, and communications; typed.
- D. Include color coded wiring diagrams as installed.
- E. Operating Procedures: Include start-up, break-in, and routine normal operating instructions and sequences. Include regulation, control, stopping, shut-down, and emergency instructions. Include summer, winter, and any special operating instructions.
- F. Maintenance Requirements: Include routine procedures and guide for preventative maintenance and trouble shooting; disassembly, repair, and reassembly instructions; and alignment, adjusting, balancing, and checking instructions.
- G. Provide servicing and lubrication schedule, and list of lubricants required.
- H. Include manufacturer's printed operation and maintenance instructions.
- I. Include sequence of operation by controls manufacturer.
- J. Provide original manufacturer's parts list, illustrations, assembly drawings, and diagrams required for maintenance.
- K. Provide control diagrams by controls manufacturer as installed.
- L. Provide Contractor's coordination drawings, with color coded piping diagrams as installed.
- M. Provide charts of valve tag numbers, with location and function of each valve, keyed to flow and control diagrams.
- N. Provide list of original manufacturer's spare parts, current prices, and recommended quantities to be maintained in storage.
  - 1. Parts Data:
    - a. Provide original manufacturer's parts list, illustrations, assembly drawings, and diagrams as necessary for service and maintenance.
    - b. Include complete nomenclature and catalog numbers for consumable and replacement parts.
    - c. Provide list of original manufacturer's spare parts, current prices, and recommended quantities to be maintained in stock by the County or operator.
- O. Include test and balancing reports.
- P. Additional Requirements: As specified in individual product specification sections.

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### 3.05 ASSEMBLY OF OPERATION AND MAINTENANCE MANUALS

- A. Assemble operation and maintenance data into durable manuals for County's personnel use, with data arranged in the same sequence as, and identified by, the specification sections.
  - 1. Provide duplicate electronic formatted (PDF) versions of the O&M binder for record purposes. Organize the same as the printed versions.
- B. Where systems involve more than one specification section, provide separate tabbed divider for each system.
- C. Binders: Commercial quality, 8-1/2 by 11 inch three D side ring binders with durable plastic covers; 2 inch maximum ring size. When multiple binders are used, correlate data into related consistent groupings.
- D. Cover: Identify each binder with typed or printed title OPERATION AND MAINTENANCE INSTRUCTIONS; identify title of Project; identify subject matter of contents.
- E. Project Directory: Title and address of Project; names, addresses, and telephone numbers of Architect, Consultants, Contractor and subcontractors, with names of responsible parties.
- F. Tables of Contents: List every item separated by a divider, using the same identification as on the divider tab; where multiple volumes are required, include all volumes Tables of Contents in each volume, with the current volume clearly identified.
- G. Dividers: Provide tabbed dividers for each separate product and system; identify the contents on the divider tab; immediately following the divider tab include a description of product and major component parts of equipment.
- H. Text: Manufacturer's printed data, or typewritten data on 20 pound paper.
- I. Drawings: Provide with reinforced punched binder tab. Bind in with text; fold larger drawings to size of text pages.
- J. Arrangement of Contents: Organize each volume in parts as follows:
  - 1. Project Directory.
  - 2. Table of Contents, of all volumes, and of this volume.
  - 3. Operation and Maintenance Data: Arranged by system, then by product category.
    - a. Source data.
    - b. Product data, shop drawings, and other submittals.
    - c. Operation and maintenance data.
    - d. Field quality control data.
    - e. Photocopies of warranties and bonds.
  - 4. Design Data: To allow for addition of design data furnished by Architect or others, provide a tab labeled "Design Data" and provide a binder large enough to allow for insertion of at least 20 pages of typed text.

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### 3.06 WARRANTIES AND BONDS

- A. Obtain warranties and bonds, executed in duplicate by responsible Subcontractors, suppliers, and manufacturers, within 10 days after completion of the applicable item of work. Except for items put into use with County's permission, leave date of beginning of time of warranty until Date of Substantial completion is determined.
- B. Project Warranty and Guarantee Forms:
  - 1. Example forms for special Project warranties and guarantees are included at the end of this Section.
  - 2. Prepare written documents utilizing the appropriate form, ready for execution by the Contractor, or the Contractor and subcontractor, supplier or manufacturer.
    - a. Submit a draft to County through Architect for approval prior to final execution.
  - 3. Refer to product technical Sections for specific content requirements, and particular requirements for submittal of special warranties.
  - 4. Prepare standard warranties and guarantees, excepting manufacturers' standard printed warranties and guarantees, on Contractor's, subcontractor's, material supplier's, or manufacturer's own letterhead, addressed to County.
  - 5. Warranty and guarantee letters shall be signed by all responsible parties and by Contractor in every case, with modifications only as approved in advance by County to suit the conditions pertaining to the warranty or guarantee.
- C. Manufacturer's Guarantee Form:
  - 1. Manufacturer's guarantee form may be used in lieu of special Project form included at the end of this Section.
  - 2. Manufacturer's guarantee form shall contain appropriate terms and identification, ready for execution by the required parties.
  - 3. If proposed terms and conditions restrict guarantee coverage or require actions by County beyond those specified, submit draft of guarantee to County through Architect for review and acceptance before performance of the Work.
  - 4. In other cases, submit draft of guarantee to County through Architect for approval prior to final execution of guarantee.
- D. Signatures: Signatures shall be by person authorized to sign warranties, guarantees and bonds on behalf of entity providing such warranty, guarantee or bond.
- E. Co-Signature: All installer's warranties and bonds shall be co-signed by Contractor. Manufacturer's guarantees will not require co-signature.
- F. Verify that documents are in proper form, contain full information, and are notarized.
- G. Co-execute submittals when required.
- H. Retain warranties and bonds until time specified for submittal.
- I. Manual: Bind in commercial quality 8-1/2 by 11 inch three D side ring binders with durable plastic covers.

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- J. Cover: Identify each binder with typed or printed title WARRANTIES AND BONDS, with title of Project; name, address and telephone number of Contractor and equipment supplier; and name of responsible company principal.
  - 1. If more than one volume of warranties, guarantees and bonds is produced, identify volume number on binder.
- K. Table of Contents: Neatly typed, in the sequence of the Table of Contents of the Project Manual, with each item identified with the number and title of the specification section in which specified, and the name of product or work item.
- L. Separate each warranty or bond with index tab sheets keyed to the Table of Contents listing. Provide full information, using separate typed sheets as necessary. List Subcontractor, supplier, and manufacturer, with name, address, and telephone number of responsible principal.
- M. Form of Warranty and Bond Submittals:
  - 1. Prior to final Application and Certificate for Payment, compile two copies of each required warranty, guarantee and bond, properly executed by Contractor, or jointly by Contractor, subcontractor, supplier, or manufacturer.
  - 2. Collect and assemble all written warranties and guarantees into binders and deliver binders to County for final review and acceptance.
  - 3. Include Table of Contents for binder, neatly typed, following order and Section numbers and titles as used in the Project Manual.
  - 4. Provide heavy paper dividers with celluloid or plastic covered tabs for each separate warranty.
    - a. Mark tabs to identify products or installation, and Section number and title.
  - 5. Include on separate typed sheet, if information is not contained in warranty or guarantee form, a description of the product or installation, and the name, address, telephone number and responsible person for applicable installer, supplier and manufacturer.
  - 6. When operating and maintenance data manuals are required for warranted construction, include additional copies of each required warranty and guarantee in each required manual.
    - a. Coordinate with requirements listed in the prior articles for operating and maintenance data manuals.

**3.07 TIME OF WARRANTY AND BOND SUBMITTALS**

- A. Submission of Preliminary Copies:
  - 1. Unless otherwise specified, obtain preliminary copies of warranties, guarantees and bonds within ten days of completion of applicable item or Work.
  - 2. Prepare and submit preliminary copies for review as specified herein.
- B. Submission of Final Copies:
  - 1. Submit fully executed copies of warranties, guarantees and bonds within ten days of date identified in Certificate of Completion but no later than three days prior to date of final Application for Payment.
- C. Date of Warranties and Bonds:

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1. Unless otherwise directed or specified, commencement date of warranty, guarantee and bond periods shall be the date established in the Certificate of Completion.
  2. Warranties for Work accepted in advance of date stated in Certificate of Completion:
    - a. When a designated system, equipment, component parts or other portion of the Work is completed and occupied or put to beneficial use by County:
      - 1) By separate agreement with Contractor, prior to completion date established in the Certificate of Completion, submit properly executed warranties to County within ten days of completion of that designated portion of the Work.
      - 2) List date of commencement of warranty, guarantee or bond period as the date established in the Certificate of Completion.
  3. Warranties for Work not accepted as of date established in the Certificate of Completion:
    - a. Submit documents within ten days after acceptance, listing date of acceptance as beginning of warranty, guarantee or bond period.
- D. Duration of Warranties and Guarantees:
1. Unless otherwise specified or prescribed by law, warranty and guarantee periods shall be not less than the Correction Period required by the Conditions of the Contract.
  2. In no case, the period is to be less than one year from the date established for completion of the Project in the Certificate of Completion.
  3. See product Specifications Sections of the Project Manual for extended warranty and guarantee beyond the minimum one year duration.

**END OF SECTION**

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**SECTION 01 78 00.01  
WARRANTY FORM LETTER**

**FOR CONTRACTOR'S / SUBCONTRACTOR'S / MANUFACTURER'S WARRANTY**

CONTRACTOR'S/SUBCONTRACTOR'S/SUPPLIER'S LETTERHEAD

**SPECIAL LIMITED PROJECT WARRANTY FOR \_\_\_\_\_ WORK.**

We, the undersigned, do hereby warrant that the portion of the Work described above which we have provided for EOC Parking Lot Expansion (FM08200012205) is in accordance with the Contract Documents and that all such Work as installed will fulfill or exceed all minimum warranty requirements. We agree to repair or replace Work installed by us, together with any adjacent Work which is displaced or damaged by so doing, that proves to be defective in workmanship, material, or function within a period of (years), commencing (date identified in Certificate of Completion, unless otherwise directed) and terminating (date).

The following terms and conditions apply to this warranty (obtain County 's approval before submission):

In the event of our failure to comply with the above-mentioned conditions within a reasonable time period determined by the County , after notification in writing, we, the undersigned, all collectively and separately, hereby authorize the County to have said defective Work repaired or replaced to be made good, and agree to pay to the County upon demand all moneys that the County may expend in making good said defective Work, including all collection costs and reasonable attorney fees.

**LOCAL REPRESENTATIVE: FOR WARRANTY MAINTENANCE, REPAIR, OR REPLACEMENT SERVICE, CONTACT:**

(Name) \_\_\_\_\_  
(Address) \_\_\_\_\_  
(City) \_\_\_\_\_ (State) \_\_\_\_\_ (ZIP) \_\_\_\_\_  
(Phone) \_\_\_\_\_ / \_\_\_\_\_  
(signed) \_\_\_\_\_  
(Typed Name) \_\_\_\_\_ (Date) \_\_\_\_\_  
(Title) \_\_\_\_\_ (Firm) \_\_\_\_\_

**CONTRACTOR:**

State License No: \_\_\_\_\_  
(signed) \_\_\_\_\_  
(Date) \_\_\_\_\_ (Typed Name) \_\_\_\_\_  
(Title) \_\_\_\_\_ (Firm) \_\_\_\_\_

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**FORM LETTER**

**FOR CONTRACTOR'S / MANUFACTURER'S GUARANTEE**

CONTRACTOR'S / MANUFACTURER'S LETTERHEAD

**SPECIAL LIMITED PROJECT [\_\_WARRANTY\_\_] [\_\_GUARANTEE\_\_] FOR \_\_\_\_\_ WORK.**

We, the undersigned, do hereby [\_\_warranty\_\_] [\_\_guarantee\_\_] that the portion of the Work described above which [\_\_we have provided\_\_] [\_\_was provided by (Installer or Subcontractor's Name)\_\_] for EOC Parking Lot Expansion (FM08200012205) in accordance with the Contract Documents and that all such Work as installed will fulfill or exceed all minimum warranty requirements. We agree to repair or replace Work installed by [\_\_us,\_\_] [\_\_(Installer or Subcontractor's Name)\_\_] together with any adjacent Work which is displaced or damaged by so doing, that proves to be defective in workmanship, material, or function within a period of (years), commencing (date indicated in Certificate of Completion, unless otherwise directed) and terminating (date).

The following terms and conditions apply to this [\_\_warranty\_\_] [\_\_guarantee\_\_] (obtain County's approval before submission):

In the event of our failure to comply with the above-mentioned conditions within a reasonable time period determined by the County, after notification in writing, we, the undersigned, all collectively and separately, hereby authorize the County to have said defective Work repaired or replaced to be made good, and agree to pay to the County upon demand all moneys that the County may expend in making good said defective Work, including all collection costs and reasonable attorney fees.

**LOCAL REPRESENTATIVE: FOR WARRANTY MAINTENANCE, REPAIR, OR REPLACEMENT SERVICE, CONTACT:**

(Name) \_\_\_\_\_  
(Address) \_\_\_\_\_  
(City) \_\_\_\_\_ (State) \_\_\_\_\_ (ZIP) \_\_\_\_\_  
(Phone) \_\_\_\_\_ / \_\_\_\_\_  
(signed) \_\_\_\_\_  
(Date) \_\_\_\_\_ (Typed Name) \_\_\_\_\_  
(Title) \_\_\_\_\_ (Firm) \_\_\_\_\_

**CONTRACTOR:**

State License No: \_\_\_\_\_  
(signed) \_\_\_\_\_  
(Date) \_\_\_\_\_ (Typed Name) \_\_\_\_\_  
(Title) \_\_\_\_\_ (Firm) \_\_\_\_\_

**FORM LETTER**

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**SECTION 01 78 39  
PROJECT RECORD DOCUMENTS**

**PART 1 - GENERAL**

**1.01 SUMMARY**

- A. Record Drawings.
- B. Record Specifications.
- C. Record Product Data.
- D. Record Samples.
- E. Record Photos.
- F. Miscellaneous record submittals.

**1.02 RELATED REQUIREMENTS:**

- A. Section 01 20 00 - Price and Payment Procedures: Schedule of Values.
- B. Section 01 30 00 - Administrative Requirements: Project Coordination.
- C. Section 01 78 00 - Closeout Submittals: General Closeout.

**1.03 SUBMITTALS**

- A. See Section 01 30 00 - Administrative Requirements, for submittal procedures.
- B. Project Record Documents: Recorded actual locations.

**PART 2 -PRODUCTS - NOT USED**

**PART 3 - EXECUTION**

**3.01 RECORD DRAWINGS**

- A. Record Documents: Maintain one set of marked-up PDF copies of the Contract Drawings and Shop Drawings, incorporating new and revised drawings as modifications are issued.
  - 1. Preparation: Mark record prints to show the actual installation where installation varies from that shown originally. Require individual or entity who obtained record data, whether individual or entity is Installer, subcontractor, or similar entity, to provide information for preparation of corresponding marked-up record prints.
    - a. Give particular attention to information on concealed elements that would be difficult to identify or measure and record later.
    - b. Accurately record information in an acceptable drawing technique.
    - c. Record data as soon as possible after obtaining it.
    - d. Record and check the markup before enclosing concealed installations.
    - e. Cross-reference record prints to corresponding archive photographic documentation.

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2. Content: Types of items requiring marking include, but are not limited to, the following:
    - a. Field changes of dimensions from Drawings.
    - b. Revisions to details shown on Drawings.
      - 1) Details not on original Contract Drawings. Application of copies of details produced and provided by Architect during construction will be accepted.
    - c. Depths of foundations and footing, measured in relation to finish First Floor datum.
    - d. Measured horizontal and vertical locations of underground utilities and appurtenances, referenced to permanent ground improvements.
    - e. Revisions to routing of piping and conduits.
    - f. Revisions to electrical circuits.
    - g. Actual equipment locations and sizes.
    - h. Duct size and routing.
    - i. Locations of concealed internal utilities.
    - j. Permanent Room names and Room numbers.
    - k. Changes made by Change Order or Construction Change Directive.
    - l. Changes made following written orders by County or County Representative.
    - m. Changes made following Architect's written orders.
    - n. Note clarifications from RFI's.
    - o. Field records for variable and concealed conditions.
    - p. Record information on the Work that is shown only schematically.
  3. Mark the Contract Drawings and Shop Drawings completely and accurately. Use personnel proficient at recording graphic information in production of marked-up record prints.
  4. Mark record sets with erasable, red-colored pencil. Use other colors to distinguish between changes for different categories of the Work at same location.
  5. Mark important additional information that was either shown schematically or omitted from original Drawings.
  6. Note Construction Change Directive numbers, alternate numbers, Change Order numbers, and similar identification, where applicable.
- B. Record Digital Data Files: Immediately before inspection for Certificate of Substantial Completion, review marked-up record prints with Architect. When authorized, prepare a full set of corrected digital data files of the Contract Drawings, as follows:
1. Format: Same digital data software program, version, and operating system as the original Contract Drawings.
    - a. Format: DWG, Version, Microsoft Windows operating system.
  2. Incorporate changes and additional information previously marked on record prints. Delete, redraw, and add details and notations where applicable.
  3. Refer instances of uncertainty to Architect and County Representative for resolution.

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4. Architect will furnish Contractor one set of digital data files of the Contract Drawings for use in recording information.
  - a. See Section 01 35 50 - Requests for Electronic Files for requirements related to use of Architect's digital data files.
  - b. Architect will provide data file layer information. Record markups in separate layers.
- C. Newly Prepared Record Drawings: Prepare new Drawings instead of preparing record Drawings where Architect determines that neither the original Contract Drawings nor Shop Drawings are suitable to show actual installation.
  1. New Drawings may be required when a Change Order is issued as a result of accepting an alternate, substitution, or other modification.
  2. Consult Architect and County Representative for proper scale and scope of detailing and notations required to record the actual physical installation and its relation to other construction. Integrate newly prepared record Drawings into record Drawing sets; comply with procedures for formatting, organizing, copying, binding, and submitting.
- D. Format: Identify and date each record Drawing; include the designation "PROJECT RECORD DRAWING" in a prominent location.
  1. Record Prints: Organize record prints and newly prepared record Drawings into manageable sets. Bind each set with durable paper cover sheets. Include identification on cover sheets.
  2. Format: Annotated PDF electronic file with comment function enabled.
  3. Record Digital Data Files: Organize digital data information into separate electronic files that correspond to each sheet of the Contract Drawings. Name each file with the sheet identification. Include identification in each digital data file.
  4. Identification:
    - a. Project name and number.
    - b. Date.
    - c. Designation "PROJECT RECORD DRAWINGS."
    - d. Name of Architect and County Representative.
    - e. Name of Contractor.

### 3.02 RECORD SPECIFICATIONS

- A. Preparation: Mark Specifications in PART 2 to indicate the actual product installation where installation varies from that indicated in Specifications, addenda, and contract modifications.
  1. Give particular attention to information on concealed products and installations that cannot be readily identified and recorded later.
  2. Mark copy with the proprietary name and model number of products, materials, and equipment furnished, including substitutions and product options selected.
  3. Record the name of manufacturer, supplier, Installer, and other information necessary to provide a record of selections made.
  4. For each principal product, indicate whether record Product Data has been submitted in operation and maintenance manuals instead of submitted as record Product Data.

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- 5. Note related Change Orders, record Product Data, and Record Drawings, where applicable.
- B. Format: Submit record Specifications as annotated PDF electronic file.

**3.03 RECORD PRODUCT DATA**

- A. Preparation: Mark Product Data to indicate the actual product installation where installation varies substantially from that indicated in Product Data submittal.
  - 1. Give particular attention to information on concealed products and installations that cannot be readily identified and recorded later.
  - 2. Include significant changes in the product delivered to Project site and changes in manufacturer's written instructions for installation.
  - 3. Note related Change Orders, record Specifications, and record Drawings where applicable.
- B. Format: Submit record Product Data as annotated PDF electronic file.
  - 1. Include record Product Data directory organized by Specification Section number and title, electronically linked to each item of record Product Data.

**3.04 RECORD SAMPLES**

- A. Immediately before date of Substantial Completion, meet with County or County Representative at Project site to determine which Samples maintained during the construction period are to be transmitted to County or County Representative for record purposes.
- B. Comply with County or County Representative's instructions for packaging, identification, marking, and delivery to County or County Representative's Sample storage space. Dispose of other Samples in the manner specified for disposing surplus and waste materials

**3.05 RECORD PHOTOS**

- A. Photograph all work before covering up, including:
  - 1. All open trenches and manholes shall be photographed.
  - 2. All exposed utilities should be identified in the photos.
  - 3. Show photograph locations and dates on Record Drawings.

**3.06 MISCELLANEOUS RECORD SUBMITTALS**

- A. Assemble miscellaneous records required by other Specification Sections for miscellaneous record keeping and submittal in connection with actual performance of the Work. Bind or file miscellaneous records and identify each, ready for continued use and reference.
  - 1. Field records on excavations and foundations.
  - 2. Field records on underground construction and similar work.
  - 3. Surveys showing locations and elevations of underground lines.
  - 4. Invert elevations of drainage piping.
  - 5. Surveys establishing building lines and levels.
  - 6. Authorized measurements using unit prices or allowances.

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7. Records of plant treatment.
  8. Ambient and substrate condition tests.
  9. Certifications received in lieu of labels on bulk products.
  10. Batch mixing and bulk delivery records.
  11. Testing and qualification of trade persons.
  12. Documented qualification of installation firms.
  13. Load and performance testing.
  14. Inspections and certifications by governing authorities.
  15. Leakage and water-penetration tests.
  16. Fire-resistance and flame-spread test results.
  17. Final inspection and correction procedures.
- B. Format: Submit miscellaneous record submittals as PDF electronic file.
1. Include miscellaneous record submittals directory organized by Specification Section number and title, electronically linked to each item of miscellaneous record submittals.

**3.07 SUBMISSION**

- A. Keep Project Record Documents current, as they will be reviewed for completeness by Architect, Engineer, Project Inspector, and County Representative; as a condition of certification for each Progress Payment Application.
- B. Prior to the date of the Notice of Completion, submit marked Record Documents to Architect and County Representative for review, approval and further processing.

**3.08 RECORDING AND MAINTENANCE**

- A. Recording: Maintain one copy of each submittal during the construction period for project record document purposes. Post changes and revisions to project record documents as they occur; do not wait until end of Project.
- B. Review of documents by Architect, Engineer, Project Inspector, or County Representative to be in concert with approval of the monthly Application for Payment.
- C. Maintenance of Record Documents and Samples:
  1. Store record documents and Samples in the field office apart from the Contract Documents used for construction.
  2. Do not use project record documents for construction purposes.
  3. Maintain record documents in good order and in a clean, dry, legible condition, protected from deterioration and loss.
  4. Provide access to project record documents for Architect and County Representative reference during normal working hours.

**END OF SECTION**

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**SECTION 01 79 00  
DEMONSTRATION AND TRAINING**

**PART 1 GENERAL**

**1.01 SUMMARY**

- A. Demonstration of products and systems where indicated in specific specification sections.
- B. Training of County personnel in operation and maintenance is required for:
  - 1. Electrical systems and equipment.
  - 2. Items specified in individual product Sections.
- C. Training of County personnel in care, cleaning, maintenance, and repair is required for:
  - 1. Items specified in individual product Sections.

**1.02 RELATED REQUIREMENTS**

- A. Section 01 78 00 - Closeout Submittals: Operation and maintenance manuals.
- B. Other Specification Sections: Additional requirements for demonstration and training.

**1.03 SUBMITTALS**

- A. See Section 01 30 00 - Administrative Requirements, for submittal procedures.
- B. Training Plan: County will designate personnel to be trained; tailor training to needs and skill-level of attendees.
  - 1. Each Sub, Design-Builder SubContractor and vendor responsible for training submits a written training plan to the Architect and County Representative for review and approval prior to training.
  - 2. Submit to Architect for transmittal to County.
  - 3. Submit not less than four weeks prior to start of training.
  - 4. Revise and resubmit until acceptable.
  - 5. Provide an overall schedule showing all training sessions.
  - 6. Include at least the following for each training session:
    - a. Identification, date, time, and duration.
    - b. Description of products and/or systems to be covered.
      - 1) Equipment list
    - c. Name of firm and person conducting training; include qualifications.
    - d. Intended audience, such as job description.
    - e. Objectives of training and suggested methods of ensuring adequate training.
      - 1) Agenda and subjects (design intent, equipment inspections, modes of operation, system interactions, troubleshooting, preventative maintenance, etc.)
    - f. Methods to be used, such as classroom lecture, live demonstrations, hands-on, etc.

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- g. Media to be used, such a slides, hand-outs, etc.
    - 1) The approved O&M manuals shall be used during the training for equipment specific references.
  - h. Training equipment required, such as projector, projection screen, etc., to be provided by Contractor.
- C. Training Manuals: Provide training manual for each attendee; allow for minimum of two attendees per training session.
- 1. Include applicable portion of O&M manuals.
  - 2. Include copies of all hand-outs, slides, overheads, video presentations, etc., that are not included in O&M manuals.
  - 3. Provide one extra copy of each training manual to be included with operation and maintenance data.
- D. Video Recordings: Submit digital video recording of each demonstration and training session for County's subsequent use.
- 1. Format: DVD Disc.
  - 2. Label each disc and container with session identification and date.

**1.04 QUALITY ASSURANCE**

- A. Instructor Qualifications: Familiar with design, operation, maintenance and troubleshooting of the relevant products and systems.
- 1. Provide as instructors the most qualified trainer of those contractors and/or installers who actually supplied and installed the systems and equipment.
  - 2. Where a single person is not familiar with all aspects, provide specialists with necessary qualifications.

**PART 2 PRODUCTS - NOT USED**

**PART 3 EXECUTION**

**3.01 TRAINING OF OWNER PERSONNEL**

- A. The Contractor and Design-Builder SubContractors shall be responsible for training coordination and scheduling and for ensuring that training is completed.
- B. The specific training requirements of County personnel by Subs, Design-Builder SubContractors and vendors is specified in the Division in which the equipment is specified.

**3.02 DEMONSTRATION - GENERAL**

- A. Demonstrations conducted during system start-up do not qualify as demonstrations for the purposes of this section, unless approved in advance by County.
- B. Demonstration may be combined with County personnel training if applicable.
- C. Operating Equipment and Systems: Demonstrate operation in all modes, including start-up, shut-down, seasonal changeover, emergency conditions, and troubleshooting, and maintenance procedures, including scheduled and preventive maintenance.

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1. Perform demonstrations not less than two weeks prior to Substantial Completion.
  2. For equipment or systems requiring seasonal operation, perform demonstration for other season within six months.
- D. Non-Operating Products: Demonstrate cleaning, scheduled and preventive maintenance, and repair procedures.
1. Perform demonstrations not less than two weeks prior to Substantial Completion.

**3.03 TRAINING - GENERAL**

- A. Conduct training on-site unless otherwise indicated.
- B. County will provide classroom and seating at no cost to Contractor.
- C. Provide training in minimum two hour segments.
- D. Training schedule will be subject to availability of County's personnel to be trained; re-schedule training sessions as required by County; once schedule has been approved by County failure to conduct sessions according to schedule will be cause for County to charge Contractor for personnel "show-up" time.
- E. Review of Facility Policy on Operation and Maintenance Data: During training discuss:
  1. The location of the O&M manuals and procedures for use and preservation; backup copies.
  2. Typical contents and organization of all manuals, including explanatory information, system narratives, and product specific information.
  3. Typical uses of the O&M manuals.
- F. Product- and System-Specific Training:
  1. Review the applicable O&M manuals.
  2. For systems, provide an overview of system operation, design parameters and constraints, and operational strategies.
  3. Review instructions for proper operation in all modes, including start-up, shut-down, seasonal changeover and emergency procedures, and for maintenance, including preventative maintenance.
  4. Provide hands-on training on all operational modes possible and preventive maintenance.
  5. Emphasize safe and proper operating requirements; discuss relevant health and safety issues and emergency procedures.
  6. Discuss common troubleshooting problems and solutions.
  7. Discuss any peculiarities of equipment installation or operation.
  8. Discuss warranties and guarantees, including procedures necessary to avoid voiding coverage.
  9. Review recommended tools and spare parts inventory suggestions of manufacturers.
  10. Review spare parts and tools required to be furnished by Contractor.
  11. Review spare parts suppliers and sources and procurement procedures.

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- G. Be prepared to answer questions raised by training attendees; if unable to answer during training session, provide written response within three days.

**END OF SECTION**

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**SECTION 02 41 00  
DEMOLITION**

**<<<< UPDATE NOTES**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. Selective demolition of built site elements.
  - 1. Demolition and removal of existing site improvements within Project area, as indicated on Drawings and as necessary to accomplish the Work, including:
    - a. Asphaltic concrete and portland cement concrete paving.
    - b. Abandoned underground utility lines outside of utility easement.
    - c. Pavement cutting and removal.
    - d. Debris removal.
  - 2. Handling and disposal of removed materials.
  - 3. Dewatering of excavations as necessary to control surface and sub-surface water.

**1.02 RELATED REQUIREMENTS**

- A. Section 01 10 00 - Summary: Limitations on Contractor's use of site and premises.
- B. Section 01 10 00 - Summary: Description of items to be removed by County.
- C. Section 01 10 00 - Summary: Description of items to be salvaged or removed for re-use by Contractor.
- D. Section 01 50 00 - Temporary Facilities and Controls: Site fences, security, protective barriers, and waste removal.
- E. Section 01 60 00 - Product Requirements: Handling and storage of items removed for salvage and relocation.
- F. Section 01 70 00 - Execution and Closeout Requirements: Project conditions; protection of bench marks, survey control points, and existing construction to remain; reinstallation of removed products; temporary bracing and shoring.
- G. Section 01 74 19 - Construction Waste Management and Disposal: Limitations on disposal of removed materials; requirements for recycling.
- H. Section 31 10 00 - Site Clearing: Vegetation and existing debris removal.
- I. Section 31 22 00 - Grading: Topsoil removal.
- J. Section 31 23 23 - Fill: Filling holes, pits, and excavations generated as a result of removal operations.

**1.03 DEFINITIONS**

- A. Demolition: Dismantle, raze, destroy or wreck any building or structure or any part thereof.

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- B. Remove: Detach or dismantle items from existing construction and dispose of them off site, unless items are indicated to be salvaged or reinstalled.
- C. Remove and Salvage: Detach or dismantle items from existing construction in a manner to prevent damage. Clean, package, label and deliver salvaged items to County in ready-for-reuse condition.
- D. Remove and Reinstall: Detach or dismantle items from existing construction in a manner to prevent damage. Clean and prepare for reuse and reinstall where indicated.
- E. Existing to Remain: Designation for existing items that are not to be removed and that are not otherwise indicated to be salvaged or reinstalled.

**1.04 REFERENCE STANDARDS**

- A. 29 CFR 1926 - Safety and Health Regulations for Construction.
- B. CFC Ch. 33 - Fire Safety During Construction and Demolition.
- C. NFPA 241 - Standard for Safeguarding Construction, Alteration, and Demolition Operations.

**1.05 DEFINITIONS**

- A. Remove: Remove and legally dispose of items, except those identified for use in recycling, re-use, and salvage programs.
- B. Environmental Pollution and Damage: The presence of chemical, physical, or biological elements or agents which adversely affect human health or welfare; unfavorably alter ecological balances of importance to human or animal life; affect other species of importance to humanity; or degrade the utility of the environment for aesthetic, cultural or historical purposes.
- C. Inert Fill: A permitted facility that accepts inert waste such as asphalt and concrete exclusively for the purpose of disposal.
  - 1. Inert Solids/Inert Waste: Non-liquid solid waste including, but not limited to, soil and concrete, that does not contain hazardous substances or soluble pollutants at concentrations in excess of water-quality standards established by a regional water board and does not contain significant quantities of decomposable solid waste.
- D. Class III Landfill: A landfill that accepts non-hazardous materials such as household, commercial, and industrial waste, resulting from construction, remodeling, repair, and demolition operations. A Class III landfill must have a solid waste facilities permit from the State of California.
- E. Demolition Waste: Building materials and solid waste resulting from construction, remodeling, repair, cleanup, or demolition operations that are not hazardous. This term includes, but is not limited to, asphalt concrete, Portland cement concrete, brick, lumber, gypsum wallboard, cardboard and other associated packaging, roofing material, ceramic tile, carpeting, plastic pipe, and steel. The materials may include rock, soil, tree stumps, and other vegetative matter resulting from land clearing and landscaping for construction or land development projects.
- F. Chemical Waste: Includes petroleum products, bituminous materials, salts, acids, alkalis, herbicides, pesticides, organic chemicals and inorganic wastes.

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- G. Recycling: The process of sorting, cleansing, treating and reconstituting materials for the purpose of using the altered form in the manufacture of a new product. Recycling does not include burning, incinerating or thermally destroying solid waste.
- H. Reuse: The use, in the same or similar form as it was produced, of a material which might otherwise be discarded.
- I. Solid Waste: All putrescible and nonputrescible solid, semisolid, and liquid wastes, including garbage, trash, refuse, paper, rubbish, ashes, industrial wastes, demolition and construction wastes, abandoned vehicles and parts thereof, discarded home and industrial appliances, dewatered, treated, or chemically fixed sewage sludge which is not hazardous waste, manure, vegetable or animal solid and semisolid wastes, and other discarded solid and semisolid wastes. "Solid waste" does not include hazardous waste, radioactive waste, or medical waste as defined or regulated by State law.

**1.06 ADMINISTRATIVE REQUIREMENTS**

- A. Pre-Construction Conference: Conduct a pre-construction conference one week prior to the start of the work of this section; require attendance by all affected trades.
- B. Convene a conference at the Project site 3 days prior to starting demolition to review the Drawings and Specifications, requirements of authorities having jurisdiction, instructions and requirements of serving utilities, sequencing and interface considerations and project conditions.
- C. Conference shall be attended by AHJ, supervisory and quality control personnel of Contractor and all subcontractors performing this and directly-related Work.
- D. Submit minutes of meeting to County, Project Inspector and Architect, for Project record purposes.
- E. Sequencing: Ensure that utility connections are achieved in an orderly and expeditious manner.
  - 1. Refer to sequence requirements specified in Section 01 10 00 - Summary; and construction progress schedule requirements specified in Section 01 32 16 - Construction Progress Schedule.

**1.07 MATERIALS OWNERSHIP**

- A. Except for items or materials indicated to be reused, salvaged, reinstalled, or otherwise indicated to remain property of County of Riverside, Facilities Management, demolished materials shall become the Contractor's property and shall be removed, recycled, or disposed from Project site in an appropriate and legal manner.
  - 1. Arrange a meeting no less than ten (10) days prior to demolition with the County or AHJ and other designated representatives to review any salvageable items to determine if County wants to retain ownership, and discuss Contractor's Waste Management and Recycling Plan.

**1.08 SUBMITTALS**

- A. See Section 01 30 00 - Administrative Requirements for submittal procedures.
- B. Site Plan: Indicate:

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1. Areas for temporary construction and field offices.
2. Areas for temporary and permanent placement of removed materials.
- C. Demolition Plan: Submit demolition plan as required by OSHA and local AHJs.
  1. Indicate extent of demolition, removal sequencing, bracing and shoring, and location and construction of barricades and fences.
  2. Demolition firm qualifications.
- D. Demolition phase:
  1. Proposed dust-control measures.
  2. Proposed noise-control measures.
  3. Schedule of demolition activities indicating the following:
    - a. Detailed sequence of demolition and removal work, including start and end dates for each activity.
    - b. Dates for shutoff, capping, and continuation of utility services.
  4. If hazardous materials are encountered and disposed of, landfill records indicating receipt and acceptance of hazardous wastes by a landfill facility licensed to accept hazardous wastes.
  5. Contractor's Waste Management and Recycling Plan: See Section 01 74 19 - Construction Waste Management and Disposal.
    - a. This plan will not otherwise relieve the Contractor of responsibility for adequate and continuing control of pollutants and other environmental protection measures.
  6. Contractor's Reuse, Recycling, and Disposal Report: See Section 01 74 19 - Construction Waste Management and Disposal.
- E. Project Record Documents: Accurately record actual locations of capped and active utilities and subsurface construction.
  1. Record drawings: Identify and accurately locate capped utilities and other subsurface structural, electrical, or mechanical conditions.

**1.09 SUBMITTALS**

- A. Demolition and Removal Procedures and Schedule: Submit for Project record only.
- B. Project Record Drawings: Submit in accordance with provisions specified in Section 01 78 00 - Closeout Submittals. Indicate verified locations of underground utilities and storm drainage system on project record drawings.

**1.10 QUALITY ASSURANCE**

- A. Demolition Firm Qualifications: Company specializing in the type of work required.
  1. Minimum of 5 years of documented experience.

**1.11 SCHEDULING**

- A. Schedule Work to precede new construction.
- B. Describe demolition removal procedures and schedule.

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- C. Perform work between the hours of 8am and 5pm, subject to noise abatement regulations and County's approval for noise considerations.

**PART 2 PRODUCTS -- NOT USED**

**PART 3 EXECUTION**

**3.01 DEMOLITION**

- A. Remove paving and curbs required to accomplish new work.
- B. Remove other items indicated, for salvage, relocation, and recycling.

**3.02 GENERAL PROCEDURES AND PROJECT CONDITIONS**

- A. Conform to the relevant Article of the General Conditions, South Coast Air Quality Management District and other applicable regulatory procedures when discovering hazardous or contaminated materials.
- B. Selective Demolition of Site and Building Elements:
  - 1. Use techniques acceptable to authorities having jurisdiction and which will achieve intended results and provide protection of surrounding features to remain.
  - 2. Some items may have been demolished prior to Work of this Contract. Verify existing conditions prior to start of demolition. If items are or have been demolished contact the Architect.
  - 3. Some items may require postponement of demolition until late in Contract Time period.
  - 4. Phase demolition as necessary to provide adequate interfacing of related Work.
  - 5. Demolish in an orderly and careful manner. Protect existing foundations, retaining walls, utility structures, other structures and finish materials to remain.
- C. Field Measurements and Conditions:
  - 1. Survey existing conditions and correlate with requirements indicated to determine extent of demolition and recycling required.
  - 2. In addition to provisions of the Conditions of the Contract, verify dimensions and field conditions prior to construction. Verify condition of substrate and adjoining Work before proceeding with demolition Work. If conflict is found notify AHJ, Project Inspector and Architect.
- D. Comply with requirements in Section 01 70 00.
- E. Comply with governing EPA notification regulations before starting demolition. Comply with hauling and disposal regulations of authorities having jurisdiction. Obtain and pay for all permits required.
- F. Environmental Controls
  - 1. Comply with federal, state and local regulations pertaining to water, air, solid waste, recycling, chemical waste, sanitary waste, sediment and noise pollution.
  - 2. Confine demolition activities to areas defined by public roads, easements, and work area limits indicated on the drawings.

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3. Temporary Construction: Remove indications of temporary construction facilities, such as haul roads, work areas, structures, stockpiles or waste areas.
  4. Water Resources: Comply with applicable regulations concerning the direct or indirect discharge of pollutants to underground and natural surface waters.
    - a. Oily Substances: Prevent oily or other hazardous substances from entering the ground, drainage areas, or local bodies of water in such quantities as to affect normal use, aesthetics, or produce a measurable ecological impact on the area.
      - 1) Store and service construction equipment at areas designated for collection of oil wastes.
  5. Dust Control, Air Pollution, and Odor Control: Prevent creation of dust, air pollution and odors.
    - a. Use temporary enclosures and other appropriate methods to limit dust and dirt rising and scattering in air to lowest practical level.
    - b. Store volatile liquids, including fuels and solvents, in closed containers.
    - c. Properly maintain equipment to reduce gaseous pollutant emissions.
  6. Noise Control: Perform demolition operations to minimize noise.
    - a. Provide equipment, sound-deadening devices, and take noise abatement measures that are necessary to comply with the requirements of this Contract.
- G. Comply with applicable codes and regulations for demolition operations and safety of adjacent structures and the public.
1. Obtain required permits.
  2. Comply with applicable requirements of NFPA 241 and CFC Ch. 33.
  3. Use of explosives is not permitted.
  4. Take precautions to prevent catastrophic or uncontrolled collapse of structures to be removed; do not allow worker or public access within range of potential collapse of unstable structures.
    - a. Survey condition of the building to determine whether removing any element might result in a structural deficiency or unplanned collapse of any portion of the structure or adjacent structures during demolition.
      - 1) Retain a licensed and qualified civil or structural engineer to provide analysis, including calculations, necessary to ensure the safe execution of the demolition work.
    - b. Prevent movement or settlement of adjacent structures. Provide bracing and shoring.
    - c. Perform surveys as the Work progresses to detect hazards resulting from demolition activities.
  5. Provide, erect, and maintain temporary barriers and security devices.
    - a. Provide, erect, and maintain temporary barriers, safety and security devices , for protection of streets, sidewalks, curbs, adjacent property and the public.

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- b. Protection: Protect existing construction and adjacent areas with temporary barriers and security devices in accordance with requirements specified in Section 01 50 00 - Temporary Facilities and Controls.
  - 1) Review location and type of construction of temporary barriers with County and/or the AHJ.
  - 2) Barriers shall control dust, debris and provide protection for persons occupying and using adjacent facilities.
  - 3) Maintain protected egress and access at all times, in accordance with requirements of authorities having jurisdiction and with permission of AHJ (AHJ having jurisdiction).
- 6. Use physical barriers to prevent access to areas that could be hazardous to workers or the public.
- 7. Conduct operations to minimize effects on and interference with adjacent structures and occupants.
- 8. Do not close or obstruct roadways or sidewalks without permits from authority having jurisdiction.
- 9. Conduct operations to minimize obstruction of public and private entrances and exits. Do not obstruct required exits at any time. Protect persons using entrances and exits from removal operations.
- 10. Obtain written permission from owners of adjacent properties when demolition equipment will traverse, infringe upon, or limit access to their property.
- H. Do not begin removal until receipt of notification to proceed from County.
- I. Do not begin removal until built elements to be salvaged or relocated have been removed.
- J. Protect existing structures and other elements to remain in place and not removed.
  - 1. Provide bracing and shoring.
  - 2. Prevent movement or settlement of adjacent structures.
  - 3. Stop work immediately if adjacent structures appear to be in danger.
  - 4. Protect existing landscaping materials, appurtenances, structures and items that are not to be demolished, or are on adjacent property.
  - 5. Mark location of utilities.
- K. Minimize production of dust due to demolition operations. Do not use water if that will result in ice, flooding, sedimentation of public waterways or storm sewers, or other pollution.
- L. Remove materials to be re-installed or retained in manner to prevent damage. Store and protect in accordance with requirements of Section 01 60 00 - Product Requirements.
- M. Perform demolition in a manner that maximizes salvage and recycling of materials.
  - 1. Comply with requirements of Section 01 74 19 - Construction Waste Management and Disposal.
  - 2. Dismantle existing construction and separate materials.
  - 3. Set aside reusable, recyclable, and salvageable materials; store and deliver to collection point or point of reuse.

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- N. Damages: Promptly repair damages to adjacent facilities caused by demolition operations.
- O. Partial Removal of Paving and Curbs: Neatly saw cut at right angle to surface.

**3.03 EXISTING UTILITIES**

- A. Coordinate work with utility companies. Notify utilities before starting work, comply with their requirements, and obtain required permits.
- B. Protect existing utilities to remain from damage.
- C. Do not disrupt public utilities without permit from authority having jurisdiction.
- D. Do not close, shut off, or disrupt existing life safety systems that are in use without at least 7 days prior written notification to County.
- E. Do not close, shut off, or disrupt existing utility branches or take-offs that are in use without at least 3 days prior written notification to County.
- F. Locate and mark utilities to remain; mark using highly visible tags or flags, with identification of utility type; protect from damage due to subsequent construction, using substantial barricades if necessary.
- G. Remove exposed piping, valves, meters, equipment, supports, and foundations of disconnected and abandoned utilities.
- H. Prepare building demolition areas by disconnecting and capping utilities outside the demolition zone. Identify and mark, in same manner as other utilities to remain, utilities to be reconnected.
- I. Utility Lines, Posts and Structures:
  - 1. Work by Utility: Posts, conductors, guy wires, boxes, structures and equipment shown to be cleared or removed by the responsible utility company or agency shall be considered work under a separate contract.
  - 2. Coordination: The Contractor shall arrange, schedule and coordinate work by utility companies and agencies.
  - 3. Payment: Costs, if any, imposed by utility companies and agencies shall be included in the Contract Sum.

**3.04 DEWATERING**

- A. Dewatering: Dewater site in localized areas as Work progresses.
  - 1. Provide an adequate system to lower and control groundwater in order to permit excavation, construction of structures, and placement of fill materials under dry conditions.
  - 2. Install sufficient dewatering equipment to pre-drain water bearing strata above and below bottom of structure foundations, drains, sewers, and other excavations.
  - 3. Maintain excavations free of standing water.
  - 4. Provide dewatering 24 hours per day in advance of placement of concrete.
  - 5. Allow no concrete to be placed in standing water.
  - 6. Ensure that trenching and excavations do not cave in due to water.
- B. Surface Run-off Water Control:

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1. Minimize flow of ground water from adjacent areas into Work areas.
  2. Do not restrict flow from adjacent properties such that natural flow is hindered.
- C. Water Disposal:
1. Dispose of run-off by legal means and as acceptable to authorities having jurisdiction.
  2. Dispose of water removed from excavations in a manner to avoid endangering public health, property, and portions of Work under construction or completed.
  3. Dispose of water in a manner to avoid inconvenience to others engaged in work about site.
  4. Provide sumps, sedimentation tanks, and other flow control devices as required by authorities having jurisdiction.

**3.05 PORTLAND CEMENT CONCRETE AND ASPHALTIC CONCRETE PAVING DEMOLITION**

- A. Cutting: Make a saw cut at edges of existing paving to be removed, where portions of existing paving are indicated to remain.
- B. Cutting Method: When adjacent to new paving, cut with abrasive type, water-cooled saw to a minimum depth of 1-1/2 inches. Cut lines straight and square to face of paving.
- C. Aggregate Base: Existing aggregate base may be retained except where landscaping and overexcavation are indicated.
- D. Concrete Removal: Break concrete and remove debris. Preserve straight cut.
- E. Disposal: Remove debris from the site except where allowed or directed for fill for subsequent earthwork or for landscape walls.

**3.06 DEBRIS AND WASTE REMOVAL**

- A. Remove debris, junk, and trash from site.
- B. Remove materials not to be reused on site; comply with requirements of Section 01 74 19 - Waste Management.
- C. Remove temporary work.
- D. Leave site in clean condition, ready for subsequent work.
- E. Clean up spillage and wind-blown debris from public and private lands.

**END OF SECTION**

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**SECTION 03 10 00  
CONCRETE FORMING AND ACCESSORIES**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. Formwork for cast-in-place concrete, with shoring, bracing and anchorage.
- B. Openings for other work.
- C. Form accessories.
- D. Form stripping.

**1.02 RELATED REQUIREMENTS**

- A. Section 03 20 00 - Concrete Reinforcing.
- B. Section 03 30 00 - Cast-in-Place Concrete.
- C. Section 04 20 00 - Unit Masonry: Reinforcement for masonry.
- D. Section 31 23 16 - Excavation: Shoring and underpinning for excavation.
- E. Section 32 13 13 - Site Concrete: Sidewalks, curbs and gutters.

**1.03 REFERENCE STANDARDS**

- A. ACI CODE-318 - Building Code Requirements for Structural Concrete and Commentary.
- B. ACI PRC-347 - Guide to Formwork for Concrete.
- C. ACI SPEC-117 - Specification for Tolerances for Concrete Construction and Materials.
- D. ACI SPEC-301 - Specifications for Concrete Construction.
- E. ASTM D695 - Standard Test Method for Compressive Properties of Rigid Plastics.
- F. PS 1 - Structural Plywood.

**1.04 DEFINITIONS**

- A. Unexposed Finish: A general-use finish, with no appearance criteria, applicable to all formed concrete concealed from view after completion of construction.
- B. Exposed Finish: A general-use finish applicable to all formed concrete exposed to view and including surfaces which may receive a paint coating (if any).

**1.05 SUBMITTALS**

- A. See Section 01 30 00 - Administrative Requirements, for submittal procedures.
- B. Product Data: Provide data on void form materials and installation requirements.
  - 1. Form release agent.
- C. Shop Drawings: Indicate pertinent dimensions, materials, bracing, and arrangement of joints and ties.

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**1.06 QUALITY ASSURANCE**

- A. Industry Standard: Formwork design and construction shall be in accordance with ACI SPEC-301, ACI CODE-318, and ACI PRC-347.
- B. Maintain one copy of each installation standard on site throughout the duration of concrete work.

**1.07 DELIVERY, STORAGE, AND HANDLING**

- A. Deliver prefabricated forms and installation instructions in manufacturer's packaging.
- B. Store prefabricated forms off ground in ventilated and protected manner to prevent deterioration from moisture.

**PART 2 PRODUCTS**

**2.01 FORMWORK - GENERAL**

- A. Provide concrete forms, accessories, shoring, and bracing as required to accomplish cast-in-place concrete work.
- B. Design and construct concrete that complies with design with respect to shape, lines, and dimensions.
- C. Chamfer outside corners of beams, joists, columns, and walls.
- D. Comply with applicable state and local codes with respect to design, fabrication, erection, and removal of formwork.
- E. Comply with relevant portions of ACI CODE-318, ACI PRC-347, and ACI SPEC-301.
- F. Provide materials for contact with concrete which impart suitable surface quality to completed concrete. Use the following form types:
  - 1. Forms for Exposed Finish Concrete:
    - a. Plywood, metal, metal-framed plywood faced, or other acceptable panel-type materials to provide continuous, straight, smooth, exposed surfaces.
    - b. Furnish in largest practical sizes to minimize number of joints and to conform to joint system shown on the Drawings.
  - 2. Forms for Unexposed Finish Concrete:
    - a. Plywood, lumber, metal, or another acceptable material.
    - b. Provide lumber dressed on at least two edges and one side for tight fit.
    - c. When unexposed concrete is intended to receive waterproofing, provide form as for exposed finish concrete.
- G. Provide materials to construct formwork to support forming materials in contact with concrete, of sufficient capacity to withstand pressures of concrete placement and to support concrete in place until cured, without distortion.

**2.02 WOOD FORM MATERIALS**

- A. Plywood for Architectural Concrete: Marine Grade, APA B-B Plyform Class 1.
  - 1. APA proprietary concrete form panels designed for high reuse.

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2. HDO for very smooth concrete finish, in Structural I, and with special overlays.
  3. Bond Classification: Exterior. Common Performance Categories: 19/32, 5/8, 11/16, 23/32, 3/4.
- B. Softwood Plywood for Concealed Surfaces: PS 1, undamaged face C Grade, Group 2 Plugged EXT or APA Structural I Sheathing.
  - C. Hardboard: For curved surfaces, tempered hardboard, Masonite Corp., or equal.
  - D. Lumber: Douglas fir or douglas fir-larch species; appropriate for intended use grade; with grade stamp clearly visible.
    1. Sound and undamaged straight edges, and solid knots, to maintain principal shores to support concrete until minimum strength is achieved as approved by Structural Engineer.
  - E. Embedded Nailers: Clear all heart redwood or pressure preservative-treated (PPTDF) douglas fir, edges reverse beveled to key into concrete.

### 2.03 FORMWORK ACCESSORIES

- A. Form Ties: Removable, adjustable-length or snap-off type, galvanized metal, fixed length, cone type, with waterproofing washer, free of defects that could leave holes larger than 1 inch in concrete surface.
- B. Form Release Agent: Capable of releasing forms from hardened concrete without staining or discoloring concrete or forming bugholes and other surface defects, compatible with concrete and form materials, and not requiring removal for satisfactory bonding of coatings to be applied.
  1. Do not use materials containing diesel oil or petroleum-based compounds.
  2. Does not impair subsequent treatments of concrete surfaces or bond of applied coatings.
  3. Products:
    - a. Nox-Crete Inc; BIO-NOX: [www.nox-crete.com/#sle](http://www.nox-crete.com/#sle).
    - b. SpecChem, LLC; Bio Strip WB (water-based): [www.specchemllc.com/#sle](http://www.specchemllc.com/#sle).
    - c. W. R. Meadows, Inc; Duogard II (water-based): [www.wrmeadows.com/#sle](http://www.wrmeadows.com/#sle).
    - d. Or Equal Substitutions: See Section 01 60 00 - Product Requirements.
- C. Dowel Sleeves: Plastic sleeve and nailable plastic base for smooth, round, steel load-transfer dowels.
  1. Thickness: 0.125 inch
  2. Compression Resistance, ASTM D695: 5,500-8,000 PSI.
  3. Products:
    - a. BoMetals, Inc: [www.bometals.com/#sle](http://www.bometals.com/#sle).
    - b. Sika Corporation; Speed Dowel: [usa.sika.com](http://usa.sika.com)
    - c. Or Equal Substitutions: See Section 01 60 00 - Product Requirements.
- D. Nails, Spikes, Lag Bolts, Through Bolts, Anchorages: Sized as required, of sufficient strength and character to maintain formwork in place while placing concrete.
- E. Screed Pins and Chairs:

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1. Provide units that leave no metal closer than 1-1/2 inch to the plane of the exposed concrete surface.
2. Manufacturers:
  - a. Grann Adjustable Quick Screed (800/554-7266).
  - b. Dayton Richmond (800/745-3700).
  - c. Aztek (877/531-3344).
  - d. Or Equal Substitutions: See Section 01 60 00 - Product Requirements.

**PART 3 EXECUTION**

**3.01 EXAMINATION**

- A. Verify lines, levels and centers before proceeding with formwork. Ensure that dimensions agree with drawings.

**3.02 SYSTEM REQUIREMENTS**

- A. Formwork Design Requirements: Formwork products and execution specified herein are for finish surface quality only.
  1. Design, layout and construction of formwork shall be solely the responsibility of the Contractor.
  2. Design and construct formwork, shoring and bracing to conform to California Building Code (CBC), Title 24, Part 2, Chapter 19A requirements and ACI CODE-318.
  3. Resulting concrete shall conform to shapes, lines and dimensions indicated and required.
- B. Coordination:
  1. Coordinate Work specified in this Section with other Sections which require placement of embedded products and provision of openings and recesses.
  2. If formwork is placed after reinforcement, resulting in insufficient concrete cover over reinforcement, request instructions from the Architect before proceeding.

**3.03 EARTH FORMS**

- A. Earth (Soil) Forms, General: Except as otherwise indicated on Drawings, conform to ACI SPEC-301, ACI PRC-347, and California Building Code (CBC) requirements. Refer also to notes on Structural Drawings.
- B. Hand trim sides and bottom of earth forms. Remove loose soil prior to placing concrete.

**3.04 ERECTION - FORMWORK**

- A. Erect formwork, shoring and bracing to achieve design requirements, in accordance with requirements of ACI SPEC-301, ACI PRC-347, and California Building Code (CBC) Title 24, Part 2 requirements.
- B. Provide bracing to ensure stability of formwork. Shore or strengthen formwork subject to overstressing by construction loads.
  1. Use form ties of sufficient strength and sufficient quantities to prevent formwork spreading.

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2. Maintain principal shores to support concrete until minimum required strength is achieved.
- C. Arrange and assemble formwork to permit dismantling and stripping. Do not damage concrete during stripping. Permit removal of remaining principal shores.
  1. Design and fabricate forms for easy removal, without impact, shock, or damage to concrete surfaces or other portions of the work.
  2. Design to support all applied loads until concrete is adequately cured, within allowable tolerances and deflection limits.
- D. Align joints and make watertight. Keep form joints to a minimum. Make forms watertight to prevent leakage of concrete mortar. Locate form joints, at exposed concrete, to be symmetrical about center of panel, unless otherwise noted. Align joints symmetrically at exposed conditions.
- E. Permanent openings: Provide openings to accommodate Work specified in other Sections. Size and locate openings accurately. Securely support items built into forms; provide additional bracing at openings and discontinuities in formwork.
- F. Temporary openings: Provide temporary openings for cleaning and inspection. Provide drain openings at bottoms of formwork to allow water to drain. Locate temporary openings in most inconspicuous locations at base of forms, closed with tight-fitting panels designed to minimize appearance of joints in finished concrete Work.
- G. Obtain approval before framing openings in structural members that are not indicated on drawings.
- H. Coordinate this section with other sections of work that require attachment of components to formwork.
- I. If formwork is placed after reinforcement, resulting in insufficient concrete cover over reinforcement, request instructions from Architect before proceeding.
- J. Inspection: Before placing of concrete, and after placement of reinforcing steel in the forms, provide notification so that proper inspection can be made. Make such notification at least 2 working days in advance of placing concrete.
- K. Rejection of Defective Work: Any movement or bellying of forms during construction or variations in excess of the tolerances specified shall be considered just cause for the removal of such forms and, in addition, the concrete construction so affected. Reconstruct forms, place new concrete and required reinforcing steel at no additional cost to the County.

**3.05 APPLICATION - FORM RELEASE AGENT**

- A. Form Release Agent: Provide either form materials with factory applied non-absorptive liner or field applied form coating to comply with applicable air quality regulations for VOC. If field applied coating is employed, thoroughly clean and recondition formwork and reapply coating before each use. Rust on form surfaces is not acceptable.
- B. Apply form release agent on formwork in accordance with manufacturer's recommendations.
- C. Apply prior to placement of reinforcing steel, anchoring devices, and embedded items.
- D. Do not apply form release agent where concrete surfaces to receive special finishes or applied coverings that are affected by agent. Soak inside surfaces of untreated forms with clean water. Keep surfaces coated prior to placement of concrete.

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### 3.06 INSERTS, EMBEDDED PARTS, AND OPENINGS

- A. Provide formed openings where required for items to be embedded in passing through concrete work.
  - 1. Install accessories in accordance with manufacturer's instructions and referenced standards, level, straight and plumb.
- B. Locate and set in place items that are cast directly into concrete.
- C. Coordinate with work of other sections in forming and placing openings, slots, reglets, recesses, sleeves, bolts, anchors, other inserts, and components of other work.
  - 1. Openings: Size and locate formed openings, depressions, recesses and chases to accommodate products to be applied to, built into and pass through concrete Work. Coordinate size, location and placement of inserts, embedded products, openings and recesses with Work specified in other Sections.
  - 2. Anchors and Other Devices: Set and build into concrete formwork anchorage devices and other embedded products required for Work to be attached to or supported by concrete elements.
  - 3. Locating Embedded Products and Openings: Use setting drawings, diagrams, instructions and templates to set embedded products.
  - 4. Screeds: Set screeds and establish level for tops of concrete slabs and leveling for finish surfaces. Shape surfaces as indicated on the Drawings. Provide cradle, pad or base type screed supports for concrete over waterproof membranes and vapor retarders.
- D. Install accessories in accordance with manufacturer's instructions, so they are straight, level, and plumb. Ensure items are not disturbed during concrete placement.
- E. Provide temporary ports or openings in formwork where required to facilitate cleaning and inspection. Locate openings at bottom of forms to allow flushing water to drain.
- F. Close temporary openings with tight fitting panels, flush with inside face of forms, and neatly fitted so joints are not apparent in exposed concrete surfaces.

### 3.07 FORM CLEANING

- A. Clean forms as erection proceeds, to remove foreign matter within forms.
- B. Clean formed cavities of debris prior to placing concrete.
  - 1. At above grade forms, flush with water or use compressed air to remove remaining foreign matter. Ensure that water and debris drain to exterior through clean-out ports.
  - 2. During cold weather, remove ice and snow from within forms. Do not use de-icing salts. Do not use water to clean out forms, unless formwork and concrete construction proceed within heated enclosure. Use compressed air or other means to remove foreign matter.
- C. Formwork Reuse: Do not reuse wood and plywood forming materials which contact concrete, except as follows:
  - 1. High density plywood may be cleaned and reused for exposed concrete.
  - 2. Unfaced plywood may be reused for concealed concrete.
  - 3. Steel and fiberglass forming materials may be cleaned and reused.

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- D. Patching and Repairs: Patch tie holes with sheet metal patches and restore forms to like new condition prior to reuse.

**3.08 FORMWORK TOLERANCES**

- A. Construct formwork to maintain tolerances required by ACI SPEC-117, unless otherwise indicated.
  - 1. Also as specified in ACI CODE-318, ACI SPEC-301, and ACI PRC-347, unless otherwise specified or indicated.
- B. Camber slabs and beams in accordance with ACI SPEC-301.

**3.09 FIELD QUALITY CONTROL**

- A. An independent testing agency will perform field quality control tests, as specified in Section 01 40 00 - Quality Requirements.
- B. Inspect erected formwork, shoring, and bracing to ensure that work is in accordance with formwork design, and to verify that supports, fastenings, wedges, ties, and items are secure.
  - 1. Comply with CBC Table 1705A.3, item 12.
- C. Do not reuse wood formwork more than 3 times for concrete surfaces to be exposed to view. Do not patch formwork.

**3.10 FORM REMOVAL**

- A. Do not remove forms or bracing until concrete has gained sufficient strength to carry its own weight and imposed loads.
  - 1. Comply with California Building Code (CBC) requirements.
  - 2. Formwork supporting weight of concrete may not be removed until concrete has reached a minimum of specified 28-day compressive strength and no earlier than 21 days after pour.
  - 3. Removal of Load Bearing Formwork:
    - a. Do not remove shoring and forms supporting weight of concrete, such as beam soffits, joists, slabs, and other structural elements, until concrete has attained its 28 day specified compressive strength, unless otherwise specified or permitted by the Structural Engineer of Record.
    - b. Determine the actual compressive strength has attained is adequate to support the weight of the concrete and superimposed loads.
    - c. Maintain curing and protection operations after form removal.
  - 4. Removal of Non Load Bearing Formwork After Superimposed Loads or as Approved by Engineer:
    - a. Provided that concrete has hardened sufficiently, that it is not damaged, and has achieved sufficient strength to support its own weight and all imposed construction and design loads, forms not actually supporting weight of concrete or weight of soffit forms may be removed after concrete has cured at not less than 50 degrees F for 24 hours.
    - b. Maintain curing and protection operations after form removal.

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- B. Loosen forms carefully. Do not wedge pry bars, hammers, or tools against finish concrete surfaces scheduled for exposure to view.
  - 1. Remove formwork progressively so no unbalanced loads are imposed on structure. Remove formwork without damaging concrete surfaces.
  - 2. Remove or snap off metal spreader ties inside wall surface. Cut nails and form ties off flush and leave surfaces level and clean.
- C. Store removed forms to prevent damage to form materials or to fresh concrete. Discard damaged forms.

**3.11 PATCHING**

- A. Schedule: Patch forming and tie holes immediately after form removal.
- B. Cleaning: Clean surface of all loose materials and soiling.
- C. Patching: Patch all holes and depressions with grouting gun and grout mix of one part cement and 2-1/2 parts mortar sand.

**3.12 FORMWORK SCHEDULE**

- A. Footings and Walls, Not Exposed to View: Site fabricated plywood or lumber, coated with form release agent.
- B. Footings and Walls, Exposed to View: Site fabricated plywood, coated with form release agent compatible with applied finish coatings.

**END OF SECTION**

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**SECTION 03 20 00  
CONCRETE REINFORCING**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. Reinforcing steel for cast-in-place concrete.
- B. Supports and accessories for steel reinforcement.

**1.02 RELATED REQUIREMENTS**

- A. Section 03 10 00 - Concrete Forming and Accessories.
- B. Section 03 30 00 - Cast-in-Place Concrete.
- C. Division 26 - Electrical: Grounding connection to concrete reinforcement.

**1.03 REFERENCE STANDARDS**

- A. ACI CODE-318 - Building Code Requirements for Structural Concrete and Commentary.
- B. ACI MNL-66 - ACI Detailing Manual.
- C. ACI SPEC-301 - Specifications for Concrete Construction.
- D. ASTM A184/A184M - Standard Specification for Welded Deformed Steel Bar Mats for Concrete Reinforcement.
- E. ASTM A615/A615M - Standard Specification for Deformed and Plain Carbon-Steel Bars for Concrete Reinforcement.
- F. ASTM A706/A706M - Standard Specification for Deformed and Plain Low-Alloy Steel Bars for Concrete Reinforcement.
- G. ASTM A996/A996M - Standard Specification for Rail-Steel and Axle-Steel Deformed Bars for Concrete Reinforcement.
- H. ASTM A1064/A1064M - Standard Specification for Carbon-Steel Wire and Welded Wire Reinforcement, Plain and Deformed, for Concrete.
- I. AWS B2.1/B2.1M - Specification for Welding Procedure and Performance Qualification.
- J. AWS A5.5/A5.5M - Specification for Low-Alloy Steel Electrodes for Shielded Metal Arc Welding.
- K. AWS D1.4/D1.4M - Structural Welding Code - Steel Reinforcing Bars.
- L. CRSI (DA4) - Manual of Standard Practice.
- M. CRSI (P1) - Placing Reinforcing Bars, 10th Edition.

**1.04 SUBMITTALS**

- A. See Section 01 30 00 - Administrative Requirements, for submittal procedures.
- B. Product Data:
  - 1. Reinforcement supporting and spacing devices at exposed concrete only, to demonstrate non-corroding and non-staining characteristics.

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- 2. Adhesive compounds.
- C. Manufacturer's Certificate: Certify that reinforcing steel and accessories supplied for this project meet or exceed specified requirements.
- D. Welders' Qualification Statement: Welders' certificates in accordance with AWS B2.1/B2.1M and dated no more than 12 months before start of scheduled welding work.
- E. Reports: Submit certified copies of mill test report of reinforcement materials analysis.
- F. Quality Control Submittals: Submit the following information related to quality assurance requirements specified:
  - 1. Certifications: Submit to the testing laboratory mill test certificates for all reinforcing steel, showing physical and chemical analysis. If steel is to be welded, include in chemical analysis the percentages of carbon, manganese, copper, nickel, and chromium, and optionally the percentages of molybdenum and vanadium.
  - 2. Certifications: If steel is to be welded, submit certifications to the testing laboratory signed by AWS Certified Welding Inspector (CWI) of prequalified welding procedures, qualifications of welding procedures unless prequalified, qualification of welding operators, and qualification of welders.
- G. Welding Procedure Specification Submittal: Submit to Testing Laboratory written Welding Procedure Specifications (WPS) as defined by AWS D1.4/D1.4M. The WPS shall be prepared by the Fabricator for review and approval by the Architect (Structural Engineer) and Testing Laboratory as complying with specified criteria, and shall be readily available to the welding inspector.

**1.05 QUALITY ASSURANCE**

- A. Perform work of this section in accordance with ACI CODE-318, ACI MNL-66, ACI SPEC-301, ASTM A184/A184M, and CRSI (P1).
  - 1. Maintain one copy of each document on project site.
- B. Regulatory Requirements: Conform to California Building Code (CBC) Title 24 Part 2, Chapter 19A requirements as amended and adopted by authorities having jurisdiction, for details of reinforcement.
- C. Provide Architect, Project Inspector, and Special Inspector with access to fabrication plant to facilitate inspection of reinforcement. Provide notification of commencement and duration of shop fabrication in sufficient time to allow inspection.
- D. Welder Qualifications: Welding processes and welding operators qualified in accordance with AWS D1.4/D1.4M and no more than 12 months before start of scheduled welding work.
  - 1. Only AWS Certified Welding Inspectors shall be used for tests and qualifications associated with welding of reinforcing steel.
  - 2. Only AWS qualified welders or welding operators shall perform welding of reinforcing steel.
- E. Coordinate Work specified in this Section with other Sections which require placement of embedded products and provision of openings and recesses.
- F. If formwork is placed after reinforcement, resulting in insufficient concrete cover over reinforcement, request instructions from Architect (Structural Engineer) before proceeding.

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## 1.06 DELIVERY, STORAGE AND HANDLING

- A. Delivery: Deliver reinforcement bars new and free from rust and mill scale in original bundles marked with durable identification tags.
- B. Storage: Store reinforcement to avoid excessive rusting or fouling with grease, oil, dirt or other bond-weakening coatings.
- C. Handling: Take precautions to maintain reinforcement identification after bundles are broken.

## PART 2 PRODUCTS

### 2.01 REINFORCEMENT

- A. Reinforcing Steel: ASTM A615/A615M, Grade 60 (60,000 psi).
  - 1. Deformed billet-steel bars.
  - 2. Unfinished.
- B. Reinforcing Steel: ASTM A706/A706M, Grade 60 (60,000 psi), deformed low-alloy steel bars.
  - 1. Unfinished.
  - 2. Carbon Content: 0.55 % maximum.
- C. Reinforcing Steel: #3 Deformed bars, ASTM A615/A615M Grade 40 (280), Type A.
- D. Tie Wire: ASTM A1064/A1064M steel wire, unfinished.
- E. Reinforcement Accessories:
  - 1. Tie Wire: Annealed, minimum 16 gauge, 0.0508 inch.
  - 2. Chairs, Bolsters, Bar Supports, Spacers: Wire-bar-type devices, complying with CRSI (DA4), for spacing, supporting and fastening reinforcing bars and welded wire reinforcement in place. Sized and shaped for adequate support of reinforcement during concrete placement.
    - a. Supports at Slab on Grade: Provide devices with load-bearing pads or horizontal runners where base material does not support chair legs, to prevent puncture of vapor retarder/barrier or provide precast concrete block bar supports of equal or greater strength to specified concrete.
    - b. Corrosion Resistance:
      - 1) Provide stainless steel or plastic components for placement within 1-1/2 inches of weathering surfaces.
        - (a) Provide plastic coated, plastic-tipped (CRSI, Class 1) or stainless steel types at exposed-to-view concrete surfaces.
        - (b) Provide only stainless steel (CRSI Class 2) at exterior exposed surfaces to be painted.
  - 3. Welding Electrodes: AWS A5.5/A5.5M E80XX, low hydrogen, with a minimum yield point of 80,000 psi, for welding grade 60 reinforcing steel.

## 2.02 RE-BAR SPLICING:

- A. Coupler Systems: Mechanical devices for splicing reinforcing bars; capable of developing 160% of steel reinforcing design strength in tension and compression.
- B. Dowel Bar Splicer with Dowel-Ins: Mechanical devices for connecting dowels; Type II capable of developing 160% of steel reinforcing design strength in tension and compression.
- C. Grout: Cementitious, non-metallic, non-shrink grout for use with manufacturer's grout sleeve reinforcing bar coupler system.

## 2.03 FABRICATION

- A. Fabricate concrete reinforcing in accordance with CRSI (DA4) - Manual of Standard Practice.
- B. Welding of reinforcement is permitted only with the specific approval of Architect. Perform welding in accordance with AWS D1.4/D1.4M.
- C. Fusion welded reinforcing steel assemblies are not permitted.
- D. Locate reinforcing splices not indicated on drawings at point of minimum stress. See Structural Drawings,
  - 1. Review locations of splices with Architect (Structural Engineer) before fabrication and placement. .

## PART 3 EXECUTION

### 3.01 PREPARATION

- A. Cleaning: Clean reinforcement to remove loose rust and mill scale, soil, and other materials which may reduce or destroy bond with concrete.
- B. Adjustment and Inspection: Do not bend or straighten reinforcement in a manner injurious to material. Do not use bars with kinks or bends not shown on Drawings and reviewed shop drawings, or bars with reduced cross-section due to corrosion or other cause.
- C. Do not bend bars No. 5 and larger in the field.
- D. Do not bend bars more than once in the same location.

### 3.02 PLACEMENT

- A. General: Place and secure reinforcement as specified herein, as indicated and noted on Drawings and in compliance with recommended details and methods of reinforcement placement and support specified in CRSI Placing Reinforcing Bars.
- B. Place, support and secure reinforcement against displacement. Do not deviate from required position.
  - 1. Set wire ties so ends are directed into concrete, not toward exposed concrete surfaces.
- C. Do not displace or damage vapor barrier.
- D. Accommodate placement of formed openings.
- E. Maintain concrete cover around reinforcing as indicated on Structural Drawings:
- F. Comply with applicable code for concrete cover over reinforcement.

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1. If not otherwise indicated on Drawings or specified herein, provide concrete cover in compliance with ACI CODE-318.
- G. Bond and ground all reinforcement to requirements of Division 26.
- H. Coordination: Locate reinforcement to accommodate embedded products and formed openings and recesses.
- I. Slab on Grade Reinforcement: Do not displace or damage vapor retarder/barrier at slab on grade.
- J. Wire Reinforcement Placement: Place reinforcement in sheets as long as practicable, lapping adjoining pieces at least one full mesh and lace splices with 16 gage wire. Offset end laps in adjacent widths to prevent continuous laps. Extend reinforcement to within 1-inch of edge at slabs on grade. Cut mesh at expansion joints and full depth control joints.
- K. Dowels: Secure tie dowels in place before depositing concrete. Provide No. 3 bars for securing dowels where no other reinforcement is provided.
- L. Reinforcement Splices, General: Provide standard reinforcement splices by lapping ends, placing bars in contact and tightly wire tying. Comply with details and requirements of ACI CODE-318 for minimum lap of spliced bars and criteria indicated on the Drawings.
1. Clearances for Splices: Wherever possible, provide minimum 1-1/2 inch clearance between sets of splices. Stagger horizontal bars so that adjacent splices are minimum 48 inches apart.
- M. Reinforcement Supports: Support reinforcement on metal chairs, spacers or metal hangers to provide required coverage and to properly locate reinforcement. Do not use wood. Avoid cutting or puncturing vapor retarder/barrier during reinforcement placement and concreting operations. Repair damages before placing concrete.
1. Support Spacing: Space chairs and accessories in conformance with CRSI Placing Reinforcing Bars.
- N. Welding of Reinforcement Steel
1. Welding: Perform welding under continuous inspection and supervision of a qualified Registered Deputy Inspector employed by testing and inspection agency. Weld reinforcement as indicated on Drawings.
  2. If mill test report is not available, make chemical analysis of bars representative of bars to be welded. Bars with CE above 0.75 shall not be welded.
  3. No welds shall be made at bends in reinforcing bars. Welds to be 1 inch minimum from bends
- O. Corrections During Concrete Placement: Maintain reinforcing steel workers on-site during placement of concrete for resetting reinforcement displaced by runways, workers and other causes.

### 3.03 FIELD QUALITY CONTROL

- A. An independent testing agency, as specified in Section 01 40 00 - Quality Requirements, will inspect installed reinforcement for compliance with contract documents before concrete placement.

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1. Concrete floor slabs on grade are to be continuously inspected as recommended in the geotechnical report.
- B. Inspector of Record, as specified in Section 01 45 33 - Code-Required Special Inspections, will inspect installed reinforcement for conformance to contract documents before concrete placement.
1. Concrete floor slabs on grade are to be continuously inspected as recommended in the geotechnical report.
- C. Defective Reinforcement Work: The following shall be considered defective and may be ordered to be removed and reconstructed at no change in Contract Time or Sum.
1. Bars with kinks or bends not shown on Drawings.
  2. Bars injured due to bending or straightening.
  3. Bars heated or bent.
  4. Reinforcement not placed in accordance with Drawings and Specifications.
  5. Rusty or oily bars.
  6. Bars exposed in surface of concrete or without adequate concrete cover.

**END OF SECTION**

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**SECTION 03 30 00  
CAST-IN-PLACE CONCRETE**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. Joint devices associated with concrete work.
- B. Miscellaneous concrete elements, including equipment pads.
- C. Concrete curing.

**1.02 RELATED REQUIREMENTS**

- A. Section 03 10 00 - Concrete Forming and Accessories: Forms and accessories for formwork.
- B. Section 03 20 00 - Concrete Reinforcing.
- C. Section 32 13 13 - Site Concrete: Sidewalks, curbs and gutters.

**1.03 REFERENCE STANDARDS**

- A. ACI CODE-318 - Building Code Requirements for Structural Concrete and Commentary.
- B. ACI PRC-211.1 - Selecting Proportions for Normal-Density and High Density-Concrete - Guide.
- C. ACI PRC-304 - Guide for Measuring, Mixing, Transporting, and Placing Concrete.
- D. ACI PRC-305 - Guide to Hot Weather Concreting.
- E. ACI PRC-306 - Guide to Cold Weather Concreting.
- F. ACI PRC-308 - Guide to External Curing of Concrete.
- G. ACI SPEC-301 - Specifications for Concrete Construction.
- H. ASTM C33/C33M - Standard Specification for Concrete Aggregates.
- I. ASTM C39/C39M - Standard Test Method for Compressive Strength of Cylindrical Concrete Specimens.
- J. ASTM C94/C94M - Standard Specification for Ready-Mixed Concrete.
- K. ASTM C109/C109M - Standard Test Method for Compressive Strength of Hydraulic Cement Mortars (Using 2-in. or [50 mm] Cube Specimens).
- L. ASTM C143/C143M - Standard Test Method for Slump of Hydraulic-Cement Concrete.
- M. ASTM C494/C494M - Standard Specification for Chemical Admixtures for Concrete.
- N. ASTM C827/C827M - Standard Test Method for Change in Height at Early Ages of Cylindrical Specimens of Cementitious Mixtures.
- O. ASTM C881/C881M - Standard Specification for Epoxy-Resin-Base Bonding Systems for Concrete.
- P. ASTM C979/C979M - Standard Specification for Pigments for Integrally Colored Concrete.
- Q. ASTM C1107/C1107M - Standard Specification for Packaged Dry, Hydraulic-Cement Grout (Nonshrink).
- R. ASTM C1240 - Standard Specification for Silica Fume Used in Cementitious Mixtures.

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- S. ASTM C1602/C1602M - Standard Specification for Mixing Water Used in the Production of Hydraulic Cement Concrete.
- T. CBC - California Building Code.

**1.04 SUBMITTALS**

- A. See Section 01 30 00 - Administrative Requirements for submittal procedures.
- B. Product Data: Submit manufacturers' data on manufactured products showing compliance with specified requirements and installation instructions.
  - 1. For curing compounds, provide data on method of removal in the event of incompatibility with floor covering adhesives.
- C. Mix Design: Submit proposed concrete mix design.
  - 1. Indicate proposed mix design complies with requirements of ACI SPEC-301, Section 4 - Concrete Mixtures.
  - 2. Indicate proposed mix design complies with requirements of ACI CODE-318, Chapter 19 - Concrete: Design and Durability Requirements, and Chapter 26 - Construction Documents and Inspection.
    - a. Reports must include all the data as required to verify conformance with ACI CODE-318, Section 26.4.2.2, and the following:
      - 1) Mix design identification number.
      - 2) Cement certification.
      - 3) Admixture data.
      - 4) Aggregate test data.
  - 3. Indicate proposed mix design complies with admixture manufacturer's written recommendations.
  - 4. Mix Design: Submit mix designs prepared, stamped and signed by a Civil Engineer licensed in the State of California.
- D. Samples: Submit two, 12 inch long samples of waterstops and construction joint devices.
- E. Quality Control Submittals:
  - 1. Field tests: Submit reports of all slump, strength and air content tests as required by authorities having jurisdiction and as indicated on the Drawings and specified herein.
  - 2. Delivery tickets: Have available copies of delivery tickets complying with ASTM C94/C94M for each load of concrete delivered to site. Include on the tickets the additional information specified in the ASTM document.
- F. Test Reports: Submit report for each test or series of tests specified.
- G. Manufacturer's Installation Instructions: For concrete accessories, indicate installation procedures and interface required with adjacent construction.
- H. Project Record Documents: Accurately record actual locations of embedded utilities and components that will be concealed from view upon completion of concrete work.

**1.05 QUALITY ASSURANCE**

- A. Perform work of this section in accordance with ACI SPEC-301 and ACI CODE-318.

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- 1. Maintain one copy of each document on site.
- B. Follow recommendations of ACI PRC-305 when concreting during hot weather.
- C. Follow recommendations of ACI PRC-306 when concreting during cold weather.
- D. Regulatory Requirements:
  - 1. Conform to California Building Code (CBC) Chapter 19 requirement, as amended and adopted by authorities having jurisdiction.
  - 2. Chemical products field-applied to concrete shall comply with applicable air quality requirements of authorities having jurisdiction.
    - a. Comply with Section 01 61 16 - Volatile Organic Compound (VOC) Content Restrictions, CALGreen Section 5.504.4 Finish material pollutant control; 5.504.4.1 Adhesives, sealants and caulks; 5.504.4.3 Paints and coatings.
    - b. Comply with CALGreen Section A5.405.4 Recycled content.
    - c. Comply with CALGreen Section A5.406 Enhanced Durability and Reduced Maintenance.
- E. Testing Agency Services: County will engage an independent testing and inspection agency to conduct tests and perform other services specified for quality control during construction, as required by Section(s) 01 40 00 - Quality Requirements and 01 45 33 - Code-Required Special Inspections.
- F. Coordination: Coordinate the placement of joint devices with erection of concrete formwork and placement of form accessories. Coordinate concrete requirements with Work specified for underground utilities and mechanical and electrical equipment pads and bases.

**1.06 DELIVERY AND HANDLING**

- A. Protection During Concrete Placement: Provide protective coverings and runways, and use appropriate equipment and means of access to Work areas to avoid soiling or damage to existing conditions.
- B. Runoff: Prevent run off of water contaminated by construction agents and chemicals from soiling existing surfaces and from contaminating existing and future landscape areas.

**1.07 WARRANTY**

- A. See Section 01 78 00 - Closeout Submittals for additional warranty requirements.

**PART 2 PRODUCTS**

**2.01 FORMWORK**

- A. Comply with requirements of Section 03 10 00.

**2.02 REINFORCEMENT MATERIALS**

- A. Comply with requirements of Section 03 20 00.

**2.03 CONCRETE MATERIALS**

- A. Cement: ASTM C150/C150M, Type II - Moderate Portland type.

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1. Cement used in contact with soil shall be Type V - Sulfate Resistant.
  2. Acquire cement for entire project from same source.
- B. Fine and Coarse Aggregates: ASTM C33/C33M.
1. Acquire aggregates for entire project from same source.
  2. Fine and coarse aggregates, CBC Title 24, Part 2, 1903A.5, ACI CODE-318 Section 26.4.
  3. Concrete indicated to receive abrasive blast or retarded finish: Design mix with uniform fine to coarse gradation of aggregates to produce evenly textured finish surface.
  4. Other than Structural Concrete: Conform to requirements for structural concrete.
- C. Water: ASTM C1602/C1602M; clean, potable, and not detrimental to concrete.

**2.04 ADMIXTURES**

- A. Use no admixtures not included in mix design. Products of the following manufacturers are specified and will be acceptable provided they comply with referenced standards all other requirements of the Contract Documents.
- B. Do not use chemicals that will result in soluble chloride ions in excess of 0.1 percent by weight of cement.
- C. Water Reducing and Accelerating Admixture: ASTM C494/C494M Type E.
1. Products:
    - a. Euclid Chemical Company; ACCELGUARD 80: [www.euclidchemical.com/#sle](http://www.euclidchemical.com/#sle).
    - b. Or Equal Substitutions: See Section 01 60 00 - Product Requirements.
- D. Water Reducing and Retarding Admixture: ASTM C494/C494M Type D.
1. Provide pigmented type, with ASTM C979/C979M inorganic pigments.
- E. Water Reducing Admixture: ASTM C494/C494M Type A.
1. Products:
    - a. Euclid Chemical Company; EUCON NW: [www.euclidchemical.com/#sle](http://www.euclidchemical.com/#sle).
    - b. Or Equal Substitutions: See Section 01 60 00 - Product Requirements.

**2.05 ACCESSORY MATERIALS**

- A. Non-Shrink Cementitious Grout: Premixed compound consisting of non-metallic aggregate, cement, water reducing and plasticizing agents.
1. Grout: Comply with ASTM C1107/C1107M.
  2. Height Change, Plastic State; when tested in accordance with ASTM C827/C827M:
    - a. Maximum: Plus 4 percent.
    - b. Minimum: Plus 1 percent.
  3. Minimum Compressive Strength at 48 Hours: 2,000 pounds per square inch.
  4. Minimum Compressive Strength at 28 Days: 8,000 pounds per square inch.
  5. Products containing aluminum powder are not permitted.
  6. Flowable Products:
    - a. Dayton Superior Corporation: [www.daytonsuperior.com/#sle](http://www.daytonsuperior.com/#sle).

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- b. L&M Construction Chemicals, Inc, a subsidiary of Laticrete International, Inc; DURAGROUT: [www.laticrete.com/our-products/concrete-construction-chemicals/#sle](http://www.laticrete.com/our-products/concrete-construction-chemicals/#sle).
  - c. SpecChem, LLC; SC Precision Grout: [www.specchemllc.com/#sle](http://www.specchemllc.com/#sle).
  - d. W. R. Meadows, Inc; 588-10K: [www.wrmeadows.com/#sle](http://www.wrmeadows.com/#sle).
  - e. W. R. Meadows, Inc; 1428 HP: [www.wrmeadows.com/#sle](http://www.wrmeadows.com/#sle).
  - f. Or Equal Substitutions: See Section 01 60 00 - Product Requirements.
7. Low-Slump, Dry Pack Products:
- a. Dayton Superior Corporation: [www.daytonsuperior.com/#sle](http://www.daytonsuperior.com/#sle).
  - b. L&M Construction Chemicals, Inc, a subsidiary of Laticrete International, Inc; Duragrout: [www.lmcc.com/#sle](http://www.lmcc.com/#sle).
  - c. Or Equal Substitutions: See Section 01 60 00 - Product Requirements.

## 2.06 BONDING AND JOINTING PRODUCTS

- A. Epoxy Bonding System:
- 1. Complying with ASTM C881/C881M and of Type required for specific application.
  - 2. Products:
    - a. Euclid Chemical Company; DURAL FAST SET LV: [www.euclidchemical.com/#sle](http://www.euclidchemical.com/#sle).
    - b. Euclid Chemical Company; DURALFLEX GEL: [www.euclidchemical.com/#sle](http://www.euclidchemical.com/#sle).
    - c. Euclid Chemical Company; DURALFLEX LV: [www.euclidchemical.com/#sle](http://www.euclidchemical.com/#sle).
    - d. Euclid Chemical Company; DURAL 452 GEL, DURAL 452 LV, or DURAL 452 MV: [www.euclidchemical.com/#sle](http://www.euclidchemical.com/#sle).
    - e. Dayton Superior Corporation: [www.daytonsuperior.com/#sle](http://www.daytonsuperior.com/#sle).
    - f. SpecChem, LLC; SpecPoxy 1000, SpecPoxy 2000, SpecPoxy 3000, or SpecPoxy 3000FS: [www.specchemllc.com/#sle](http://www.specchemllc.com/#sle).
    - g. W. R. Meadows, Inc; Rezi-Weld Gel Paste, Rezi-Weld Gel Paste State, Rezi-Weld 1000: [www.wrmeadows.com/#sle](http://www.wrmeadows.com/#sle).
    - h. Or Equal Substitutions: See Section 01 60 00 - Product Requirements.

## 2.07 CURING MATERIALS

- A. Curing Compound, Naturally Dissipating: Clear, water-based, liquid membrane-forming compound; complying with ASTM C309.
- 1. Product dissipates within 4 to 6 weeks.
  - 2. Provide product containing fugitive red dye.
  - 3. Products:
    - a. Dayton Superior Corporation: [www.daytonsuperior.com/#sle](http://www.daytonsuperior.com/#sle).
    - b. Euclid Chemical Company; COLOR-CRETE CURE AND SEAL VOC: [www.euclidchemical.com/#sle](http://www.euclidchemical.com/#sle).
    - c. W. R. Meadows, Inc; 1100-Clear: [www.wrmeadows.com/#sle](http://www.wrmeadows.com/#sle).

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- d. Or Equal Substitutions: See Section 01 60 00 - Product Requirements.
- B. Water: Potable, not detrimental to concrete.

**2.08 CONCRETE MIX DESIGN**

- A. Proportioning Normal Weight Concrete: Comply with ACI PRC-211.1 recommendations and ACI CODE-318.
- B. Concrete Strength: Establish required average strength for each type of concrete on the basis of field experience or trial mixtures, as specified in ACI SPEC-301.
  - 1. For trial mixtures method, employ independent testing agency acceptable to Architect for preparing and reporting proposed mix designs.
- C. Admixtures: Add acceptable admixtures as recommended in ACI PRC-211.1 and at rates recommended or required by manufacturer.
- D. Normal Weight Concrete:
  - 1. Compressive Strength, when tested in accordance with ASTM C39/C39M at 28 days: As indicated on drawings.
  - 2. Water-Cement Ratio: As indicated on Structural Drawings.
  - 3. Maximum Slump: As indicated on Structural Drawings.
  - 4. Maximum Aggregate Size: 1 inch.
    - a. Structural Concrete: Maximum size not larger than 1/5 of narrowest dimension between forms, 1/3 depth of slab nor 3/4 of minimum clear spacing between individual reinforcing bars.
    - b. Other than Structural Concrete: Conform to requirements for structural concrete.

**2.09 MIXING**

- A. Transit Mixers: Comply with ASTM C94/C94M.
- B. Adding Water: If concrete arrives on-site with slump less than suitable for placement, do not add water that exceeds the maximum water-cement ratio or exceeds the maximum permissible slump.

**PART 3 EXECUTION**

**3.01 EXAMINATION**

- A. Verify lines, levels, and dimensions before proceeding with work of this section.
- B. Verify that concrete cover requirements are met in formwork construction and reinforcement placement.
- C. Verify that all embedded products and formed openings and recesses are correctly placed.

**3.02 PREPARATION**

- A. Verify that forms are clean and free of rust before applying release agent.
- B. Prepare previously placed concrete by cleaning with hydro-blasting or wet sand blasting to provide suitable surface for bonding. Provide minimum aggregate exposure of 1/4 inch.

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- C. Coordinate placement of embedded items with erection of concrete formwork and placement of form accessories.
- D. Where new concrete is to be bonded to previously placed concrete, prepare existing surface by cleaning and applying bonding agent in according to bonding agent manufacturer's instructions.
  - 1. Use epoxy bonding system for bonding to damp surfaces, for structural load-bearing applications, and where curing under humid conditions is required.
  - 2. Use latex bonding agent only for non-load-bearing applications.

**3.03 CONCRETE MIXING**

- A. Concrete Mixing, General: Comply with ACI CODE-318 as adopted by CBC, Title 24, Part 2, Chapter 19 and ACI PRC-304 - Guide for Measuring, Mixing, Transporting, and Placing Concrete. Introduce and mix admixtures in compliance with manufacturer's instructions and recommendations.

**3.04 PLACING CONCRETE**

- A. Notify County's Inspector and at least 2 working days in advance of placing concrete.
- B. Place concrete in accordance with ACI PRC-304.
  - 1. General: Comply with ACI CODE-318, as adopted by CBC, Title 24, Part 2, Chapter 19 and as follows:
    - a. Schedule continuous placement of concrete to prevent the formation of cold joints.
    - b. Deliver ready mix concrete in accordance with ASTM C94/C94M. Place concrete within 90 minutes after start of mixing.
    - c. Provide construction joints if concrete for a particular element or component cannot be placed in a continuous operation.
      - 1) Submit for review, proposed locations of joints prior to pouring. See Structural Drawings for additional requirements.
    - d. Deposit concrete as close as possible to its final location, to avoid segregation.
  - 2. Placement in Forms: Limit horizontal layers to depths which can be properly consolidated, but in no event greater than 24 inches.
    - a. Consolidate concrete by means of mechanical vibrators, inserted vertically in freshly placed concrete in a systematic pattern at close intervals. Penetrate previously placed concrete to ensure that separate concrete layers are knitted together.
    - b. Vibrate concrete sufficiently to achieve consistent consolidation without segregation of coarse aggregates.
    - c. Do not use vibrators to move concrete laterally.
- C. Hot Weather Placement: Comply with recommendations of ACI PRC-305 when ambient temperature before, during, or after concrete placement is expected to exceed 90 deg F or when combinations of high air temperature, low relative humidity, and wind speed are such that the rate of evaporation from freshly poured concrete would otherwise exceed 0.2 lbs./SF/Hr..
  - 1. Use evaporation reducer.

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2. Do not add water to approved concrete mixes under any conditions.
  3. Provide mixing water at lowest feasible temperature, and provide adequate protection of poured concrete to reduce rate of evaporation.
  4. Use fog nozzle to cool formwork and reinforcing steel immediately prior to placing concrete.
- D. Cold-Weather Placement: Comply with provisions of ACI PRC-306 when air temperature has fallen to or is expected to fall below 40 deg F. Protect concrete work from physical damage or reduced strength that could be caused by frost, freezing actions, or low temperatures.
1. Uniformly heat water and aggregates before mixing to obtain a concrete mixture temperature of not less than 50 deg F and not more than 80 deg F at point of placement.
  2. Do not use frozen materials or materials containing ice or snow. Do not place concrete on frozen subgrade or on subgrade containing frozen materials.
  3. Do not use calcium chloride, salt, or other materials containing antifreeze agents or chemical accelerators unless otherwise accepted in mix designs.
- E. Notify Architect not less than 24 hours prior to commencement of placement operations.
- F. Maintain records of concrete placement. Record date, location, quantity, air temperature, and test samples taken.
- G. Ensure reinforcement, inserts, and waterstops will not be disturbed during concrete placement.
- H. Place concrete continuously without construction (cold) joints wherever possible; where construction joints are necessary, before next placement prepare joint surface by removing laitance and exposing the sand and sound surface mortar, by sandblasting or high-pressure water jetting.

### 3.05 CONCRETE FINISHING

- A. Repair surface defects, immediately after removing formwork.
1. Remove honeycombed areas and other defective concrete down to sound concrete, cutting perpendicular to surface or slightly undercutting without damaging reinforcement. Dampen patch location and area immediately surrounding it prior to applying bonding compound or patching mortar.
  2. Before bonding compound has dried, apply patching mixture matching original concrete in materials and mix except for omission of coarse aggregate, and using a blend of white and normal portland cement as necessary to achieve color match. Consolidate thoroughly and strike off slightly higher than surrounding surface.
- B. Exposed Form Finish: Rub down or chip off and smooth fins or other raised areas 1/4 inch or more in height. Provide finish as follows:
1. Grout Cleaned Finish: Wet areas to be cleaned and apply grout mixture by brush or spray; scrub immediately to remove excess grout. After drying, rub vigorously with clean burlap, and keep moist for 36 hours.

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**3.06 CURING AND PROTECTION**

- A. Comply with requirements of ACI PRC-308. Immediately after placement, protect concrete from premature drying, excessively hot or cold temperatures, and mechanical injury.
- B. Maintain concrete with minimal moisture loss at relatively constant temperature for period necessary for hydration of cement and hardening of concrete.
  - 1. Normal concrete: Not less than seven days.
- C. Formed Surfaces: Cure by moist curing with forms in place for full curing period.

**3.07 MISCELLANEOUS CONCRETE ITEMS**

- A. Filling In: Fill in holes and openings left in concrete structures for passage of Work specified in other Sections, after such Work is in place. Mix, place, and cure concrete as specified to blend with in-place construction. Provide other miscellaneous concrete filling shown or required to complete Work. Use non-shrink grout where required or indicated.
- B. Curbs: Provide monolithic finish to interior curbs by stripping forms while concrete is still green and by steel-troweling surfaces to a hard, dense finish with corners, intersections, and terminations slightly rounded.
- C. Equipment Bases and Foundations: Provide machine and equipment bases and foundations as shown on drawings. Set anchor bolts for machines and equipment to template at correct elevations, complying with diagrams or templates of manufacturer furnishing machines and equipment.

**3.08 FIELD QUALITY CONTROL**

- A. An independent testing agency will perform field quality control tests, as specified in Section 01 40 00 - Quality Requirements.
- B. Maintain records of concrete placement. Record date, location, quantity, air temperature, and test samples taken.
- C. Provide free access to concrete operations at project site and cooperate with appointed firm.
- D. Submit proposed mix design of each class of concrete to inspection and testing firm for review prior to commencement of concrete operations.
- E. Field Certifications: For all concrete, provide signed copy of batch plant's certificate stating quantity of each material, amount of water, admixtures, departure time and date accompanying each load of materials or concrete.
- F. Field Tests of Concrete: Perform tests in accordance with applicable California Building Code requirements, ACI SPEC-301 and requirements of authorities having jurisdiction.
- G. Tests of concrete and concrete materials may be performed at any time to ensure compliance with specified requirements.
- H. Compressive Strength Tests: ACI CODE-318 Section 26.12.2, ASTM C39/C39M, for each test, mold and cure four concrete test cylinders. Obtain test samples each day, for every 150 cubic yards, 5,000 sq. ft. of slab or wall surface area, or less of each class of each class of concrete placed. (4) minimum.

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1. Take additional samples for 7-day compressive strength tests for of each class of concrete at the beginning of concrete work or whenever the mix or aggregate is changed.
2. Test one cylinder at 7 days and two at 28 days after placement.
3. Maintain fourth cylinder to be tested at 56 days only if 28-day test fails to meet strength requirement.
4. Take one additional test cylinder during cold weather concreting and cure it at job site under same conditions as concrete it represents. Test cold weather cylinder at 28 days.
5. Comply with ACI CODE-318, 26.12.3 Acceptance Criteria for Standard-Cured Specimens.
  - a. Strength level of a concrete mixture shall be acceptable if (1) and (2) are satisfied:
    - 1) Every average of any three consecutive strength tests equals or exceeds  $f_c'$ .
    - 2) No strength test falls below  $f_c'$  by more than 500 psi if  $f_c'$  is 5000 psi or less; or by more than  $0.10f_c'$  if  $f_c'$  exceeds 5000 psi.
  - b. If either of the requirements of 26.12.3.1(a) is not satisfied, steps shall be taken to increase subsequent strength tests.
  - c. Requirements of 26.12.6 for investigating strength tests shall apply if the requirements of 26.12.3.1(a)(2) are not met.
- I. Take one additional test cylinder during cold weather concreting, cured on job site under same conditions as concrete it represents.
- J. Perform one slump test for each set of test cylinders taken, following procedures of ASTM C143/C143M.

### 3.09 DEFECTIVE CONCRETE

- A. Test Results: The testing agency shall report test results in writing to Architect and Contractor within 24 hours of test.
- B. Defective Concrete: Concrete not complying with required lines, details, dimensions, tolerances or specified requirements.
- C. Repair or replacement of defective concrete will be determined by the Architect. The cost of additional testing shall be borne by Contractor when defective concrete is identified.
  1. Obtain repair details from Architect (Structural Engineer) and approved by AHJ before proceeding.
- D. Do not patch, fill, touch-up, repair, or replace exposed concrete except upon express direction of Architect for each individual area.

### 3.10 PROTECTION

- A. Protect concrete from marring and damage due to weather and construction activities.
  1. Protective measures shall include providing temporary coverings, and be in accordance with Section 01 50 00 - Temporary Facilities and Controls, and shall prohibit all non-essential construction activities, including cleaning and maintenance of construction equipment.

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2. In particular, protect concrete floor slabs from oil, paint and other products that might penetrate and degrade concrete surface.

**END OF SECTION**

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**SECTION 04 20 00  
UNIT MASONRY**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. Concrete block.
  - 1. Applications: Site Walls.
- B. Mortar and grout.
- C. Reinforcement and anchorage.
- D. Accessories.

**1.02 RELATED REQUIREMENTS**

- A. Section 03 20 00 - Concrete Reinforcing: Reinforcing steel for grouted masonry.
- B. Section 05 50 00 - Metal Fabrications: fabricated steel items.
- C. Section 07 13 00 - Sheet Waterproofing: Preparing masonry surfaces to receive waterproofing.

**1.03 REFERENCE STANDARDS**

- A. ASTM C90 - Standard Specification for Loadbearing Concrete Masonry Units.
- B. ASTM C91/C91M - Standard Specification for Masonry Cement.
- C. ASTM C129 - Standard Specification for Nonloadbearing Concrete Masonry Units.
- D. ASTM C140/C140M - Standard Test Methods for Sampling and Testing Concrete Masonry Units and Related Units.
- E. ASTM C144 - Standard Specification for Aggregate for Masonry Mortar.
- F. ASTM C150/C150M - Standard Specification for Portland Cement.
- G. ASTM C207 - Standard Specification for Hydrated Lime for Masonry Purposes.
- H. ASTM C270 - Standard Specification for Mortar for Unit Masonry.
- I. ASTM C404 - Standard Specification for Aggregates for Masonry Grout.
- J. ASTM C476 - Standard Specification for Grout for Masonry.
- K. ASTM C780 - Standard Test Method for Preconstruction and Construction Evaluation of Mortars for Plain and Reinforced Unit Masonry.
- L. TMS 402/602 - Building Code Requirements and Specification for Masonry Structures.

**1.04 ADMINISTRATIVE REQUIREMENTS**

- A. Preinstallation Meeting: Convene a preinstallation meeting one week before starting work of this section; require attendance by all relevant installers.

**1.05 SUBMITTALS**

- A. See Section 01 30 00 - Administrative Requirements for submittal procedures.

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- B. Product Data: Provide data for masonry units and masonry accessories.
- C. Samples: Submit four samples of decorative block units to illustrate color, texture, and extremes of color range.
- D. Manufacturer's Certificate: Certify that masonry units meet or exceed specified requirements.
- E. Installer's Qualification Statement.
- F. Maintenance Materials: Furnish the following for County's use in maintenance of project.
  - 1. See Section 01 60 00 - Product Requirements, for additional provisions.

**1.06 QUALITY ASSURANCE**

- A. Comply with provisions of TMS 402/602, except where exceeded by requirements of Contract Documents.
  - 1. Maintain one copy of each document on project site.
- B. Manufacturer Qualifications: Company specializing in manufacturing the type of products specified in this section with minimum three years of documented experience.
- C. Installer Qualifications: Company specializing in performing work of the type specified and with at least three years of documented experience.
- D. Single-Source Responsibility for Masonry Units: Obtain exposed masonry units of uniform texture and color, or a uniform blend within the ranges accepted for these characteristics, from one manufacturer for each different product required for each continuous surface or visually related surfaces.
- E. Single-Source Responsibility for Mortar Materials: Obtain mortar ingredients of uniform quality, including color for exposed masonry, from one manufacturer for each cementitious component and from one source and producer for each aggregate.

**1.07 DELIVERY, STORAGE, AND HANDLING**

- A. Deliver, handle, and store masonry units by means that will prevent mechanical damage and contamination by other materials.
  - 1. Store and handle masonry units off the ground, under cover, and in a dry location to prevent their deterioration or damage due to moisture, temperature changes, contaminants, corrosion, and other causes. If units become wet, do not place until units are in an air-dried condition.

**PART 2 PRODUCTS**

**2.01 CONCRETE MASONRY UNITS**

- A. Acceptable Manufacturers:
  - 1. Angeles Block Co., Inc.: [www.angelusblock.com](http://www.angelusblock.com).
  - 2. Orco Block Co.: [www.orco.com](http://www.orco.com).
  - 3. RCP Block and Brick: [www.rcpblock.com](http://www.rcpblock.com).
  - 4. Substitutions: See Section 01 60 00 - Product Requirements.
- B. Concrete Block: Comply with referenced standards and as follows:

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1. Size: Standard units with nominal face dimensions of 16 x 8 inches or as indicated and nominal depths as indicated on the Drawings for specific locations.
2. Special Shapes: Provide nonstandard blocks configured for corners.
3. Load-Bearing Units: ASTM C90, medium weight.
  - a. Hollow block, as indicated.
  - b. Exposed Faces: Manufacturer's standard color and texture where indicated.
  - c. Pattern: As indicated on Drawings.
  - d. Unit Compressive Strength: Where indicated, provide units with minimum average net area compressive strength of 2,000 psi (Type M or S) and not less than the unit compressive strengths required to produce concrete unit masonry construction of compressive strength indicated.
  - e. Nonloadbearing Units: ASTM C129.
    - 1) Hollow block, as indicated.
    - 2) Medium weight.
  - f. Solid Cap Unit: Nominal unit size, texture and color to match adjacent wall, unless specified otherwise.

## 2.02 MORTAR AND GROUT MATERIALS

- A. All materials to conform to CBC, Section 2103.2 and 2103.3.
- B. Masonry Cement: ASTM C91/C91M, Type S.
- C. Portland Cement: ASTM C150/C150M, Type I; color as required to produce approved color sample.
  1. Not more than 0.60 percent alkali.
- D. Hydrated Lime: ASTM C207, Type S.
- E. Mortar Aggregate: ASTM C 144, except for joints less than 1/4-inch use aggregate graded with 100 percent passing the No. 16 sieve.
- F. Grout Aggregate: ASTM C404.
- G. Water: Clean and potable.

## 2.03 REINFORCEMENT AND ANCHORAGE

- A. Reinforcing Steel: Type specified in Section 03 20 00; size as indicated on drawings; uncoated finish.

## 2.04 ACCESSORIES

- A. Joint Filler: Closed cell polyurethane; oversized 50 percent to joint width; self expanding; 3/8 inch wide by maximum lengths available.
  1. Manufacturers:
    - a. Hohmann & Barnard, Inc: [www.h-b.com](http://www.h-b.com).
    - b. WIRE-BOND: [www.wirebond.com/#sle](http://www.wirebond.com/#sle).
    - c. Substitutions: See Section 01 60 00 - Product Requirements.

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- B. Cleaning Solution: Non-acidic, not harmful to masonry work or adjacent materials.
  - 1. Job-Mixed Detergent Solution: Solution of trisodium phosphate (1/2-cup dry measure) and laundry detergent (1/2-cup dry measure) dissolved in one gallon of water.
  - 2. Basis of Design Product: Enviro Klean as manufactured by ProSoCo, Inc., [www.prosoco.com](http://www.prosoco.com), or equal.
- C. Proprietary Acidic Cleaners: Standard-strength cleaners designed for removing mortar/grout stains, efflorescence, and other new construction stains from new masonry surfaces of type indicated below.
  - 1. Do not discolor or damage masonry surfaces.
  - 2. Cleaners shall be expressly approved for intended use by manufacturer of masonry units being cleaned.
  - 3. Comply with applicable occupational safety and hazardous and toxic materials regulations in handling and disposing of solutions.
  - 4. General Purpose Cleaner: For removal and control of efflorescence, removal of excess mortar, grout and common construction soiling from new masonry not subject to metallic oxidation stains.
    - a. Basis of Design Product: Sure Klean No. 600 as manufactured by ProSoCo, Inc., [www.prosoco.com](http://www.prosoco.com), or equal.
  - 5. Cleaner for Asphalt and Tar: For removing asphalt, tar, grease, hydraulic oil, motor oil and similar materials from porous masonry.
    - a. Basis of Design Product: Sure Klean Asphalt & Tar Remover as manufactured by ProSoCo, Inc., [www.prosoco.com](http://www.prosoco.com), or equal.
  - 6. Cleaner for Lime Putty Stains: For removing excess mortar, heavy lime deposits and normal construction stains from new masonry surfaces where high-strength lime putty mortar mixes have been used.
    - a. Basis of Design Product: Sure Klean 101 Lime Solvent as manufactured by ProSoCo, Inc., [www.prosoco.com](http://www.prosoco.com), or equal.

**2.05 MORTAR AND GROUT MIXING**

- A. General: Do not add admixtures including coloring pigments, air-entraining agents, accelerators, retarders, water repellent agents, antifreeze compounds, or other admixtures, unless otherwise indicated.
  - 1. Do not use calcium chloride in mortar or grout.
  - 2. Minimum grout strength  $f'c$  = as indicated on Drawings.
  - 3. Minimum mortar strength  $f'c$  = as indicated on Drawings.
- B. Mortar for Unit Masonry: ASTM C270, using the Proportion Specification.
  - 1. Masonry below grade and in contact with earth: Type S.
- C. Grout: ASTM C476; consistency required to fill completely volumes indicated for grouting; fine grout for spaces with smallest horizontal dimension of 2 inches or less; coarse grout for spaces with smallest horizontal dimension greater than 2 inches.
  - 1. Provide grout admixture in proportion to manufacturer's instructions.

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- D. Admixtures: Add to mixture at manufacturer's recommended rate and in accordance with manufacturer's instructions; mix uniformly.
- E. Mixing: Use mechanical batch mixer and comply with referenced standards.

**PART 3 EXECUTION**

**3.01 EXAMINATION**

- A. Verify that field conditions are acceptable and are ready to receive masonry.
- B. Verify that related items provided under other sections are properly sized and located.
- C. Verify that built-in items are in proper location, and ready for roughing into masonry work.

**3.02 PREPARATION**

- A. Direct and coordinate placement of metal anchors supplied for installation under other sections.
- B. Comply with CBC Section 2104 in addition to referenced unit masonry standard and other requirements indicated applicable to each type of installation included in Project.
- C. Leave openings for equipment to be installed before completion of masonry. After installation of equipment, complete masonry to match construction immediately adjacent to the opening.
- D. Cut or trim interior of face shells or cross webs of masonry units, where necessary, to provide a minimum clearance of 1/2 inch or one bar diameter, whichever is greater, to reinforcing bars.
- E. Protection of Unit Masonry: During erection, cover tops of walls, projections, and sills with waterproof sheeting at end of each workday. Cover partially completed unit masonry when construction is not in progress.
  - 1. Extend cover a minimum of 24-inches down both sides and hold cover securely in place.
- F. Stain Prevention: Prevent grout, mortar, and soil from staining the face of unit masonry to be left exposed or painted. Remove immediately any grout, mortar, and soil that come in contact with such masonry.
- G. Stopping and Resuming Work: In each course, rack back 1/2-unit length for one-half running bond; do not tooth. Clean exposed surfaces of set masonry, and remove loose masonry units and mortar prior to laying fresh masonry.

**3.03 COLD AND HOT WEATHER REQUIREMENTS**

- A. Comply with requirements of TMS 402/602 or applicable building code, whichever is more stringent.

**3.04 COURSING**

- A. Establish lines, levels, and coursing indicated. Protect from displacement.
- B. Maintain masonry courses to uniform dimension. Form vertical and horizontal joints of uniform thickness.
- C. Concrete Masonry Units:
  - 1. Bond: Running.

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2. Coursing: One unit and one mortar joint to equal 8 inches.
3. Mortar Joints: Concave.

**3.05 PLACING AND BONDING**

- A. Lay out walls in advance for accurate spacing of surface bond patterns with uniform joint widths and for accurate locating of openings, movement-type joints, returns, and offsets. Avoid the use of less-than-half-size units at corners, jambs, and where possible at other locations.
- B. Lay solid masonry units in full bed of mortar, with full head joints, uniformly jointed with other work.
  1. Bed webs in mortar in starting course on footings and in all courses of piers, columns, and pilasters, and where adjacent to cells or cavities to be filled with grout.
  2. For starting course on footings where cells are not grouted, spread out full mortar bed including areas under cells.
- C. Lay hollow masonry units with face shell bedding on head and bed joints.
- D. Buttering corners of joints or excessive furrowing of mortar joints is not permitted.
- E. Remove excess mortar and mortar smears as work progresses.
- F. Interlock intersections and external corners, except for units laid in stack bond.
- G. Do not shift or tap masonry units after mortar has achieved initial set. Where adjustment must be made, remove mortar and replace.
- H. Perform job site cutting of masonry units with proper tools (motor-driven saws) to provide straight, clean, unchipped edges. Prevent broken masonry unit corners or edges. Use full-size units without cutting where possible.

**3.06 REINFORCEMENT AND ANCHORAGE - GENERAL AND SINGLE WYTHE MASONRY**

- A. Place continuous joint reinforcement in first and second joint below top of walls.
- B. Embed longitudinal wires of joint reinforcement in mortar joint with at least 5/8 inch mortar cover on each side.
- C. Lap joint reinforcement ends as indicated on Drawings, minimum 6 inches.
- D. Reinforce joint corners and intersections with strap anchors 16 inches on center.
- E. Fasten anchors to structural framing and embed in masonry joints as masonry is laid. Unless otherwise indicated on drawings or closer spacing is indicated under specific wall type, space anchors at maximum of 16 inches horizontally and 16 inches vertically.

**3.07 GROUTED COMPONENTS**

- A. Lap splices as indicated on Drawings.
- B. Support and secure reinforcing bars from displacement. Maintain position within 1/2 inch of dimensioned position.
- C. Place and consolidate grout fill without displacing reinforcing.

**3.08 TOLERANCES**

- A. Install masonry within the site tolerances found in TMS 402/602.

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- B. Verify tolerances prior to placing next course. If the unit placed does not meet the tolerances listed below, it shall be removed and reinstalled to meet specified tolerances at no additional cost to County.
- C. Maximum Variation From Unit to Adjacent Unit: 1/16 inch.
- D. Maximum Variation from Plane of Wall: 1/4 inch in 10 ft and 1/2 inch in 20 ft or more.
- E. Maximum Variation from Plumb: 1/4 inch per story non-cumulative; 1/2 inch in two stories or more.
- F. Maximum Variation from Level Coursing: 1/8 inch in 3 ft and 1/4 inch in 10 ft; 1/2 inch in 30 ft.
- G. Maximum Variation of Mortar Joint Thickness: Head joint, minus 1/4 inch, plus 3/8 inch.
- H. Maximum Variation from Cross Sectional Thickness of Walls: 1/4 inch.

**3.09 CUTTING AND FITTING**

- A. Cut and fit for pipes and sleeves. Coordinate with other sections of work to provide correct size, shape, and location.
- B. Obtain approval prior to cutting or fitting masonry work not indicated or where appearance or strength of masonry work may be impaired.

**3.10 FIELD QUALITY CONTROL**

- A. An independent testing agency will perform field quality control tests, as specified in Section 01 40 00 - Quality Requirements.
- B. Concrete Masonry Unit Tests: Test each variety of concrete unit masonry in accordance with ASTM C140/C140M for compliance with requirements of this specification.
- C. Mortar Tests: Test each type of mortar in accordance with ASTM C780, testing with same frequency as masonry samples.

**3.11 REPAIRING AND POINTING**

- A. Repairing: Remove and replace masonry units that are loose, chipped, broken, stained, or otherwise damaged or if units do not match adjoining units. Install new units to match adjoining units and in fresh mortar or grout, pointed to eliminate evidence of replacement.
- B. Pointing: During the tooling of joints, enlarge any voids or holes, except weep holes, and completely fill with mortar. Point-up all joints including corners, openings, and adjacent construction to provide a neat, uniform appearance, prepared for application of sealants.

**3.12 CLEANING**

- A. Remove excess mortar and mortar droppings.
- B. Replace defective mortar. Match adjacent work.
- C. Clean soiled surfaces with cleaning solution.
- D. Use non-metallic tools in cleaning operations.
- E. Final Cleaning: After mortar is thoroughly set and cured, clean exposed masonry as follows:
  - 1. Remove large mortar particles by hand with wooden paddles and nonmetallic scrape hoes or chisels.

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2. Test cleaning methods on sample wall panel; leave 1/2 panel uncleaned for comparison purposes. Obtain Architect's approval of sample cleaning before proceeding with cleaning of masonry.
3. Wet wall surfaces with water prior to application of cleaners; remove cleaners promptly by rinsing thoroughly with clear water.
4. Clean concrete unit masonry by means of cleaning method indicated in NCMA TEK 45 applicable to type of stain present on exposed surfaces.

**3.13 PROTECTION**

- A. Without damaging completed work, provide protective boards at exposed external corners that are subject to damage by construction activities.

**END OF SECTION**

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**SECTION 05 50 00  
METAL FABRICATIONS**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. Shop fabricated steel items.

**1.02 RELATED REQUIREMENTS**

- A. Section 03 30 00 - Cast-in-Place Concrete: Placement of metal fabrications in concrete.

**1.03 REFERENCE STANDARDS**

- A. ASTM A36/A36M - Standard Specification for Carbon Structural Steel.
- B. ASTM A53/A53M - Standard Specification for Pipe, Steel, Black and Hot-Dipped, Zinc-Coated, Welded and Seamless.
- C. ASTM A123/A123M - Standard Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products.
- D. ASTM A500/A500M - Standard Specification for Cold-Formed Welded and Seamless Carbon Steel Structural Tubing in Rounds and Shapes.
- E. AWS A2.4 - Standard Symbols for Welding, Brazing, and Nondestructive Examination.
- F. AWS D1.1/D1.1M - Structural Welding Code - Steel.
- G. SSPC-Paint 20 - Zinc-Rich Primers (Type I, "Inorganic," and Type II, "Organic").

**1.04 SUBMITTALS**

- A. See Section 01 30 00 - Administrative Requirements, for submittal procedures.
- B. Shop Drawings: Indicate profiles, sizes, connection attachments, reinforcing, anchorage, size and type of fasteners, and accessories. Include erection drawings, elevations, and details where applicable.
  - 1. Indicate welded connections using standard AWS A2.4 welding symbols. Indicate net weld lengths.

**1.05 QUALITY ASSURANCE**

- A. Welder's Qualifications:
  - 1. Welding shall be performed by certified welders qualified in accordance with procedures specified in applicable referenced AWS standard, using materials, procedures and equipment of the type required for the Work.
  - 2. Certify that each welder has satisfactorily passed AWS qualification tests for welding processes involved and, if pertinent, has undergone re-certification.

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**PART 2 PRODUCTS**

**2.01 REGULATORY REQUIREMENTS**

- A. Conform to applicable requirements of California Building Code (CBC), Title 24, Part 2, as amended and adopted by authorities having jurisdiction.
  - 1. Comply with Title 24, Part 9, California Fire Code Chapter 35 "Welding and Other Hot Work."

**2.02 MATERIALS - STEEL**

- A. Steel Sections: ASTM A36/A36M, for channels, angles and plates.
- B. Steel Tubing: ASTM A500/A500M Grade B cold-formed structural tubing.
- C. Pipe: ASTM A53/A53M, Grade B Schedule 40, black finish.
- D. Mechanical Fasteners: Same material as or compatible with materials being fastened; type consistent with design and specified quality level.
- E. Bolts, Nuts, and Washers: As indicated on Drawings.
- F. Galvanize all exterior steel members to comply with ASTM A123/A123M. Provide minimum 1.7 oz/sq ft galvanized coating.
- G. Touch-Up Primer for Galvanized Surfaces: SSPC-Paint 20, Type I - Inorganic, complying with VOC limitations of authorities having jurisdiction.

**2.03 FABRICATION**

- A. Ferrous Metal Surfaces, General:
  - 1. For metal fabrications exposed to view upon completion of the Work: Provide ferrous metals materials selected for their surface flatness, smoothness, and freedom from surface blemishes.
  - 2. Do not use materials whose exposed surfaces exhibit pitting, seam marks, roller marks, rolled trade names, roughness, and, for steel sheet, variations in flatness exceeding those permitted by reference standards for stretcher-leveled sheet.
- B. Hot-dip galvanize fabricated ferrous items, indicated as remaining unpainted, after fabrication. Field connections shall be bolted or screwed where possible. Avoid field cutting and welding which damage galvanized coating.
- C. Fit and shop assemble items in largest practical sections, for delivery to site.
- D. Fabricate items with joints tightly fitted and secured.
- E. Gas cutting of non-structural steel items may be acceptable where stress is not transmitted through flame-cut surfaces.
  - 1. Make cuts clean and to contour.
  - 2. Deduct 1/8 inch from effective width of members cut by torch.
- F. Continuously seal joined members by continuous welds.
- G. Joints Exposed to Weather or Water: Fabricate to keep water out, or provide adequate drainage of water that penetrates.

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- H. Steel Tubing and Piping Fabrication: Unless otherwise indicated, close ends with plate stock so no exposed ends of tubing and piping. Grind all edges.
- I. Connections, General:
  - 1. Component parts of built-up members shall be well-pinned with closely-fitted contact.
  - 2. Conceal connections where possible.
  - 3. Otherwise, make countersinks for concealment after fabrication, except where noted.
- J. Welding: Conform to AWS D1.1/D1.1M recommendations.
  - 1. Do not field weld galvanized components to remain unfinished.
  - 2. Provide continuous welds at welded corners and seams.
  - 3. Grind exposed welds smooth and flush with base material.
  - 4. Re-weld to fill holes. Putties and fillers are not acceptable.
- K. Grind exposed joints flush and smooth with adjacent finish surface. Make exposed joints butt tight, flush, and hairline. Ease exposed edges to small uniform radius.
- L. Exposed Mechanical Fastenings: Flush countersunk screws or bolts; unobtrusively located; consistent with design of component, except where specifically noted otherwise.
  - 1. Bolted and Screwed Connections:
    - a. Provide holes and connections for work specified in other Sections.
    - b. Use bolts for field connections only.
    - c. Provide washers under heads and nuts bearing on wood.
    - d. Draw all nuts tight and nick threads of permanent connections.
    - e. Use beveled washers where bearing is on sloped surfaces.
    - f. Where screws must be used for permanent connections in ferrous metal, use flat head type, countersunk, with screw slots filled and finished smooth and flush.
- M. Supply components required for anchorage of fabrications. Fabricate anchors and related components of same material and finish as fabrication, except where specifically noted otherwise.

**2.04 FABRICATED ITEMS**

- A. Rough Hardware
  - 1. Provide bent or otherwise custom fabricated bolts, plates, anchors, hangers, dowels, and other miscellaneous steel and iron shapes as indicated on Drawings.
- B. Other Products and Fabrications
  - 1. Other Products and Fabrications: Provide all materials not specifically described but required for a complete and proper installation, as selected by the Contractor, subject to review and acceptance by County Representative and Architect.

**2.05 FINISHES - STEEL**

- A. Mechanical Finishes: Complete finishing prior to fabrication wherever possible.
  - 1. After fabrication, finish all joints, bends, abrasions, and other surface blemishes to match finish.

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- 2. Protect finish on exposed surfaces by using temporary protective covering.
- B. Clean surfaces of rust, scale, grease, and foreign matter prior to finishing.
- C. Galvanizing of Structural Steel Members: Galvanize all exterior steel members after fabrication to ASTM A123/A123M requirements. Provide minimum 1.7 oz/sq ft galvanized coating.
- D. Galvanizing of Non-structural Items: Galvanize all exterior steel members after fabrication to ASTM A123/A123M requirements.

**2.06 FABRICATION TOLERANCES**

- A. Squareness: 1/8 inch maximum difference in diagonal measurements.
- B. Maximum Offset Between Faces: 1/16 inch.
- C. Maximum Misalignment of Adjacent Members: 1/16 inch.
- D. Maximum Bow: 1/8 inch in 48 inches.
- E. Maximum Deviation From Plane: 1/16 inch in 48 inches.
- F. Punch, drill and reaming in manner to leave clean, true lines and surfaces.
  - 1. Oversize hole 1/16 inch by punching, when material thickness is equal to or less than bolt diameter plus 1/8 inch.
  - 2. Sub-punch 1/16 inch smaller than bolt and drill or ream to oversize by 1/16 inch, when material thickness is thicker than bolt diameter plus 1/8 inch.

**PART 3 EXECUTION**

**3.01 EXAMINATION**

- A. Verify that field conditions are acceptable and are ready to receive work.
- B. Field Inspection of Fabricated Products: Prior to installation, inspect products for damage and verify markings and dimensions against reviewed submittals.
- C. Environmental Conditions: Do not install products intended for interior locations when spaces are uncovered and unprotected from inclement weather.
- D. Coordination: Coordinate metal fabrications Work with Work specified in other Sections so that related Work shall be accurately and properly joined.

**3.02 PREPARATION**

- A. Supply setting templates to the appropriate entities for steel items required to be cast into concrete.
- B. Make provision for erection loads with temporary bracing. Keep work in alignment.
- C. Obtain Architect's review prior to site cutting or making adjustments not indicated on Drawings and reviewed shop drawings.

**3.03 INSTALLATION**

- A. Install items plumb and level, accurately fitted, free from distortion or defects.

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- B. Provide for erection loads, and for sufficient temporary bracing to maintain true alignment until completion of erection and installation of permanent attachments.
- C. Field weld components as indicated on drawings.
- D. Perform field welding in accordance with AWS D1.1/D1.1M.
- E. Obtain approval prior to site cutting or making adjustments not scheduled.

**3.04 TOLERANCES**

- A. Maximum Variation From Plumb: 1/4 inch per story, non-cumulative.
- B. Maximum Offset From True Alignment: 1/4 inch.
- C. Maximum Out-of-Position: 1/4 inch.

**END OF SECTION**

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**SECTION 07 13 00  
SHEET WATERPROOFING**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. Self-adhered modified bituminous sheet membrane.

**1.02 RELATED REQUIREMENTS**

- A. Section 03 30 00 - Cast-in-Place Concrete: Concrete substrate.
- B. Section 31 22 00 - Grading: Requirements for backfill.
- C. Section 31 23 23 - Fill: Requirements for backfill.
- D. Section 33 41 00 - Subdrainage: Foundation drainage.

**1.03 REFERENCE STANDARDS**

- A. ASTM D412 - Standard Test Methods for Vulcanized Rubber and Thermoplastic Elastomers-- Tension.
- B. ASTM D570 - Standard Test Method for Water Absorption of Plastics.
- C. ASTM D882 - Standard Test Method for Tensile Properties of Thin Plastic Sheeting.
- D. ASTM D1970/D1970M - Standard Specification for Self-Adhering Polymer Modified Bituminous Sheet Materials Used as Steep Roofing Underlayment for Ice Dam Protection.
- E. ASTM D5295/D5295M - Standard Guide for Preparation of Concrete Surfaces for Adhered (Bonded) Membrane Waterproofing Systems.
- F. ASTM D5385/D5385M - Standard Test Method for Hydrostatic Pressure Resistance of Waterproofing Membranes.
- G. ASTM D6506/D6506M - Standard Specification for Asphalt Based Protection Board for Below-Grade Waterproofing.
- H. NRCA (WM) - The NRCA Waterproofing Manual.

**1.04 SUBMITTALS**

- A. See Section 01 30 00 - Administrative Requirements for submittal procedures.
- B. Product Data: Provide data for membrane, surface conditioner, flexible flashings, joint cover sheet, and joint and crack sealants.
- C. Shop Drawings: Indicate special joint or termination conditions and conditions of interface with other materials.
- D. Certificate: Certify that products meet or exceed specified requirements.
- E. Manufacturer's Installation Instructions: Indicate special procedures.
- F. Manufacturer's qualification statement.
- G. Installer's qualification statement.

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- H. Warranty: Submit manufacturer warranty and ensure forms have been completed in County's name and registered with manufacturer.
- I. Specimen Warranty.

**1.05 QUALITY ASSURANCE**

- A. Manufacturer Qualifications: Company specializing in manufacturing products specified in this section, with not less than three years of documented experience.
- B. Installer Qualifications: Company specializing in performing work of the type specified and with at least three years of documented experience.

**1.06 MOCK-UPS**

- A. See Section 01 40 00 - Quality Requirements for additional requirements.
- B. Construct mock-up consisting of 100 sq ft of vertical waterproofed panel; to represent finished work including internal and external corners.
- C. Locate where directed.
- D. Mock-up may remain as part of work.

**1.07 FIELD CONDITIONS**

- A. Maintain ambient temperatures above 40 degrees F for 48 hours before and during application and until liquid or mastic accessories have cured.

**1.08 WARRANTY**

- A. See Section 01 78 00 - Closeout Submittals for additional warranty requirements.
- B. Extended Warranty: Provide written guarantee from waterproofing membrane manufacturer, and furnish joint written warranty to County from waterproofing applicator and Contractor, covering all membranes, and other elements essential to be watertight.
- C. Contractor shall correct defective Work within a five year period after Date of Final Inspection; remove and replace materials concealing waterproofing at no extra cost to County.
- D. Provide five year manufacturer warranty for waterproofing failing to resist penetration of water, except where such failures are the result of structural failures of building. Hairline cracking of concrete due to temperature change or shrinkage is not considered a structural failure.

**PART 2 PRODUCTS**

**2.01 SHEET WATERPROOFING APPLICATIONS**

- A. Self-Adhered Modified Bituminous Sheet Membrane:
  - 1. Location: Retaining walls.
  - 2. Cover with drainage panel.

**2.02 SHEET WATERPROOFING MATERIALS**

- A. Self-Adhered Modified Bituminous Sheet Membrane:
  - 1. Thickness: 60 mil, 0.060 inch, minimum.

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2. Sheet Width: 36 inches, minimum.
3. Tensile Strength:
  - a. Film: 5,000 psi, minimum, measured in accordance with ASTM D882 and at grip-separation rate of 2 inches per minute.
  - b. Membrane: 325 psi, minimum, measured in accordance with ASTM D412 Method A, using die C and at spindle-separation rate of 2 inches per minute.
4. Elongation at Break: 300 percent, minimum, measured in accordance with ASTM D412.
5. Water Vapor Permeance: 0.05 perm, maximum, measured in accordance with ASTM E96/E96M.
6. Low Temperature Flexibility: Unaffected when tested in accordance with ASTM D1970/D1970M at minus 20 degrees F, 180 degree bend on 1 inch mandrel.
7. Water Absorption: 0.1 percent increase in weight, maximum, measured in accordance with ASTM D570, 24 hour immersion.
8. Hydrostatic Pressure Resistance: Membrane resists leakage for at least one hour from pressure equivalent to 200 feet head of water applied in accordance with test method ASTM D5385/D5385M.
9. Adhesives, Sealants, Tapes, and Accessories: As recommended by membrane manufacturer.
10. Products:
  - a. Carlisle Coatings & Waterproofing Inc; MiraDRI 860/861: [www.carlisleccw.com/#sle](http://www.carlisleccw.com/#sle).
  - b. GCP Applied Technologies; Bituthene 3000: [www.gcpat.com/sle](http://www.gcpat.com/sle).
  - c. Henry Company; Blueskin WP 200: [www.henry.com/#sle](http://www.henry.com/#sle).
  - d. W.R. Meadows, Inc; MEL-ROL: [www.wrmeadows.com/#sle](http://www.wrmeadows.com/#sle).
  - e. Substitutions: See Section 01 60 00 - Product Requirements.

### 2.03 ACCESSORIES

- A. Attachment Materials:
  1. Circular Membrane Discs: 1-1/2 inch diameter with neoprene pads or as recommended by manufacturer.
- B. Seaming Materials: As recommended by membrane manufacturer.
- C. Membrane Sealant: As recommended by membrane manufacturer.
- D. Sealant for Cracks and Joints In Substrates: Resilient elastomeric joint sealant compatible with substrates and waterproofing materials.
- E. Protection Board: Provide type capable of preventing damage to waterproofing due to backfilling and construction traffic.
  1. Multilayer internally-reinforced asphaltic panels, 1/8 inch thick, nominal, complying with ASTM D6506/D6506M.
  2. Products:
    - a. W.R. Meadows, Inc; Protection Course: [www.wrmeadows.com/#sle](http://www.wrmeadows.com/#sle).
    - b. Substitutions: See Section 01 60 00 - Product Requirements.

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- F. Drainage Panel: Drainage layer with geotextile filter fabric on earth side. See also Section 33 41 00 - Subdrainage.
  - 1. Composition: Dimpled polystyrene, polyethylene, or polypropylene core; polypropylene filter fabric.
  - 2. Thickness: As indicated on drawings.
    - a. Products:
      - 1) American Wick Drain Corp.; Product Amerdrain 520: [www.americanwick.com](http://www.americanwick.com).
      - 2) Carlisle Coatings & Waterproofing; Product MiraDRAIN 6000: [www.carlisle-ccw.com](http://www.carlisle-ccw.com).
      - 3) CETCO; Product AquaDrain with Aquadrain 100BD Base Drain: [www.cetco.com](http://www.cetco.com).
      - 4) JDR Enterprises, Inc.; Product J-DRain 420: [www.j-drain.com](http://www.j-drain.com).
      - 5) W.R. Meadows, Inc; Mel-Drain 5012: [www.wrmeadows.com/#sle](http://www.wrmeadows.com/#sle).
      - 6) Substitutions: See Section 01 60 00 - Product Requirements.
- G. Cant Strips: Premolded composition material.
- H. Flexible Flashings: Type recommended by membrane manufacturer.
- I. Termination Bars: Stainless steel; compatible with membrane and adhesives.
- J. Adhesives: As recommended by membrane manufacturer.
- K. Thinner and Cleaner: As recommended by adhesive manufacturer, compatible with sheet membrane.

**PART 3 EXECUTION**

**3.01 EXAMINATION**

- A. Verify existing conditions are acceptable prior to starting work.
- B. Verify substrate surfaces are durable; free of matter detrimental to adhesion or application of waterproofing system.
- C. Verify that items penetrating surfaces to receive waterproofing are securely installed.

**3.02 PREPARATION**

- A. Protect adjacent surfaces from damage not designated to receive waterproofing.
- B. Clean and prepare surfaces to receive waterproofing in accordance with manufacturer's instructions; vacuum substrate clean.
- C. Do not apply waterproofing to surfaces unacceptable to membrane manufacturer.
- D. Fill nonmoving joints and cracks with a filler compatible with waterproofing materials.
- E. Seal moving cracks with sealant and nonrigid filler, using procedures recommended by sealant and waterproofing manufacturers.
- F. Seal cracks and joints with sealant using depth to width ratio as recommended by sealant manufacturer.

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- G. Surfaces for Adhesive Bonding: Apply surface conditioner at a rate recommended by manufacturer, and protect conditioner from rain or frost until dry.
- H. Concrete Surfaces for Adhesive Bonding: Prepare concrete substrate in accordance with ASTM D5295/D5295M.
  - 1. Remove substances that inhibit adhesion including form release agents, curing compounds admixtures, laitance, moisture, dust, dirt, grease and oil.
  - 2. Repair surface defects including honeycombs, fins, tie holes, bug holes, sharp offsets, rutted cracks, ragged corners, deviations in surface plane, spalling and delaminations, as described in reference standard.
  - 3. Remove and replace areas of defective concrete; see Section 03 30 00.
  - 4. Prepare concrete for adhesive bonded waterproofing using mechanical or chemical methods described in referenced standard.
  - 5. Test concrete surfaces as described in referenced standards, and verify surfaces are ready to receive adhesive bonded waterproofing membrane system.

**3.03 INSTALLATION - MEMBRANE**

- A. Install membrane waterproofing in accordance with manufacturer's instructions and NRCA (WM) applicable requirements.
- B. Roll out membrane, and minimize wrinkles and bubbles.
- C. Self-Adhering Membrane: Remove release paper layer, and roll out onto substrate with a mechanical roller to provide full contact bond.
- D. Overlap edges and ends, minimum 3 inches, seal permanently waterproof by method recommended by manufacturer, and apply uniform bead of sealant to joint edge.
- E. Reinforce membrane with multiple thickness of membrane material over joints, whether joints are static or dynamic.
- F. Weather lap joints on sloped substrate in direction of drainage, and seal joints and seams.
- G. Flexible Flashings: Seal items watertight that penetrate through waterproofing membrane with flexible flashings.
- H. Extend membrane over cants and up intersecting surfaces at membrane perimeter minimum 6 inches above horizontal surface for first ply and 4 inches at subsequent plies laid in shingle fashion.
- I. Seal membrane and flashings to adjoining surfaces.
  - 1. Install termination bar along edges.
  - 2. Install counterflashing over exposed edges.

**3.04 INSTALLATION - DRAINAGE PANEL AND PROTECTION BOARD**

- A. Place drainage panel directly against membrane, butt joints, place to encourage drainage downward; scribe and cut boards around projections, penetrations, and interruptions.
- B. Place protection board directly against drainage panel; butt joints, and scribe and cut boards around projections, penetrations, and interruptions.
- C. Adhere protection board to substrate with compatible adhesive.

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**3.05 FIELD QUALITY CONTROL**

- A. See Section 01 40 00 - Quality Requirements for additional requirements.
- B. County will provide testing services, and Contractor to provide temporary construction and materials for testing.
- C. Upon completion of horizontal membrane installation, dam installation area in preparation for flood testing.
- D. Flood to minimum depth of 1 inch with clean water, and after 48 hours inspect for leaks.
- E. If leaking is found, remove water, repair leaking areas with new waterproofing materials as directed by Architect; repeat flood test, and repair damage to building.
- F. When area is proven watertight, drain water and remove dam.

**3.06 PROTECTION**

- A. Do not permit traffic over unprotected or uncovered membrane.

**END OF SECTION**

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**SECTION 07 92 00  
JOINT SEALANTS**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. Self-leveling pourable joint sealants.
- B. Joint backings and accessories.
- C. County-provided field quality control.

**1.02 RELATED REQUIREMENTS**

- A. Section 01 61 16 - Volatile Organic Compound (VOC) Content Restrictions: Additional requirements for sealants and primers.

**1.03 REFERENCE STANDARDS**

- A. ASTM C661 - Standard Test Method for Indentation Hardness of Elastomeric-Type Sealants by Means of a Durometer.
- B. ASTM C920 - Standard Specification for Elastomeric Joint Sealants.
- C. ASTM C1193 - Standard Guide for Use of Joint Sealants.
- D. ASTM C1311 - Standard Specification for Solvent Release Sealants.
- E. ASTM C1330 - Standard Specification for Cylindrical Sealant Backing for Use with Cold Liquid-Applied Sealants.
- F. ASTM D2240 - Standard Test Method for Rubber Property--Durometer Hardness.
- G. SCAQMD 1168 - Adhesive and Sealant Applications.
- H. SWRI (VAL) - SWR Institute Validated Products Directory.

**1.04 SUBMITTALS**

- A. See Section 01 30 00 - Administrative Requirements for submittal procedures.
- B. Product Data: Submit manufacturer's technical datasheets for each product to be used; include the following:
  - 1. Physical characteristics, including movement capability, VOC content, hardness, cure time, and color availability.
  - 2. List of backing materials approved for use with the specific product.
  - 3. Substrates that product is known to satisfactorily adhere to and with which it is compatible.
  - 4. Substrates the product should not be used on.
  - 5. Substrates for which use of primer is required.
  - 6. Substrates for which laboratory adhesion and/or compatibility testing is required.
  - 7. Installation instructions, including precautions, limitations, and recommended backing materials and tools.

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- 8. Sample product warranty.
- 9. Certification by manufacturer indicating that product complies with specification requirements.
- 10. SWRI Validation: Provide currently available sealant product validations as listed by SWRI (VAL) for specified sealants.
- C. Product Data for Accessory Products: Submit manufacturer's technical data sheet for each product to be used, including physical characteristics, installation instructions, and recommended tools.
- D. Color Cards for Selection: Where sealant color is not specified, submit manufacturer's color cards showing standard colors available for selection.
- E. Samples for Verification: Where custom sealant color is specified, obtain directions from Architect and submit at least two physical samples for verification of color of each required sealant.
- F. Manufacturer's qualification statement.
- G. Installer's qualification statement.
- H. Executed warranty.

**1.05 QUALITY ASSURANCE**

- A. Maintain one copy of each referenced document covering installation requirements on site.
- B. Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section with minimum three years documented experience.
- C. Installer Qualifications: Company specializing in performing the work of this section and with at least three years of documented experience.
- D. County will employ an independent testing agency to perform the field quality control inspection and testing as referenced in PART 3 of this section and as follows, to prepare and submit the field quality control plan and log, and to provide recommendations of remedies in the case of failure.
  - 1. Contractor shall cooperate with testing agency and repair failures discovered and destructive test location damage.

**1.06 WARRANTY**

- A. See Section 01 78 00 - Closeout Submittals for additional warranty requirements.
- B. Manufacturer Warranty: Provide 2-year manufacturer warranty for installed sealants and accessories that fail to achieve a watertight seal, exhibit loss of adhesion or cohesion, or do not cure. Complete forms in County's name and register with manufacturer.
- C. Extended Correction Period: Correct defective work within 2-year period commencing on Date of Substantial Completion.

**PART 2 PRODUCTS**

**2.01 MANUFACTURERS**

- A. Self-Leveling Sealants:

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1. Adhesives Technology Corporation: [www.atcepoxy.com/#sle](http://www.atcepoxy.com/#sle).
2. Bostik Inc: [www.bostik-us.com/#sle](http://www.bostik-us.com/#sle).
3. Dayton Superior Corporation: [www.daytonsuperior.com/#sle](http://www.daytonsuperior.com/#sle).
4. Dow: [www.dow.com/#sle](http://www.dow.com/#sle).
5. Master Builders Solutions: [www.master-builders-solutions.com/en-us/#sle](http://www.master-builders-solutions.com/en-us/#sle).
6. Pecora Corporation: [www.pecora.com/#sle](http://www.pecora.com/#sle).
7. QUIKRETE Companies: [www.quikrete.com/#sle](http://www.quikrete.com/#sle).
8. Sherwin-Williams Company: [www.sherwin-williams.com/#sle](http://www.sherwin-williams.com/#sle).
9. Sika Corporation: [www.usa.sika.com/#sle](http://www.usa.sika.com/#sle).
10. Tremco Commercial Sealants & Waterproofing: [www.tremcosealants.com/#sle](http://www.tremcosealants.com/#sle).
11. W.R. Meadows, Inc: [www.wrmeadows.com/#sle](http://www.wrmeadows.com/#sle).
12. Or Equal Substitutions: See Section 01 60 00 - Product Requirements.

## 2.02 JOINT SEALANT APPLICATIONS

### A. Scope:

1. Exterior Joints: Seal open joints, whether or not the joint is indicated on drawings, unless specifically indicated not to be sealed. Exterior joints to be sealed include, but are not limited to:
  - a. Wall expansion and control joints.
  - b. Joints between door, window, and other frames and adjacent construction.
  - c. Joints between different exposed materials.
  - d. Openings below ledge angles in masonry.
  - e. Other joints indicated below.
2. Do not seal the following types of joints:
  - a. Intentional weep holes in masonry.
  - b. Joints indicated to be treated with manufactured expansion joint cover, or some other type of sealing device.
  - c. Joints where sealant is specified to be provided by manufacturer of product to be sealed.
  - d. Joints where installation of sealant is specified in another section.
  - e. Joints between suspended panel ceilings/grid and walls.

### B. Exterior Joints: Use nonsag nonstaining silicone sealant, unless otherwise indicated.

1. Type CP-1 - Control and Expansion Joints in Concrete Paving: Self-leveling polyurethane traffic-grade sealant.

## 2.03 JOINT SEALANTS - GENERAL

- A. Sealants and Primers: Provide products having lower volatile organic compound (VOC) content than indicated in SCAQMD 1168.
- B. Colors: As indicated on drawings.

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## 2.04 SELF-LEVELING JOINT SEALANTS

- A. Self-Leveling Silicone Sealant: ASTM C920, Grade P, Uses M and A; single or multicomponent, explicitly approved by manufacturer for traffic exposure when recessed below traffic surface; not expected to withstand continuous water immersion.
1. Movement Capability: Plus 100 percent, minus 50 percent, minimum.
  2. Hardness Range: 0 to 15, Shore A, when tested in accordance with ASTM C661.
  3. Color: To be selected by Architect from manufacturer's standard range.
  4. Service Temperature Range: Minus 40 to 180 degrees F.
  5. Products:
    - a. Dow; DOWSIL SL Parking Structure Sealant: [www.dow.com/#sle](http://www.dow.com/#sle).
    - b. Pecora Corporation; Pecora 300 SL (Self-Leveling): [www.pecora.com/#sle](http://www.pecora.com/#sle).
    - c. Pecora Corporation; Pecora 322 FC (Fast Cure): [www.pecora.com/#sle](http://www.pecora.com/#sle).
    - d. Sika Corporation; Sikasil 728SL: [www.usa.sika.com/#sle](http://www.usa.sika.com/#sle).
    - e. Tremco Commercial Sealants & Waterproofing; Spectrem 900SL: [www.tremcosealants.com/#sle](http://www.tremcosealants.com/#sle).
    - f. Or Equal Substitutions: See Section 01 60 00 - Product Requirements.
- B. Type P-1 - Self-Leveling Polyurethane Sealant: ASTM C920, Grade P, Uses M and A; single or multicomponent; explicitly approved by manufacturer for traffic exposure; not expected to withstand continuous water immersion .
1. Movement Capability: Plus and minus 25 percent, minimum.
  2. Hardness Range: 35 to 55, Shore A, when tested in accordance with ASTM C661.
  3. Color: To be selected by Architect from manufacturer's standard range.
  4. Service Temperature Range: Minus 40 to 180 degrees F.
  5. Products:
    - a. Pecora Corporation: [www.pecora.com/#sle](http://www.pecora.com/#sle).
    - b. Sherwin-Williams Company; Stampede 1SL Polyurethane Sealant: [www.sherwin-williams.com/#sle](http://www.sherwin-williams.com/#sle).
    - c. Sika Corporation; Sikaflex-1c SL: [www.usa.sika.com/#sle](http://www.usa.sika.com/#sle).
- C. Rigid Self-Leveling Polyurethane Joint Filler: Two part, low viscosity, fast setting; intended for cracks and control joints not subject to significant movement.
1. Hardness Range: Greater than 100, Shore A, and 50 to 80, Shore D, when tested in accordance with ASTM C661.
  2. Products:
    - a. ARDEX Engineered Cements; ARDEX ARDIFIX: [www.ardexamericas.com/#sle](http://www.ardexamericas.com/#sle).
    - b. Or Equal Substitutions: See Section 01 60 00 - Product Requirements.
- D. Type EPX-1 - Semi-Rigid Self-Leveling Epoxy Joint Filler: Epoxy or epoxy/polyurethane copolymer; intended for filling cracks and control joints not subject to significant movement; rigid enough to support concrete edges under traffic.

1. Composition: Multicomponent, 100 percent solids by weight.
2. Durometer Hardness: Minimum of 85 for Type A or 35 for Type D, after seven days when tested in accordance with ASTM D2240.
3. Color: Concrete gray.
4. Joint Width, Minimum: 1/8 inch.
5. Joint Width, Maximum: 1/4 inch.
6. Joint Depth: Provide product suitable for joints from 1/8 inch to 2 inches in depth including space for backer rod.
7. Products:
  - a. Dayton Superior Corporation: [www.daytonsuperior.com/#sle](http://www.daytonsuperior.com/#sle).
  - b. Euclid Chemical Company; EUCCO 700: [www.euclidchemical.com/#sle](http://www.euclidchemical.com/#sle).
  - c. Nox-Crete Inc; DynaFlex 502: [www.nox-crete.com/#sle](http://www.nox-crete.com/#sle).
  - d. W.R. Meadows, Inc; Rezi-Weld Flex: [www.wrmeadows.com/#sle](http://www.wrmeadows.com/#sle).
  - e. Or Equal Substitutions: See Section 01 60 00 - Product Requirements.

**2.05 ACCESSORIES**

- A. Backer Rod: Cylindrical cellular foam rod with surface that sealant will not adhere to, compatible with specific sealant used, and recommended by backing and sealant manufacturers for specific application.
  1. Type for Joints Not Subject to Pedestrian or Vehicular Traffic: ASTM C1330; Type O - Open Cell Polyurethane.
  2. Type for Joints Subject to Pedestrian or Vehicular Traffic: ASTM C1330; Type B - Bi-Cellular Polyethylene.
  3. Open Cell: 40 to 50 percent larger in diameter than joint width.
  4. Closed Cell and Bi-Cellular: 25 to 33 percent larger in diameter than joint width.
  5. Products:
    - a. Adfast USA Inc; Adseal BR-2600 Backer Rod: [www.adfastcorp.com/#sle](http://www.adfastcorp.com/#sle).
- B. Backing Tape: Self-adhesive polyethylene tape with surface that sealant will not adhere to and recommended by tape and sealant manufacturers for specific application.
- C. Masking Tape: Self-adhesive, nonabsorbent, nonstaining, removable without adhesive residue, and compatible with surfaces adjacent to joints and sealants.
- D. Joint Cleaner: Noncorrosive and nonstaining type, type recommended by sealant manufacturer; compatible with joint forming materials.
- E. Primers: Type recommended by sealant manufacturer to suit application; nonstaining.

**PART 3 EXECUTION**

**3.01 EXAMINATION**

- A. Verify that joints are ready to receive work.
- B. Verify that backing materials are compatible with sealants.

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- C. Verify that backer rods are of the correct size.

**3.02 PREPARATION**

- A. Remove loose materials and foreign matter that could impair adhesion of sealant.
- B. Clean joints, and prime as necessary, in accordance with manufacturer's instructions.
- C. Perform preparation in accordance with manufacturer's instructions and ASTM C1193.
- D. Mask elements and surfaces adjacent to joints from damage and disfigurement due to sealant work; be aware that sealant drips and smears may not be completely removable.

**3.03 INSTALLATION**

- A. Install this work in accordance with sealant manufacturer's requirements for preparation of surfaces and material installation instructions.
- B. Provide joint sealant installations complying with ASTM C1193.
- C. Measure joint dimensions and size joint backers to achieve the following, unless otherwise indicated:
  - 1. Width/depth ratio of 2:1.
  - 2. Neck dimension no greater than 1/3 of the joint width.
  - 3. Surface bond area on each side not less than 75 percent of joint width.
- D. Install bond breaker backing tape where backer rod cannot be used.
- E. Install sealant free of air pockets, foreign embedded matter, ridges, and sags, and without getting sealant on adjacent surfaces.
- F. Do not install sealant when ambient temperature is outside manufacturer's recommended temperature range, or will be outside that range during the entire curing period, unless manufacturer's approval is obtained and instructions are followed.
- G. Nonsag Sealants: Tool surface concave, unless otherwise indicated; remove masking tape immediately after tooling sealant surface.
- H. Concrete Floor Joint Filler: After full cure, shave joint filler flush with top of concrete slab.

**3.04 POST-OCCUPANCY**

- A. Post-Occupancy Inspection: Perform visual inspection of entire length of project sealant joints at a time that joints have opened to their greatest width, i.e., at low temperature in thermal cycle. Report failures immediately and repair them.

**END OF SECTION**

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**SECTION 10 14 23  
PANEL SIGNAGE**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. Traffic and parking control, and site informational signage

**1.02 REFERENCE STANDARDS**

- A. 36 CFR 1191 - Americans with Disabilities Act (ADA) Accessibility Guidelines for Buildings and Facilities; Architectural Barriers Act (ABA) Accessibility Guidelines.
- B. ADA Standards - Americans with Disabilities Act (ADA) Standards for Accessible Design.
- C. ASTM C94/C94M - Standard Specification for Ready-Mixed Concrete.
- D. CBC - California Building Code.
- E. CBC Ch. 11B - California Building Code-Chapter 11B.
- F. CBC Chapter 11B - California Building Code-Chapter 11B.

**1.03 SUBMITTALS**

- A. See Section 01 30 00 - Administrative Requirements for submittal procedures.
- B. Product Data: Manufacturer's product literature for each type of panel sign, indicating styles, font, foreground and background colors, locations, and overall dimensions of each sign.
- C. Shop Drawings:
  - 1. Include dimensions, locations, elevations, materials, text and graphic layout, attachment details, and schedules.
  - 2. Schedule: Provide information sufficient to completely define each panel sign for fabrication, including room number, room name, other text to be applied, sign and letter sizes, fonts, and colors.
    - a. When room numbers to appear on signs differ from those on drawings, include the drawing room number on schedule.
    - b. When content of signs is indicated to be determined later, request such information from County through Architect at least 2 months prior to start of fabrication; upon request, submit preliminary schedule.
    - c. Submit for approval by County through Architect prior to fabrication.
- D. Samples: Submit two samples of each type of sign, of size similar to that required for project, indicating sign style, font, and method of attachment.
- E. Verification Samples: Submit samples showing colors, materials, and finishes specified.
- F. Manufacturer's Installation Instructions: Include installation templates and attachment devices.
- G. Manufacturer's qualification statement.
- H. Maintenance Materials: Furnish the following for County's use in maintenance of project.

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1. See Section 01 60 00 - Product Requirements for additional provisions.

**1.04 QUALITY ASSURANCE**

- A. Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section with minimum three years of documented experience.

**1.05 DELIVERY, STORAGE, AND HANDLING**

- A. Package signs as required to prevent damage before installation.
- B. Store under cover and elevated above grade.
- C. Store tape adhesive at normal room temperature.

**1.06 FIELD CONDITIONS**

- A. Do not install tape adhesive when ambient temperature is lower than recommended by manufacturer.
- B. Maintain minimum ambient temperature during and after installation.

**PART 2 PRODUCTS**

**2.01 MANUFACTURERS**

- A. Panel Signage:
  1. ASI Sign Systems, Inc.: [www.asisignage.com](http://www.asisignage.com).
  2. Best Sign Systems, Inc: [www.bestsigns.com/#sle](http://www.bestsigns.com/#sle).
  3. FASTSIGNS International, Inc: [www.fastsigns.com/#sle](http://www.fastsigns.com/#sle).
  4. Inpro Corporation: [www.inprocorp.com/#sle](http://www.inprocorp.com/#sle).
  5. Mohawk Sign Systems, Inc: [www.mohawksign.com/#sle](http://www.mohawksign.com/#sle).
  6. Seton Identification Products: [www.seton.com/aec/#sle](http://www.seton.com/aec/#sle).
  7. Or Equal Substitutions: See Section 01 60 00 - Product Requirements.

**2.02 REGULATORY REQUIREMENTS**

- A. Accessibility Requirements: Comply with ADA Standards, CBC Chapter 11B, and applicable building codes, unless otherwise indicated; in the event of conflicting requirements, comply with the most restrictive requirements.
  1. Requirements for Persons with Disabilities: Provide identifying devices meeting the requirements for the physically disabled of the following codes:
    - a. California Building Code (CBC) Title 24, Part 2; Chapter 11B, Accessibility.
    - b. Code of Federal Regulations 36 CFR 1191 - Americans with Disabilities Act (ADA) Accessibility Guidelines for Buildings and Facilities.
    - c. Accessible Means of Egress Signage: CBC 1009.
      - 1) Directional Signage: CBC 1009.10.

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- (a) Provide directional signage complying with CBC Ch. 11B-703.5 indicating the location of all other means of egress and which are accessible means of egress:
  - (1) At exits serving a required accessible space but not providing an approved accessible means of egress.
- 2. Raised characters: Comply with CBC Ch. 11B-703.2.
  - a. Depth: It shall be 1/32 inch minimum above their background and shall be sans serif uppercase and be duplicated in Braille.
  - b. Height: It shall be 5/8 inch minimum and 2 inches maximum based on the height of the uppercase letter "I". CBC Ch. 11B-703.2.5
  - c. Finish and contrast: Characters and their background shall have a non-glare finish. Character shall contrast with their background with either light characters on a dark background or dark characters on a light background. CBC Ch. 11B-703.5.1
  - d. Proportions: It shall be selected from fonts where the width of the uppercase letter "O" is 60% minimum and 110 % maximum of the height of the uppercase letter "I". Stroke thickness of the uppercase letter "I" shall be 15% maximum of the height of the character. CBC Ch. 11B-703.2.4 and 11B-703.2.6; If characters are both visual and raised, provide stroke width min. 10% and maximum 15% of the character "I". CBC Ch. 11B 703.5.7.
  - e. Character Spacing: Spacing between individual tactile characters shall comply with CBC Ch. 11B-703.2.7.
    - 1) 11B-703.2.8 Line spacing. Spacing between the baselines of separate lines of raised characters within a message shall be 135 percent minimum and 170 percent maximum of the raised character height.
  - f. Format: Text shall be in a horizontal format. CBC Ch. 11B-703.2.9.
  - g. Braille: It shall be contracted (Grade 2) and shall comply with CBC Ch. 11B-703.3 and 11B-703.4. Braille dots shall have a domed and rounded shape and shall comply with CBC Table and Figure 11B-703.3.1. Duplicate all characters on sign.
  - h. Mounting height: Tactile sign on signs shall be located 48 inches minimum to the baseline of the lowest Braille cells and 60 inches maximum to the baseline of the highest line of raised characters above the finish floor or ground surface. CBC Ch. 11B and Figure 11B-703.4.1.
  - i. Mounting location: A tactile sign shall be located per CBC Ch. 11B and Figure 11B-703.4.2 as follows:
    - 1) alongside a single door on the latch side.
    - 2) on the inactive leaf of a double door with one active leaf.
    - 3) to the right of the right hand door at double doors with two active leaves.
    - 4) on the nearest adjacent wall where there is no wall space at the latch side of a single door or at the right side of double doors with two active leaves.
    - 5) so that a clear floor space of 18 x 18 inch minimum, centered on the tactile characters, is beyond the arc of any door swing between the closed position and 45 degree open position.

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3. Visual characters shall comply with CBC Ch. 11B -703.5 and shall be 40 inches minimum above finish floor or ground.
  - a. Visual character stroke thickness of the uppercase letter “I” shall be 10% minimum and 20% maximum of the height of the character. CBC Ch. 11B-703.5.7.
    - 1) Line Spacing between the baselines of characters within a message shall be 135% minimum and 170% maximum of the character height per CBC Ch. 11B-703.5.9.
    - 2) Character Spacing between individual adjacent characters shall be 10% minimum and 35% maximum of character height per CBC Ch. 11B-703.5.8.
4. Pictograms shall comply with CBC Ch. 11B-703.6.
5. Symbol of accessibility shall comply with CBC Ch. 11B-703.7.
6. Variable message signs shall comply with CBC Ch. 11B-703.8.

**2.03 PANEL SIGNAGE**

- A. Panel Signage:
  1. Application: Traffic Signs signs.
  2. Description: Flat signs reflective media, nontactile characters.
  3. Sign Size: As indicated on drawings.
  4. Corners: Radiused.
  5. Color and Font, unless otherwise indicated:
    - a. Character Font: Helvetica, Arial, or other sans serif font.
    - b. Character Case: Upper and lower case (title case).
    - c. Background Color: As scheduled.
    - d. Character Color: Contrasting color.
  6. Braille: Grade II, ADA-compliant.
  7. One-Sided Wall Mounting: Concealed screws.

**2.04 SIGNAGE APPLICATIONS**

- A. Traffic Signs: To match campus standards; locate where indicated on drawings.
  1. Manufacturers:
    - a. Hawkins Traffic Safety Supply, Inc.: [www.hawkinstraffic.com](http://www.hawkinstraffic.com).
    - b. Safeway Sign Company: [www.safewaysign.com](http://www.safewaysign.com).
    - c. Western Highway Products, Inc.: [www.westernhighway.com](http://www.westernhighway.com).
    - d. Substitutions: See Section 01 6000 - Product Requirements.
  2. Plaque Signs: Provide manufacturer's standard silk-screened signs, baked-on enamel applied over Diamond Grade (DG), (10-year projected life) retro-reflectorized backing; on aluminum or 16 gage galvanized steel sheet. Provide with anti-graffiti protective overlay film. Produce smooth, even, level sign surfaces, constructed to remain flat under installed condition within a tolerance of plus or minus 1/16-inch measured diagonally. Provide two holes for post mounting.

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- a. Parking Stall Signs: Sign text, accessible parking control shall comply with requirements of State of California Code of Regulations (CCR) - Title 24, Part 2, CBC Ch. 11B-502.6 in addition to requirements of State of California, Department of Transportation (CALTRANS) and regulations of local authorities having jurisdiction.
  - 1) Single post mount, not less than 70 square inches with white reflectorized copy on blue background conforming to No. 15090, SAE AMS-STD-595 (FED-STD-595C). Sign shall display a profile view of a wheelchair with occupant in white on blue background.
    - (a) Provide an additional sign below the accessible sign with the text "Minimum Fine \$250".
  - 2) Position one sign at the end of each parking space designated for disabled usage.
  - 3) One in every six spaces (CBC Ch. 11B-208.2.4), but not less than one, provide a 12 inch by 3-1/4 inch "Van Accessible" sign below the symbol of accessibility, wording per CBC Ch. 11B-502.6, 36 CFR 1191, and ADA Standards.
  - 4) Sign shall be mounted 80 inches from bottom of sign to finish grade of parking space or centered on wall at interior end of parking space at a minimum height of 60 inches above the parking space, finished grade, ground or sidewalk, to the bottom of the sign.
- 3. Support Posts:
  - a. Galvanized Steel Rail for Bolt-Together Framing:
    - 1) Yield Strength: 60,000 psi.
    - 2) Post and Footing Insert Size: As indicated on Drawings.
    - 3) Post: Basis of Design Product: 6535K372 as distributed by McMaster Carr, or equal.
    - 4) Footing Insert: Basis of Design Product: 6535K392 as distributed by McMaster Carr, or equal.
    - 5) Curved/Angle Bolt: Basis of Design Product: Curved Bolt Set for 1-3/4" High Rails for Bolt-Together Framing as distributed by McMaster Carr, or equal.
  - b. Concrete: Ready-mixed, complying with ASTM C94/C94M; normal Portland cement; 3,500 psi strength at 28 days, 3 inch slump; 3/4 inch nominal size aggregate.
- 4. Accessories: Provide welded galvanized steel fittings and galvanized or stainless steel bolts, nuts and washers.
- 5. Fasteners: Provide tamper-proof galvanized steel fasteners.
  - a. Tufnut System (714) 962-5838, Allegheny Bolt (Tampruf brand; (516) 568-1052 or equal.

**2.05 FABRICATION**

- A. Provide signs and supports factory-prefabricated and pre-finished, ready for assembly and installation.

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**2.06 ACCESSORIES**

- A. Concealed Screws: Noncorroding metal; stainless steel, galvanized steel, chrome plated, or other.
- B. Exposed Screws: Stainless steel.
- C. Tape Adhesive: Double-sided tape, permanent adhesive.

**PART 3 EXECUTION**

**3.01 EXAMINATION**

- A. Verify that substrate surfaces are ready to receive work.
- B. Notify Architect if conditions are not suitable for installation of signs; do not proceed until conditions are satisfactory.

**3.02 INSTALLATION**

- A. Install in accordance with manufacturer's instructions.
- B. Install with horizontal edges level.
- C. Locate panel signs and mount at heights indicated on drawings and in accordance with ADA Standards, CBC Chapter 11B, and applicable building codes.
  - 1. Room and Door Signs: Locate on wall at latch side of door (per CBC Ch. 11B-703.4.2) a minimum of 48 inches to the baseline of the lowest braille cells; with baseline of highest line of raised character text at maximum 60 inches above finished floor.
    - a. Comply with CBC Ch. 11B-703.4.1 and CBC Ch. 11B -703.4.2
- D. Protect from damage until final inspection; repair or replace damaged items.

**3.03 SITE AND TRAFFIC SIGN INSTALLATION**

- A. Locate informational signage as verified in field by County. Verify and coordinate sign locations to prevent conflict with underground utilities.
- B. Locate accessible car and van parking stall and drive approach signs where shown on Drawings and as required by applicable ordinances and regulations of authorities having jurisdiction. Verify and coordinate sign locations to prevent conflict with underground utilities.
- C. Excavate for sign support footings to depth as shown on Drawings or, if not shown, as recommended by manufacturer. Provide forms for concrete not supported by compacted soil.
- D. Set posts in concrete base, minimum 12 inch diameter and 18 inches deep; unless indicated otherwise on Drawings.
  - 1. Set sign support post plumb and so sign face will be perpendicular to stall or parallel to curb face, as applicable.
    - a. Set posts into pipe sleeve inserts set and anchored into concrete.
    - b. Fill annular space between posts and sleeves with grouting compound.
  - 2. Signs set in asphaltic paving surfaces or concrete sidewalks shall be mounted in core drilled holes minimum 8 inch diameter, 18 inches deep with top of base flush to finish.

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3. Firmly attach signs mounted to walls with appropriate expansion anchors or bolting, adhesive not permitted.
  4. Seal all holes water tight.
- E. Install plaque signage to posts, with panel facing traffic as necessary.

**END OF SECTION**

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**SECTION 10 75 00  
FLAGPOLES**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. Aluminum Flagpoles.

**1.02 RELATED REQUIREMENTS**

- A. Section 03 30 00 - Cast-in-Place Concrete: Concrete base and foundation construction.
- B. Section 01 10 00 - Summary: County furnished products; flags.
- C. Section 31 23 16 - Excavation: Foundation earthwork.

**1.03 REFERENCE STANDARDS**

- A. 36 CFR 1191 - Americans with Disabilities Act (ADA) Accessibility Guidelines for Buildings and Facilities; Architectural Barriers Act (ABA) Accessibility Guidelines.
- B. AASHTO M 36 - Standard Specification for Corrugated Steel Pipe, Metallic-Coated, for Sewers and Drains.
- C. ADA Standards - Americans with Disabilities Act (ADA) Standards for Accessible Design.
- D. ASTM A123/A123M - Standard Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products.
- E. ASTM B221 - Standard Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes.
- F. ASTM B221M - Standard Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes (Metric).
- G. CBC Ch. 11B - California Building Code-Chapter 11B.
- H. NAAMM FP 1001 - Guide Specifications for Design Loads of Metal Flagpoles.

**1.04 SUBMITTALS**

- A. See Section 01 30 00 - Administrative Requirements, for submittal procedures.
- B. Product Data: Provide data on pole, accessories, and configurations for each type of flagpole required. Include data for fittings and accessories.
- C. Shop Drawings: Indicate detailed dimensions, base details, anchor requirements, and imposed loads.
- D. Calculations: Submit engineering calculations and design for flagpole foundation assembly and pole per loads of CBC Chapter 16A.
  - 1. Design criteria as appropriate to the locale of the Project: NAAMM FP 1001 .
  - 2. Furnish calculations and drawings in a form acceptable to Architect.
  - 3. Calculations and foundation design shall be prepared and signed by a civil or structural engineer currently registered to practice in the State of California.

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- E. Certificate: Submit professional structural engineer's certification that design complies with requirements of the contract documents.
- F. Manufacturer's Instructions: Submit for each product specified in this section. Include instructions for examination, preparation, and protection of adjacent work.
- G. Maintenance Data: Provide lubrication and periodic maintenance requirement schedules and cleaning.

**1.05 QUALITY ASSURANCE**

- A. Manufacturer's Qualifications: Firm regularly engaged in manufacture of products specified in this section, and whose products have been in satisfactory use under similar service conditions for not less than 5 years.
- B. Installer's Qualifications: Firm regularly engaged, for the preceding five years, in the installation of flagpoles of equivalent type and physical characteristics to those required. If requested by Architect submit verifiable list of not less than five projects of equivalent type successfully completed within the preceding two years.

**1.06 DELIVERY, STORAGE, AND HANDLING**

- A. Spiral wrap flagpole with protective covering and pack in protective shipping tubes or containers.
- B. Protect flagpole and accessories from damage or moisture.

**PART 2 PRODUCTS**

**2.01 MANUFACTURERS**

- A. Flagpoles:
  - 1. Baartol Company, Inc., a division of Eder Flag Mfg. Co. Inc.; Architectural Series, Model EC("height"): [www.ederflag.com](http://www.ederflag.com)
  - 2. Concord Industries, Inc: [www.concordindustries.com](http://www.concordindustries.com).
  - 3. Flagpole Warehouse Division of The Flag Company, Inc.: [www.flagpolewarehouse.com](http://www.flagpolewarehouse.com).
  - 4. Morgan Francis Flagpoles & Accessories: [www.morgan-francis.com](http://www.morgan-francis.com).
  - 5. Pole-Tech Co., Inc: [www.poletech.com](http://www.poletech.com).
  - 6. Substitutions: See Section 01 60 00 - Product Requirements.

**2.02 FLAGPOLES**

- A. Flagpoles: Designed in accordance with NAAMM FP 1001
  - 1. Material: Aluminum.
  - 2. Design: Cone tapered.
  - 3. Mounting: Ground mounted type.
  - 4. Outside Butt Diameter: 6 inches.
  - 5. Outside Tip Diameter: 3.5 inches.
  - 6. Nominal Wall Thickness: 0.188 inches.

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- 7. Nominal Height: 35 ft; measured from nominal ground elevation.
- 8. Halyard: Internal type, electric operation.
- B. Performance Requirements:
  - 1. Wind Pressure Loading on Flagpole with Flag: Resistant without permanent deformation to 110 miles/hr wind speed, in accordance with NAAMM FP 1001; the factor of safety used is 2.5.
- C. Pole Construction: Construct pole and ship to site in one piece if possible. If more than one piece is necessary, provide snug- fitting, precision joints with self-aligning, internal splicing sleeve arrangement for weather-tight hairline field joints.

**2.03 POLE MATERIALS**

- A. Aluminum: ASTM B221 (ASTM B 221M) , 6063 alloy , T6 temper.

**2.04 ACCESSORIES**

- A. Finial Ball: Aluminum, 6 inch diameter, Gold anodized.
- B. Truck Assembly: Cast aluminum; revolving, stainless steel ball bearings, non-fouling.
- C. Cleats: 9 inch size, aluminum with galvanized steel fastenings, one per halyard.
  - 1. Locate top of cleats maximum 47 inches above finish walking surface.
  - 2. Comply with CBC 11B-308 and 36 CFR 1191.
- D. Cleat Box: Aluminum, with built-in hinge and hasp assembly, attached to pole with tamper proof screws inside box.
- E. Halyard: 5/16 inch diameter nylon, braided, white.
  - 1. Provide 2 continuous halyards for each flagpole
  - 2. Halyard Flag Snaps: Provide 2 swivel snaps per halyard, chromium-plated bronze.
- F. Connecting Sleeve For Multiple Section Poles: Same material as pole, precision fit for field assembly of pole, concealed fasteners.
- G. Primer: Zinc chromate type.

**2.05 MOUNTING COMPONENTS**

- A. Foundation Tube Sleeve: AASHTO M 36, corrugated 16 gage, 0.0598 inch steel, galvanized, depth of 38-1/2 inches as indicated.
  - 1. Steel centering wedges: Minimum 1/8 inch thick wedges, welded to sleeve plate inside foundation sleeve for the purpose of centering pole.
- B. Pole Base Attachment: Flush; steel base with base cover.
  - 1. Foundation support plate: Square steel plate welded to electrical grounding spike at base of concrete foundation.
    - a. Minimum edge dimension of square plate: 6-inches.
    - b. Minimum thickness: 3/16 inch.
  - 2. Provide manufacturer's standard flash collar, finished to match flagpole.
- C. Lightning Ground Cable: Copper No. 6 AWG, soft drawn.

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**2.06 FINISHING**

- A. Metal Surfaces in Contact With Concrete: Asphaltic paint.
- B. Concealed Steel Surfaces: Galvanized to ASTM A123/A123M requirements.
- C. Aluminum: Mill finish.
- D. Finial: Gold anodized finish.

**PART 3 EXECUTION**

**3.01 EXAMINATION**

- A. Verify that concrete foundation is ready to receive work and dimensions are as indicated on shop drawings.
- B. Verify an adjacent 30 x 48 inch clear firm, stable and level surface area for clear access. CBC Ch. 11B and ADA Standards.

**3.02 PREPARATION**

- A. Coat metal sleeve surfaces below grade and surfaces in contact with dissimilar materials with asphaltic paint.

**3.03 INSTALLATION**

- A. Install flagpole , base assembly, and fittings in accordance with manufacturer's instructions.
- B. Electrically ground flagpole installation.
- C. Install foundation plate and centering wedges for flagpoles base set in concrete base and fasten.

**3.04 TOLERANCES**

- A. Maximum Variation From Plumb: 1 inch.

**3.05 ADJUSTING**

- A. Adjust operating devices so that halyard and flag function smoothly.

**END OF SECTION**

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**SECTION 26 05 00**  
**ELECTRICAL GENERAL PROVISIONS**

**PART 1 - GENERAL**

**1.01 SCOPE**

- A. Work Included: All labor, materials, appliances, tools, equipment, facilities, transportation, and services necessary for and incidental to performing all operations in connection with furnishing, delivery and installation of the work of this Section, complete, as shown on the Drawings and/or specified herein. Work includes, but is not necessarily limited to, the following:
  - 1. Examine all other Sections for work related to those other Sections and required to be included as work under this Section.
  - 2. Electrical General Provisions and Requirements for electrical work.
  - 3. Division-1; General Requirements; General Conditions.
- B. Organization of the Specifications into Divisions, Sections and Articles, and arrangement of Drawings shall not control the Contractor in dividing the Contract Work among Sub-Contractors or in establishing the extent of work to be performed by any trade.

**1.02 GENERAL SUMMARY OF ELECTRICAL WORK**

- A. The Specifications and Drawings are intended to cover a complete installation of systems. The omission of expressed reference to any item of labor or material for the proper execution of the work in accordance with present practice of the trade shall not relieve the Contractor from providing such additional labor and materials.
  - 1. The Contract Document terms "Provide", "Provided", "Providing", are each defined to mean individually and collectively: Contractor shall furnish, and Contractor shall install, and Contractor shall connect.
- B. Refer to the Drawings and Shop Drawings of other trades for additional details, which affect the proper installation of this work. Diagrams and symbols showing electrical connections are diagrammatic only. Wiring diagrams do not necessarily show the exact physical arrangement of the equipment.
- C. Before submitting a bid, the Contractor shall become familiar with all features of the Building Drawings and Site Drawings, which may affect the execution of the work. No extra payment will be allowed for failure to obtain this information.
- D. If there are omissions or conflicts between the Drawings and Specifications, clarify these points with the Owner's Representative before submitting bid and before commencing work.
- E. Provide work and material in conformance with the Manufacturer's published recommendations for respective equipment and systems.

**1.03 LOCATIONS OF EQUIPMENT**

- A. The Drawings indicate diagrammatically the desired locations or arrangements of conduit runs, outlets, equipment, etc., and are to be followed as closely as possible. Proper judgment must be exercised in executing the work to secure the best possible installation in the

available space and to overcome local difficulties due to space limitations or interference of structure conditions encountered.

- B. Where outlets are placed on a wall, locate symmetrically with respect to each other, furniture, cabinets, and other features or finishes on the wall.
- C. In the event changes in the indicated locations or arrangements are necessary, due to developed conditions in the building construction or rearrangement of furnishings or equipment, such changes shall be made without cost to the Contract, providing the change is ordered before the conduit runs, etc., and work directly connected to same is installed and no extra materials are required.
- D. Lighting fixtures in mechanical spaces are shown in their approximate location only. Do not install light outlets or fixtures until mechanical piping and ductwork is installed; then install lights in a location to provide best lighting.
- E. Coordinate and cooperate in every way with other trades to avoid interference and assure a satisfactory job.
- F. The location of the existing utilities, building, equipment and conduit shown on the Drawings is approximate. Verify exact locations and routing of existing systems by potholing all trench routes prior to digging the trench. Pothole at least 100 feet ahead of the actual trenching to allow space to alter the new conduit routing to accommodate existing conditions.
- G. Underground Detection Services Existing Utility Structures
  - 1. Detection/location services shall be provided utilizing the latest detection equipment available. Services shall be performed by a company regularly engaged in the business of existing Underground Utility Structure Detection for the past 5-years.
  - 2. Prior to excavation and prior to directional boring the following work shall be performed:
    - a. Contractor to mark excavating, trenching and directional boring locations and indicate width and depth.
    - b. Locate, by way of vertical and horizontal control dimensions, existing subgrade petroleum product pipes, process piping, conduits, sewer, water, gas, storm drain, electrical, telephone, and irrigation lines in the affected areas of Contract Construction Work.
    - c. Arrange and meet with the Owner's Representative to review existing underground conditions.
    - d. The proposed location and route of each excavation shall be continuously surveyed along the entire excavation path using Ground-Penetrating Radar (GPR) operating from the surface grade. The GPR shall detect and map existing underground metal and non-metal, both private and public utility lines, pipes, conduits, conductors, etc. The GPR shall identify the horizontal and vertical location of existing underground conditions located at a depth of up to 3-meters below finish grade and located with a vertical and horizontal accuracy within  $\pm 12$ -inches of actual condition. The Contractor shall add this information to the existing Conditions Site Plan.
  - 3. Exercise extreme caution in directional boring, excavating and trenching on this site to avoid existing underground utilities and structures, and to prevent hazard to personnel and/or damage to existing underground utilities or structures. The Contract Documents, Drawings and specifications do not include necessary components for construction safety, which is the responsibility of the Contractor.

4. Repair/replace, without additional cost to the Contract, and to the satisfaction of the Owner any existing work damaged that was identified in the record Drawings provided; Identified by the Owner's Representative; Identified by the Underground Detection Services performed; or any existing work damaged as a result of failure to comply with all the Referenced Requirements.
  5. The Contractor shall contact Common Ground Alliance (CGA) telephone #811 "Know What's Below-Call Before You Dig" and Underground Service Alert (USA), not less than 72-hours prior to excavation. Contractor shall not excavate until verification has been received from CGA and USA that existing underground utilities serving the site have been located, identified, and marked.
- H. The locations of existing underground utilities, where shown on Drawings, are shown diagrammatically and have not been independently verified by the Owner, the Owner's Representative, the Architect/Engineer. The Owner, the Owner's Representative, and the Owner's Architect/Engineer are not responsible for the location of underground utilities or structures, whether or not shown or detailed and installed under this or any other Contracts. The Contractor shall identify each existing utility line prior to excavation and mark the locations on the ground of each existing utility line.

#### **1.04 AIR CONDITIONING, HEATING, AND PLUMBING EQUIPMENT WIRING**

Provide electrical work, materials, and control components required for proper operation of the air conditioning, heating and plumbing systems as indicated on the Electrical, Mechanical, and Plumbing Contract Documents and specified herein.

#### **1.05 UTILITY POWER SERVICE**

- A. Power service and metering facilities shall conform to the Requirements of the serving Utility Power Company. Contractor shall verify service locations and Requirements prior to construction. Service information will be furnished by the serving utility company.
- B. Conform to all Requirements of the serving Utility Power Company. Location of transformer pad and or manholes and pull boxes and routing of service conduits indicated on the Drawings are approximate and shall be verified with the serving Utility Power Company prior to installation. Installation of service shall not begin until approved Drawings have been received from the serving Utility Power Company.
- C. Within 30-calendar days of receipt of notice that the Contract award has been made, the Contractor shall notify the New Business Departments of the District Office of the serving Utility Companies concerning the project Contract and shall provide information as to the total lighting, power, telephone, and signal Requirements of the Contract. The Contractor shall furnish at the same time information as to the estimated completion date of job or the date when the respective Utility Company circuits, will be ready for installation, energizing and activation of the respective services.
- D. In addition to the Requirements of the serving Utility Power Company, all power service conduits for Utility Power Company circuits, shall be completely surround and encase in concrete on all sides, top and bottom. The concrete shall be red mix color and extend a minimum of 3-inches past the conduit on all sides on the conduits.
- E. Contractor shall submit Electrical Utility metering and electrical service entrance equipment Shop Drawings to the Utility Power Company supplying the project for review and approval by

the serving Utility Power Company. The submittal and acceptance by the Utility Power Company shall occur prior to submitting of Shop Drawings to the Owner's Representative or A/E for review. Copies of the serving Electrical Utility approval of the service entrance equipment shall be included in the Shop Drawings submittals to the Owner's Representative and A/E.

#### **1.06 QUALITY ASSURANCE**

- A. Work and materials shall be in full accordance with the latest Recommendations, Rules and Regulations as follows. The following publications shall be included in the Contract Documents Requirements. If a conflict occurs between the following publications and any other part of the Contract Documents, the Requirements describing the more restrictive provisions shall become the applicable Contract definition:
1. California Code of Regulations Title 24.
  2. California Part 3 "California Electrical Code" CEC, Title 24 and Title 8 "Division of Industrial Safety".
  3. California Building Code – CBC.
  4. California Fire Code – CFC
  5. The National Electrical Code – NEC/NFPA 70.
  6. The California Building Code – CBC.
  7. National Fire Protection Agency – NFPA.
  8. National Fire Alarm Code – NFAC/NFPA 72.
  9. Underwriter's Laboratory – UL.
  10. Other applicable State and Local Government Agencies Laws and Regulations.
  11. Electrical Installation Standards National Electrical Contractors Association (NECA) and National Electrical Installation Standards (NEIS):
    - a. NECA/NEIS-1: Standard of Practices for Good Workmanship in Electrical Contracting
    - b. NECA/NEIS-90: Recommended Practices for Commissioning Building Electrical Systems
    - c. NECA/NEIS-101: Standard for installing Steel Conduit (Rigid, IMC, etc.)
    - d. NECA/NEIS-111: Recommended Practice installing Nonmetallic Raceways
    - e. NECA/NEIS-230: Standards for Selecting, installing and Maintaining Electric Motors and Motor Controllers
    - f. NECA/FOA-301: Standards for installing and Testing Fiber Optic Cables
    - g. NECA/NEIS-305: Standard for Fire Alarm System Job Practice
    - h. NECA/NEIS–331: Standards for installing Building and Service Entrance Grounding
    - i. NECA/NEIS-407: Recommended Practice for installing Panelboards
    - j. NECA/NEIS-409: Recommended Practice for installing and Maintaining Dry-Type Transformers
    - k. NEIS/NECA and IESNA-500: Recommended Practice for installing Indoor Commercial Lighting Systems

- l. NEIS/NECA and IESNA-501: Recommended Practice for installing Exterior Lighting Systems
  - m. NECA/BICSI-568: Standards for installing Commercial Building Telecommunications System
  - n. NECA/NEMA-605: Recommended Practice for installing Underground Nonmetallic Utility Duct
  - o. NECA/BICSI-607: Standards for Telecommunications Bonding and Grounding, Planning, and installation Methods
  - p. NECA/NEIS-700: Installing Overcurrent Protection to Achieve Selective Coordination
- B. All material and equipment shall be new and shall be delivered to the site in unbroken packages. All material and equipment shall be listed and labeled by Underwriters Laboratories or other recognized Testing Laboratories, where such listings are available. Comply with all Installation Requirements and restrictions pertaining to such listings.
  - C. Work and material shown on the Drawings and in the Specifications are new and included in the Contract unless specifically indicated as existing or N.I.C. (not in Contract).
  - D. Keep a copy of all applicable Codes and Standards available at the job site at all times for reference while performing work under this Contract. Nothing in Plans or Specifications shall be construed to permit work not conforming to the most stringent of Building Codes.
  - E. Where a conflict or variation occurs between applicable Codes, Standards and/or the Contract Documents, the provisions of the most restrictive provision shall become the Requirement of the Contract Documents.

#### **1.07 SUBMITTALS (ADDITIONAL REQUIREMENTS)**

##### **A. General**

1. Review of Contractor's submittals is for general conformance with the design concept of the Project and general compliance with the information given in the Contract Documents. Any action shown is subject to the Requirements of the Plans and Specifications. Contractor is responsible for quantities; dimensions which shall be confirmed and correlated at the job site; fabrication processes and techniques of construction; coordination of work with that of all other trades and satisfactory performance of their work.
2. The Contractor shall review each submittal in detail for compliance with the Requirements of the Contract Documents prior to submittal. The Contractor shall "Ink Stamp" and sign each item of the submittal with a statement "CERTIFYING THE SUBMITTAL HAS BEEN REVIEWED BY THE CONTRACTOR AND COMPLIES WITH ALL THE REQUIREMENTS OF THE CONTRACT DOCUMENTS". The Contractor shall clearly and specifically identify each individual proposed substitution, substitution of equal or proposed deviation from the Requirements of the Contract Documents with a statement "THIS ITEM IS A SUBSTITUTION".

The burden of research, preparation of calculations and the furnishing of adequate and complete Shop Drawings information to demonstrate the suitability of Contractor's proposed substitutions and suitability of proposed deviations from the Contract Documents is the responsibility of the Contractor.

3. Departure from the submittal procedure will result in resubmittals and delays. Failure of the Contractor to comply with the Submittal Requirements shall render void any acceptance or any approval of the proposed variation. The Contractor shall then be required to provide the equipment or method without variation from the Contract Documents and without additional cost to the Contract.
4. The Contractor at no additional cost or delays to the Contract shall remove any work, material and correct any deficiencies resulting from deviations from the Requirements of the Contract Documents not approved in advance by the Owner prior to commencement of work.
5. Shop Drawings submitted by the Contractor, which are not specifically required for submittal by the Contract Documents, or Contractor Shop Drawings previously reviewed and resubmitted without a written resubmittal request to the Contractor, will not be reviewed, considered, or commented on. The respective Shop Drawing submittal/resubmittal will not be returned to the Contractor and will be destroyed without comment or response to the Contractor. The respective submittal shall be considered null and void as being not in compliance with the Requirements of the Contract Documents.
6. Refer to Division-1 for Additional Requirements.

**B. Material Lists and Shop Drawings**

1. Submit material list and Equipment Manufacturers for review within 35 days of Award of Contract. Give name of Manufacturer and where applicable, brand name, type and/or catalog number of each item. Listing of more than one Manufacturer for any one item of equipment, or listing items "as specified", without both make and model or type designation, is not acceptable. Shop Drawings shall not be submitted before review completion of Manufacturers list. The right is reserved to require submission of samples of any material whether or not particularly mentioned herein.
2. After completion of review of the Material and Equipment Manufacturers list, submit Shop Drawings for review. Shop Drawings shall be submitted in completed bound groups of materials (i.e., all lighting fixtures or all switchgear, etc.). The Contractor shall verify dimensions of equipment and be satisfied as to fit and that they comply with all Code Requirements relating to clear working space about electrical equipment prior to submitting Shop Drawings for review. Submittals, which are intended to be reviewed as substitution or departure from the Contract Documents, must be specifically noted as such. The Requirements of the Contract Documents shall prevail regardless of the acceptance of the submittal.
3. Each Shop Drawing item shall be identified with the Specification Section and paragraph numbers, lighting fixture types and Drawing sheet numbers; the specific Shop Drawing is intended to represent. Shop Drawings 11-inches by 17-inches or smaller in size shall be bound in 3-ring binders. Divider tabs shall be provided in the 3-ring binders identifying and separating each separate Shop Drawing submittal item. Shop Drawings larger than 11-inches by 17-inches, Shop Drawing pages/sheets submittals shall be sequentially numbered with unique alphanumeric numbering system to facilitate correspondence referencing identification of individual sheets.
4. The time required to review and comment on the Contractor's submittals will not be less than 14 calendar days, or more than 21 calendar days after receipt of the submittals at

the office of FBA Engineering. The review of Contractor submittals and return to Contractor of submittals with review comments will occur in a timely manner conditioned upon the Contractor complying with all the following:

- a. The submittals contain complete and accurate information, complying with the Requirements of the Contract Documents.
  - b. Contractor's submittals are each marked with Contractor's approval "stamp", and with Contractor signatures.
  - c. The submittals are received in accordance with a written, Shop Drawing submittal schedule for each submittal. The Contractor distributes the schedule not less than 35-calendar days in advance of the Shop Drawing Submittals, and the schedule identifies the calendar dates, the Contractor will deliver the various submittals for review.
5. Shop Drawings shall include the Manufacturers projected days for shipment from the factory of completed equipment, after the Contractor releases the equipment for production. It shall be the responsibility of the Contractor to ensure that all material and equipment is ordered in time to provide an orderly progression of the work. The Contractor shall notify the Owner's Representative of any changes in delivery, which would affect the project completion date.
6. Submittal Identification
- a. Refer to and coordinate with Division 1 Section of the Specifications.
  - b. Each submittal shall be dated: with submittal transmission date; sequentially numbered and titled with submittal contents identification and applicable Specification/Drawing references (i.e., Submittal dated: 5/12/19 Submittal #4 Contents: Branch circuit panelboards Sheet #E5.1 and Transformers Specification Section 26 05 01 Paragraph 2.11, etc.).
  - c. Each resubmittal shall be dated: with original submittal date and resubmittal transmission dates; sequentially numbered with original submittal number and sequential resubmittal revision number and titled with submittal contents identification and applicable Specifications/Drawing references (i.e., Original Submittal Date: 5/12/19 Resubmittal Date: 10/9/19 Original Submittal #4 Resubmittal Revision R2 Contents: Transformer Resubmittal Specification Section 26 05 01 Paragraph 2.11, etc.).
  - d. Contractor shall provide a written response narrative with each resubmittal. Describe each response-action, resubmittal addition, change and deletion. Correspond to each response to A/E specific review comment.
- C. The Contractor shall be responsible for incidental, direct and indirect costs resulting from the Contractor's substitution of; or changes to; the specified Contract Materials and Work.
- D. The Contractor shall pay, upon request by the Owner's Representative, a fee for the Owner's Representative time involved in the review of substitution submittals and design changes resulting from the Contractor's requested substitutions. The fee shall be not less than \$125.00 per hour but, in no case, less than stated in Division-1, whichever is greater.

E. Maintenance and Operating Manuals

1. The Contractor shall furnish three copies of type-written maintenance and operating manuals for all electrical equipment, fire alarm equipment, sound system equipment, etc., to the Owner.
2. Instruct Owner's personnel in correct operation of all equipment at completion of project. Provide the quantity and duration of instruction class as specified; but in no case less than two 4-hour duration separate instruction classes for each individual equipment group furnished as part of the Contract. Instruction classes shall be presented by Manufacturer's Authorized Field Service Engineer at the project site. Instruction class size shall be at the Owner's discretion, not less than one or more than fifteen students shall attend each instruction session. Submit fifteen written outline copies of the proposed instruction class curriculum, 14-days prior to the class-scheduled dates.
  - a. Each of the individual instruction classes shall be recorded to provide a permanent instruction reference for the Owner. The recordings shall be made using audio and color full motion High-Definition (HD) video with audio-video digital recording, battery operated cameras, for each instruction session.
  - b. Provide each instruction presenter with a personal portable "wireless" single channel FM microphone system, battery operated, transmit the audio voice to the camera audio input and ensure voice and video are synchronized. Provide a matching receiver(s) for each video camera.
  - c. Provide a minimum of four standard High-Definition (HD), audio-video DVD-ROM recordings of each instruction session. Identify and label each DVD-ROM with date and instruction session name.
3. Maintenance and operating manuals shall be bound in three ring, hard-cover, plastic binders with table of contents. Manuals shall be delivered to the Owner's Representative, with an itemized receipt.

F. Portable or Detachable Parts: The Contractor shall retain in his possession and shall be responsible for all portable and detachable parts or portions of the installation such as fuses, keys, locks, adapters, locking clips, and inserts until final completion of Contract Work. These parts shall then be delivered to the Owner's Representative with an itemized receipt.

G. Record Drawings (Additional Requirements)

1. Provide and maintain in good order a complete set of electrical Contract "Record" prints. Changes to the Contract to be clearly recorded on this set of prints. At the end of the project, transfer all changes to one set of transparencies to be delivered unfolded to the Owner's Representative.
2. The actual location and elevation of all buried lines, boxes, monuments, vaults, stub-outs and other provisions for future connections shall be referenced to the building lines or other clearly established base lines and to approved benchmarks. If any necessary dimensions are omitted from the Record Drawings, the Contractor shall, at the Contractor's own expense, do all excavation required to expose the buried work and to establish the correct locations.
3. The Contractor shall keep the "Record" prints up to date and current with all work performed.



4. Refer to Division-1 for Additional Requirements.

#### **1.08 CLEANING EQUIPMENT, MATERIALS, PREMISES**

All parts of the equipment shall be thoroughly cleaned of dirt, rust, cement, plaster, etc., and all cracks and corners scraped out clean. Surfaces to be painted shall be carefully cleaned of grease and oil spots and left smooth, clean and in proper condition to receive paint finish.

#### **1.09 JOB CONDITIONS - PROTECTION**

Protect all work, materials and equipment from damage from any cause whatever and provide adequate and proper storage facilities during the progress of the work. Provide for the safety and good condition of all the work until final acceptance of the work by the Owner and replace all damaged or defective work, materials and equipment before requesting final acceptance.

#### **1.10 EXCAVATION, CUTTING, BACKFILL AND PATCHING ADDITIONAL REQUIREMENTS**

##### **A. General**

1. Perform excavation, cutting, backfill, core drilling, directional boring, and patching of the construction work required for the proper installation of the electrical work.
2. Patching shall be of the same material, thickness, workmanship, and finish as existing and accurately match-surrounding work to the satisfaction of the Owner's Representative.
3. Prior to penetrating, coring, drilling or cutting existing building elements, concrete and/or masonry, provide imaging equipment examinations of each specific location. The imaging process shall identify existing internal embedded components and locations, including structural elements/anchors, conduit, and piping that are present. Do not penetrate or damage the existing internal embedded elements. Imaging shall employ one of the following, with GPR methodology preferred:
  - a. Non-invasive imaging employing high frequency, Ground Penetrating Radar (GPR), single side echo reflection technology.
  - b. Non-invasive imaging employing x-ray radiography, through-and-through imaging technology.

##### **B. Excavation Temporary Cover**

1. Excavations for Contract Work occurring in streets, vehicular drive areas, parking lots, sidewalks; any paved surface; or any area accessible to the public; provide temporary steel plating and shoring support for the plates, to completely cover the excavations under one or more of the following conditions:
  - a. Excavation shall not remain "open" for more than 4-calendar days; provide temporary plating.
  - b. Excavation shall not be "open" over weekends (Saturday, Sunday) or Holidays; provide temporary plating.
2. The temporary plating shall be a minimum of 0.75-inch thickness steel, but in no case shall the thickness be less than required to support AASHO-H20 traffic loading.
3. Provide a minimum of two 100% open lane(s) (12 feet lane width) for vehicular traffic at all times during construction, for vehicle access to all areas.

## 1.11 IDENTIFICATION

### A. Equipment Nameplates

1. Panelboards, terminal cabinets, circuit breakers, disconnect switches, starters, relays, time switches, contactors, push-button control stations, and other apparatus used for the operation or control of feeders, circuits, appliances, or equipment shall be properly identified by means of descriptive nameplates or tags permanently attached to the apparatus and wiring.
2. Provide nameplate label on electrical service entrance equipment describing available short circuit information calculated by the Contractor, including:
  - a. Calculation date, month-day-year.
  - b. Calculate maximum available short circuit fault current.
  - c. Description of parameters and changes affecting the Requirements for recalculation of the fault current information.
3. Electrical equipment including switchgear, switchboards, electric panels and control panels, motor control centers, combination motor starters, transformers, disconnects, etc., shall each be labeled by the Manufacturer with "Electric-Arc-Flash" warning signs. The signs shall explain a hazard to personnel may exist if the equipment is worked on while energized or operated by personnel while energized. The sign shall instruct personnel to wear the correct protective equipment/clothing (PPE) when working "Live" or operating "Live" electrical equipment and circuits.
4. Nameplates shall be engraved laminated phenolic, rated UV-resistant for wet locations and outdoor locations, fade resistant. Shop Drawings with dimensions and format shall be submitted before installation. Attachment to equipment shall be with escutcheon pins, rivets, self-tapping screws or machine screws. Self-adhering or adhesive backed nameplates shall not be used.
5. Provide black-on-white laminated plastic nameplates engraved in minimum ¼-inch high letters to correspond with the designations on the Drawings. Provide other or additional information on nameplates where indicated.

### B. Plates: All cover and device plates shall be furnished with engraved or etched designations under any one of the following conditions (minimum character size not less than 0.188 inch. Engraving shall indicate circuits and equipment controlled or connected):

1. More than two devices under a common coverplate.
2. Lock switches.
3. Pilot switches.
4. Switches in locations from which the equipment or circuits controlled cannot be readily seen.
5. Manual motor starting switches.
6. Where so indicated on the Drawings.
7. As required on all control circuit switches, such as heater controls, motor controls, etc.
8. Receptacles other than standard 15-amp 120-volt duplex receptacles; shall indicate circuit voltage, ampere, phase and source circuit number.

9. Where outlets or switches are connected to emergency power circuit; provide panelboard and circuit number engraved on plate.
  10. Low voltage and signal system outlets.
- C. For equipment and access doors or gates to equipment containing or operating on circuits of more than 100 volts AC or DC nominal. Provide red-on-white laminated warning signs engraved in ½-inch high letters to read: "DANGER - 480 (or applicable voltage) VOLTS KEEP OUT AUTHORIZED PERSONNEL ONLY".
- D. Wire and Cable Identification
1. Provide identification on individual wire and cable including signal systems, fire alarm, electrical power systems (each individual phase, neutral and ground), empty conduit pull ropes, and controls circuit.
  2. Permanent identification shall be provided at each termination location, splice location, pullbox, junction box and equipment enclosure.
    - a. Individual wire and cable larger than #6AWG or 0.25-inch diameter, shall be provided with polypropylene identification tag holders, with yellow polypropylene tags interchangeable black alphanumeric characters, character height 0.25 inch. Attach identification tags with plastic "tie" wraps, minimum of two for each tag as manufactured by Almetek Industries- "EZTAG" Series; or TECH Products - "EVERLAST" Series.
    - b. Individual wire and cable #6AWG and smaller or smaller than 0.25-inch diameter, shall be provided with water and oil resistant, flexible, self-laminating pressure sensitive machine embossed plastic tags that wrap a minimum of 360 degrees around the wire/cable diameter. The entire tag shall then be covered with a clear flexible waterproof plastic cover wrapped a minimum of 540 degrees around the wire/cable diameter and completely covering the identification. As manufactured by: Brady Identification; or 3M; or Panduit.
    - c. Each identification tag location shall indicate the following information: circuit number, circuit phase, source termination and destination termination equipment name (or outlet number as applicable).
  3. Install permanent identification after installation/pulling of wire/cable is complete, to prevent loss or damage to the identification.
- E. Cardholders and cards shall be provided for circuit identification in panelboards. Cardholders shall consist of a metal frame retaining a clear plastic cover permanently attached to the inside of panel door. List of circuits shall be typewritten on card. Circuit description shall include name or number of circuits, area, and connected load.
- F. Junction and pull boxes shall have covers stenciled with box numbers when shown on the Drawings, or circuit numbers according to panel schedule. Data shall be lettered in a conspicuous manner with a color contrasting to finish.

### 1.12 TESTING

- A. The Contractor shall obtain an independent testing laboratory, provide all instrumentation, and perform tests on the electrical system and equipment as hereinafter described and further directed by the Owner's Representative. The test shall be performed after the completion of all electrical systems included in the Contract Scope of Work. All tests shall be

recorded and documented and submitted to the Owner's Representative for review, six copies.

1. All equipment and Personnel required for set-up and testing shall be provided by the Contractor.
  2. Return all equipment and circuits to corrected operational condition when test-and-pass is successfully completed.
- B. Test for Phase to Ground and Neutral Condition:
1. Open main service disconnects.
  2. Isolate the system neutral from ground by removing the neutral disconnects link located in the service switchboard.
  3. Close all submain disconnects.
  4. Close all branch feeder circuit breakers.
  5. Turn all switches to "on" position, unplug all portable equipment from outlet receptacles.
  6. Measure the resistance of each non-energized phase-to-phase, phase-to-ground and phase-to-neutral. A properly calibrated "megger" type test instrument shall be used. The test voltage shall be a nominal 500 volts.
  7. Record all readings after 1-minute duration and document into a complete report.
  8. Isolating Grounds and Phases: In the event that low resistance phase and/or ground neutral connections are found in the system, they shall be isolated and located by testing each circuit individually as outlined above. Make proper corrections to restore the resistance values to an acceptable value.
- C. Method of obtaining ground resistance shall be in accordance with the latest edition of the James G. Biddle (Plymouth Meeting, Pennsylvania) manual published on this subject.
1. Perform "fall-of-potential" three-point tests on the main grounding electrode of system per IEEE Standard No. 81, Section 8.2.1.5. when suitable locations for test rods are not available, a low resistance dead earth or reference ground shall be utilized.
  2. Perform the two-point method test per IEEE Standard No. 81, Section 8.2.1.1, to determine the ground resistance between the main grounding system and all major electrical equipment frames, system neutral, and/or derived neutral points.
- D. The testing, calibrating and setting of all ground and ground fault equipment, circuit breakers, circuit device protection relays, and meters adjustable settings shall be by an independent testing laboratory. Set as recommended by the respective Manufacturer and coordination and arc-flash studies, to be coordinated with other protection devices within the electrical design. Bound and tabulated copies of the test and settings shall be sent to the Owner's Representative.
- E. Ampere and Voltage Measurements
1. Measure and record ampere and line voltage measurements under full load on all panel feeders, switchboard, and switchgear feeders, motor control centers and motor circuits provided in the Contract. Record measurements at the equipment tested and submit to the Owner's Representative for review.

2. Ampere and voltage measurements shall be:
    - a. Phase A-B, A-C and B-C.
    - b. Phase A-Neutral, B-Neutral and C-Neutral.
  3. The ampere and voltage readings shall be not less than 20-minutes duration for each test. Record and submit the measured minimum, maximum and 20-minute average for each ampere and voltage value and test location. Voltage and ampere measurements shall occur at the connected load end of each respective feeder, not at the source of supply end of each feeder.
  4. Test equipment shall be accurate within plus or minus 1%.
  5. Branch circuit devices 40 amp or less and motor loads ten horsepower or smaller are excluded from ampere and voltage testing Requirement.
  6. If, in the opinion of the Owner's Representative, the voltages and regulations are not met within acceptable limits, make arrangements with the serving utility for proper electrical service. Retest feeder line voltages, and submit to Owner's Representative for review, after the Utility Company has completed corrective actions. Reset "voltage taps" on transformers provided or modified as part of the Contract Work, to adjust line voltages to within acceptable values, as directed by the Owner's Representative.
- F. State of California Title-24 Testing
1. Mandatory California Title-24 Building Energy Code, Part-6 acceptance testing. Shall ensure those respective systems properly installed and functioning, all in conformance with Title-24.
  2. Refer to Process Guide to Acceptance Testing, published by the State of California, complete the testing and documentation.
  3. Perform California Title-24 Testing and Certification. Submit the completed Certification of acceptance documentation to the AHJ.
- G. The Contractor shall complete the following work before any electrical equipment is energized.
1. All equipment shall be permanently anchored.
  2. All bus connections and conductor/wire connections shall be tightened per Manufacturer's instructions and witnessed by the Owner's Representative.
  3. All ground connections shall be completed and identified. Perform and successfully complete all required megger and ground resistance tests.
  4. Low voltage/signal circuits, line voltage branch circuits and feeders shall be connected, tested and identified.
  5. The interiors of all electrical enclosures including busbars and wiring terminals shall be cleaned of all loose material and debris, paint, plaster, cleaners or other abrasives over spray removed and equipment vacuumed clean. The Owner's Representative shall observe all interiors before covers are installed.
  6. All wall, ceiling, and floor work and painting shall be completed within areas containing electrical equipment prior to installation of equipment. The equipment, indoor rooms and spaces shall be weather-tight, and weather protected from environmental incursions.

7. All doors to line voltage and low voltage/signal electrical equipment rooms shall be provided with locks to restrict access to energized equipment.
8. Electrical spaces and rooms shall not be used as storage rooms after power is energized.
9. Outdoor electrical equipment enclosures and housing shall be weather protected.
10. The electrical system time current coordination and Arc-Flash studies shall be complete for circuit breakers, ground relays set, and circuit relay sets, fuses; set-up, tested and calibrated accordingly. Protection settings for all devices shall be completed and tested.

### **1.13 COMMISSIONING - CX**

#### **A. General**

1. The Commissioning shall verify the electrical systems for the term of the Contract, by observation; and by calibration; and by testing. The Commissioning shall ensure the electrical systems perform interactively and correctly, according to the Contract and Operational Requirements.
2. Commissioning shall provide startup, testing and documented confirmation of the Contract constructed systems, materials and work, functions in compliance within the criteria set forth in the Contract Documents to the satisfaction of the Owner's needs. The Commissioning Scope shall encompass each system identified as requiring "Commissioning" by the Contract Documents, including but not limited to:
  - a. Electrical circuits' protection, short-circuit, overcurrent, ground fault devices and electrical grounding.
  - b. Electrical circuits monitoring and metering.
  - c. Light fixtures, lamps and ballasts.
  - d. Lighting control devices, equipment and lighting control systems.
  - e. Standby and emergency electric power supply equipment and systems.
  - f. Motor Control Equipment.
  - g. Fire alarm, equipment, devices and fire alarm systems.
  - h. Communications, low voltage and signal devices and systems.
  - i. Additional systems described in the Contract Documents.
3. Commissioning process shall review all the Shop Drawing submittals, including:
  - a. Controls, Operation and Maintenance Requirements.
  - b. Facility performance testing compliance.
  - c. Project Contract Requirements compliance.
  - d. Compliance with basis for design and operational descriptions provided in the Contract.
4. Commissioning shall be the process of ensuring all the systems described in the Contract Documents comply with the Contract Document design; all systems are installed properly; all systems are functional, tested and capable of being operated and maintained to perform within the Contract Requirements and design intent.

5. Functional setup, recalibration, correcting deficiencies, retesting and the associated costs, for system(s) that fail Commissioning, shall be the responsibility of the Contractor. The Contractor shall include all Commissioning costs in the Contract Scope of Work.
6. Complete all Commissioning functions prior to the occupancy of the facility by the Owner, unless directed otherwise by the Owner's Representative.
7. Submit six copies of Commissioning Documentation to Owner's Representative.
8. Commissioning, unless specifically indicated otherwise, shall be performed by Factory-Trained Technician(s) Authorized and Certified by the Manufacturers of the respective equipment/systems. Where specifically indicated, Commissioning shall be performed by Independent Test Lab.

**B. Commissioning Procedures**

1. Prepare a Commissioning Matrix identifying components and systems included in the Commissioning Scope; the status; actions completed and actions to be completed.
2. Verify Contractor compliance with Contract Document Requirements Manufacturer's recommendations and approved Shop Drawings.
3. Perform startup, functional tests, reports and document results.
4. Evaluate and document the setup parameters, software, operating condition and performance of each system at the time of functional test completion. Document and record each performance parameter and condition, in the Commissioning Report.
5. Schedule testing and prepare descriptions of testing.
6. Describe measures taken to correct deficiencies.
7. Verify that instructions to Owner's Representatives, operations, and maintenance manuals comply with Contract Documents.
8. Prepare warranty matrix identifying the start dates, expiration dates, routine preventative maintenance dates and the Owner's responsibility for performing preventative maintenance and keeping logs for each maintenance function and warranty claims.
9. Confirm completion of all punch list items that have been acceptably accomplished and a list of what has not been acceptably completed.
10. Describe uncorrected deficiencies accepted by the Owner.

**C. Commissioning Phasing**

The Commissioning Phases of work shall include the following activities:

1. SDQ – Shop Drawing Qualification shall verify complete and correct Shop Drawings have been submitted.
2. IQ – The Installation Qualification of Contract work shall verify systems are correctly and properly installed.
3. OQ – Verify systems interfaces and software are correctly and properly operational.
4. ITM – Verify the Contract Inspection, Testing and procedures for Maintenance are complete.
5. PQ – Performance Qualification completes the functional performance testing to validate each building system.

#### **1.14 TEMPORARY ELECTRICAL POWER**

- A. Provide temporary electrical power if work requiring power outages cannot be completed in time permitted and approved by the Owner's Representative.
- B. Temporary electrical power shall be a standby diesel engine generator. Voltage, frequency, regulation, etc. shall be equal to that of normal utility source. Exhaust system shall have a critical silencing muffler. Generator voltage shall match the existing secondary voltage required at the site. The Contractor shall furnish all necessary cables, switches, etc., to make all required connections to existing panels, feeders, etc. Generator shall be sized to adequately carry the demand load. If record of demand load is not available, size generator to match corresponding transformer, maximum capacity circuit as directed by the Owner's Representative.
- C. After completion of required usage of the temporary generators, prior to completion of the project, the Contractor shall remove the generators. All temporary cables, switches, etc. shall be removed and all permanent equipment left in satisfactory condition.
- D. Each generator shall be housed in security type sound attenuated housing to prevent access by unauthorized Personnel. Temporary power cables, connections, etc. shall be protected from unauthorized personnel.
- E. The Contractor shall be responsible for complete operation of the generator including Personnel, fuel supplies, proper safety precautions, etc. Generator shall not be left unattended while in operation.
- F. The Contractor shall provide temporary construction lighting and power as required in areas where work is being performed. Temporary power arrangements, outages, installation, work schedules, etc., shall be submitted in writing 3-weeks prior to requested outage date, and approved by the Owner's Representative prior to start of work.

#### **1.15 ASBESTOS, POLYCHLORINATED BIPHENYL (PCB) OR HAZARDOUS WASTE:**

It is understood and agreed that this Contract does not contemplate the handling of asbestos, PCB or any hazardous waste material. If asbestos, PCB or any hazardous waste material is encountered, notify the Owner's Representative immediately. Do not disturb, handle or attempt to remove.

#### **1.16 TIME/CURRENT COORDINATION, SHORT CIRCUIT, ARC-FLASH AND SERIES RATED EQUIPMENT**

- A. Series Rated Equipment.
  - 1. Circuit Protective Devices identified as "Series Rated" or "Current Limiting" (i.e., CLCB - current limiting circuit breaker; CLF - current limiting fuse, etc.) shall be Series Rated and Tested (UL 489 and CSA5) by the Manufacturer with all equipment and circuit protective devices installed downstream of the identified series rated or current limiting device.
  - 2. Provide nameplates on all equipment located downstream, including the CLCB and CLF devices, to comply with CEC/NEC paragraphs 110-22 and 240-83 "CAUTION SERIES RATED SYSTEM - NEW DEVICE INSTALLATIONS AND REPLACEMENTS SHALL BE THE SAME MANUFACTURER AND MODELS".
- B. Short Circuit, Coordination and Arc-Flash
  - 1. Perform engineering analysis and submit engineered settings for each equipment location, fuse and circuit breaker device, showing the correct time and current settings



to provide selective coordination within the limits of the specified equipment. Shall comply with the latest application Standards of IEEE and ANSI. Provide electrical system short circuit worst case bolted-fault analysis, both 3-phase line-to-line and 1-phase line-to-ground calculations as part of the coordination analysis recommendations. Provide Electric Arc-Flash calculations as part of the coordination analysis recommendations.

2. The information shall be submitted in both tabular form and on time current log-log graph paper, with an engineering narrative. Written narrative describing data, assumptions, analysis of results and prioritized recommendations, six copies.
3. The goal is to minimize an unexpected but necessary electrical system outage and personnel exposure to the smallest extent possible within the fault occurrence location, using the specified Contract Equipment. Shall comply with, but not limited to:
  - a. IEEE-242, Recommended Practices for Protection and Coordination of Industrial and Commercial Distribution.
  - b. IEEE-399, Recommended Practices for Industrial and Commercial Power System Analysis.
  - c. IEEE-1584, Guide to Performing Arc-Flash Hazard Study.
  - d. CEC
4. Provide permanent warning labels on each equipment location. The labels shall describe Arc-Flash, Short-Circuit and Time/Current Coordination, including safety precautions and protective clothing. Also described actions to be taken if any circuit changes or equipment modifications occur.
5. Shall be submitted with the Shop Drawing submittals for the respective equipment.

#### **1.17 INDEPENDENT TESTING LABORATORY**

- A. Testing Laboratories Definition
  1. The Testing Laboratory shall meet Federal OSHA Criteria for accreditation of Nationally Recognized Testing Laboratories (NRTL) Title 29 Part 1907 and 29 CFR-1910.
  2. Membership in the National Electrical Testing Association (NETA) shall also constitute acceptance of meeting said criteria, for testing of electrical systems.

#### **1.18 SPARE FUSES**

Provide three spare fuses for each size and type to match the installed fuses where the fuses are provided as part of the Contract. Provide spare fuse holders on inside door of each respective fuse compartment. Provide engraved nameplate on front of fuse access door indicating fuse type / catalog number ampere rating and Manufacturer of fuse.

#### **1.19 EQUIPMENT SEISMIC AND WIND LOAD REQUIREMENTS (ADDITIONAL REQUIREMENTS)**

- A. Seismic Performance and Seismic Restraint Requirements
  1. Refer to Structural, Architectural, and Soils Report Contract Documents for Additional Requirements.

B. General

1. Equipment supports and anchorages provided as part of the Contract shall be designed, constructed and installed in accordance with the Earthquake Regulations of the California Building Code (CBC), International Building Code (IBC).
2. Provide equipment anchorage details, coordinated with the equipment mounting provision, prepared, signed and "stamped" with PE Registration in good standing, by a Civil or Structural Engineer licensed as a Professional Engineer (PE) in the State of California.
3. Mounting recommendations shall be provided by the Manufacturer based upon approved shake-table tests used to verify the seismic design of that type of equipment.
4. The Equipment Manufacturer shall document the details necessary for proper wind-load and seismic mounting, anchorage, and bracing of the equipment for floor, ceiling, and wall/back installation location.
5. Seismic performance shall be based on actual installation location of the respective equipment in the building and height above or below grade.
6. The Seismic Requirements are typical for each equipment item exceeding 19-pounds, including but not limited to the following:
  - a. Switchgear, switchboards, and motor control equipment
  - b. Transformers
  - c. Equipment racks and terminal cabinets
  - d. Panels
  - e. Conduits with floor, ceiling or wall attachment support and conduits with suspension attachments.
  - f. Busway, wire way and cable tray
  - g. Uninterruptable Power Supplies (UPS)
  - h. Generators and related equipment
  - i. Lighting equipment
  - j. Fire alarm equipment

C. Certification

1. Electrical Equipment Manufacturers and Contractor shall provide Special Seismic Certification (SCC) for each specific equipment configuration with shake-table verification, all furnished as part of the Contract Documents Requirements. The SCC shall include the specific installation location characteristics of the respective equipment including as follows:
  - a. Ground or floor attachment
  - b. Wall attachment
  - c. Ceiling attachment
  - d. Roof attachment
2. Wind Loading Electrical equipment and anchorages shall withstand the wind-load imposed at the installation location. Wind Loading Withstand Requirements shall apply to all electrical equipment installed in outdoor locations and to all electrical equipment

exposed to the weather. The equipment shall be tested and certified by the Manufacturer and Contractor. The wind-load withstand qualification of the equipment and anchorages shall be verified by the following methods:

- a. Aerodynamic wind tunnel test method.
  - b. Analytical calculation method, for oversized equipment too large for wind tunnel test method.
3. The wind-load withstands rating, and the SCC shall comply with the Requirements of the Authority Having Jurisdiction (AHJ), and include the latest revisions, but not limited to the following:
- a. American Society of Civil Engineers; ASCE-7
  - b. CBC, including but not limited to Sections 1702, 1708, 1709, 1708A and 1709A.
  - c. California Office of Statewide Health Planning and Development OSHPD; OPA-Preapproval of Anchorage; Code Application Notice CAN 2-1708A.5 and OSP-Special Seismic Certification Approval
  - d. US Department of Homeland Security; FEMA- (installing seismic restraints for electrical equipment).
- D. Wall Mounted Electrical Equipment
1. Surface Mounted Equipment
    - a. Provide multiple horizontal sections of metal “C” channels for support and attaching wall mounted equipment to walls. Channels shall provide “turned lips” at longitudinal edges to hold “lock-in” fasteners and shall comply with ANSI-1008 and ASTM-A569 latest revision. The channels shall be steel hot dip zinc galvanized. As manufactured by Unistrut or Kindorf.
    - b. The “C” channels shall be positioned horizontally within 3-inches of the top and bottom of each equipment section cabinet and located behind each equipment vertical section. Provide additional intermediate “C” channels at not less than 36-inches on center between the “top” and “bottom” “C” channel positions, located behind each equipment vertical section.
    - c. The “C” channels shall be of sufficient length to provide connection to not less than two vertical structural wall framing elements separated by not less than 16-inches; but in no case shall the “C” channel length be less than the width of the respective equipment section.
    - d. Attach the “C” channels to the wall structural elements after the wall, finish surface, installation (including painting) is complete.
    - e. Attach the “C” channels with fasteners to the building wall framing structural elements as follows: welded to steel framing; bolted to wood framing; cast in place concrete inserts for masonry and concrete construction; drilled “afterset” expansion anchors for existing masonry and concrete construction.
    - f. Attach the equipment to the “C” channels with threaded and bolted fasteners to “pre-locate” and lock into the channel “turned lips” and channel walls.
  2. Flush mount equipment
    - a. Provide anchor attachment of equipment into adjacent wall structural elements.

E. Housekeeping Pad

1. Provide cast-in-place, steel re-enforced concrete raised “housekeeping” pads under all floor standing electrical equipment (except data network equipment racks).
2. Pad sizes
  - a. The raised housekeeping pad height shall extend 4-inches above the surrounding finished floor elevation for interior building locations.
  - b. The pad shall extend 8-inches below finish grade plus 4-inches above finish grade for outdoor equipment location on grade.
  - c. The pads shall extend 7-inches past the “footprint” edge of the respective floor standing equipment.
3. Anchor equipment to pads. Anchor pads to the building structural floor. Equipment pad, equipment reinforcing, and equipment anchoring shall comply with Seismic Earthquake Requirements and Wind Load Requirements.
4. Unless shown otherwise on Drawings. The equipment housekeeping pad steel re-enforcing shall consist of two layers of number 4-Size steel-rebar laid horizontally and uniformly spaced 6-inches on center. Position rebar in two directions (90-degrees opposed) and centered inside the concrete housekeeping pad. Horizontal rebar shall extend to within 3-inches of the edge of the concrete pad in all directions. Metal wire “tie-wrap” shall be provided at each rebar crossing.
5. Equipment anchor attachments shall extend through the housekeeping pad and into the structural concrete below the pad a minimum of not less than 2-inches.

**1.20 ELECTRICAL WORK CLOSEOUT**

- A. Prepare the following items and submit to the Owner’s Representative before final acceptance.
  1. Two copies of all test results as required under this Section.
  2. Two copies of local and/or State Code Enforcing Authority’s Final Inspection Certificates.
  3. Copies of Record Drawings as required under the General Conditions, pertinent Division One Sections and Electrical General Provisions.
  4. Two copies of all receipts transferring portable or detachable parts to the Owner’s Representative when requested.
  5. Notify the Owner’s Representative in writing when installation is complete and that a Final Inspection of this work can be performed. In the event any defect or deficiencies are found during this final inspection they shall be corrected to the satisfaction of the Owner’s Representative before final acceptance can be issued.
  6. List of spare fuses and locations identified by equipment name and building designation.
  7. Prior to energizing, retighten to the proper torque, each circuit conductor lug landing, each bus bar (phases, neutral and ground) and circuit protection device threaded connections in all switchboards, switchgear, motor control centers, transformers, busways, disconnect switches, motor starters, motor terminals and panelboards, after the equipment is installed/connected and prior to energizing the equipment. The torque values shall comply with Manufacturer's Recommendations.

B. Electrical Power Single Line Diagrams – SLD

1. Provide single line diagrams showing the Contract Document work complete electrical power system (normal and emergency). SLD shall show inter-connection circuits, electrical equipment, panels, and circuit protection devices, nominal 50% (½-size) approximately 18-inches by 24-inches. Show installed voltages and electrical capacity sizes.
2. SLD shall be mounted in metal (picture frame) rigid enclosure frame with rigid-backing (backer-board) and clear/transparent front, for hanging on wall. Provide clear transparent cover over SLD inside the frame.
3. Provide a wall-hung ( $\pm 48$ -inches) SLD in each “main” and “sub” electrical equipment room. If wall space is limited, alternatively securely attach SLD frame to room door facing into the respective electrical room.

END OF SECTION 26 05 00  
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**SECTION 26 05 01**  
**BASIC ELECTRICAL MATERIALS AND METHODS**

**PART 1 - GENERAL**

**1.01 SCOPE**

- A. Work Included: All labor, materials, appliances, tools, equipment, facilities, transportation, and services necessary for and incidental to performing all operations in connection with furnishing, delivery, and installation of the work of this Section, complete as shown on the Drawings and/or specified herein. Work includes, but is not necessarily limited to the following:
  - 1. Examine all other Sections for work related to those other Sections and required to be included as work under this Section.
  - 2. General Provisions and Requirements for electrical work.

**1.02 SUBMITTALS (ADDITIONAL REQUIREMENTS)**

- A. Submit product data sheets for all outlet boxes, floor boxes, wiring devices, device plates, relays, contactors, timeswitches, and disconnects fuses.
- B. Submit detailed Shop Drawings including Dimensioned Plans, elevations, details, schematic and point-to-point wiring diagrams and descriptive literature for all component parts for transformers, relays, time clocks, and photocells.
- C. Submit transformer test reports.
- D. Submit material list for outlet boxes.

**PART 2 - PRODUCTS**

**2.01 OUTLET AND JUNCTION BOXES**

- A. General:
  - 1. Flush or concealed outlet boxes and junction boxes.
    - a. Non-masonry and/or non-concrete locations provide pressed steel boxes. Steel thickness not less than 0.062-inch, hot-dip galvanized. Knockout (KO) type with conduit entrances and quantities size to match conduits shown connecting to respective junction box and outlet box.
    - b. UL-514 listed and labeled.
    - c. Minimum required box depth is exclusive of extension-ring depth.
    - d. Provide all boxes with matching cover plates. Cover plates shall be gasketed water-tight in wet and outdoor locations.
    - e. Boxes installed in masonry or concrete shall be UL "concrete-tight" approved for installation in concrete and shall allow the placing of conduit without displacing reinforcing bars.
  - 2. Provide boxes of proper Code size for the number of wires or conduits passing through or terminating therein. In no case shall box be less than 4.0-inch square by 2.125-inches

deep, unless specified elsewhere or noted otherwise on the Drawings. 2.5-inches minimum depth for box width's exceeding 2-gang.

3. Increase the minimum outlet box size to 4.69-inches square by not less than 2.125-inches deep, where one or more of the following conditions occurs:
  - a. More than two conduits connect to the outlet box.
  - b. Circuit or Conduit "homerun" connects to outlet box.
4. Signal, Communication and Low Voltage:
  - a. Individual audio/visual, telephone, computer or data outlets: 4.69-inch square by 2.125-inch-deep minimum with two gang single gang] gang extension ring on flush boxes.
  - b. Combination signal/telephone/data or computer outlets: 4.69-inch square by 2.125-inch-deep minimum with 2-gang wide extension ring on flush boxes.
5. Junction boxes shall be sized to comply with the following:
  - a. Code Requirements size based on the conduit quantities, conduit sizes and wire-fill connected to the junction box.
  - b. Junction box minimum size shall not be less than 4.69-inches by 4.69-inches by 2.5-inches deep, but not less than size indicated on the Drawings or required by code.
6. Provide extension rings on flush outlets to finish face of extension ring flush with finished building surfaces. Extension ring shall match outlet box construction and contain "attachment mounting-tabs" for wiring devices. Extension rings shall be "screw-attached" to respective outlet box and maintain "ground" bonding continuity.
7. Outlet boxes installed in outdoor locations, or in wet locations, or in concrete/masonry, shall be cast-iron or cast-bronze, with threaded conduit hubs. UL rated for wet locations.
  - a. Aluminum boxes shall NOT be in contact with concrete or masonry. Die-cast aluminum or cast aluminum water-tight electrical outlet boxes with threaded hubs may be provided as an alternate to cast-iron or cast-bronze outlet boxes, only where one or more of the following conditions occur:
    - 1) Outdoor locations above finish grade.
    - 2) Indoor wet locations surface or flush in walls or ceilings.
8. Provide fixture-supporting device in outlet boxes for surface mounted fixtures as required.
9. Provide solid gang boxes for three or more devices, typical for line and low voltage switches, receptacles, low voltage/signal outlets, etc. for mounting devices behind a common device plate.
10. Provide isolation barriers in outlet boxes:
  - a. Between line voltage and low voltage devices.
  - b. Where more than one device is installed in an outlet box.
  - c. Between 277-volt and 120-volt devices.
  - d. Between devices connected to emergency and non-emergency circuits of all volt-ages.

11. Outlet boxes installed penetrating into fire rated walls, fire rated floors, fire rated ceilings and all fire rated construction. The outlet boxes shall be UL listed, classified and labeled, for fire rated and temperature rated penetration of the respective fire rated surface and fire rated construction. The outlet box fire rating and temperature rating shall equal or exceed the fire/temperature rating of the surface/construction being penetrated. Provide UL listed and labeled supplemental fire and temperature protection to maintain ratings:
  - a. Wall and ceiling penetrations, tumescent fire wrap (external or internal of outlet box).
  - b. Floors provide subfloor supplemental fireproofing below floor box.
12. Outlet boxes installed in floors. The floor outlet boxes shall be UL listed and labeled for Scrub Water Exclusion Requirements, including but not limited to tiles, carpeting and exposed wood and concrete floor finishes.
13. Outdoor flush in wall device outlet boxes:
  - a. Flush in wall, gasketed watertight, with hinged, key locking cast metal, self-closing cover. Tamper resistant and vandal resistant. UL-listed and labeled for installation in masonry, cast-in-place concrete and hollow-framed walls.
  - b. Flush cast-iron or cast-bronze device back-box, 4.68-inch square by 2.25-inch deep.
  - c. Internal metal adapter plate and wiring device types, in the box as indicated on the Drawings.
  - d. As manufactured by Legrand/Pass and Seymour #4600 Series: or C.W. Cole #310 Series.
14. Refer to Architectural and Structural contract documents and details for additional Box and Install Requirements.
15. Refer to Architectural and Structural Contract Documents and Details for additional Box and Install Requirements.
- B. Duplex-Combi and Quad-Combi flush mount, wall outlet box metal construction, sizes as shown on the Drawings, but not less than the following sizes:
  1. Duplex-Combi box, nominal 3-gang wide by 3.0-inches deep. Provide 2-gang wide "reducer" extension ring and high/low potential internal box dividers on box.
  2. Quad-Combi box, nominal 5-gang wide by 3.0-inches deep. Provide 4-gang wide "reducer" extension ring and high/low potential internal box dividers on box.
  3. Single piece common, nonmetallic coverplate, device-mounting brackets with wiring devices for data/ communication outlet keystones and duplex convenience receptacles.
  4. Provide knock-out concentric rings for various conduit sizes on the outlet box both top and bottom:
    - a. Two 0.75-inch conduits for power (duplex and quad boxes), top and bottom (high-potential).
    - b. Two 1.25-inch conduits for data/signal (quad box) top and bottom (low-potential).
    - c. One 1.25-inch conduit for data/signal (duplex box), top and bottom (low-potential).
  5. As manufactured by Wiremold WallSource Series; or Hubbell Multi-Connect Series, multiple service recess outlet boxes.



C. Surface Outlet Boxes

1. Surface mounted outlet boxes, cast iron Type FS or FD, with threaded hubs as required. Box interior dimensions and interior volume capacity not less than required for “press steel boxes”, and “sheet steel boxes”. Provide plugs in all unused openings. Provide weatherproof gaskets for all exterior boxes.

D. Floor Boxes

1. General:

- a. Outlet boxes installed in floors. The floor outlet boxes shall be UL listed and labeled for scrub water exclusion requirements, including but not limited to floor tiles, carpeting and exposed wood and concrete floor finishes.
- b. Electrical power receptacles in a floor box; shall be industrial grade wet location heavy-duty, high-abuse rated devices, tamper resistant. Grounding type, 125 volts, 60Hz AC, 20-amp, NEMA 5-20R (duplex), or other NEMA configurations noted on the Drawings. Standard length receptacle mounting strap as required by the Manufacturer of floor box being furnished.
- c. Tested, listed and labeled to comply with UL-514A and/or UL514C.

2. Poke-Thru floor boxes for “After-Set” Floor Outlets.

- a. Through floor wiring for power and communication shall be UL listed with a fire and temperature rating of not less than 2-hours. The units shall include an internally divided floor fitting; a divided through-floor conduit/raceway, and a divided under floor junction “split-box” not less than 4.7-inches by 4.7-inches by 2.125-inches in size. Junction box shall be installed concealed in ceiling space of the floor below. The length of the floor “through-raceway” shall match the thickness of the finish floor and as recommended by the Manufacturer. Unit shall be self-supporting without the attachment of an above floor fitting. Internal isolation barriers between high potential and low potential circuits and sections. The integral fire barrier shall incorporate a cold smoke barrier to prevent the passage of smoke when heat is not present.
- b. Poke-Thru Floor boxes shall contain dual services for high potential and low potential devices and circuits.
- c. Poke-Thru Floor pedestal type; (internally divided high potential and low potential sections) service fittings die cast, brushed aluminum, single piece device housing, with stainless steel device cover plates front and rear of the housing as follows:
  - 1) Front side (high potential) one 20-amp, 120 volt, 60Hz, AC, grounding duplex convenience outlet plugs.
  - 2) Rear side (low potential) shall contain “knockouts” or “keystones” as follows at locations shown on the Drawings:
    - a) Knockouts for signal cables one 1-inch diameter and two 0.5-inch diameter with rubber bushing grommets for each knockout.
    - b) Four RJ-45 keystone, snap-in retainers for low potential plug-in signal connections.
    - c) The Contractor shall provide the type of outlet(s) at each poke-thru location as required by the low voltage-signal Contract Documents.

- 3) Alternately where specifically indicated on the Drawings, the front and rear cover plates shall be supplied with knockouts for 1.0-inch flexible conduit "Furniture" connection, one per cover plate.
  - 4) The pedestal shall provide 0.25-inch or greater protective over-hang (drip-lip) of the device coverplates. Provide stainless steel device coverplates.
- d. Non-Pedestal Poke-Thru flush in floor type; (internal divided high potential and low potential sections) die cast, flush with finish floor, metal cover flip-open, locking, hinged access covers. Open-close die cast aluminum port-covers for plug-in portable cable connections. ADA compliant, wide trim matching flange.
- 1) Two 20-amp, 120-volt, 60Hz, AC, grounding duplex convenience receptacles for high potential power connections.
  - 2) Four RJ-45 keystone, snap-in retainers for low potential plug-in signal connections. The Contractor shall provide the type of outlet(s) at each poke-thru location as required by the Low Voltage-Signal Contract Documents.
  - 3) Cover shall close and lock after portable plug-in cables have been inserted into respective connections, under the cover.
  - 4) UL wet mop, scrub water rated for carpeted and non-carpeted floors.
- e. Die cast aluminum cover, nominal 8-inch diameter metal housing flush in "core-hole", outlet metal body size.
- f. Flush with floor or pedestal type as indicated on Drawings. As manufactured by Wiremold/Legrand# Evolution Poke-Thru 8AT Series, Smoke and Fire Rated Poke-Through fittings; no known equal.
3. Floor Boxes for Flush Floor Outlets (non-pedestal) recessed concealed inside outlet box, plug-in receptacles.
- a. Provide cast-in-floor with concrete pour pan, rated for on grade to prevent direct earth contact, cast-in-place concrete floors on-grade and above-grade; adjustable "leveling-feet" for box.
  - b. UL wet mop, scrub water rated for carpeted and non-carpeted floors. UL-File E171211 installation fire rating and/or UL-Fire Resistance Classified.
  - c. Floor boxes shall contain dual services:
    - 1) High potential with not less than two 120-volt 60Hz AC 20-amp grounding duplex convenience receptacles.
    - 2) Low potential for low voltage system outlets and signal circuits with up to and including eight RJ-45 plug-in keystone snap-in retainer receptacles. The Contractor shall provide the type of outlet(s) at each poke-thru location as required by the Low Voltage-Signal Contract Documents.
    - 3) Internal isolating barrier between high and low potential circuits and sections of box.
    - 4) Also refer to Drawings for Additional Outlet Requirements.
  - d. Conduit knockouts in bottom of box and in each side walls of box. Not less than one 1.25-inch and one 0.75-inch knockouts for both low potential and high potential conduits connections on each opposing box sides. Include the same configuration of

knockouts on the bottom of the box, for high potential section and low potential sections.

- e. Floor box cover:
  - 1) Flush tamper resistant "lock-down" removable main cover. Independent hinged "flip-out" port in the removable cover, to allow main box cover to be in a fully closed position with "plug-in" cords connected into box when the lock-down cover is closed. Main cover "lock-down" to prevent non-authorized access into box interior.
  - 2) Brass, removable recessed main cover, rated for carpet, or tile for floor finish, brass overlapping trim cover finish. Cover recess depth 0.25-inch, 0.5-inch or 0.75-inch as required to match respective floor covering thickness and type. ADA compliant, wide trim matching flange.
- f. Floor box with metal body, nominal box size 10-inches by 12-inches by depth to match floor, but not less than 3.0-inches deep box.
- g. Floor box as manufactured by FSR #FL-500P Series; no known equal.

## 2.02 PULLBOXES

### A. General

- 1. Sizes as indicated on the Drawings and in no case of less size or material thickness than required by the Governing Code and AHJ.
- 2. Exercise care in locating pull boxes to avoid installation in drain water flow areas and to clear existing condition interferences.
- 3. UL listed and labeled for electrical circuits.

### B. General Purpose Sheet Metal Pullbox

- 1. General purpose sheet steel pull boxes: Install only in dry protected locations with removable screw covers. Manufacturer's standard rust proofing and baked enamel finishes.
- 2. Weatherproof sheet steel pull boxes: Fabricate of Code gauge steel. All surfaces interior and exterior hot-dip galvanized steel. Gasketed weather-tight cover of same material. Manufacturer's standard baked exterior enamel finish.

### C. Concrete Pullboxes and Hand-holes

- 1. H-20 traffic rated box and cover, pre-cast concrete, steel reinforced pull boxes and hand-holes. Provide complete with pulling irons, hot-dip galvanized metal traffic cover with hot-dip galvanized metal cover frame, pullbox concrete base with sump. Four cable full height wall racks with porcelain blocks.
- 2. Boxes shall be "Intercept" type with multiple sections and extension cable-intercepts at both ends of box. Refer to Drawings for box size.
- 3. Covers shall be flush bolt down. Covers weighing more than 40-pounds shall be split cover type "Torsion-Spring" assist, hinged open-close.
- 4. Box covers shall comply with Federal ADA, UL, State and Local AHJ for slip resistance. Provide bead weld on cover to pull box to indicate services within pull box (i.e., "480/277-VOLT, 3-PHASE, 4-WIRE ELECTRICAL" OR "SIGNAL/TEL/P.A./CLOCK/FIRE ALARM" etc.).

5. Shall be set on a machine-compacted pea gravel base 12-inches thick and extend 6-inches beyond box base on all sides. Provide a ¾-inch by 10-foot copper clad ground rod through the box bottom with 9-inch projection into box, for grounding all metal parts with #10awg copper bond wire.
6. After cables have been pulled, connected, tested and inspected, seal all box joints and seal box between cover and frame with a mastic compound similar to Parmagum or Dukseal.
7. As manufactured by Jensen Precast, or Oldcastle Precast.

### 2.03 SWITCHES, WIRING DEVICES

#### A. General

1. Provide wiring device circuit switches totally enclosed, electrical insulating Bakelite or electrical insulating composition base, manual operator type with 277-volt 60Hz AC rating for full capacity contacts rated for incandescent lamp loads, fluorescent lamp loads and motor loads. Switch mounting-ears for screw attachment to outlet box. Switches shall be UL listed and labeled; conform to NEMA-WD1 and WD6.
2. Switch controlling (on-off) rated for all lighting loads and all non-lighting loads; switch ratings shall be 20-amp, unless indicated otherwise on Drawings.
3. Color as selected by Owner’s Representative. Switches controlling circuits connected to emergency power shall be red.
4. All switches shall be of the same Manufacturer.
5. Where switches are mounted in multiple gang assembly and are operating at 277 volts and/or 277 volts and 120 volts or emergency/non-emergency and mounted in same outlet box, there shall be an insulating barrier installed between each switch.
6. Devices shall additionally be listed and labeled as UL-All Weather-Resistant for the following install locations:
  - a. Devices indicated on Drawings as Weather-Proof (W.P.).
  - b. Devices installed in outdoor locations
  - c. Installed in classified wet or damp area locations both indoor and outdoor.
7. Wiring devices shall be listed and labeled for connection of both “solid” and “stranded” copper circuit conductors.
8. Switches with ampere and voltage ratings different than described herein. The different rated switches shall have the same characteristics and performance as the respective described switches, except for differing ampere and voltage characteristics.

#### B. Switches Heavy Duty (Toggle – Type)

1. Single Pole Switches – 20 amp at 277V

<u>Manufacturer</u>	<u>Toggle Type</u>	<u>Lock Type</u>
Hubbell	#HBL1221	#HBL1221-L
Legrand/P&S	#20AC1	#20AC1-L
Leviton	#1221	#1221-L
Cooper-Arrow/Hart	#AH1221	#AH1221-L

2. Double Pole Switch – 20 amp at 277V

<u>Manufacturer</u>	<u>Toggle Type</u>	<u>Lock Type</u>
Hubbell	#HBL1222	#HBL1222-L
Legrand/P&S	#20AC2	#20AC2-L
Leviton	#1222	#1222-L
Cooper-Arrow/Hart	#AH1222	#AH1222-L

3. Three-Way Switches – 20 amp at 277V

<u>Manufacturer</u>	<u>Toggle Type</u>	<u>Lock Type</u>
Hubbell	#HBL1223	#HBL1223
Legrand/P&S	#20AC3	#20AC3-L
Leviton	#1223	#1223-L
Cooper-Arrow/Hart	#AH1223	#AH1223-L

4. Four-Way Switches – 20 amp at 277V

<u>Manufacturer</u>	<u>Toggle Type</u>	<u>Lock Type</u>
Hubbell	#HBL1224	#HBL1224-L
Legrand/P&S	#20AC4	#20AC4-L
Leviton	#1224	#1224-L
Cooper-Arrow/Hart	#AH1224	#AH1224-L

5. Momentary Contact Switches – 20 amp at 277V

<u>Manufacturer</u>	<u>3-Position Regular</u>	<u>3-Position Lock</u>
Hubbell	#HBL1557	#HBL1557-L
Legrand/P&S	#1251	#1251-L
Leviton	#1251	#1251-L
Cooper-Arrow/Hart	#AH (extra)	#AH (extra)

6. Maintained Contact Switches (Double Throw, Center Off) – 20 amp at 277V

<u>Manufacturer</u>	<u>Toggle Type</u>		<u>Lock Type</u>	
	<u>1-Pole</u>	<u>2-Pole</u>	<u>1-Pole</u>	<u>2-Pole</u>
Legrand/P&S	#1225	#1226	#12250L	#1226-L
Hubbell	#HBL1385	#HBL1386-L	#HBL1385-L	#HBLM1386-L
Leviton	#1385	#1386		
Cooper-Arrow/Hart	#AH (extra)	#AH (extra)	#AH (extra)	#AH (extra)

7. Pilot lights used in conjunction with circuit switches shall be LED type with red jewel.

C. Weather-Proof (W.P.) Switches

- Outdoor switches provide heavy-duty, tamper resistant gasketed weatherproof metal, hinged door cover for each switch.
- Cover door shall be key locking-type or padlock-type.

D. Other Switches, Receptacles, Devices, and Outlets

- Special devices outlets and outlet locations shall be as indicated on the Drawings. Modify device and outlet characteristics to accommodate the actual install location conditions for each outlet.

## 2.04 LIGHTING CONTROL DIMMER SWITCHES (ARCHITECTURAL DIMMING)

### A. LED Lamp Dimmers

1. Shall be specifically designed and rated for dimming Solid State Lighting – LED (SSL, Light Emitting Diode), both power supply/drivers and lamps. Dimming compatible solid state electronic power supplies/drivers.
2. LED lamps with self-contained power supplies inside each lamp shall be compatible with the dimming system and the dimming system shall be compatible with the lamp/driver power supply. Shop Drawing, submit Manufacturer's compatibility certificate.

## 2.05 RECEPTACLES

### A. General

1. All receptacle wiring devices in flush type outlet boxes shall be installed with a bonding jumper to connect the box to the receptacle ground terminal. Grounding through the receptacle mounting straps is not acceptable. The bonding jumper shall be sized in accordance with the branch circuit protective device as tabulated herein under "Grounding". Bonding jumper shall be attached at each outlet to the back of the box using drilled and tapped holes and washer head screws 6-32 or larger (except isolated ground receptacles). For receptacles in surface mounted outlet boxes direct metal-to-metal contact between receptacle mounting strap (if it is connected to the grounding contacts) and outlet box may be used. Receptacle mounting-ears for screw attachment to outlet box. Receptacle shall be UL listed and labeled; conform to NEMA-WD1 and WD6.
2. All receptacles shall be same Manufacturer.
3. Receptacle color as selected by Owner's Representative. Receptacles connected to emergency power circuits shall be red.
4. Tamper Resistant Receptacle
  - a. Devices shall additionally be listed and labeled as tamper resistant, provide tamper resistant receptacles in buildings containing dormitories, guestrooms, housing/residences, condominiums, apartments, dwellings, hotels/motels, secondary schools K through 12<sup>th</sup> grade, childcare/daycare/kindergarten, hospital pediatric-care units and other locations required by AHJ.
  - b. The electrical receptacles shall be rated "Tamper-Resistant-Receptacle" (TR), UL-TR (RTRT). Spring loaded shutters shall automatically open-close (unblock-block) the receptacle slots when the plug-in (cap) insertion and removal occurs.
  - c. Typical for 15-amp and 20-amp receptacles. Modify Manufacturer's catalog number description to include tamper resistant receptacle function.
5. Wiring devices shall be listed and labeled for connection of both "solid" and "stranded" copper circuit conductors.
6. Duplex convenience receptacles and 120-volt single phase branch circuits.
  - a. Duplex (convenience) receptacle, wiring device with two single receptacles with the same electrical rating, integrated into a single assembly by the Manufacturer.
  - b. 20-amp branch circuits with a single duplex convenience receptacle connection on each circuit, receptacles shall be rated for 20-amp.

- c. 15-amp and 20-amp branch circuits with two or more duplex convenience receptacle connections each circuit, receptacle shall be rated 15-amp or 20-amp.
  - 7. Devices shall additionally be listed and labeled as UL-All Weather-Resistant, provide weather resistant receptacles for the following install locations. Modify Manufacturer’s catalog number descriptions, shall include all-weather-resistant UL listing and labeling:
    - a. Devices indicated on Drawings as Weather-Proof (W.P.).
    - b. Devices installed in outdoor locations.
    - c. Devices installed in classified as damp or wet locations both indoor and outdoor.
    - d. All GFCI (ground-fault) receptacles all locations.
  - 8. Receptacles with ampere and voltage ratings different than described for duplex convenience receptacles. The different rated receptacles shall have the same characteristics and performance as the respective duplex convenience receptacles, except for differing ampere and voltage characteristics.
  - 9. Receptacles shall be GFCI type for the following locations:
    - a. located within 84-inches of a sink or hosebib shall be GFCI receptacles.
    - b. Devices installed in outdoor locations.
    - c. Devices installed in classified as damp or wet locations both indoor and outdoor.
    - d. Devices indicated on Drawings as GFCI or Weather-Proof (W.P.).
  - 10. “Split-Wire” duplex convenience receptacles. Each split-wire receptacle plug connects on independent common circuit. Provide nameplate or graphic on face of receptacle describing the receptacle function and control source. Comply with California Title-24 and ASHRAE-90.1, latest revisions.
- B. Duplex convenience receptacles.
- 1. Shall be grounding type, 120 volt and shall have two current carrying contacts and one grounding contact which are internally connected to the frame. Outlet shall accommodate standard parallel blade cap and shall be side wired. Receptacles shall be tamper-resistant–TR, UL-TR.
  - 2. GFCI receptacles shall be all Weather-Resistant and wet location rated. Rated 120-volt 60Hz AC, 20 amp, unless indicated otherwise on Drawings.
  - 3. Heavy Duty Industrial Grade
 

<u>Manufacturer</u>	<u>NEMA 5-15R</u>	<u>NEMA 5-20R</u>	<u>NEMA 5-20R-GFCI</u>
a. Legrand/P&S	#5262	#5362	#2095HG
b. Leviton	#5262	#5362	#W7899
c. Hubbell	#CR5252	#5362	#GFR8300
d. Cooper-Arrow/Hart	#AH5262	#AH5362	#WRVGF20
- C. Weatherproof (W.P.) Receptacle
- 1. Outdoor receptacles shall be duplex convenience GFCI type rated 20-amp 120 Volt 60Hz AC weatherproof, GFCI, unless indicated otherwise on Drawings. Test-reset buttons and visual pilot.

2. GFCI receptacles shall be wet location and Weather-Resistant rated weatherproof, gasketed, key locking tamper resistant, wet location.
  3. Outdoor, flush mount outlet with hinged, key-locking, weather-proof cover as manufactured by: Pass and Seymour/Legrand #4600 Series; or C.W. Cole #310 Series.
  4. On exposed conduit runs, provide weatherproof ground fault circuit interrupter type GFCI receptacles installed in "FS" conduit watertight cast metal body, with weather-proof spring door type covers, gasket watertight. Door shall be key locking-type or padlock-type.
- D. Other Switches, Receptacles, Devices, and Outlets.
1. Special devices, outlets and outlet locations shall be as indicated on the Drawings. Modify device and outlet characteristics to accommodate the actual install location conditions for each outlet.

## **2.06 PLATES**

- A. Metal cover plates for devices
1. Provide cover plates for every line voltage and low voltage switch, receptacle, telephone, computer, television, signal and other device outlets.
    - a. All line voltage circuit plates shall be metal, 0.040-inch stainless steel Type 302 alloy, composed of 18% chromium and 8% nickel.
    - b. Plates for low voltage signal systems may be metal or non-metal. Non-metal plates shall be high-abuse, hard-service and high-impact resistant.
  2. Plates shall be as manufactured by P&S; or Hubbell; or Leviton; or General Electric.

## **2.07 VANDAL-PROOF FASTENINGS**

Provide approved vandal-proof type screws, bolts, nuts where exposed to sight throughout the project. Screws for such items as switch plates, receptacle plates, fixtures, communications equipment, fire alarm, blank covers, wall and ceiling plates to be spanner head stainless steel, tamperproof type. Provide Owner with six screwdrivers for this type.

## **2.08 STRUCTURAL AND MISCELLANEOUS STEEL**

Structural and miscellaneous steel used in connection with electrical work and located out-of-doors or in damp locations, shall be hot-dip galvanized unless otherwise specified. Included are underground pull box covers and similar electrical items. Galvanizing averages 2.0 ounce per square foot and conforms to ASTM A123.

## **2.09 FLASHING ASSEMBLIES**

- A. General
1. Flashing shall be compatible with the material being penetrated and with the pipe passing through the flashing. Coordinate with and comply with Manufacturer's recommendations, for both the flashing and the material being penetrated.
  2. Provide lead metal flashing assemblies at all roof penetrations, unless recommended otherwise by Manufacturer.



3. Seal the joint between the flashing and pipe passing through the flashing with water-proofing compound.
  4. Lead flashing for roof penetrations, as manufactured by: Santa Rosa Lead Products; or Semco; or Flashco.
- B. Storm Collars
1. In addition to penetration flashing, provide a storm-collar counter-flashing for each roof penetration flashing. Shall attach to the structure of the penetration and form a water-tight "umbrella" counter flashing over the roof penetration flashing.
  2. As manufactured by: STD-Storm collars; or ASI-Storm collars.

## 2.10 RELAYS, CONTACTORS AND TIMESWITCHES

- A. Individual Control Relays (HVAC Plumbing of the Control Functions)
1. Individual control relays shall have convertible contacts rated a minimum of 10-amp, 600 volts regardless of usage voltage. Coil voltage, number and type of contacts shall be verified and supplied to suit the specific usage as shown in the wiring diagrams and/or schedules on the Electrical and Mechanical Drawings. Coil control circuit shall be independently fused, sized to protect coil. Relays shall be installed on prefabricated mounting strips. Each relay shall have a surge suppressor to limit coil transient voltages. Furnished in the NEMA Type I enclosure unless indicated otherwise.
  2. The following relays are approved:

<u>Manufacturer</u>	<u>Type</u>
Cooper-Arrow/Hart	IMP
General Electric	Class CR 2811
Square D Co.	Class 8501, Type A
Westinghouse	Bul. 16-321, Type NH
Allen Bradley	Approved Equal
- B. Contactors and/or Relays
1. Contactors and/or relays for control of lighting shall be 600-volt AC, electrically operated, mechanically held units, open type for panel mounting with number of poles and of size as indicated on the Drawings. Provide auxiliary control relay for operation of each contactor and/or relay with a 2-wire control circuit.
  2. Contactors and/or relays shall be mounted in panelboards in barriered section under separate hinged lockable doors or in contactor and/or relay cabinets as called for on the Drawings. Contactors and/or relays shall be installed on Lord sound absorbing rubber mounts.
  3. Contactors and/or relays shall be Automatic Switch Co. Bulletin #920 Series for 2-pole and 3-pole, Automatic Switch Co. Bulletin 917 Series with poles as indicated on Drawings. Coil control circuit shall be independently fused, sized to protect coil.
  4. Contactors and/or relays shall be equipped with a switch, in the proper configuration, to disconnect the control circuit controlling the coil of the respective device. Control circuit disconnect switch shall be labeled showing function of device.

C. Time-Switches

1. All timeswitches shall have synchronous motor drive for operation on 120 or 277 volts, 60Hz, AC and shall be furnished with a 10-hour, spring-driven, reserve-power motor. Contacts shall be rated 40-amp per pole.
  - a. Timeswitches for control of air conditioning or plumbing equipment shall have 7-day dial and shall be Tork WL Series or approved equal by Paragon or Intermatic.
2. All timeswitches shall be mounted in separate section in top of panelboards under separate lockable door unless otherwise indicated on Drawings. Clear opening for time-switch shall be a minimum of 12-inches by 12-inches.

D. Contactors and/or Relays/Time-switch Cabinet

1. Contactors, relays, and/or timeswitches not indicated to be mounted in electrical panels shall be mounted in a cabinet, size as required, with hinged lockable door keyed same as panelboards. Construction of the cabinet shall be similar to terminal cabinets.
2. Each contactor, relay or time-switch mounted in the contactor cabinet shall be barriered in its own compartment and shall be installed on Lord sound absorbing mounts.
3. Contactor cabinets shall be of the same Manufacturer as the panelboards.
4. Where relays and/or contactors occupy the same enclosure as timeswitches they shall have a clear acrylic shield installed over each relay or contactor to guard line exposed parts from accidental contact by non-authorized personnel.

## 2.11 DISCONNECTS (SAFETY SWITCHES)

A. General

1. Disconnect switches shall all be rated:
  - a. 600-volt 60Hz AC for all safety switches.
  - b. NEMA Type HD, quick-make, quick-break, H.P.-rated.
  - c. Fused Class "R", in NEMA Type I enclosure, lockable.
  - d. Number of poles and amperage as indicated on the Drawings.
2. Provide internal neutral bus, ground-lug and conductor landing lugs, size to match conductors shown on Drawings. Switch access door shall be interlocked with switch to prevent access inside switch when switch is "on" closed position.
3. Where enclosure is indicated W.P. (Weather-Proof) switches shall be rain-tight NEMA Type HD and NEMA 3R enclosure, lockable.
4. Maximum voltage, current and horsepower rating clearly marked on the switch enclosure and switches having dual element fuses shall have rating indicated on the nameplate.
5. Switch and fuses ampere rating shall also comply with Manufacturer recommendation for the connected load.

## 2.12 TRANSFORMERS

A. General

1. Provide dry type transformers constructed to meet Underwriters' Laboratories' Specification UL 506 and tested in accordance with ANSI and NEMA Standards.

Performance on transformers equal to or better than ANSI, NEMA, IEEE and CEC published criteria.

- a. 60Hz AC line and load.
  2. UL Class 220°C insulation with maximum winding temperature rise of 150°C in 40°C ambient at 100% continuous rated capacity with overload capacity per ANSI C57.12 and C57.96 vacuum impregnated core and coil insulation. Transformer efficiency shall meet or exceed NEMA-TP1 (latest revision) Requirements.
  3. Transformers shall be equipped with not less than five 2.5% full capacity voltage taps, two above and three below normal voltage. Line and load terminals shall be accessible, located behind removable front cover plate. Transformer connects shall terminate in “conductor-lugs” to match line side incoming and outgoing secondary side conductors, shall occur on a common (same) side of transformer on insulated supports.
  4. Provide wall mount and ceiling mount transformers support brackets, platforms and attachment structures for transformers.
  5. Dry type transformers shall meet or exceed NEMA TP-1 (latest revision), Class-1 efficiency levels and shall be marked as energy efficient for United States Department of Energy and Environmental Protection Agency DOE/EPA “Energy Star”.
  6. Transformer windings shall be copper or aluminum.
  7. Electrostatic Shield: Provide full width, copper, 100% electrostatic shield (Faraday Shield), between line and load transformer windings, on each transformer phase. Shield shall be low impedance grounded to the transformer metal frame and shall attenuate common mode electrical noise 120dB at 1-500MHz range and transverse mode electrical noise, 30dB at 1-500MHz range. Average effective coupling capacitance of thirty picofarads between line and load sides.
  8. Connect transformers by one of the following methods:
    - a. Under floor conduit resulting in no rigid connections to transformer (provide ground strap for equipment ground).
    - b. Liquid tight flexible metal conduit (provide ground wire for equipment ground).
    - c. Pullbox or wireways from transformer, which are isolated from transformer with an approved sound absorbing neoprene gasket (provide ground strap for equipment ground).
  9. The physical dimensions of the transformer shall not exceed the size shown on the Drawings.
  10. Transformer and transformer mounting shall be designed and tested and comply with install location seismic earthquake resistance seismic loads, typical for floor, wall and ceiling mount/suspended transformers. Bolt floor-mounted transformers to floor and mounting brackets, provide isolation rubber mounts, on each attachment contact location.
- B. Test Requirements:
1. The transformers shall be subjected to the following production tests:
    - a. Applied Potential
    - b. Induced Potential

- c. No Load Loss.
  - d. Voltage Ratio.
  - e. Polarity
  - f. Continuity
2. The Manufacturer shall have performed the following additional tests on transformer units identical to the design type being supplied to this Specification. Proof of performance of these tests in the form of test data sheets shall be provided at the Time Shop Drawings are submitted for approval.
- a. Sound Levels
  - b. Temperature
  - c. Full Load and 50% Load Losses for linear and nonlinear loads
  - d. Voltage Regulation
  - e. Impedance
- C. Transformer Housing
- 1. Metal, air cooled enclosure
    - a. Removable metal NEMA 1 enclosure, indoor location
    - b. Removable NEMA – 3R enclosures, outdoor locations, with vent shields.
    - c. Provide screen protected ventilation for all openings, including bottom of housing, to prevent accidental contact with internal components and prevent rodent/insect entrance.
  - 2. Manufacture’s rust inhibitor primer and standard finish paint.
  - 3. Removable lifting and skidding provisions.
  - 4. Provide wall mount and ceiling mount transformers support brackets, platforms and attachment structures for transformers.
- D. Sound Levels: Transformer sound levels, between no loads to full load, shall be guaranteed by the Manufacturer not to exceed the following values:
- |                  |       |
|------------------|-------|
| 9kVA and below   | 40dBA |
| 10kVA to 50kVA   | 45dBA |
| 51kVA to 150kVA  | 50dBA |
| 151kVA to 300kVA | 55dBA |
| 301kVA to 500kVA | 60dBA |
- E. K-Rated Transformers
- 1. Transformers shall comply with UL-1561 and IEEE-519, shall all be rated K4, for harmonic content electrical loads, in accordance with UL-1561 and IEEE C57.110 (latest revision), unless noted otherwise with other K-Ratings on Drawings.
  - 2. The transformers shall be specially designed and manufactured for non-linear electrical load which cause harmonic current and voltage distortion, with 3<sup>rd</sup>, 5<sup>th</sup>, 7<sup>th</sup>, 9<sup>th</sup> and 15<sup>th</sup> harmonic current and voltage distortion.
  - 3. Transformers, which are simply oversized larger than the specified kVA rating and then derated to the specified kVA rating to compensate for harmonic overloading, are not acceptable.

4. Secondary neutral connections rated at 200% of rated secondary phase current.
  5. Transformers Manufactured by; Cutler Hammer; or General Electric; or Square D Co.; or Siemens.
- F. Seismic Earthquake and Wind Loading Withstand, Testing and Certification (Additional Requirements)
1. The complete transformer assembly; including housings/enclosures, accessories, supports/anchors etc., shall be designed, manufactured and tested for wind loading for outdoor locations; earthquake seismic rated withstand for indoor and outdoor locations.
  2. Shall withstand, survive and maintain continuous non-interrupted energized operation (running) during the seismic event occurrences. Continued normal energized operation after the wind event and seismic event occurrences have abated.
  3. Shall include demonstrations of successful operation and run test after completion of seismic event shake-table simulation.
  4. Provide three-dimensional finite element analysis demonstrating anchorage and operational withstand of wind loading as follows:
    - a. 110MPH – West Coast States USA and Hawaii, per ASCE/SEI 7-10.
  5. Acceptance test seismic qualification of proposed equipment shall employ triple axis shake-table simulation of the Required Response Spectrum (RRS) seismic event motion, certified and approved by the AHJ.
  6. Seismic test shall be performed by a third-party independent test laboratory. Wind analysis and seismic Testing and reports shall be certified, signed and “stamped” by PE Professional Engineer licensed and in good standing in the State, Civil Engineer or Structural Engineer.

### **2.13 SPARE FUSE CABINETS**

Provide a cabinet in each room where a switchboard or motor control center is installed and contains fuses. Cabinets shall be as specified for "Terminal Cabinets" and shall be of sufficient size to contain all spare fuses herein before specified. Provide clips (two per fuse) for each spare fuse. Mount clips in plywood backboard in cabinet. Label cabinet "SPARE FUSES".

### **2.14 CONCRETE WORK (ADDITIONAL REQUIREMENTS)**

- A. Portland Cement
1. ASTM C33- (latest revision), Type II, Low Alkali Cement. Composed of Portland cement, coarse aggregate, fine aggregate, and water.
    - a. Concrete for use as electrical equipment footings, lighting pole bases and equipment slabs on grade, concrete shall attain minimum 28-day compressive strength of 4000psi, using not less than 5.75 sacks of cement per cubic yard of wet concrete.
    - b. Concrete for underground duct/conduit encasement, the minimum 28-day compressive strength shall be 2000 psi. Provide a minimum of 10-pounds of red oxide concrete coloring per yard of concrete.
    - c. Mix shall obtain a 6-inches slump, measured with standard slump cone per ASTM C143/C143M (latest revision).

2. Coarse Aggregate: Uniformly graded between maximum size not over 1½-inch and not less than ¾-inch and minimum Size #4, crushed rock or washed gravel. For concrete encased conduit only, maximum aggregate size shall be ½-inch.
  3. Fine Aggregate: Clean, natural washed sand of hard and durable particles varying from fine to particles passing ¾-inch screen, of which at least 12% shall pass fifty mesh screens.
- B. Water: Clean and free from deleterious quantities of acids, alkalis, salts, or organic materials.
- C. Reinforcement
1. Bars: Intermediate Grade Steel conforming to ASTM A615/A615M grade 60, with pattern deformations.
  2. Welded Wire Fabric: ASTM A185/A185M.
  3. Bending: Conform to Requirements of ACI 318.
- D. Form Material: For exposed work, use PS 1-66 "B-B Concrete Form" plywood forms, or equal. Elsewhere, forms may be plywood, metal, or 1-inch by 6-inches boards. Forms for round lighting pole bases shall be sono-tube.

## **2.15 SURGE PROTECTION DEVICE (SPD)**

- A. General
1. The unit shall be modular in construction and operate in parallel with 60Hz AC line voltage, 4-wire or 5-wire, grounded or ungrounded systems, as applicable; voltage, kVA and ampere capacity as indicated on the Drawings. Suitable for connection through an external circuit breaker or combination switch/fuse protective device rated 30-amp, continuous duty, rated for Service Entrance equipment connection. Protection sequences shall include circuit configurations as follows:
    - a. Line-to-Line (Phase-to-Phase).
    - b. Line-to-Ground (Phase-to-Ground).
    - c. Line-to-Neutral, where neutral is present.
    - d. Ground-to-Neutral, where neutral is present.
  2. The unit shall operate correctly with any combination of resistive, inductive, or capacitate loads. The unit shall automatically shunt to ground the electrical transients and EMI/RFI noise occurring above the specified values. The unit shall automatically reset after transient condition has passed. Operating temperature minus 40° centigrade to plus 85° centigrade.
  3. Provide one or more individual self-contained protection module(s) for each line voltage phase, ground and neutral, suitable for direct connect with line-side C/B protection and disconnect. Provide one spare individual plug-in protection module. Provide incoming line, neutral and ground conductor termination lugs rated CU/AL #14 through #4 AWG. Lugs shall be barriered from and prewired to the respective protection modules.
  4. Provide a NEMA twelve housing to contain all unit modules, devices and conductor terminations. The housing shall include a hinged pad-lockable access door.
    - a. Flush housing for mounting internally inside related equipment.

- b. Surface mounted, with conduit entrance knockouts for external mounting. Maximum housing size shall not exceed 36-inches wide by 72-inches high by 8-inches deep.
- 5. As manufactured by EFI Corporation Model #MXPB/SPD; or MCG Electronics; or Current Technology; or Liebert.

**B. Operational Characteristics**

- 1. Surge protection, testing, listing and certification.
  - a. UL 1449 (latest edition) and CSA, for Surge Protection Device, UL 1283 for voltage electrical noise attenuation, ANSI/IEEE C62.45, C62.1 for C62.41, (latest edition) bi-directional transient clamping voltages for both Normal Mode and Common Modes against Category A and B ring wave and Category B impulse wave.
  - b. The unit connected to the service entrance shall also withstand a minimum of 2,000-sequential ANSI/IEEE C62.41 Category C surges without failure following IEEE test procedures in C62.1, C62.41 and C62.45.
- 2. Surge protection, EMI noise rejection, and RFI noise rejection shall be provided for Common Mode (line-to-neutral and line-to-ground), Normal Mode (line-to-line) and neutral to ground.
- 3. EMI and RFI noise rejection.

Conducted line noises interference both electromagnetic (EMI) and radio frequency (RFI) shall be reduced by the unit over a continuous spectrum of 0.5MHz to 1.0MHz. The basis for reduction shall be a standardized 50-OHM insertion loss MIL -STD-220A test. Provide spectrum analysis test dB attenuation reports showing RFI filtering over specified frequencies. Test data based on calculated or computer simulation is not acceptable.

- 4. Three Phase and Grounded "WYE" Performance Requirements.

<u>Characteristics</u>	<u>208/120 Volt</u>	<u>480/277 Volt</u>
Nominal line-to-line	208 Volt	480 Volt
Nominal line-to-neutral	120 Volt	277 Volt
Internal capacitance (Microfarads)	2.5	2.5
Maximum response time	1-nano sec.	1-nano sec.
EMI/RFI noise rejection	25-35dB	25-35-dB
Nominal peak clamp voltage Line-to-neutral & line-to-ground	500 Volts	900 Volts
Minimum transient energy dissipation per phase (at 8x20 microseconds waveform)	1000 Joules	1500 Joules
Peak transients withstand (at 8x20 micro-seconds waveform) without failure of the unit	50,000 amp	60,000 amp
• Category-C3	300,000 amp	500,000 amp
• Category-B3	100,000 amp	150,000 amp
• Category-A3	50,000 amp	60,000 amp

**C. Diagnostic Indicators**

- 1. Shall display the "Normal" and "Fault" status of each line suppression circuit, along with protection circuit "on" indication.
- 2. Shall provide a sonic audible fault alarm with silence push-button.

D. Surge Protection Categories

1. Surge protectors shall comply with ANSI C62.41 (Latest Revision) Standard Protection Categories for "impulse" and "ringwave" transients, based on the installation locations shown in the Contract Documents.
  - a. Service entrance, main switchboard or substation locations - Category "C3", high exposure.
  - b. Mid building, distribution panels, distribution panels over 400-amp main bus rating locations - Category "B3", high exposure.
  - c. Branch circuit panelboards 400-amp or less main bus rating - Category "A3", high exposure.
2. The SPD short circuit current withstand rating shall exceed the actual short circuit current available at the SPD installation location.

**2.16 PLUG STRIP SURGE PROTECTION DEVICE**

A. General:

1. Self-contained unit rated 15-amp, nominal 120 volt plus 10%, 60Hz, AC, 1875 watts full continuous load. Internal 15-amp resettable overload protection circuit breaker. Red illuminated on-off switch. 6-foot, 14 AWG 3-conductor, grounded, heavy duty jacketed AC line cord with NEMA 5-15 cap. Multi-outlet receptacles, suitable for use with the following types of plug-in loads, data processing equipment, audio/video equipment, test instruments, medical equipment, photo graphic equipment and "switching type" power supplies. As manufactured by TRIPP LITE Isobar Series; EFI; or equal.
2. Protected outlets shall be NEMA 5-15R 15-amp, AC 60Hz receptacles. Provide four protected outlet plugs on each plug strip, as indicated on the Drawings. Each group of two receptacles (duplex) shall be connected to separate protected load isolated filter banks. Each duplex shall be isolated from the other output receptacles, minimum isolation of 25dB at 1MHz line to line, line to neutral, line to ground and neutral to ground.
3. Non-blocking plug-in locations/orientation for plug-in "power-brick" power supplies.

B. Operation:

Self-contained RFI and EMF shielded housing with mounting slots for temporary mounting of the unit. Protected outlet receptacles shall supply filtered, electrical line voltage power to the connected equipment. Line noise RFI and EMI interference filtering suppression, surge protection and spike protection shall occur in all three modes of operation line to ground, line to neutral and neutral to ground rated as follows:

1. 13,000-amp, 210 joules (watt-seconds) peak withstands capacity.
2. Transient response time less than 5-nano seconds.
3. 140-volt AC RMS initiate spikes suppression 330 volt maximum let through.
4. RFI and EMI Suppression-Provide spectrum analysis test dB attenuation reports showing RFI filtering over specified frequencies.
  - 50KHz greater than 20dB
  - 150KHz greater than 40dB
  - 1MHz greater than 80dB



5. Diagnostic indicator lights located on the SPD housing shall provide alarm alert for each of the following conditions:
    - a. Loss of AC power.
    - b. Damage, malfunction in the SPD suppression circuits.
    - c. Improper AC electrical outlet wiring.
  6. Standards Testing, Listing and Certification Compliance:
    - a. IEEE 587 A and B compliance.
    - b. UL 1449 surge suppressers.
    - c. UL 1363 temporary power taps.
    - d. UL 1283 electromagnetic interference filters.
- C. Rack Mounted SPD
1. SPD units installed in equipment racks shall comply with all the same Performance Requirements, except as follows.
    - a. EIA/TIA – Equipment rack mount style (19-inches or 24-inches as applicable).
    - b. Minimum of two front mounted outlets and not less than six rear mounted outlets.

## **2.17 WIREWAY**

- A. General:
1. Unobstructed lay in type, metal wireway, fittings and connectors UL listed for use as wireway and auxiliary gutter. Length, elbows and "T-S" as shown on Drawings. Minimum cross-section size 4-inches by 4-inches, but not less than shown on the Drawings. Suitable for mounting in any position orientation.
- B. Construction:
1. Minimum metal gauge shall not be less than 14-gage.
  2. Cover shall be hinged entire length of cover. Cover shall be held in the closed position with bolts and nuts.
  3. Provide spring nuts on all hardware fastener penetrations into the interior of the wireway to protect against wire insulation damage.
  4. The inside of 90-degree corners in the wireway shall be a 45-degree bevel.
  5. Grounding continuity between wireway sections and fittings shall be continuous the entire length of the wireway.
- C. Finish:
1. Indoor non-raintight, rust inhibitor phosphatizing base coating and baked enamel finish, Manufacturer's standard color.
  2. Raintight outdoor-galvanized metal, with corrosion resistant phosphate primer and baked enamel finish, Manufacturer's standard color, NEMA 3R construction.
  3. All hardware shall be plated to prevent corrosion.

## PART 3 - EXECUTION

### 3.01 GROUNDING (ADDITIONAL REQUIREMENTS)

- A. Grounding shall be executed in accordance with all applicable Codes and Regulations, both State of California and local authorities having jurisdiction.
- B. The neutral of each transformer shall be grounded by individual separate ground conductors in individual conduits as follows:
1. Conductor and conduit shall be grounded to building main ground bus.
  2. Conductor and conduit shall be grounded to nearest available effectively grounded building structural steel member or grounded metal cold water pipe.
- C. The transformer neutral ground conductors for secondary side of the transformers shall be copper and shall be sized according to the following table:
- | <u>Secondary Total Equivalent Size Copper</u> | <u>Neutral Ground Wire Size Copper</u> |
|---|--|
| #2 or smaller                                 | #6-1-inch conduit                      |
| 1 or 1/0                                      | #4-1-inch conduit                      |
| 2/0 or 3/0                                    | #2-1¼-inch conduit                     |
| 4/0 thru 350 MCM                              | #1-1¼-inch conduit                     |
| Over 350 MCM thru 600 MCM                     | 2/0-1½-inch conduit                    |
| Over 600 MCM thru 1100 MCM                    | 3/0-1½-inch conduit                    |
| Over 1100 MCM                                 | 4/0-2-inch conduit                     |
- D. Each pull box or any other enclosure in which several ground wires are terminated shall be equipped with a ground bus secured to the interior of the enclosure. The bus shall have a separate lug for each ground conductor. No more than one conductor shall be installed per lug.
- E. The maximum resistance to ground shall not exceed 5 ohms.

### 3.02 OUTLET AND JUNCTION BOXES

- A. General:
1. Accurately place boxes and securely fastens to structural members. Where outlets are shown at same location but at different mounting heights, install outlets in one vertical line. Where outlets are shown at same location and mounting height, mount outlets as close together in a horizontal row as possible. Where the outlet boxes for switches and receptacles are shown at the same location and mounting height, mount in common outlet box with barriers between devices. Provide single piece multi-gang cover plate for close mounted outlet boxes. Where switches are shown on wall adjacent to hinge side of doors, box shall be installed to clear door when door is fully opened.
  2. Flush mounted boxes shall be attached to not less than two parallel studs or structure members by means of metal supports. The supports shall span between and attach to the structure members.
  3. Boxes above accessible ceilings shall be attached to structural members. Where boxes are suspended, they shall be supported independently of conduit system by means of hanger rods and/or preformed steel channels. Boxes shall be supported independently of all piping, ductwork, equipment, ceiling hanger wires and suspended ceiling grid system.

4. Surface mounted outlets shall be attached to concrete or masonry walls by means of expansion shields.
  5. Floor boxes shall be installed level with finish floor and within adjustable limits of floor ring. Where outlets are shown at same or adjacent location, use multi-gang boxes.
    - a. Provide cut-outs in the sub-floor assembly, to accept the recess depth of each electrical floor box. Provide added "fire-proof" applications on the bottom of each floor box location extending through the sub-floor. The "fire-proof" application shall be equal to the floor fire-assembly withstand rating.
    - b. Poke-thru floor outlets, core drill floor for installation of poke-thru. Install "split-box" in the ceiling space of the floor below. If the ceiling space of the floor below is not accessible ceiling type (lift-out), then provide 12-inches round removable fire-rated stainless steel access panel and trim-ring in the finish ceiling for hand-access to poke-thru "split-box" above the ceiling.
  6. Outlet Box Horizontal and Vertical Separation: Outlet boxes and device outlet rings installed flush in walls shall be horizontally and vertically separated by not less than 24-inches (edge of box to edge of box) from device outlet boxes and rings in common wall surfaces located on the opposite (back) side of the same wall.
    - a. Where the separation cannot be maintained, provide a solid backing behind and completely enclosing each outlet box.
    - b. The backing shall extend the width of the wall cavity (i.e., between "studs" or masonry cells) behind the box and 12-inches above and below the outlet box center-line, completely enclosing the outlet box.
    - c. The backing shall consist of the following:
      - 1) 5/8-inch thick gypsum board anchored in place for "stud" wall construction.
      - 2) Solid "mortar" to completely fill the outlet box "cell" behind the box in masonry construction.
  7. Provide metal outlet box for each device. Install devices in metal outlet boxes. Typical for all wiring devices including, switches, receptacles, line voltage devices, and low voltage/signal system devices.
- B. Fire Wrap:
1. In fire rated walls and ceilings provide fire rated "box-wrap" around the outside of each outlet box placed in fire rated wall or ceiling. Install the fire wrap on exterior of box inside the wall or ceiling, to maintain the fire rating of wall or ceiling with the installed outlet boxes.

### **3.03 SWITCHES AND RECEPTACLES-DEVICES**

- A. General
1. Provide outlet boxes for all devices, switches, receptacles, both line-voltage and low-voltage.
  2. Devices installed in wireways shall be installed flush in wireway assembly.
  3. Install and screw attach devices into outlet boxes and wireways.
  4. Provide ground circuit connections to all devices.

5. Provide branch circuit connections to all devices.
  6. Provide testing and commissioning for proper operation and phase/ground connectors.
    - a. Test each GFCI devices after installation and circuit connection is complete.
    - b. Test all devices for correct polarity and proper electrical energization.
  7. Install and adjust all coverplates to be flush and level, with correct device identification.
  8. Were one or more devices occurring at the proximity with other similar devices, all of the devices shall be “granged” under one common coverplate as follows:
    - a. Duplex convenience receptacles with other proximity (within 18-inches) duplex convenience receptacles.
    - b. Lighting control switches not exceeding 20-amp switch rating with other proximity (within 18-inches) similar switches.
- B. Line-voltage Plug-In Type Receptacle Installation Orientation:
1. The “ground-pin” shall face “up” at the receptacle top location (double duplex) 4-plex, individual and vertically mounted individual duplex receptacles.
  2. The “neutral-blade” shall face “up” at the receptacle top location on horizontally mounted duplex receptacles.

### **3.04 DIMMER SWITCHES (ARCHITECTURAL DIMMING)**

- A. General
1. Do not break off dimmer cooling fins.
  2. Dimmers shall be surface or flush wall-mounted at the location indicated on the Drawings.
  3. Provide controls and control circuits in conduit connecting between dimmers, controllers and light fixtures, shall comply with respective Manufacturer’s recommendations.
    - a. The Drawings do not show all the lighting system point-to-point control circuit connects. Provide conduit and control circuit connects in conduit, all to comply with the Lighting Controls Manufacturer recommendations, include all materials and work as part of the Contract Requirements, for complete and operational lighting controls in each room.
  4. Provide outlet boxes for dimmer control stations. Provide equipment cabinets for dimmer equipment at each room location with dimming equipment, flush wall mount unless indicated otherwise on Drawings.
- B. Set-up, Testing, and Commissioning
1. Provide set-up, testing, and commissioning of lighting dimming system.
  2. Comply with CA-T24 Energy Code for commissioning. Comply with Manufacturer’s set-up and testing recommendations.
  3. Set-up and program lighting scene presets, lighting intensities, fade rates, and zone controls. Document and coordinate setup parameters with the Owner’s Representative.
  4. Provide factory trained and authorized Technicians to set-up, test and commission the lighting dimming control systems in each room, prior to initial energizing system.

### 3.05 CONCRETE WORK

- A. Form:
  - 1. Space forms properly with spreaders and securely tie together. Do not use twisted wire form ties. Keep forms wet to prevent joints from opening up before concrete is placed. Replace improper construction as directed. Do not use wood inside forms.
  - 2. Build in and set all anchors, dowels, bolts, sleeves, iron frames, expansion joints and other materials required for the Electrical Work. Place all items carefully, true, straight, plumb, and even.
  - 3. Carefully remove all exposed forms. Cut nails and tie wires below face of concrete and fill all holes. Rubbish will not be allowed to remain in, under, or around concrete.
- B. Mixing: Use batch machine mixer of approved type. After ingredients are in mixer, mix for at least 1½-minutes.
- C. Transit Mixing: In lieu of mixing at site, transit mixing may be used if rate of delivery, haul time, mixing time, and hopper capacity is such that concrete delivered will be placed in forms within 90-minutes from time of introduction of cement and water to mixer.
- D. Placing of Concrete
  - 1. Before placing concrete, remove wood, rubbish, vegetable matter and loose material from inside forms. Thoroughly wet down wood forms to close joints.
  - 2. Clean reinforcement; remove paint, loose rust, scale and foreign material. Bars with bends not called for will be rejected. Hold securely in place to prevent displacement. Lap bar splices 24-diameters, min; lap fabric one mesh min. Tie intersections, corners, splices with 16-gallon annealed wire, or as otherwise called for.
  - 3. Place concrete immediately after mixing. Do not use concrete that has begun to set; no tempering will be allowed. If chuting is used, avoid segregation. In placing new concrete against existing concrete, use bonding agent per Manufacturer's directions.
  - 4. Give careful and thorough attention to curing of concrete. Keep concrete and forms wet for a minimum of 10-days, after placing concrete.
- E. Concrete Finish
  - 1. Finish of Exposed Concrete: Horizontal surfaces, steel troweled monolithic finish; vertical surfaces, smooth and free of fins, holes, projection, etc.
  - 2. Exposed lighting pole bases shall be filled and sack finished to a smooth finish.

### 3.06 SURGE PROTECTION DEVICE INSTALLATION (SPD)

- A. Direct connect SPD Installation
  - 1. Install unit cabinet to insure a maximum connected circuit length of less than 8-feet from the equipment the surge protection unit is connected to, approximately plus 48-inches on wall.
  - 2. Alternately, factory install SPD unit directly into respective equipment, instead of remote from equipment. Install SPD inside respective switchgear, switchboards, distribution panels, panelboards, etc.

3. Connect between surge protection unit and supply equipment with not less than 1.25-inch conduit containing 5#4AWG, copper conductor, 600-volt THHN/THWN insulation, connection circuit.
  4. Provide a subfeed overcurrent protective device in the respective panel or switchboard to supply the SPD connection circuit, whether or not shown on the Drawings. The protective subfeed device shall be a thermal magnetic circuit breaker rated not less than 30-amp 3-pole or a safety switch and fuse unit rated not less than 60-amp 3-pole, voltage and short circuit fault interrupting class to match the respective circuit voltage.
  5. Connect surge protection unit to main building ground bus or electric distribution equipment ground bus (whichever is closer distance), with 1.25-inch conduit - 1#4AWG copper conductor 600 volt, THHN/THWN insulation.
- B. Plug-in type SPD
1. Install in respective equipment racks.
  2. Install at respective workstation locations, cabinets and furniture.
  3. Connect to respective equipment and wall electrical outlets.
- C. Install, Connect, and Test each SPD unit in accordance with Manufacturer's recommendations.

### **3.07 WIREWAY INSTALLATION**

Wireway hangers shall provide clamp type, hanger rod type, direct bolted bracket type from ceiling or walls as indicated on the Drawings and required for field installation locations. Supports shall be installed a minimum of 5-feet on center.

END OF SECTION 26 05 01  
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**SECTION 26 05 30  
CONDUIT AND WIRE**

**PART 1 - GENERAL**

**1.01 SCOPE**

- A. Work Included: All labor, materials, appliances, tools, equipment, facilities, transportation, and services necessary for and incidental to performing all operations in connection with furnishing, delivery, and installation of the work of this Section, complete as shown on the Drawings and/or specified herein. Work includes, but is not necessarily limited to the following:
1. Examine all other Sections for work related to those other Sections and required to be included as work under this Section.
  2. General Provisions and Requirements for electrical work.

**1.02 SUBMITTALS (ADDITIONAL REQUIREMENTS)**

- A. Submit product data sheets for all wire, supports, conduit, fittings, and splicing materials.  
B. Submit material list for all conduit and conduit fittings.

**PART 2 - PRODUCTS**

**2.01 CONDUIT**

- A. General
1. The interior surfaces of conduits and fittings shall be continuous and smooth, with a constant interior diameter. Conduits and conduit fittings shall provide conductor raceways of fully enclosed circular cross section. The interior surfaces of conduits and fittings shall be without ridges, burrs irregularities or obstructions. Conduits and fittings of the same type shall be of the same uniform weight and thickness.
  2. Type of conduit, type of conduit fittings and conduit supports shall be suitable for the conditions of use and the conditions of location of installation, based on the Manufacturer's recommendations and based on applicable Codes.
  3. All fittings for metal conduit shall be suitable for use as a grounding means, pursuant to the applicable Code Requirements. All metal conduit and metal conduit fittings shall provide 3 second duration ground fault current carrying ratings, when installed and connected to the respective conduit, as follows:
    - a. RMC and EMT conduit fittings.
      - 1) 0.5-inch through 1.5-inch conduit/fitting size - 10,000-amp RMS.
      - 2) 2.0-inches and larger conduit/fitting size - 20,000-amp RMS.
    - b. FMC and LTFMC Conduit Fittings
      - 1) 0.5-inch through 1.25-inch conduit/fitting size - 1,000-amp RMS (without external bonding jumper).
      - 2) 1.5-inch through 4.0-inch fitting size - 10,000-amp RMS with bonding jumper.

4. Protective corrosion resistant finish for metal conduit fabricated from steel and metal conduit fittings fabricated from steel, shall be as follows:
    - a. Clean all metal surfaces (including metal threads) with acid bath “pickle” prior to coating, to remove dirt, oil and prepare surfaces for galvanizing.
    - b. Hot-dip galvanized zinc coating on all interior and exterior steel surfaces. Minimum finish zinc coating thickness shall not be less than 0.002 inches.
    - c. Threads shall be hot-dip zinc coated after machine fabrication.
    - d. Exterior metal surfaces shall be finished with clear organic polymer topcoat layer, after galvanizing.
    - e. The inner metal surfaces of conduit fittings shall be finished with a lubricating topcoat after galvanizing, to facilitate conductor pulling through the conduit/fitting.
  5. Threads for metal conduit and metal conduit fittings shall be taper-pipe-thread, National Pipe Standards (NPS) and shall comply with ANSI-B1.20.1.
  6. Metal conduit termination connector fittings shall be provided with a Manufacturer installed, insulating throat bushing inside the fitting. The bushing shall protect the wire conductor insulation from cutting, nicks and abrasion during conductor installation and electrical load “cycling” after installation is complete. The bushing shall comply with UL 94V-0 flammability.
  7. Provide conduit bonding/grounding jumper from metal enclosures with “concentric ring” knockouts, to positively ground/bond each respective conduit(s) to the metal enclosure.
  8. Metal conduit fittings connecting to PVC coated metal conduit shall be PVC coated to match the conduit.
  9. The conduit and fittings shall be watertight and airtight without cracks and pinholes.
- B. Rigid Metal Conduit (RMC)
1. Rigid metal, round tubing, machine threaded at both ends.
    - a. The conduit and conduit fittings shall comply with the Requirements for an equipment grounding conductor, pursuant to applicable codes.
  2. RMC raceway types shall be as follows:
    - a. Rigid galvanized steel conduit (RGS), minimum yield strength shall be 35,000 PSI. Shall comply with NEMA standard 5-19 (latest revision); ANSI C80.1 and ANSI-C80.4 (latest revision); UL 514-B and UL 6 (latest revisions); National Pipe Standard Specification (latest revision).
    - b. Intermediate steel conduit (IMC). Shall comply with NEMA Standard 5-19 (latest revision) ANSI-C80.6 (latest revision); UL 2142 (latest revision).
  3. RMC fittings:
    - a. Fittings shall be compatible with RGS and IMC.
    - b. Fittings shall be rated “liquid tight”.
    - c. Fittings imbedded in concrete shall be rated “liquid tight” and “concrete tight”.
    - d. Connectors and couplings for terminating, connecting and coupling to RMC conduit shall be threaded metal.



- e. Fittings shall comply with ANSI C80.4 and ANSI C33-84 (latest revision); NEMA FB1 (latest revision); UL 514 (latest revision).
  - f. Conduit seal fittings:
    - 1) Conduit seals shall prevent the passage of gases, liquids and vapors past the location of the seal installation in the conduit.
    - 2) Conduit seals shall be suitable for installation in both vertical and horizontal conduit locations.
    - 3) Conduit seals shall be visible and accessible for inspection after installation is complete.
    - 4) Conduit seals shall be rated for the following locations:
      - a) Wet locations
      - b) Classified hazardous location materials CEC Class 1 Division 1.
      - c) Temperature ranges from 0 minus 20 degrees centigrade through 90 degrees centigrade.
    - 5) Conduit seals, sealing compound and sealing compound dam shall be the products of the same Manufacturer.
4. RMC fittings as manufactured by:
- a. For threaded enclosure, termination connection.
    - 1) Thomas & Betts - 106 Series bonding locknut, 5302 Series sealing ring with stainless steel retainer.
  - b. For non-threaded enclosure, termination connector.
    - 1) Thomas & Betts - 370 Series watertight threaded sealing hub, 106 Series threaded bonding lock nut, Sta-Con Series enclosure bonding jumper and 3870 Series threaded ground bushing.
    - 2) Emerson-OZ/Gedney-CHMT/CHT watertight threaded hub with bonding locknut and GH50G Series enclosure bonding jumper.
  - c. For RMC-to-RMC conduit-to-conduit coupling
    - 1) Thomas & Betts/Erickson - 674 (threaded) Series
    - 2) Emerson-OZ/Gedney Type TPC (threaded) Series
    - 3) Threaded RMC conduit couplings, product of the same Manufacturer as the RMC conduit.
  - d. For RMC Conduit Seals
    - 1) Emerson-OZ/Gedney-EYA and EYAM (threaded) Series
    - 2) Appleton-EYF and EYM (threaded) Series
- C. Electrical Metallic Tubing (EMT)
- 1. Rigid metal round tubing, "thin wall" steel construction, with non-threaded ends.
    - a. The conduit and conduit fittings shall comply with the Requirements for an equipment grounding conductor pursuant to applicable Codes.
    - b. The conduit shall be watertight and airtight without cracks and pinholes.

2. EMT shall be allowed for conduit size ranges from 0.5-inch through 4.0-inches.
  3. Comply with ANSI C80.3, C80.4, and ANSI C33.98 (latest revisions); UL 594 and UL 797 (latest revisions); CEC Section 12500 (latest revision).
  4. EMT fittings:
    - a. Connectors and couplings for terminating, connecting and coupling to EMT conduit shall be non-threaded steel fabrication.
    - b. EMT termination connector fittings shall be as follows:
      - 1) Do not use set screw type connectors and couplings.
      - 2) Compression types “raintight” and “concrete tight” when installed in wet or damp locations, outdoors and in concrete or masonry construction.
    - c. Fittings shall comply with ANSI C33.84 (latest revision); UL 514 (latest revision); NEMA FB-1.
  5. EMT fittings as manufactured by:
    - a. For threaded and non-threaded enclosure, termination connector
      - 1) Thomas & Betts-TC721A (set screw type) Series (with locknuts).
      - 2) Emerson-OZ/Gedney-TC500I (set screw type) Series (with locknuts).
      - 3) Thomas & Betts-5123 (compression type) Series (with two locknuts).
      - 4) Emerson-OZ/Gedney-TC600I (compression type) Series (with locknut).
      - 5) Thomas & Betts-4240 (compression type) Series (90-degree angle with locknut).
      - 6) Emerson-OZ/Gedney-TWL (compression type) Series (90-degree angle with locknut).
    - b. For EMT-to-EMT conduit-to-conduit coupling:
      - 1) Thomas & Betts-TK121A (set screw type) Series (with locknut).
      - 2) Emerson-OZ/Gedney-5000 (set screw type) Series (with locknut).
      - 3) Thomas & Betts-5120 (compression type) Series.
      - 4) Emerson-OZ/Gedney-TC600 (compression type) Series.
    - c. For EMT to RMC conduit to conduit combination coupling:
      - 1) Thomas & Betts-HT221 (set screw type) Series.
      - 2) Emerson-OZ/Gedney-ESR (set screw type) Series.
      - 3) Thomas & Betts-530 (compression type) Series.
      - 4) Emerson-OZ/Gedney-ETR (compression type) Series.
- D. Flexible Metal Conduit (FMC)
1. Round flexible conduit, fabricated from a single continuous steel strip. The steel shall be factory formed into continuous interlocking convolutions to form a complete lock between steel strips and provide raceway flexibility.
  2. Metal to metal grounding contact shall be maintained throughout the length of the FMC conduit.

3. FMC shall be allowed for conduit size ranges from 0.5 inch through 4.0-inches.
  4. FMC shall comply with ANSI-C.33.84 and ANSI C33.92; NEMA FB-1; CEC 12-1100.
  5. FMC Fittings
    - a. FMC fittings shall be malleable iron construction or steel construction.
    - b. Fitting shall automatically cause the FMC raceway throat opening to be centered with respect to the fitting throat opening.
    - c. Straight and angled connector termination fittings shall be threaded on one end and shall include a threaded locknut, suitable for connection to threaded and unthreaded enclosures.
    - d. The attachment of the fittings to FMC shall be angled saddle type, to engage and interlock with the FMC spiral groove, and shall be unaffected by vibration. Direct bearing screw type fittings shall not be used.
    - e. Direct FMC conduit-to-FMC conduit coupling of FMCs shall not be permitted.
    - f. Shall comply with ANSI C33.9, and ANSI C33.92 (latest revision); NEMA FB1 (latest revision); UL 514.
  6. FMC fittings as manufactured by:
    - a. Straight Termination Connectors      45- and 90-Degree Angle Connectors  
     Thomas & Betts- 3110 Series      Thomas & Betts-3130 Series (with locknut)  
     (with locknut)
    - b. FMC to EMT conduit combination coupling:  
     Thomas & Betts 503TB Series.
- E. Liquid Tight Flexible Metal Conduit (LTFMC)
1. The metal conduit core of LTFMC shall comply with the same Requirements as FMC conduit, with the addition of a thermoplastic exterior flexible jacket over the metal core.
  2. The exterior jacket shall be positively locked to the metal core to prevent jacket “sleeving”.
  3. The LTFMC shall be rated for installation and operating service temperatures of between minus 20 degrees centigrade through plus 90 degrees centigrade.
  4. The LTFMC jacket shall be suitable for continuous exposure to sunlight, rainwater, water vapor, mineral oils and liquid solvents, without penetrating into the conduit and without deteriorating the jacket.
  5. LTFMC sizes from 0.5-inch through 1.25-inches shall include an additional internal ground conductor, fabricated by the Manufacturer, as an integral part of the conduit core.
  6. Direct LTFMC conduit-to-LTFMC conduit coupling of LTFMC shall not be permitted.
  7. LTFMC shall be allowed for conduit size ranges from 0.5-inch through 4.0-inches.
  8. In addition to the Requirements for FMC conduit, LTFMC shall also comply with ANSI C-33.84 (latest revision); NEMA-FB1 (latest revision); CEC 12-1400 (latest revision).
  9. LTFMC fittings
    - a. Fittings shall include an external mechanical ground/bond wire connector.

- b. The attachment of the fitting to LTFMC shall be threaded compression type onto the conduit core with locknut and liquid tight jacket compression seal. The fitting shall automatically prevent “sleeving” of the jacket.
  - c. Straight and angled termination connector fittings shall be threaded on one end and shall include locknut suitable for connection to threaded and unthreaded enclosures.
10. LTFMC fittings as manufactured by:
- a. Termination connector fittings:
 

<u>Straight</u> Thomas & Betts-5331 GR Series. Appleton-STB & STN-L Series; for use with preformed “knockouts”. Emerson- OZ/Gedney-4QSeries.	<u>45- and 90-Degree Angle Connectors</u> Thomas & Betts-5341GR & 5351GR Series Appleton-STB-L & STN-L Series for use with preformed “knockouts”. Emerson-OZ/Gedney-4Q Series
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  - b. LTFMC to RMC conduit to conduit combination coupling fittings:
    - 1) Thomas & Betts-5271 GR Series.
    - 2) Emerson-OZ/Gedney-4Q Series
- F. Rigid Non-Metallic Conduit (RNMC)
- 1. General
    - a. Conduit and fittings shall be 90-degree centigrade conductor rated. Fabricated from homogeneous material, free from visible cracks, holes or foreign inclusions, with integral “end-bell”. The conduit and conduit fittings shall be watertight and airtight.
    - b. Conduit, conduit fittings and conduit fitting assembly “solvent cement” shall all be the product of the same Manufacturer. Conduit fittings shall be solvent cement welded watertight.
    - c. Conduit and fittings shall be identified with legible markings showing ratings, size and Manufacturer’s name.
    - d. RNMC and fitting shall be corrosion resistant, watertight.
    - e. Conduit shall be suitable for conductor operating temperatures from minus 20 degrees centigrade to 90 degrees centigrade.
    - f. RNMC shall comply with NEMA TC-2 (PVC 40 conduit, latest revision) NEMA TC-6 (EB conduit latest revision) and NEMA TC-3 (fittings, latest revision); UL 514 and UL 651 (latest revision).
  - 2. Polyvinyl Chloride (PVC)-RNMC
    - a. PVC-Schedule 40 heavy wall construction.
  - 3. RNMC fittings connecting to metallic raceways shall be provided with a ground/bond jumper connection.
- G. Expansion Joint, Deflection Joint and Seismic Joint Conduit Fittings
- 1. Expansion Conduit Fitting - Fitting shall provide for a minimum of 2-inches straight line movement between two connecting conduits in each direction (total 4-inches conduit expansion and contraction) parallel to the respective conduit lengths. Fitting shall be watertight.

2. Deflection Conduit Fitting - Fitting shall provide for a minimum of 30 degrees angular deflection movement ("Shear" deflection) between two connecting conduits, in any direction perpendicular to the length of the respective conduits. Fitting shall be water-tight.
3. Combination Expansion/Deflection Conduit Fitting, Fitting shall provide the combined "expansion" and "deflection" movement capacity between two connecting conduits as described for separate "expansion" and "Deflection" conduit fittings. Fitting shall be approved for installation concealed in both masonry/concrete construction and exposed non-masonry/concrete construction. Fitting shall be watertight.
4. Fittings shall comply with UL.
5. Fittings as manufactured by:
  - a. Conduit expansion fittings exposed, or concealed locations as manufactured by:
    - 1) Emerson – OZ/Gedney – AXB-8 Series for RMC conduit.
    - 2) Emerson – OZ/Gedney - TX Series for EMT conduit.
    - 3) Appleton – AXB or XJ8 Series for RMC conduit and EMT conduits. Provide RMC to EMT combination conduit coupling fittings for each end of the expansion fitting.
  - b. Combination expansion/deflection conduit fittings exposed, or concealed conduit locations as manufactured by:
    - 1) Emerson-OZ/Gedney-AXDX Series for RMC conduit.
    - 2) Emerson-OZ/Gedney-AXDX Series for EMT conduit.
    - 3) Appleton-DX Series for RMC conduit.
    - 4) Provide RMC to EMT combination conduit coupling fittings for each end of the expansion/deflection fitting.
  - c. Conduit expansion/deflection fittings for FMC and LTFMC conduit.
    - 1) Provide a minimum of 12-inches of "slack" LTFMC in each FMC or LTFMC conduit at building and structure seismic or expansion joint conduit crossings.
    - 2) Note: Each FMC "slack" expansion/deflection location, shall be considered as not less than a 90-degree conduit bend location, for compliance with the maximum quantity of conduit bends allowed in a raceway.
6. Conduit fitting bonding jumper:
  - a. The grounding/bonding path of metal conduit shall be maintained by the fitting.
  - b. Provide a bonding jumper at each expansion, deflection and combination expansion deflection conduit fitting.
  - c. The jumper shall be a bare flexible copper "braid". The copper braid electrical current carrying capacity shall be equal to the metal conduit.
  - d. Provide a factory terminated ground clamp on each end of the braid with adjusting steel conduit grounding clamps and connect to each respective conduit end.
  - e. The jumper braid length shall be 8-inches longer than the respective conduit fitting.

f. Bonding jumper for FMC and EMT fittings as manufactured by:

- 1) Emerson-OZ/Gedney – BJ and BJE Series
- 2) Appleton – BJ/XJ Series

H. Conduit Bodies Conduit Fitting

1. Conduit bodies shall provide conductor access with a removable conduit body cover and wiring area enclosed in metal housing. The conduit body shall facilitate pulling conductors.
2. In-line form “C” conduit bodies shall be prohibited.
3. The interior space “length” of 90 degree “elbow” conduit bodies shall not be less than six times the diameter size of the largest conduit connecting to the conduit body.
4. Conduit body covers shall be removable, gasketed; watertight “domed” metal covers “Mogul-Type” with threaded screw attachment to the conduit body.
5. Lubricated, reusable, wire roller guards inside the conduit body shall protect wire from insulation damage during wire “pulling”.
6. Conduit body fittings shall comply with UL 514.
7. Conduit bodies as manufactured by:
  - a. For RMC Conduit
    - 1) Hubbell/Killark – LB/Mogul (90-degree elbow) Series – threaded body.
    - 2) Emerson-OZ/Gedney - LB 6X/Mogul (90-degree elbow) Series - threaded body.
    - 3) Appleton – NEC6X-LB/Mogul (90-degree elbow) Series - threaded body.
  - b. For EMT Conduit
    - 1) Same as for RMC conduit. Provide EMT to RMC conduit combination coupling fitting for each outlet body connection.

## 2.03 CONDUIT SUPPORTS

A. General

1. Conduit Supports, hangers and fasteners for metal conduit shall be steel, hot dip zinc galvanized.
2. Threaded hardware shall be continuous, free running threads.
3. Conduit support systems, including support channels, pipe clamps, braces, anchors, hardware, fasteners, shall be sized to support the full capacity circuit conductors’ weight, plus the installed conduit weight, plus the conduit fitting weight and support hardware weight, plus a 300% additional weight capacity safety factor.
4. Provide lock washer at each “bolted”/threaded connection.
5. Conduit supports, fasteners, channels, braces, hardware, anchors, pipe clamps, and hangers as manufactured by Unistrut or Kindorf.
6. Supports shall be free of “BURRS” and sharp edges.
7. Metal supports cut in the field shall be zinc galvanized after cutting to prevent rust.

B. Conduit Hangers

1. Threaded steel hanger rods.
  - a. Hanger rods smaller than 0.375-inches in diameter shall not be used for support of individual conduits.
  - b. Hanger rods smaller than 0.5-inches in diameter shall not be used for support of multiple conduits.
2. Conduit hanger wires shall be not less than 12-gauge steel.
3. Conduit hangers shall attach to structure fasteners with steel “Clevis” or “Swing” hangers and shall provide a minimum of 45 degrees of angular movement in any direction at the point of the conduit hanger attachment to the structure fasteners.
4. Conduits individually suspended by conduit hangers shall fasten to the respective hangers with “Clevis” type pipe hangers. The pipe hangers shall be steel, adjustable to fit conduit size and shall completely enclose the conduit circumference.

C. Conduit Support Channels

1. “C” channels shall be factory preformed with a minimum 12-gauge thickness metal. The channel shall be factory “punched” with regularly spaced slotted holes for fastener attachments along the length of the channel.
2. The “C” channel shall not deflect more than 0.1-inch between channel supports at maximum installed design load, including required safety factor.
3. Channels shall comply with ANSI-1008 (latest revision) and ASTM-A569 latest revision).
4. Channels shall provide “turned lips” at longitudinal edges to hold (lock-in) fasteners.
5. Conduit support channels suspended from conduit hangers shall attach to conduit hangers with treaded connections. Provide a minimum of two hangers (trapeze style) connected to each channel.
6. Non-suspended conduit support channels shall connect to structure fasteners with threaded connectors.

D. Fasteners, Seismic Earthquake Rated

1. Channel fasteners:
  - a. Channel fasteners shall “pre-locate” and lock into the channel “turned lips” and channel “walls”.
  - b. A separate metal strap shall “tie” each conduit to each channel with conduit channel fasteners.
2. Structure fasteners:
  - a. Structure fasteners for wall and floor mounted conduit attachments shall attach to existing masonry and concrete structures with structure fasteners using drilled, mechanical, expansion shield anchors.
  - b. Structure fasteners for wall and floor mounted conduit attachments shall attach to new masonry and concrete structures with structure fasteners using steel threaded inserts precast into the structures.

- c. Structure fasteners shall center the support load above or below the beam flanges and reduce torsion-rotation forces exerted on the structural beam. Attach to steel structural members with "swing-beam clamps", with set-locking screw structure fasteners.
  - 1) Beam clamps shall include integral safety rod, strap, or "J"-hook to secure the attachment clamp to the beam flanges on both sides of the beam, with integral hanger rod attachment.
  - 2) Or double-ended beam clamp to secure the attachment clamp to the beam flanges on both sides of the beam, with integral hanger rod attachment.
- d. Structure fasteners for wall and floor mounted conduit attachments shall attach to wood structural members with flush "through-bolted" wood beam/wood framing stud structure fasteners.
- e. Structure fasteners for wall mounted conduit attachments shall attach to steel framing studs and steel structural elements with spot welded steel structure fasteners or drilled and bolted structure fasteners.

E. Brace Connectors

- 1. Provide lateral brace connectors to resist horizontal, lateral and vertical movement of suspended conduits during seismic earthquakes.
- 2. The braces shall connect from each conduit support, attach as close to the conduit as possible, and attach to fixed rigid, non-suspended building "main" structural elements with fixed anchoring.
- 3. Brace attachment connectors and fasteners shall be rigid preformed steel channels or flexible #10-gauge steel hanger wire.
- 4. Connect and attach the brace connectors to fixed structural elements in the same manner as conduit support hangers. The connection of braces to structural elements shall be independent of the conduit support hanger structure fasteners.

**2.04 ELECTRICAL POWER WIRE AND CABLE**

A. General

- 1. All wire and cable shall be single-conductor, annealed copper, insulated 600-volt, #12AWG minimum unless specifically noted otherwise on the Drawings. At the direction of the Owner, aluminum conductors shall not be permitted.
- 2. Conductors #10AWG and smaller shall be solid. Conductors #8AWG and larger shall be stranded.
- 3. Insulation of conductor connected to circuit protection devices required to be "100%" rated, shall be 90-degree centigrade rated insulation.
- 4. Insulation of conductors installed outdoors, on grade or underground, insulation shall be rated for wet locations.
- 5. Insulation of conductors installed outdoors, installed exposed to the sun, installed in exposed conduits, insulation shall be rated for high-temperature 90 degrees centigrade.
- 6. Insulation of branch circuit conducts installed in light fixtures; insulation shall be rated for 90 degrees centigrade.



7. Conductor exposed to oil, insulation and jacket shall be oil resistant, complying with "Oil Resistant-1" and "Oil Resistant-2" UL 83.

B. Conductor Insulation

1. 600 Volt AC and/or DC insulated conductors installed entirely inside conduits, or enclosed inside wireways, or enclosed inside raceways, insulation shall be rated as follows.
  - a. Indoor above Grade locations either concealed or exposed.
    - 1) Dual rated THHN and THWN
    - 2) Individually rated THHN-2
    - 3) Individually rated THWN-2
    - 4) XHHW-2
  - b. Outdoor above Grade either concealed or exposed.
    - 1) XHHW-2
    - 2) THWN-2
    - 3) THW-2
  - c. Outdoor below Grade or outdoor on Grade.
    - 1) XHHW-2
    - 2) THWN-2
    - 3) THW-2
  - d. All other enclosed raceway locations not described above.
    - 1) XHHW-2
    - 2) THWN-2
    - 3) THW-2

C. Insulation Color Coding and Identification

1. The following color code for branch circuits:
  - a. Neutral . . . White (Tape feeder neutrals with white tape near connections)
  - b. Normal Power

<u>120/208 Volt</u>	<u>480/277 Volt</u>
Ground Green	Ground Green
Phase A Black	Phase A Brown
Phase B Red	Phase B Orange
Phase C Blue	Phase C Yellow
  - c. Emergency power same insulation color as normal power except as follows:

<u>120/208 Volt</u>
Provide a continuous stripe on each conductor insulation, orange or yellow, except ground
<u>480/277 Volt</u>
Provide a continuous stripe on each conductor insulation blue or black, except ground

2. When individual neutral conductors are shown for each branch circuit, the color code for the neutral conductors shall be as follows:
    - a. 120/208 volt; Phase A - White with Black stripe; Phase B - White with Red stripe; Phase C - White with Blue stripe.
    - b. 277/480 volt; Phase A - White with Brown stripe; Phase B - White with Orange stripe; Phase C - White with Yellow stripe.
  3. Feeders identified as to phase or leg in each, switchboard, switchgear, panelboard and junction location with printed identifying tape.
  4. Fire alarm conductors: Use 600-volt, type THHN-2/THWN-2 conductors and color-coded per Equipment Manufacturer's recommendations and approved and listed for use on fire alarm systems by the California State Fire Marshal.
  5. Color coding for mechanical and plumbing control wiring shall be an agreed upon color code between the Mechanical/Plumbing Contractor and the Electrical Contractor, and color code shall be submitted to the Owner's Representative in writing for approval prior to installation.
- D. Panel and Equipment Feeders
1. Wire size shown on the Drawings is for copper conductors. At the direction of the Owner, aluminum conductors shall not be permitted.

## 2.05 CHEMICAL GROUND ROD

- A. General
1. Self-contained ground rod(s) using chemically enhanced grounding shall be provided where specifically indicated on the Drawings. As manufactured by Lyncole XIT Grounding Systems, 22412 South Normandie Avenue, Torrance, CA. Telephone (800)962-2610; or Superior Grounding Systems, Irwindale, CA. Telephone (800)747-7925; or ERICO – Eritech Chemical Ground Electrode.
  2. The ground rod shall operate from changes in atmospheric pressure pumping air through the ground rod, hygroscopically extracting moisture from the air to activate the ground electrolytic chemicals and improve the ground rod performance.
  3. Ground rod system shall be UL-467 listed.
  4. Ground rod system shall be 100% self-activating, sealed and maintenance free. The addition of chemical or water solutions shall not be required.
- B. Ground Rod
1. Ground rod shall consist of a 2-inches nominal diameter hollow, copper tube. The tube shall be permanently capped on the top and bottom. Air breather holes shall be provided in the top of tube. Drainage holes shall be provided in the bottom and sides of the tube for electrolyte drainage into the surrounding soil.
  2. The ground rod shall be chemically filled at the factory with environmentally non-hazardous water-soluble metallic salts to enhance electrical grounding performance.
  3. Ground rod shall be a minimum of 10-feet long for straight (vertical) installation; or "L" shape minimum 20-feet long for horizontal installation.

4. Ground wire clamping "U-Bolt" with pressure plate on the top end of the tube sized for 1#2 thru 500 MCM AWG ground electrode conductor connection and stranded 4/0AWG copper pigtail exothermically welded to the side of rod for ground electrode conductor connection.
- C. Ground Box
1. Precast concrete box with slots for conduit entrances. Approximately 10-inch diameter by 12-inches high. Cast iron grate flush cover with "Breather" slots XIT Box #XB-12.
- D. Backfill Material
1. Natural volcanic, non-corrosive Bentonite Clay backfill material.
  2. Shall absorb water at a minimum of thirteen times its dry volume or approximately 14-gallons for 50 pounds of clay.
  3. PH value 8-10 with maximum resistivity of 2.5 OHMS-M at 300% moisture content by weight.

### **PART 3 - EXECUTION**

#### **3.01 TRENCHING, FOOTINGS, SLEEVES**

- A. Provide trenching, concrete encasement of conduits, back-filling, and compaction for the underground electrical work, in accordance with applicable Sections of this Specification.
- B. Provide footings for all post and/or pole-mounted lighting fixtures: concrete shall conform to the applicable Sections of this Specification.
- C. Sleeves
1. Provide sleeves for raceways, conduit and wire/cables passing through the following construction elements:
    - a. Concrete and masonry foundations, floors, walls and slabs.
    - b. Gypsum, Lath, and plaster walls and ceilings.
    - c. Building structures (i.e., foundations, walls, floors, ceilings, beams, and roofs) with a fire rating exceeding 20-minutes.
  2. Sleeves shall extend 1.5-inch above and below floors, except under floor standing electrical equipment. Sleeves shall be flush with wall ceiling foundations and partitions exposed to public view and extend approximately 0.5-inch past penetration in fire rated construction. Sleeves shall be installed at exact penetration locations and angles to accommodate wire/cable, raceway and conduit routings.
  3. Joists, girders, beams, columns or reinforcing steel shall not be cut or weakened. Where construction necessitates the routing of conduit or raceways through structural members, framing or footings, written permission to make such installation shall first be obtained from the Owner's Representative. Such permission will not be granted, however, if any other method of installation is possible.
  4. The layout and design of raceways and conduits located in or routed through masonry or reinforced beams or the Owner's Representative shall review walls before any work is performed. All sleeving shall be accomplished according to the instructions of the Owner's Representative and shall be accepted before any concrete is poured.

5. Sleeves, raceways and conduit shall be located to clear steel reinforcing bars in beams. Reinforcing bars in walls shall be offset to clear piping and sleeves.
6. Provide a continuous clearance between the inside of a sleeve and exterior of wire/cables, conduits and raceways passing through the sleeve not less than the following:
  - a. 0.5-inch clearance except as required otherwise.
  - b. 1.0-inch clearance through outside walls below grade.
  - c. 3.0-inch clearance through seismic joints.
7. Sleeves set in fire rated construction shall be caulked between sleeve and building structure, additionally sleeves shall be caulked between the sleeve and the wire/cables, conduits/raceways passing through the sleeve. The caulking shall be a fireproof sealant, equal to the fire rating and temperature being penetrated. Clearance between components inside of sleeve and exterior of components passing through sleeve and between components inside the sleeve shall comply with Fireproof Sealant Manufacturer's recommendations.
8. Sleeve material:
  - a. In floor construction: Schedule 40 black steel pipe, with upper surface to be sealed watertight.
  - b. In concrete or masonry walls roofs or ceilings: Schedule 40 black steel pipe. When installed in roofs or outside walls, seal outer surface watertight.
  - c. In fire rated construction; 24-gauge galvanized iron or steel.
  - d. Sleeves through waterproof membranes: Cast iron or Schedule 40 steel with flashing clamp device and corrosion resistant clamping bolts. Caulk space between pipe and sleeve and surfaces between sleeve and conduits sealed watertight.

### **3.02 GROUNDING**

- A. Grounding shall be executed in accordance with all applicable Codes and Regulations, both State and local authorities having jurisdiction.
- B. Where nonmetallic conduit is used in the distribution system, the Contractor shall install the proper sized copper ground wire in the conduit with the feeder for use as an equipment ground. The electrical metallic raceway system shall be grounded to this ground wire.
- C. The maximum ground/bond resistance to the grounding electrode shall not exceed 1-ohm from any location in the electrical system. The maximum ground resistance of the grounding electrode to earth shall not exceed 5-ohms.
- D. Ground/Bond Conductors
  1. Provide an additional, dedicated, green insulation equipment ground/bond wire inside each conduit type and raceway as follows. Size the ground/bond conductors to comply with CEC Requirements. The metal conduit or raceway shall not be permitted to serve (function) as the only (exclusive) electrical ground return path:
    - a. All types of nonmetallic conduit and all types of non-metallic raceways including but not limited to: RNMC - Rigid Nonmetallic Conduit.
    - b. FMC - Flexible Metal Conduit.
    - c. LTFMC - Liquid Tight Flexible Metal Conduit.

- d. Metal and non-metal raceways.
  - e. RMC - Rigid Metal Conduit.
  - f. EMT - Electrical Metal Tubing.
2. The equipment ground/bond wire shall be continuous from the electrical circuit source point of origin to the electrical circuit end termination utilization point as follows:
    - a. Every conduit and raceway path containing any length of the above identified conduits or raceway.
    - b. Every conduit path and raceway path connected to any length of the above-identified conduits and raceways.
  3. The equipment ground/bond wire shall be sized as follows, but in no case smaller than indicated on the Drawings. Install equipment ground/bond wire in each conduit/raceway, with the respective phase conductors:
 

a. Feeder, Sub-feeders and Branch	Minimum Equipment
<u>Circuit Protection</u>	<u>Ground Wire Size</u>
15 amp	#12
20 amp	#12
0 to 60 amp	#10
70 to 100 amp	#8
101 to 200 amp	#6
201 to 400 amp	#2
401 to 600 amp	#1
  4. Splices in ground/bond wires shall be permitted only at the following locations:
    - a. Ground buses with listed and approved ground lugs.
    - b. Where exothermic welded ground/bond wire splices are provided.
  5. Provide ground/bond wire jumpers for conduit fittings with ground lugs, expansion and deflection conduit fittings at conduit fittings connecting between metallic and non-metallic raceways and to bond metal enclosures to conduit fittings with ground lugs.
- E. Where conductors are run in parallel in multiple raceways, the grounding conductor shall be run in parallel. Each parallel equipment-grounding conductor shall be sized on the basis of the ampere rating of the overcurrent device protecting the circuit conductors in the raceway. When conductors are adjusted in size to compensate for voltage drop, grounding conductors, where required, shall be adjusted proportionately in size.
  - F. Ground conductors for branch circuit wiring shall be attached at each outlet to the back of the box using drilled and tapped holes and washer head screws, 6-32 or larger.
  - G. Each panelboard, switchboard, pull box or any other enclosure in which several ground wires are terminated shall be equipped with a ground bus secured to the interior of the enclosure. The bus shall have a separate lug for each ground conductor. No more than one conductor shall be installed per lug.

### 3.03 CONDUIT

#### A. General

1. The sizes of the conduits for the various circuits shall be as indicated on the Drawings, but not less than the conduit size required by code for the size and quantity of conductors to be installed in the conduit.
2. Conduits shall be installed concealed from view. Install conduits concealed in walls, concealed below floors and concealed above ceilings, except as specifically noted otherwise.
  - a. Conduits shall not be installed in concrete floors.
3. The following systems shall be considered as circuits 100 volts and less, all other circuits shall be considered to be over 100 volts (power circuits) unless specifically noted otherwise: Fire alarm, energy management control, telephone, public address, data, computer, television, intercom, intrusion alarm and nurse call.
4. Conduits shall be provided complete with conduit bends, conduit fittings, outlet boxes, pullboxes, junction boxes, conduit anchors/supports, grounding/bonding for a complete, and operating conductor/wire raceway system.
5. Metal and nonmetal conduits shall be provided mechanically continuous between termination connection points. Metal conduit shall be provided electrically continuous between termination connection points.
6. Individual conduit paths and home runs shown on the Drawings shall be maintained as separate individual conduits for each homerun and path.
7. Conduits, conduit fittings and installation work occurring in classified hazardous materials locations shall comply with applicable Code Class 1 Division 1 Requirements, unless specifically noted otherwise.
8. Transitions between conduits constructed of different materials and occurring in above grade locations shall be allowed only at outlet boxes, junction boxes, pull boxes, and equipment enclosures unless specifically indicated otherwise. Provide outlet boxes and junction boxes.
9. Metal conduit terminating to nonmetal enclosures; terminating into metal enclosures with "concentric.ring" knockouts; terminating into metal enclosures with knockout reducing washers, including but not limited to equipment housings, outlet boxes, junction boxes, pull boxes, cable trenches, manholes, shall be provided with a ground/bonding lug integrated with the conduit termination conductor fitting construction, by the Fitting Manufacturer. The lug shall provide for connection of a grounding/bonding conductor (insulated or uninsulated). The grounding lug shall be located on the fitting, inside the termination enclosure.
10. The type of conduit, type of conduit fittings, and type of conduit supports, and method of conduit installation shall be suitable for the conditions of use and conditions of location of installation based on the Manufacturer's recommendations; based on the applicable Codes and based on the Requirements of the two.

- B. RMC Installation Locations. RGS, IMC conduits and RGS, IMC fittings shall be installed in the following locations:
1. Embedded in floors, walls, ceilings, roofs, foundations, and footings constructed with concrete.
  2. Embedded in walls and foundations constructed with brick and masonry.
  3. Interior of buildings, within 9-feet of finish floor lines for exposed conduit locations.
  4. Exterior of building for exposed conduit locations.
  5. Damp or wet locations exposed or concealed locations.
  6. Exposed on roofs.
  7. RMC conduit and RMC fittings may be installed in any location where EMT and FMC conduit is permitted to be installed.
- C. EMT Installation Locations. EMT conduit and EMT fittings may be installed in the following locations, for circuit conductors operating below 600 volts to ground; locations containing only “non-hazardous materials”; only dry locations:
1. Concealed in hollow non masonry/non-concrete, metal stud frame and wood stud frame walls and floors.
  2. Concealed above ceilings.
  3. Exposed inside interior enclosed crawl spaces.
  4. Exposed interior locations placed 9-feet or higher above finished floors (except as described in paragraph below at lower heights).
  5. Exposed on walls and ceilings (any height) in the following dedicated function areas, interior enclosed room locations:
    - a. Indoor enclosed electrical equipment rooms and closets.
    - b. Indoor enclosed data and telecommunication terminal rooms and closets.
    - c. Indoor enclosed HVAC equipment rooms and closets.
  6. Any location where FMC is described to be installed, except as the final connection to rotating or vibrating equipment.
- D. FMC Installation Locations. FMC conduit and FMC fittings may be installed in the following locations for circuit conductors operating below 600 volts to ground; locations containing only “non-hazardous materials”; only dry, interior locations:
1. Concealed in hollow non-masonry metal stud frame and wood stud frame fully enclosed walls.
  2. Concealed above fully enclosed ceiling spaces.
  3. FMC conduit shall be installed in continuous lengths between termination points. FMC shall not be “spliced” or coupled directly to FMC or any other conduit type under any circumstance.
  4. The maximum continuous length of FMC that shall be installed between termination end points is 15-feet. Circuits requiring continuous conduit lengths exceeding 15 feet between termination end points shall be installed using either RMC or EMT conduits. FMC lengths shorter than 16-inches are prohibited.

5. The minimum size FMC conduit shall be as shown on the Drawings but not be less than the following:
  - a. FMC lengths of 6-feet or less, minimum FMC conduit size shall be 0.50-inch.
  - b. FMC lengths exceeding 6-feet, minimum FMC conduit size shall be 1.0-inch.
- E. LTFMC Installation Locations. LTFMC conduit and LTFMC fittings shall be installed in the following locations for circuit conductors operating below 600 volts to ground; locations containing only “non-hazardous materials”:
  1. Final electrical connection to vibrating or rotating equipment; control and monitoring devices mounted on vibrating and rotating equipment including the following. Minimum conduit length shall not be less than 24-inches:
    - a. Motor, engines, boilers, solenoids, and valves.
    - b. Fixed mounted “shop” (manufacturing) production equipment.
    - c. Fixed mounted food preparation equipment and “kitchen” equipment.
  2. All locations where exposed flexible conduit connections are required, both indoor and outdoor.
  3. Final connection to indoors electrical transformers. Minimum conduit length shall not be less than 24-inches; maximum conduit length shall not exceed 72-inches.
  4. Do not install LTFMC located in environmental air plenums.
- F. RNMC Installation Locations. RNMC conduit and RNMC fittings shall be installed in the following locations containing only “non-hazardous material”:
  1. Underground, concealed below earth grade, unless specifically noted or specified otherwise.
  2. RNMC type “EB” conduit(s) shall be concrete encased along the entire length of the conduits for all installation locations.
  3. Non-metal type raceways and RNMC type conduit shall not be installed inside buildings.
- G. Conduit Installation
  1. Conduit Supports
    - a. Securely and rigidly support all raceways/conduits from the building structure. Raceways/Conduits shall be supported independent of all piping, air ducts, equipment ceiling hanger wires, and suspended ceiling grid systems. Secure conduit to structural element by means of UL listed and approved hangers, fasteners, “C” channels and pipe clamps.
    - b. Provide conduit supports spaced along the length of the conduit as follows:
      - 1) RMC and EMT conduit, maximum not to exceed 96-inches on center; within 24-inches of each conduit bend and conduit termination location.
      - 2) FMC and LTFMC conduit, maximum not to exceed 24-inches on center; within 6-inches of each conduit bend and conduit termination location.



- c. Suspended conduit methods:
    - 1) Individual, suspended raceways/conduits separated by more than 12-inches from any other conduit and suspended from ceilings and roofs shall be supported as follows:
      - a) Conduits smaller than 1.5-inch by means of hanger rods or hanger wires.
      - b) Conduits 1.5-inch and larger by means of hanger rods.
      - c) The conduit shall attach to the hangers with pipe clamps.
    - 2) Suspended raceways/conduits positioned within 24-inches of any other conduit shall be grouped and supported by hanger rods using trapeze type conduit support channels ("C" channels). Conduits shall individually attach to common channels side-by-side, with pipe clamps.
  - d. Non-suspended conduit methods:
    - 1) Individual raceway/conduits placed against wall/ceiling/floors, placed inside hollow wall/ceiling construction or structure framing (i.e., "dry- wall" or plaster hollow wall construction), shall be secured by means of individual pipe clamps and fasteners attached to the framing studs or other structural members and the conduit/raceway.
    - 2) Provide common "C" channel supports for all multiple raceway/conduits placed against vertical or horizontal surfaces and positioned within 24-inches of other raceways/conduits. Attach channels to the framing studs or other structural members. Attach the conduits/raceway individually to common channels, side-by-side, with pipe clamps.
    - 3) The use of toggle bolts is prohibited.
  - e. Conduit rising from floor for motor connection shall be independently supported if extending over 18-inches above floor. Support shall not be to a motor or ductwork, which may transmit vibrations.
  - f. Provide conduit anchoring, conduit support and conduit bracing systems conforming to Earthquake Seismic Requirements. The conduit support/anchoring system capacity shall include the weight of the conduits, conduit fittings, conduit supports, and conductors/wires/cables installed in the conduits plus a 300% safety factor. Submit Shop-Drawing details showing each typical conduit anchor, conduit support and conduit brace location.
2. Conduit separation:
- a. Conduit installed underground or below building slab without full concrete encasement: Shall be separated from adjacent conduits of identical systems (i.e., signal to signal, data to data, power to power, control to control etc.) by a minimum of 3-inches. Conduits of non-identical systems (i.e., signal to power; data to power; power to control; signal to control, etc.) shall be separated by a minimum of 12-inches.
  - b. Conduit installed underground with full concrete encasement; shall be separated from adjacent conduits of similar systems (100 volt and less) by a minimum of 2-inches; conduits for non-power systems (100 volts and less to ground) shall be separated by a minimum of 6-inches from power circuits (over 100 volts to ground);

conduits for power circuits shall be separated from adjacent conduits of similar power systems (over 100 volts to ground) by a minimum of 3-inches.

- c. Separation of conduits entering termination points or crossing other conduits may be reduced as required within 60-inches of the termination or crossing points.
- d. Conduits shall be separated from hot water piping, exhaust flues/chimneys, steam piping, boilers, furnaces, ovens by a minimum of 12-inches.

3. Conduit stubs:

- a. Branch circuit and telephone conduits turned up from floor at the following locations shall terminate each conduit in a flush conduit coupling at the floor and then extend into partition or to equipment. Refer to Owner's Representative's Drawings for location of walls and partitions.
  - 1) Interior demountable partitions.
  - 2) Below, into or adjacent to equipment not installed directly adjoining to a wall.
  - 3) Up from below the floor into hollow stud frame walls.
- b. From each panel, and signal cabinet which is wall mounted, stub up from top of the panel/cabinet a minimum of three 1-inch conduits to the nearest accessible ceiling spaces or other accessible location. Where the floor below the panel is accessible or is a ceiling space, stub an additional three 1-inch conduits from the bottom of the panel into the accessible space below the panel. Cap conduits for future use.
- c. Conduits stubbed underground outside of building line for future use shall be terminated a minimum of 5-feet clear (whichever distance is greater) of building or adjacent concrete walks and AC paving. The stubout conduit shall be capped. Provide concrete monuments, 6-inches by 6-inches by 15-inches deep, buried flush with grade over the capped ends. The face of monument shall be furnished with 3-inches square brass plates securely mounted and engraved with the number and size of conduits and type of service (i.e., "POWER", "TEL.", etc.).
- d. Conduits stubbed into ceiling or floor spaces from outlets for telephone, video, computer/data or television shall be provided with an insulated throat bushing, on the end of each conduit stubout.
- e. Conduit stubouts from outlet boxes and equipment located in hollow stud walls, into ceiling and floor spaces, shall be EMT or RMC conduit. The stubouts shall terminate into the ceiling and floor spaces with a conduit termination connector fitting.
- f. Empty conduit stubs into building spaces and equipment shall be individually identified with an "ID-tag" located at each end of the conduit. The ID-tag shall state the origination point and termination point of the respective conduit (i.e., "from PNL-A/to Room #121"; "from outlet #24/to outlet #17 in Room #120"; etc.).
- g. Provide a conduit termination fitting with insulated throat bushing and mechanical ground lugs at each conduit "stub-up" location.

4. Conduit concrete encasement:

- a. Conduits which are run underground exterior to building slab shall be continuously concrete encased except, 15-amp and 20-amp power branch circuit conduits underground do not require concrete encasement.

- b. Concrete for encasement of underground conduits shall be 2000-PSI 28-days cure strength with a mix of cement, sand, water and maximum of ¾-inch gravel. Concrete encasement of conduits shall be continuous without voids. The encasement shall extend 3-inches past the edges of all conduits on all sides of the circuit. Provide 10 pounds of red oxide cement coloring uniformly mixed with each cubic yard of concrete for conduit encasement.
  - c. Conduits located below or adjacent to structural foundations shall be separated from the foundation by a minimum of 12-inches. Conduits located below structural foundations shall be fully and continuously concrete backfilled and encased between the bottom of the foundation to the bottom of the conduits. The concrete shall be 4000-PSI 28-day cure strength instead of 2000-PSI concrete.
  - d. Conduits of any size and type (including 15 amp and 20-amp power branch circuits) located under roads, paved areas and “transit-system” right of way shall be concrete encased.
5. Underground conduits:
- a. Three or more underground conduits larger than 1-inch in size and occupying the same trench shall be separated and supported on factory fabricated, non-metallic, duct/conduit support spacers. The spacers shall be modular, keyed interlocking type, "built-up" to accommodate quantity, size orientation and spacing of installed conduits. The spacers shall maintain a constant distance between adjacent conduit supports and hold conduits in place during trench backfill operations. Minimum support spacer installation interval along with length of the conduits shall be as follows:
    - 1) Concrete encased conduits, not less than 8-feet on center.
    - 2) Non-concrete encased conduits, not less than 5-feet on center.
  - b. Provide trenching, excavation, shoring and Back-filling required for the proper installation of underground conduits. Tops of backfill shall match finish grade.
  - c. Bottoms of trenches shall be cut parallel to “finish grade” elevation. Make trenches 12-inches wider than the greatest diameter of the conduit.
  - d. Back-filling Trenches for Conduits without Concrete Encasement Requirements
    - 1) Conduits which are not required by the Contract Documents to be concrete encased and are located exterior to building slab, shall be set on a 3-inch bed of damp clean sand. Conduit trenches shall be back-filled to within 12-inches of finished grade with damp sand after installation of conduit is completed. Remainder of backfill shall be native soil.
    - 2) Conduits located under a building which are not required by the Contract Documents to be concrete encased, shall be completely back-filled and compacted with clean damp sand to the same level as the building foundation pad.
    - 3) Provide a continuous yellow 12-inches wide flat plastic tracer tape, located 12-inches above the conduits in the trench. The tracer tape shall be imprinted with “Warning-Electric Circuits” a minimum of 24-inches on center.

- e. Back-filling trenches for conduits under paved areas:
  - 1) In addition to the Requirements of conduit concrete encasement, conduits under walkways, roads, parking lots, driveways, and buildings shall be cast in place concrete “slurry mix” backfill. The slurry mix shall cover each side and top of conduits and conduit concrete encasement. The slurry mix shall be continuous to the underside of the finish subgrade surface.
- f. Back-filling trenches for conduits with Concrete Encasement Requirements by the Contract Documents:
  - 1) Trenches with all conduits concrete encased shall be back-filled with clean damp sand when located under building pads.
  - 2) Trenches with all conduits concrete encased and not located under a building pad and not located under paved areas shall be back-filled with clean damp sand or native soil.
- g. Backfill material:
  - 1) Sand and native soil backfill of trenches shall be machine vibrated in 6-inch lifts to provide not less than 90% compaction of backfill.
  - 2) Soil backfill shall have no stones, organic matter or aggregate greater than 3-inches.
  - 3) Concrete and slurry mix (2000-PSI) shall be machine vibrated during installation to remove “air-voids”.
  - 4) The slurry mix shall consist of concrete, clean rock, clean sand, and clean water mixture. Maximum shrinking of slurry mix shall not exceed 5% wet to dry.
- h. Do not backfill until Owner’s Representative has approved Installation and As-Built Drawings are up to date. Promptly install conduits after excavation has been done, so as to keep the excavations open as short a time as possible. Excess soil from trenching shall be removed from the site.
- i. Install underground conduit, except under buildings, not less than 24-inches below finished grade in non-traffic areas and 30-inches below finished grade in traffic areas, including roads and parking areas. Not less than 48-inches below finished grade under public/private transit system right of way and railroad right of way. Dimensions shall be measured to the top of the conduit.
- j. Conduit crossing existing underground utilities shall cross below the bottom depth of the existing utilities. If the top portion of the existing utility depth below finish grade exceeds 72-inches and the specified separation and depths are maintained when crossing over the top of the existing underground utility, the conduit may cross above the existing underground utility.
- k. Provide long radius horizontal bends (minimum radius of 36-times the conduit diameter) in underground conduits where the conduit is in excess of 100-feet long.
- l. Conduits installed below grade and on grade below buildings, shall not be smaller than 0.75-inch. Conduits for circuits exceeding 600 volts shall not be smaller than 5.0-inches.
- m. Underground conduits entering a building shall be sloped. The conduit direction of slope shall be away from the building and shall prevent water in the conduit from

“gravity draining” towards the building. The conduit slope “high point” shall originate from the building, out to the first exterior pullbox, manhole etc. exterior conduit termination “low point”. The minimum slope angle shall be a constant 8-inches (or greater) of fall for each 100-feet of conduit length.

- n. Dewatering:
  - 1) Provide pumping to remove, maintain and dispose of all water entering the excavation during the time the excavation is being prepared, for the conduit laying, during the laying of the conduit, and until the backfill at the conduit zone has been completed. These provisions shall apply on a continuous basis. Water shall be disposed of in a manner to prevent damage to adjacent property. Trench water shall not be drained through the construction. Groundwater shall not be allowed to rise around the pipe until joining compound has firmly set.
  - 2) The Owner’s Representative shall be notified 48 hours prior to commencement of dewatering.
- 6. Raceway/Conduits, which are installed at this time and left empty for future use, shall have 0.25-inch diameter polyvinyl rope left in place for future use. The pull rope shall be 500-pounds minimum tensile strength. Provide a minimum of 5-feet of slack at each end of pull ropes.
- 7. Unless otherwise restricted by Structural Drawings and Specifications, the maximum size conduit permitted in concrete slab on-grade, walls, ceilings and roofs constructed of masonry or concrete shall not be greater than 20% of the concrete/masonry thickness. Conduits installed in these locations shall not cross.
  - a. Conduits shall not be installed in cast-in-place concrete floors.
- 8. Provide openings in building structures for conduit penetrations:
  - a. New construction shall be provided with conduit sleeves, to provide conduit penetrations.
  - b. Existing construction shall be drilled (core drill masonry and concrete) and provide conduit sleeves installed after drilling, to provide conduit penetrations.
  - c. Where the structure penetrations for underground conduits penetrating through foundations will not comply with the (restriction/penetration) shown in the Contract Documents, install the conduits below and clear of the foundation lowest point.
- 9. Conduit bends risers and offsets:
  - a. The minimum bend radius of “factory or field” fabricated conduit bends shall not be less than the following. The bend radius shall be measured at the surface, inside radius of the conduit wall:
    - 1) FMC and LTFMC conduit - conduit minimum bend radius 12-times the conduit diameter.
    - 2) RMC and EMT conduit minimum bend radius - conduit for power circuits over 100-volts and less than 600-volts, 8-times conduit diameter. Conduit for power circuits over 600-volt, 12-times conduit diameter. Conduit for low voltage, signal and fiber optic circuits, 10-times conduit diameter.

- 3) RNMC conduit - conduit minimum bend radius 36-times the conduit diameter. Under building reduce minimum bend radius to 10-times the conduit diameter. Conduit bends and offsets in RNMC with less than 36-times conduit diameter bend/offset radius shall be RNMC PVC Schedule 80.
  - b. Bends and offsets in conduits shall be kept to an absolute minimum. The total summation of all bends and offsets permitted in a conduit segment, occurring between two conduit termination/connection end points, shall not exceed the following, including conduit fittings:
    - 1) RMC and EMT conduit - 360 angular degrees
    - 2) FMC and LTFMC conduit - 180 angular degrees
    - 3) RNMC conduit - 270 angular degrees
  - c. Each field fabricated conduit offset, bend and elbow which are not the standard product of the Raceway/Conduit Manufacturer shall be mandrel tested. The test shall be conducted after the conduit installation is complete and prior to pulling-in any wire, in the same manner as for underground conduits.
  - d. Factory manufactured angle connector conduit fittings shall be installed in exposed conduit locations only. Installation in locations normally concealed from view shall not be permitted. Not more than one factory manufactured angle connector shall be permitted in any length of conduit between conduit termination end points.
  - e. RNMC conduit risers from below grade shall be PVC coated RGS. Conduit risers, bends or offsets entering into a building shall be PVC coated RGS.
  - f. If three or more conduit-bends of the same conduit size and same conduit material type, installed, as part of the Contract Work, fail to comply with the required minimum conduit bend radius or conduit angular degree limits. The following corrective actions shall occur:
    - 1) The Contractor shall remove all the non-complying conduit bends and the respective wire in the conduit from the project site. Provide new conduit and wire, complying with the Contract Documents.
    - 2) Where the conduit bends similar to the non-complying conduit bends are installed concealed in walls, floors, above ceilings or below grade, the Contractor shall expose the conduit bends to allow visual observation.
    - 3) The Contractor shall remove the non-complying conduit bends and dispose of the project site. The Contractor shall provide new conduit bends and conductors complying with the Contract Documents.
    - 4) All the costs to correct the deficient material and work along with costs to repair the direct, indirect, incidental damages and Contract delays shall be the sole responsibility of the Contractor and shall be included in the bid price.
10. Expansion joint, deflection joint and seismic joint fittings.
- a. Provide a conduit expansion fitting for each conduit length and conduit type as follows (Note - The installation of specified combination expansion/deflection fittings at seismic joints shall satisfy this Spacing Requirement also):

- |  | <u>Conduit Type</u> | <u>Conduit</u>                       | <u>Fitting Length Spacing</u> |
|--|---------------------|--------------------------------------|-------------------------------|
|  | 1) RMC and EMT      | Exposed exterior locations           | 200-feet                      |
|  | 2) RMC and EMT      | Interior weather protected locations | 400-feet                      |
- b. Provide a conduit combination expansion/deflection fitting for each conduit, crossing the following elements:
    - 1) At each building or non-building structure seismic joint.
    - 2) At each building on non-building structure expansion joint.
    - 3) At each conduit penetration of a “sound-rated” wall, floor or ceiling.
  11. Provide two locknuts and an insulated throat bushing at each metal conduit terminating at enclosures, including but not limited to outlet boxes, junction boxes, terminal cabinets, switchgear, transformers, switchboards, distribution panels and panelboards.
  12. Provide metallic or plastic closure caps on all conduit ends during construction, until installation of conductors in the respective conduit.
  13. Conduit run exposed, shall be run at right angles or parallel to the walls or structures. All changes in directions, either horizontally or vertically, shall be made with conduit outlet bodies as manufactured by Crouse Hinds, OZ or equal. Conduits run on exposed beams or trelliswork shall be painted to match surrounding surfaces.
  14. Conduit exposed on roof:
    - a. Conduits installed exposed on roofs shall be installed on conduit sleepers. Place the conduit sleepers at a maximum 5-feet on center along the entire length of the conduit; under conduit expansion/deflection fittings; under each junction box and within 24-inches of each conduit bend.
    - b. Provide a conduit support “C” channel continuous along the top length of the sleeper and rigidly bolted to the sleeper. Conduits shall be loosely fastened to each sleeper “C” channel with pipe clamps to allow for relative movement between the sleeper and conduit.
    - c. Conduits shall not block or interfere with roof hatches, doors, ventilation openings, dampers, equipment access panels/doors, roof water drainage.
    - e. Conduit sleepers shall be fabricated from “clear” solid redwood 4-inches by 4-inches (nominal) size. Sleeper length shall extend a minimum of 9-inches past the conduits attached to the sleeper, but in no case shall the length of the sleeper be less than 24-inches.
    - f. Provide a pad under each sleeper, sleepers shall not be installed in direct contact with the roofing. Sleeper pads shall extend a minimum of 6 inches past each side of the sleeper. The sleeper pad shall be semi-rigid mineral surfaced composition board, not less than 0.375-inch thickness, bituminous impregnated, manufactured for application on the specific roofing material. Remove roofing “ballast” (gravel) under pad, prior to installation of sleeper pad. Do not puncture roof membrane.
    - g. Position the “length” of the conduit sleepers’ perpendicular to the roof slope, to prevent obstruction of roof drainage water flow. Where the conduit routing prevents placing the conduit sleeper parallel to the roof slope, provide two separate sleeper pads for the conduit sleeper, with a continuous 3-inches wide water

- drainage gap between the sleepers. Align the water drainage gap to allow unimpeded water travel along the roof slope drainage flow line between the pads.
- h. Sleepers and sleeper pads shall be set in non-hardening mastic, a minimum of 0.25-inch thickness. Mastic shall be inorganic, non-hardening, and complying with ASTM-D1227. Mastic shall be applied with continuous uniform coverage, minimum 0.25-inch thickness, on all the surfaces of each conduit sleeper and on the sleeper pad contact surface with the roof.
- 15. Rigid steel conduit or electrical metallic tubing shall not be strapped or fastened to equipment subject to vibration or mounted on shock absorbing bases.
  - 16. RMC conduit threads:
    - a. Machine cut threads on RMC conduit required for field fabrication shall comply with NPS and ANSI-B1.20.1.
    - b. The length of bare metal exposed during thread fabrication shall be completely covered by conduit couplings and fittings. Additionally, the thread length shall insure that conduit joints will reach “torque” tightness and become secure before conduit ends “butt” together and before conduit ends “butt” into the “shoulders” of other conduit fittings.
    - c. Running threads or right/left-handed threads shall not be used to connect RMC.
  - 17. RNMC conduit:
    - a. Joints and fittings shall be solvent welded to RNMC conduit. Joints and fittings shall be watertight and airtight after fabrication.
  - 18. Tighten each conduit fittings and fitting appurtenance, to the “torque” (allowable tolerance  $\pm 5\%$ ) value recommended by the Fitting Manufacturer and applicable Code. If three or more conduit fittings are found to not be in compliance with the Manufacturer’s “torque” (tightness) recommendations, the following corrective actions shall occur:
    - a. The Contractor shall tighten “re-torque” the defective fittings and all similar conduit fittings installed as part of the Contract Documents in the presence of the Owner’s Representative.
    - b. If the respective conduit fittings similar to the deficient “torque tightness” fittings are installed concealed in walls, floors, above ceilings or below grade, the Contractor shall expose the fitting, to allow retightening each similar conduit fitting to the Manufacturers recommended “torque” values.
    - c. All the cost to repair the direct, indirect, incidental damages and Contract delays resulting from complying with these Requirements shall be the sole responsibility of the Contractor and shall be included in the bid price.
  - 19. Horizontal directional boring for underground conduit:
    - a. Provide a directional guided horizontal “bore-hole” underground conduit installation where one or more of the following conduits occur:
      - 1) Continuous trenching excavation and backfill for conduit installation is not permitted by the Contract.



- 2) Where continuous trenching excavation due to the existing surface and below grade conditions and restrictions, is not possible or practical to excavate a trench.
  - b. Provide “path-tracing” of the underground bore head, from the surface, along the entire horizontal bore length. Path tracing shall use electronic transmitters and receivers, continuously communicating the underground bore head locations and depth to the bore equipment operator. The directional boring system shall employ active tracking and directional position/steering control of the bore equipment drill head location. The active tracking system shall provide a portable receiver / transmitter unit for tracking the position of the moving drill head; a sensor “Sonde” unit on the drill head for tracking signals to the receiver/transmitter; and a drill head tracking data view display located at the boring equipment operator position to view the drill head position information sent from the portable receiver/transmitter. As manufactured by SPX-Radiodetection Company or similar products.
  - c. Provide vertical pilot excavations not more than 50 feet on center along the path of the bore-hole to intercept the horizontal bore-hole routing, provide excavations at the beginning and end terminals staging points of the horizontal bore-hole.
  - d. Provide full-depth “shoring” of the vertical pilot excavations. Remove the shoring, backfill, compact and repair the excavations when conduit installation is complete.
  - e. “Drilling-fluid” shall be used during “backreaming” and “pullback”, pumped through the drill pipe to the bore drill head.
  - f. Directional guided horizontal drilling shall employ equipment specifically designed and manufactured for the process. The Equipment Manufacturer shall train bore equipment operating personal in the proper operation of said equipment.
  - g. Locate the position, size, depth and identify all underground “cross-bore” existing underground utilities, pipes, structures and conflicts along the entire bore path of each underground bore, prior to initiating directional boring work. Notify respective agency for each “cross bore” potential crossing. Comply with the recommendations of the Cross Bore Safety Association (CBSA).
  - h. Horizontal, directionally guided boring equipment, as manufactured: by Ditch Witch; Vermeer Manufacturing; or Case Corporation.

J. Conduit Seals

1. Provide conduit seal fittings at each location where a conduit transitions or passes through the following areas and where indicated on the Drawings:
  - a. Refrigerated areas.
  - b. Temperature control rooms including warming rooms, steam rooms, saunas etc.
  - c. Classified hazardous material areas.
  - d. Water intrusion areas.
2. Provide conduit seals on each conduit entering a building from a below grade area located outside the building (i.e., basement, vault etc.) and connecting to the following types of equipment
  - a. Transformers

- b. Panelboards
  - c. Motor control centers
  - d. Switchboards
  - e. Switchgear
  - f. Motors
  - g. Terminal cabinets
  - h. Terminal backboards
  - i. Cable trenches
3. Conduit seals shall be installed in locations where the fitting is visible and accessible.
- K. Nailing Shields
- 1. Provide “nail” shields where FMC conduit and conductors not installed in a conduit are installed through wood stud and wood frame construction. The nail shield shall provide a barrier resistant to “nailing” fasteners through the stud and penetrating into the FMC and conductors.
  - 2. The nail shields shall be flat nominal 1.5-inch by 3-inches, 14-gauge steel, and hot dip zinc galvanized with “nailing spurs”.
  - 3. Provide nailing shields on the front face and rear face of each FMC penetration. The shield shall be centered on each penetration through the respective framing, stud framing blocking, and stud framing plates.
- L. Conduit Bodies
- 1. Conduit bodies shall be installed in exposed conduit locations only or above accessible ceilings.
  - 2. Conduit bodies shall be accessible for removing body cover and pulling wire through the conduit body.
  - 3. Conduit bodies shall not be installed inside enclosed walls.
- M. Preparation of Reuse of Existing Conduits
- 1. Prepare existing conduits shown to be reused as part of Contract Work as follows: Complete the required work prior to installing any conductors or cables in respective existing conduits.
    - a. “Rod” out existing raceways to be used under this contract, with approved test and flexible mandrels to remove all obstructions to clear debris from inside conduits.
    - b. Use test mandrels at least 12-inches long, 0.25-inch less than diameter of duct at center, tapering to 0.5-inches less than duct size at ends.
  - 2. If test mandrels cannot be pulled through raceways, Contractor shall perform the following to clear the existing raceways:
    - a. Force rigid or semi-rigid rods through the raceways to clear the obstructions from one to both ends of the raceway.
    - b. Force a power-driven rotating router device through the conduit from one or both ends of raceways. Device shall incorporate small diameter cutting blades. Repeat

the "router" process in incremental stages to a cutting blade diameter approximately 1/8-inch smaller than the raceway inside diameter.

3. After clearing the raceway of obstructions, pull a test mandrel or brush through the raceway to clear the remaining debris from the raceway.

### **3.04 WIRE AND CABLE**

- A. Branch circuit and fixture joints for #10AWG and smaller wire shall be made with UL-approved connectors listed for 600 volts, approved for use with copper and/or aluminum wire. Connector to consist of a cone-shaped, expandable coil spring insert, insulated with a nylon shell and two wings placed opposite each other to serve as a built-in wrench or shall be molded one-piece as manufactured by 3M-"Scotchlok".
- B. Branch circuit joints of #8AWG and larger shall be made with screw pressure connectors made of high strength structural aluminum alloy and UL-approved for use with both copper and/or aluminum wire as manufactured by Thomas & Betts. Joints shall be insulated with plastic splicing tape, tapered half-lapped and at least the thickness equivalent to 1.5-times the conductor insulation. Tapes shall be fresh and of quality equal to Scotch.
- C. Use UL listed pulling compound for installation of conductors in conduits.
- D. Correspond each circuit to the branch number indicated on the panel schedule shown on the Drawings except where departures are approved by the Owner's Representative.
- E. All wiring, including low voltage, shall be installed in conduit.
- F. Control wiring to conform to the wiring diagrams shown on the Mechanical Drawings and the Manufacturer's wiring diagrams.
- G. All splices in exterior pull boxes and light poles shall be cast resins encapsulated.
  1. Power conductor splices - 3M Scotchcast Series 82/85 /90; Plymouth or equal.
  2. Control and signal circuits 3M Scotchcast Series 8981 thru 8986, Plymouth or equal.
- H. Neatly group and lace all wiring in panelboards, motor control centers and terminal cabinets with plastic ties at 3-inches on centers. Tag all spare conductors.

### **3.05 TESTING**

- A. Testing Conduit and Conduit Bends. The Contractor shall demonstrate the usability of all underground raceways, and field fabricated conduit bends installed as part of this Contract.
  1. A round tapered segmented semi-rigid mandrel with a diameter approximately 1/4-inch smaller than the diameter of the raceway, shall be pulled through each new raceway.
  2. The mandrel shall be pulled through after the raceway installation is completed. Conduits which stubout only, may have the mandrel pulled after the concrete encasement is completed, but prior to completing the backfill.
  3. Owner's Representative shall witness the raceway testing for usability. A Representative of the respective Utility Company shall witness the raceway testing where applicable.
  4. Contractor shall repair/replace any conduit and conduit bend provided under this Contract which will not readily pass the mandrel during this test.

END OF SECTION 26 05 30

**SECTION 26 24 16**  
**PANELBOARDS AND TERMINAL CABINETS**

**PART 1 - GENERAL**

**1.01 SCOPE**

- A. Work Included: All labor, materials, appliances, tools, equipment necessary for and incidental to performing all operations in connection with furnishing, delivery, and installation of the work of this Section, complete, as shown on the Drawings and/or specified herein. Work includes, but is not necessarily limited to the following:
  - 1. Examine all other specification sections and Drawings for related work required to be included as work under Division 26.
  - 2. General Provisions and Requirements for electrical work.

**1.02 SUBMITTALS (ADDITIONAL REQUIREMENTS)**

- A. Provide Manufacturer's catalog data for panels, cabinets and circuit breakers.
- B. Provide Shop Drawing showing panel circuit arrangements, size, voltage, ampacity, overcurrent protective devices, etc.
- C. Provide nameplate engraving schedule.
- D. Short Circuit, Coordination and Arc-Flash
  - 1. Perform and submit engineered settings for each equipment location, fuse and adjustable circuit breaker device, showing the correct time and settings to provide the selective coordination within the limits of the specified equipment, per the latest applicable Standards of IEEE and ANSI. Provide electrical system short circuit fault analysis, both 3-phase line-to-line and 1-phase line-to-ground calculations as part of the coordination analysis recommendations. Provide Electric Arc-Flash calculations as part of the coordination analysis recommendations.
  - 2. The information shall be submitted in both tabular form and on time current log-log graph paper, with an engineering narrative. Written narrative describing data, assumptions, analysis of results and prioritized recommendations, six copies.
  - 3. The goal is to minimize an unexpected but necessary electrical system outage and personnel exposure to the smallest extent possible within the fault occurrence location, using the specified Contract equipment; shall comply with, but not limited to:
    - a. IEEE-242, Recommended Practices for Protection and Coordination of Industrial and Commercial Distribution.
    - b. IEEE-399, Recommended Practice for Industrial and Commercial Power System Analysis.
    - c. IEEE-1584, Guide to Performing Arc-Flash Hazard Study.
    - d. CEC
  - 4. Electrical equipment including switchgear, switchboards, electrical panels, and control panels, transformers, disconnects, etc., shall each be labeled by the Manufacturer with "Electrical-Arc-Flash" warning signs. The signs shall explain a hazard to personnel may exist if the equipment is worked on while energized or operated by Personnel, to wear

the correct protective equipment/clothing (PPE) when working “Live” or operating “Live” equipment and circuits.

### **1.03 SEISMIC EARTHQUAKE AND WIND LOADING WITHSTAND, TESTING AND CERTIFICATION. (ADDITIONAL REQUIREMENTS)**

#### **A. General**

1. The complete panels and terminal cabinets’ assemblies; including circuit protection devices, meter, housings/enclosures, accessories, supports/anchors etc., shall be designed, manufactured and tested.
  - a. Wind loading all outdoor equipment locations.
  - b. Earthquake seismic and CBC/IBC Seismic withstand all indoor and all outdoor equipment locations.
2. Shall withstand, survive and maintain continuous non-interrupted energized operation during seismic event occurrences and wind event occurrences. Continued normal energized operation after the wind event and seismic event occurrences have abated.
3. Shall include demonstrations of successful operation and run test after completion of seismic event shake-table simulation. Acceptance test seismic qualification shall employ triple axis shake-table simulation of the Required Response Spectrum (RRS) seismic event motion, certified and approved by the AHJ.
4. Provide three-dimensional finite element analysis demonstrating anchorage and operational withstand of wind loading not less than as follows and as required by AHJ:
  - a. 110MPH – West Coast States USA and Hawaii, per ASCE/SEI 7-16.
5. Seismic test shall be performed by a third-party independent test laboratory. Wind analysis and seismic testing and reports shall be certified, signed and “stamped” by PE Professional Engineer licensed and in good standing in the State, Civil Engineer or Structural Engineer.

## **PART 2 - PRODUCTS**

### **2.01 PANELBOARDS AND DISTRIBUTION PANELS**

- A. Shall be flush or surface mounting as indicated with group -mount circuit protection devices as shown on panel schedule, hinged lockable doors, index cardholders and proper bussing.
  1. Panelboards shall comply with the latest versions:
    - a. NEMA – PB1.
    - b. UL – 50 and 67.
    - c. CEC.
    - d. ASTM-B187.
  2. Where indicated on the Drawings shall be furnished with sub-feed breakers and/or additional conductor lugs, split bussing, contactors, time switches, relays, etc., as required.
    - a. Branch circuit panels up through forty-two circuits shall be single section, to accommodate all the circuits and components.

- b. Distribution panels shall be single section or multi-section, to accommodate all the circuits and components.
  - 3. Panels shall be "Service-Entrance" equipment rated when the panel main incoming supply feeder originates from one of the following:
    - a. Originates outdoors exterior of the building in which the respective panel is located.
    - b. Originates from an electrical supply source not located in the same building as the respective panel.
- B. Housing and Painting, Panels and Terminal Cabinets
  - 1. Shall be finished with one coat of rust inhibitor zinc chromate and coat of primer sealer after a thorough cleaning.
  - 2. Finish color paint as selected by Owner's Representative where exposed to public view (e.g., corridors, covered passages, offices, etc.). Prime coated panelboard shall be painted to match surroundings after installation in public areas.
  - 3. Manufacturer's standard color in electrical rooms/closets, janitors, HVAC and storage rooms.
  - 4. Shall be fabricated of sheet steel of the following minimum gauges.
    - a. Full height hinged, locking door. Trim #12-gauge steel; enclosure - code gauge steel.
    - b. Panels installed in indoor dedicated electrical equipment rooms and dedicated electrical equipment closets, omit full height hinged locking panel door. Dead front cover behind omitted panel door shall remain.
  - 5. NEMA-1 Metal Housing, for indoor locations.
  - 6. NEMA-3R Metal Housing, tamper resistant, for outdoor locations.
  - 7. Furnish all panels and terminal cabinets with the Manufacturer's flush locks and keys except where indicated otherwise herein. Keys and locks shall be interchangeable for all panels. Provide two latches and two locks for door heights exceeding 36-inches.
  - 8. Fasten the trim to panel and terminal cabinets by means of concealed, bolted or screwed fasteners accessible only when the door is open.
- C. Panels 208/120 volt, three phase, 4-wire, S/N or 120/240-volt, single phase, 3-wire, S/N.  
Branch circuit panel as manufactured by:
  - 1. Cutler Hammer "Pow-R-Line 1 or 2" Series
  - 2. General Electric "A" Series
  - 3. Square D "NF/NQ" Series
  - 4. Siemens "P1/P2" Series
- D. Branch circuit panels for 480/277 volt, three phase, 4 wire, S/N.  
Panelboard as manufactured by:
  - 1. Cutler Hammer "Pow-R-Line 2" Series
  - 2. General Electric "A" Series
  - 3. Square D "NF" Series
  - 4. Siemens "P1/P2" Series

- E. Distribution panels as manufactured by:
  - 1. Cutler Hammer "Power-R-Line 3 or 4" Series
  - 2. General Electric "Spectra" Series
  - 3. Square D "I-Line" Series
  - 4. Siemens "P4/P5" Series
- F. Top and bottom gutter space shall not be less than 6-inches high. Provide 6-inches additional gutter space in all panels where double lugs are required or where cable ampere size exceeds bus ampere size.
- G. Panel dimensions.
  - 1. Panels with buss sizes 50-amp thru 400-amp.
    - a. Shall be 20-inches wide. Surface or flush mounting as indicated.
    - b. Recess mounted type shall have a 20-inches wide (maximum) recess metal enclosure with overlapping edge trim plate cover extending 1-inch on all sides of enclosure.
    - c. Depth shall be 5.75-inches nominal. Height of panel as required for devices.
  - 2. Panels with buss sizes greater than 400-amp.
    - a. Narrow panels 24-inch (maximum) wide by 6.5-inches (maximum) deep units. Wide panels 25-inch to 44-inches (maximum) wide by 8-inches to 15-inches (maximum) deep units. Nominal 90-inch panel height.
    - b. The wider units shall be used only at locations where the narrow unit is not available with the quantity or size of large-ampere frame branch/sub-feed circuit protective devices shown on the panel schedules, or where the main breaker size exceeds the narrow panel maximum.
    - c. Distribution panels shall be floor standing and supported from behind the panels at walls.
- H. Distribution panels and branch circuit panels maximum load rating
  - 1. Panelboards and Distribution Panels exceeding 800-amp load rating shall not be permitted.
  - 2. Provide Distribution Switchboards instead of Distribution Panels for bus load and circuit load ratings exceeding 800-amp.
- I. Panel Auxiliary Cabinets
  - 1. Panelboards shown on the Drawings with relays, time clocks or other control devices shall have a separate auxiliary metal barriered compartment mounted above panel.
  - 2. Panelboards with circuits controlled by low voltage remote control relays shall be provided with separate auxiliary cabinets to contain the relays, adjacent to the panelboard.
  - 3. Provide auxiliary cabinets with separate hinged locking door to match panelboard.
  - 4. Provide mounting subbase in cabinet for control devices and wiring terminal strips.

- J. Panels shall have a circuit index cardholder removable type, with clear plastic cover. Index card shall have circuit numbers imprinted to match circuit breaker numbers.
  - 1. The panel identification nameplate shall describe the respective panel name and voltage, corresponding to the contract documents.
  - 2. The electrical power source, name and location of each panel supply-feeder and supply equipment name shall also be identified and described on the respective panel nameplate.
- K. SPD - Surge Protection Device
  - 1. Provide each of the following branch circuit panel and distribution panel types with a SPD and RF filtering:
    - a. 208/120 volt - single phase and/or three phase.
    - b. 120/240 volt - single phase.
    - c. 480/277 volt - single phase and/or three phase.
  - 2. The SPD shall be installed inside the respective panel housing and shall be factory connected to each main phase, ground and neutral bus inside the panel.
  - 3. The SPD monitor/annunciator indicators shall be visible only when the panel access door is in the open position.
  - 4. Provide a 20-amp 3-pole (2-pole for single-phase panels) branch circuit protection device in each panel for SPD connection.
  - 5. The SPD and panel shall be UL labeled and listed for combined use. See related Specification sections for additional SPD Requirements.

**2.02 SHORT CIRCUIT RATING**

- A. Circuit protective devices and bussing as indicated on the Drawings. All devices and bussing shall have a short circuit fault withstand and interrupting capacity not less than the maximum available fault current at the panel and as indicated on the Drawings, plus a 25% additional capacity (safety margin). However, in no case shall the short circuit fault interrupting and withstand capacity be less than the following symmetrical short circuit.

	<u>C/B and/or Bus Rating</u>	<u>Circuit Voltage</u>	<u>Short Circuit Amp.</u>
1.	400A and less	240V and below	10,000A
2.	400A and less	over 240V and below 600V	14,000A
3.	Over 400A, 800A and below	240V and below	42,000A
4.	Over 400A, 800A and below	over 240V and below 600V	30,000A

- B. Panel Short Circuit Fault Rating
  - 1. General
    - a. Provide a “fully rated” for short circuit fault interrupt and full load ampere main circuit breaker in each branch circuit panel and/or each distribution panel. Provide the main circuit breaker whether or not a main circuit breaker is shown otherwise on the Drawings, schedules or diagrams. The “utility-source” plus the “motor-load” transient contributions shall be used to establish the available fault duty values, unless indicated otherwise on the Drawings.



- b. The panel main circuit breaker full load ampere capacity rating shall equal the respective panel main bus ampere rating.
  - c. The panel assembly, buss and circuit protection devices bolted fault short circuit withstand and bolted fault short circuit interrupt ratings shall not be less than 125% greater (including a 25% safety margin) than the available utility-source symmetrical and asymmetrical bolted fault short circuit current when “series combined rated” with the panel main circuit breaker.
  - d. The main circuit breaker rated “bolted-fault” short circuit fault interrupt and withstand short circuit rating shall not be less than 125% (including a 25% safety margin) of the upstream main service entrance “bolted-fault” available (symmetrical and asymmetrical) short circuit current.
2. Distribution Panelboards
- a. Distribution panel, main circuit breaker, all feeder circuit breakers, and all branch circuit breakers shall be “fully-rated” (plus safety margin) for the available bolted fault short circuit current (including safety margin).
  - b. Shall provide time/current-tripping coordination with downstream equipment and upstream equipment.
3. Non-emergency branch circuit panelboards 400-amp buss and smaller; Non-emergency branch circuit panelboards 400-amp trip main circuit breaker and smaller.
- a. The branch circuit panel main circuit breaker shall be “fully-rated” (plus safety margin) Current Limiting Circuit Breaker type (CLCB). Shall provide time/current-tripping coordination with upstream equipment.
  - b. The branch circuit panel main circuit breaker shall be “series-rated” with the panel downstream branch circuit devices and panel bussing. “The series-rating” shall provide short circuit bolted fault current withstand protection and short circuit bolted fault interrupt rating protection during a downstream 3-phase line-to-line and/or single-phase line-to-ground short circuit bolted faults.
  - c. Typical for branch circuit panelboards connected to normal-power (non-emergency) power circuits.

### **2.03 PANEL CIRCUIT BREAKERS, CIRCUIT PROTECTION DEVICES**

- A. Circuit Breakers General, for Distribution Panels and Panelboards
- 1. NEMA-AB1 and AB3, comply with latest revision.
  - 2. UL-1087, UL-489 and IEC-60.947.2 rated devices, comply with latest revision.
  - 3. 5Hz AC closing and 3Hz AC trip and clear.
  - 4. Main circuit breakers for distribution panels exceeding 400 amp and larger.
    - a. Shall be Insulated Case Circuit Breaker type ICCB.
  - 5. Main circuit breakers for branch circuit panelboards 400-amp buss and smaller.
    - a. Shall be Current Limiting Circuit Breaker type-CLCB for non-emergency panelboards.
    - b. Shall be Molded Case Circuit Breaker type-MCCB for emergency panelboards.

6. Branch circuit breakers and feeder circuit breakers smaller than 100-amp trip shall be Molded Case Circuit Breakers type-MCCB and/or Current Limiting Circuit Breakers type-CLCB.
  7. All circuit breakers 100 amp and larger trip shall employ sensors and solid state digital electronic automatic trip system. Short-time and long-time Time/current curve shaping field adjustable functions and adjustable instantaneous trip. Typical for Molded Case Circuit Breaker type-MCCB, Insulated Case Circuit Breaker type-ICCB and Current Limiting Circuit Breaker type-CLCB.
- B. Manufacturer
1. Circuit breakers as manufactured by the following companies only are acceptable:
    - a. Cutler Hammer
    - b. General Electric Co.
    - c. Square D Co.
    - d. Siemens
- C. Configuration
1. Circuit breakers shall be arranged in the panels so that the breakers of the proper trip settings and numbers correspond to the numbering in the panel schedules on the Drawings.
  2. Circuit numbers of breakers shall be black-on-white micarta tabs or other previously approved method. Circuit number tabs, which can readily be changed from front of panel, will not be accepted. Circuit number tabs shall not be attached to or be a part of the breaker.
  3. Panelboard circuit protection devices shall be bolt on type for connection to panel bus. Removable and installable without disturbing adjacent devices.
  4. Provide conductor wire terminations (lugs) on each circuit protection device for incoming main feeder, branch circuits and outgoing feeder circuits. Dual rated copper/aluminum and compatible with the respective conductor size, type and quantity.
  5. Where 2-pole or 3-pole breakers occur in the panels, they shall be common trip units. Single pole breakers with tie-bar between handles will not be accepted.
  6. Branch circuit panels shall be field convertible for bottom entry main incoming feeder or top entry main incoming feeder.
  7. Each panel section, the feeder and branch circuit protection devices (3-phase and/or 1-phase) shall be "twin-mount", side-by-side double row construction for the following circuit sizes:
    - a. 480/277 volt, 60-amp circuit size and smaller.
    - b. 240 volt – 208/120-volt, 100-amp circuit size and smaller.
- D. Lock-Off and Lock-On
1. All circuit breakers shall be pad-lockable in the "off" position.
  2. Where branch circuit breakers supply the power to motors and signal systems, the breakers shall also be furnished with lockout clips, mounted in the "on" position. The breakers shall be able to trip automatically with lockout clips in place.

3. Provide lock-on clips on branch circuit breakers supplying fire alarm equipment and fire alarm panels. Provide identification of the dedicated "fire alarm" circuit function and operation. Color-code the circuit breakers to comply with AHJ Requirements.
  4. Locking facilities shall be riveted or mechanically attached to the circuit breaker (submit sample for approval. Other means of attachment shall not be accepted without prior written approval of the Owner's Representative.
- E. Switch and Fuse Feeder Protective Devices for Distribution Panels
1. Locations where the Drawings show distribution panels employing switch-fuse circuit protection devices.
  2. Fusible Switches: Quick-make, quick-break type with rejection clips for use with Class "R" fuses Current Limiting Fuses (CLF). Switches with ratings up to and including 100-amp at 240 volts shall be twins mounted. Switches rated through 60-amp and 480 volts shall be twins mounted. Provisions for padlocking in the "on" and/or "off" positions. Switches shall be removable from front of panel without disturbing adjacent units or panel bus structure.
  3. Fuses shall be time delay current limiting types, UL Class RK-1 unless otherwise indicated on the Drawings.  
Provide one spare set of fuses of each size and type in each Distribution Panel.
  4. Provide auxiliary contact on switch for remote status (on-off) signaling and monitoring. Provide conductor lugs to accept conductor temperature rating, sizes and quantities shown on Drawings.
  5. Switch and fuse devices shall be permitted only in distribution panels and only where specifically indicated on the Drawings for feeders.

## 2.04 PANEL BUSSING

- A. Bus Material
1. Bussing shall be rectangular cross section tin-plated copper. As directed by Owner, aluminum panel bussing shall not be permitted.
  2. Bussing shall be non-tapped, full length of the enclosure.
- B. Ground Bus
1. Each panel shall be equipped with a ground bus secured to the interior of the enclosure. The bus shall have a separate lug for each ground conductor. No more than one conductor shall be installed per lug.
  2. Provide additional isolated ground bus in each panel with connecting isolated ground feeders and/or connecting isolated ground branch circuits.
- C. Provisions
1. Provide space and all hardware and bus mounting attachments for future devices as indicated on the Drawings.
- D. Neutral Bus
1. The ampere rating of the neutral bus of panels and distribution panels shall be a minimum of 100% greater ampere capacity than the ampere rating of the corresponding

phase bus, where the panel is indicated to be provided with an “oversize-neutral” or “200%” neutral on the Drawings.

## 2.05 TERMINAL AND AUXILIARY CABINETS

### A. Cabinets

1. Fabricated of code gauge sheet steel for flush mounting (except where noted as surface) of size indicated on the Drawings, and complete with hinged lockable doors, provide the quantity of 2-way Feed through conductor terminals required for termination of all conductors, plus 15% spares of each type.
2. Cabinet locks to operate from same key used for panelboards. The trim to cabinets shall be fastened by means of concealed bolted or screwed fasteners accessible behind door into cabinets. All cabinets shall have 5/8-inch plywood backing, finished with fireproof intumescent primer and finish coat paint. Provide equipment ground bus in each cabinet.
3. Cabinets shall be finished with one coat of zinc chromate and one coat of primer sealer after a thorough cleaning. Where exposed to public view (e.g., corridors, covered passages, offices, etc.) finish color paint to match surrounding and Manufacturer’s standard gray color in switchboard, janitors, heater, and storage rooms.
4. Provide grounded metal barriers inside cabinet to isolate and separate line voltage and low voltage from each other inside the cabinet.

### B. Cabinet dimensions.

1. Unless indicated otherwise on Drawings.
  - a. Shall be 20-inches wide. Surface or flush mounting as indicated.
  - b. Recess mounted type shall have a 20-inches wide (maximum) recess metal enclosure with overlapping edge trim plate cover extending 1-inch on all sides of enclosure.
2. Depth shall be 5.75-inches nominal. Height of cabinet as required for devices, plus 25% spare unused interior space for future use, but not less than 36-inches high.

### C. Terminals

1. Non-digital analog circuits; line and low voltage modular signal systems, 15-amp dual row with isolation barriers, screw-down terminals insulated strips, heavy duty.
  - a. As manufactured by: Molex, or ITT-Cannon, or General Electric.
2. Digital circuits; low voltage signal systems, ANSI/ EIA/TIA Category-6, 110-Block or 66-Block gas-tight punch down style, heavy duty.
  - a. As manufactured by: Leviton, or Ortronics, or AMP.

### D. Identification (Additional Requirements)

1. Provide engraved nameplate on each cabinet indicating its designation and system (i.e., “Life Safety System - Panel 2LS”, etc.).
2. Identify each terminal landing with unique circuit number and provide corresponding alphanumeric text-index card inside panel access door

## **PART 3 - EXECUTION**

### **3.01 MOUNTING**

- A. Flush mounted panelboards and terminal cabinets shall be securely fastened to at least two studs or structural members. Trim shall be flush with finished surface.
  - 1. Panels and cabinets installed flush (recess or semi-recess) into fire rated or smoke rated walls. The wall recess shall be fully wrapped inside the recess with fire/smoke rated materials. The wrap-materials shall provide the same fire and/or smoke protection rating as the respective wall.
- B. Surface mounted panels and terminal cabinets shall be secured to walls by means of preformed galvanized steel channels securely fastened to at least two studs or structural members.
- C. Panelboards and terminal cabinets shall be installed to ensure the top circuit protective device (including top compartment control devices) are not more than 6-feet-6-inches above finish floor in front of the panel and the bottom device is a minimum of 12-inches above the floor. Manufacturer shall specifically indicate on Shop Drawing submittals each panel where these conditions cannot be met.

### **3.02 IDENTIFICATION (ADDITIONAL REQUIREMENTS)**

- A. Provide a red and white Bakelite nameplate with ½-inch high letters in each 277/480-volt panel fastened to face of dead-front plate, to read: "DANGER 480 (or as applicable) VOLTS KEEP OUT AUTHORIZED PERSONNEL ONLY".
- B. Manufacturer shall stencil the panel/cabinet number identification on the inside of door to correspond with the designation on the Drawings.
- C. Identification plates and numbers shall be attached with screws or twist lock fasteners. Adhesive attachment of any kind shall not be used.

### **3.03 SPARE CONDUITS (ADDITIONAL REQUIREMENTS)**

Provide three 1-inch conduit only stubs from each panel and terminal cabinet into accessible ceiling space. Where floor level below panel or terminal cabinet is accessible, also provide an additional three 1-inch conduit only stubs into accessible floor space.

END OF SECTION 26 24 16  
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**SECTION 26 50 05**  
**LIGHTING FIXTURES**

**PART 1 - GENERAL**

**1.01 SCOPE**

A. Work Included:

All labor, materials, appliances, tools, equipment necessary for and incidental to performing all operations in connection with furnishing, delivery and installation of the work of this Section, complete, as shown on the Drawings and/or specified herein. Work includes, but is not necessarily limited to the following:

1. Examine all other Specification Sections and Drawings for related work required to be included as work under Division 26.
2. General Provisions and Requirements for electrical work.

**1.02 SUBMITTALS (ADDITIONAL REQUIREMENTS)**

A. General

1. Submit certification letter from Manufacturers of Lamps and Ballasts and power supplies, (or alternately, Manufacturer's published catalog data) stating/showing the specific lamp, ballast, or power supply combination comply with Manufacturer recommendation and approval for the combined use, shown on the Drawings.
2. Provide complete Manufacturer's catalog data information for each light fixture (luminaire), ballast, lamp, materials, auxiliary equipment/devices, finishes and photometrics.

B. Performance Certification

1. Submit Manufacturers certified lamp and ballast tests report data showing compliance with Contract Document.
2. Submit Manufacturer's letter of certification for each fixture type, confirming the proposed combination of specific lamp, ballast and auxiliary components for each light fixture (luminaire) type will function together correctly and perform in compliance with the Requirements of the Contract Documents as follows:

"The proposed lamp(s), lamp ballast(s) (where, applicable), lamp sockets and fixture have been tested as an assembly. The proposed fixture products assemblies are certified by the Manufacturer to function within the required temperature, lumen output, electrical characteristics and operational life described in the Contract Documents".

C. Light Fixture Samples

1. If requested by the Owner's Representative, provide a sample of each fixture proposed as a substitution for a specified fixture. Sample fixture shall be complete with specified lamps, 3 wire grounding "SO" cord and plug for 120-volt 60Hz, AC plug-in operation. Sample fixtures shall be delivered to the Owner's Representative's office for review, the samples shall be picked up within 10-working days after review comments have been received; any samples left beyond this time will be discarded by the Owner's

Representative. Decision of Owner's Representative regarding acceptability of any lighting fixture is final.

### 1.03 QUALITY ASSURANCE (ADDITIONAL REQUIREMENTS)

- A. Work and materials shall be in full accordance with the latest Rules and Regulations. The publications shall be included in the Contract Document Requirements. If a conflict occurs between the following publications and any other part of the Contract Documents, the Requirements describing the more restrictive provisions shall become the applicable Contract definition:
1. UL – Underwriters' Laboratory:
    - a. UL – 1572: HID Lighting Fixtures
    - b. UL – 1570: Fluorescent Lighting Fixtures
    - c. UL – 1029: HID Ballast
    - d. UL – 935: Fluorescent Lamp Ballast
    - e. UL – 542: Lamp Holders, Starters, and Starter Holders
    - f. UL – 8750 and 1598C: Light Emitting Diode – LED Equipment for use in Lighting Products and replacements
  2. NEMA – National Electrical Manufacturers Association:
    - a. NEMA – LE4: Recessed Luminaires Ceiling Compatibility
    - b. NEMA – SSL #1, #3 and #6: Electronic Drivers for LED; LED and Incandescent Lamp Replacement
    - c. NEMA – LSD #44, #45, #49 and #51: SSL-solid state lighting
  3. United States Federal Government:
    - a. FCC – Part 18: EMI and RFI emissions limitations.
    - b. EPA: Energy conservation publications and waste disposal regulations.
  4. ETL and C.B.M. certified and approved.
  5. Electrical installation standards, National Electrical Contractors' Association:
    - a. NEIS/NECA Recommended Practice for and IESNA 500: installing Indoor Commercial Lighting Systems.
    - b. NEIS/NECA Recommended Practice for and IESNA 501: installing Exterior Lighting systems
    - c. NEIS/NECA and IESNA - 502: Recommended Practice for installing Industrial Lighting Systems.
  6. Illuminating Engineering Society – IES (IESNA):
    - a. IES – LM41: Photometric and Reporting.
    - b. IES – 587: Transient Surge Protection.
    - c. IES – LM79: Solid State Lighting (SSL) Testing and Measurement.
    - d. IES – LM80: Testing for Lifetime of LED.
  7. ANSI-American National Standards Institute:
    - a. ANSI – C81

- b. ANSI – C82
  - c. ANSI – C62.41: Transient Withstand
  - d. ANSI – C78: Lamps
8. State California Code of Regulations - Title-24: Energy Code

## **PART 2 - PRODUCTS**

### **2.01 GENERAL**

#### **A. Complete Fixture**

1. Provide light fixtures complete including lamps, ballasts, lamp holders' sockets, housings, ceiling and wall trim "rings" for each ceiling type, mounting and adapter support brackets, diffusers/lenses and outlet boxes.
2. Include an allowance of \$300.00 to provide a light fixture for each lighting fixture outlet shown on Drawings without a fixture type designation.

#### **B. Specific Fixture Requirements and Fixture Schedule Information**

1. The catalog numbers included in the description of the various types of lighting fixtures shall be considered to establish the type or class of the fixture with a particular Manufacturer only. The fixture length, number of lamps and lamp types, component materials, accessories, mounting type, ceiling, wall and install adapters, operation voltage, and all other components required to fulfill the total description of the fixture based on all Drawing information, branch circuits, voltages, Specification information, and shall be included in the Contract Requirements regardless of whether or not the catalog number specifically includes these components.
2. Lighting fixtures shall be the types as indicated in fixture schedule on the Drawings and as described in the Specifications.
3. All fixtures of the same fixture type shall be the same Manufacturer and of identical finish and appearance, unless indicated otherwise on Drawings.

#### **C. Manufacturer Certification of Operation**

Lamps and lamp ballasts and power supplies (drivers) shall be recommended and certified by the respective Manufacturer(s), to be "matched" to operate correctly together, within the published characteristics, for efficacy, lamp starting, operating life hours, lumen output, power factor, power input, operating line ampere, sound intensity, and temperature.

### **2.02 POWER SUPPLIES**

(For Driver-Power Supplies for LED-Solid State Lamps)

#### **A. General**

1. All power supplies, lighting fixtures assemblies and components shall be ANSI, ETL approved C.B.M. certified and UL labeled.
2. Lamp ballasts, power supplies and transformers shall be for use with the specific lamps provided as part of the Contract.
3. Shall be suitable for use with automatic occupancy motion sensing type switching "on-off" control systems, with multiple "on-off" cycles per hour, on a 24-hours a day basis.



Operation shall be without loss of performance in operating characteristics described in the Contract Documents.

4. Fusing
    - a. Shall be independently fused on the incoming line side within the fixture compartment.
    - b. Alternately the Manufacturer may install the equipment fuse inside the power supply.
    - c. Provide a label next to ballast cover reading: "Ballast (Power Supply) is fused, check fuse prior to relamping". Provide an additional quantity of 10% spare fuses and deliver to Owner's Representative.
  5. Electronic solid-state power supplies shall be the product of Manufacturer that has been producing power supplies for a minimum of 5-consecutive years prior to the date of the Contract.
  6. Provide low temperature rated ballasts and power supplies in lighting fixtures installed outdoors; in non-heated building spaces; inside walk-in refrigerators/freezers, cold storage spaces. The minimum starting temperature rating shall be not less than minus 20-degrees below zero Fahrenheit.
  7. Shall be designed and supplied to operate on the incoming line voltage system circuits to which the respective light fixtures are connected.
  8. Power factor shall be not less than 0.90, starting and operating. The input starting transient line input ampere should never exceed lamp normal operating ampere by more than 10%.
  9. Power supply disconnect:
    - a. Lighting Fixture Manufacturer factory installed and prewired inside each light fixture, for lamp-driver power supply.
    - b. Shall comply with UL-2459 and CEC/NEC. Shall disconnect (load-break) energized or de-energized driver from respective line voltage circuit and dimming circuit. UL-94V-0 flame retardant.
    - c. Hot pluggable, multi-pole, insulated connectors, with strain relief and finger-safe squeeze-to-release latching function.
    - d. Suitable for available voltage and ampere dimming and non-dimming lamp-power supplies.
  15. Power supplies as manufactured by General Electric, Advance, Philips, Universal, Sylvania /Osram or equal.
- B. Emergency Lighting
1. Light fixtures shown connected to both normal power and external emergency power branch circuits, shall be furnished with power supply for the normal and emergency power circuits.

## 2.03 LIGHT FIXTURES (LUMINAIRES)

### A. General

1. Lighting fixtures shall have all parts, power supplies, support attachments, trim flanges and fittings necessary to complete and properly install the fixture at the indicated installation locations. All fixtures shall be provided with LED's and lumen rating as specified.
2. Ceiling and/or wall surface mounted lighting fixtures shall not have any exposed chase nipples or conduit knockouts visible to view within fixture housing. Lighting fixtures mounted in continuous rows shall have chase nipples or conduit knockouts between lighting fixture housing but shall not have visible chase nipples/conduit knockouts on the visible ends of the continuous row of lighting fixtures.
3. Where fixture color is indicated to be selected by the Architect and/or Owner's Representative, provide two color chip samples for each color for review.
4. Recessed fixtures with attached junction box shall be provided with a junction box permanently attached to the plaster ring so that the junction box is accessible through the fixture opening when the fixture is removed. Connection between fixture and pull box shall be flexible metal conduit with not less than 16 AWG "AF" or "CF" type fixture rated copper wires, high temperature wire insulation for not less than 600 volts AC. The flexible conduit shall be sufficient length, so that when the fixture is removed, the pull-box is readily accessible.
5. Recessed fixtures shall be Underwriters' Laboratory approved for recessed installation with plaster frame and attached pull box. Lamp enclosure, reflectors and finish wiring shall not be installed until plastering is completed. Exposed finish trim shall not be installed until finish painting of the adjacent surface is completed.
6. The fixture shall bear Underwriters' Laboratory label of approval for the wattage and installation indicated.
7. Light fixtures installed outdoors, in damp or wet locations shall be UL labeled for said location as "damp-location" and "wet-location" for the respective installation location.
8. Fixtures in contact with thermal/building insulation shall be UL listed and rated for direct contact installation in thermal insulation systems.
9. Lighting fixtures installed in masonry and/or concrete construction. The fixture housing shall be rated for "concrete-pour" installation location.

### B. Lens and Diffusers

1. Acrylic plastic or Plexiglas for the light fixture diffusers or fixtures lenses shall be 100% virgin material.
2. Thickness of not less than 0.125-inch, as measured at the "THINIST" portion on the diffuser or lens. However, thickness shall be increased to sufficient construction and camber to prevent the lens and diffusers from having any noticeable sag over the entire normal life of the installation.
3. Diffusers shall be formed from cast sheet by a vacuum and/or pressure technique.
4. Lighting fixtures containing lamps with dichroic reflectors and light fixtures with non-dichroic lens/diffuser shall be rated for high temperature lamp operations resulting from lamp heat redirected (reflected) back into the fixture.

- C. Fixture/Luminaire Internal Wiring
  - 1. Provide wiring between LED lamps and associated operating and starting equipment. Provide ballasts/transformers inside lighting fixture that is, connected to a multi-lamp ballast in another luminaire.
  - 2. Wire insulation for ballast/lamps employing igniters, shall be rated and UL listed for the igniter pulse voltage.
  - 3. Light fixture internal LED lamps and power supply; grounding of lamps and power supplies; and wiring connections, shall all comply with the recommendations of Ballast Manufacturer and Lighting Control System Manufacturer.

**2.04 SOLID STATE LIGHTING (SSL), LIGHT EMITTING DIODES (LED) LAMPS, POWER SUPPLIES, AND LIGHT FIXTURES (ADDITIONAL REQUIREMENTS)**

- A. General
  - 1. Solid State LED light source (lamps), related control equipment (driver-power supply), and luminaire (light fixture) optics for light output distribution.
  - 2. Shall comply with the US-DOE Energy Star Program for SSL-LED. Submit documentation with Shop Drawings.
  - 3. Shall comply with the latest revision IESNA LM-79 and LM-80. Submit documentation with Shop Drawings.
  - 4. SSL chromaticity shall comply with latest revision NEMA and ANSI – C78.377. Submit documentation with Shop Drawings.
  - 5. Submit with Shop Drawings two samples of each light fixture type employing SSL, with prewired 120 volt, 60Hz AC “SO” cord and plug-in cap.
- B. LED Lamps
  - 1. Lamp lumen output and overall efficiency shall be based on the LED lamps installed in specified fixture and ambient operating temperature.
  - 2. Lamp Color Rendition Index (CRI) shall equal or exceed CRI – 80, unless noted otherwise on Drawings.
  - 3. Lamp color output shall be 4000-degree K ( $\pm 100K$ ), unless noted otherwise on Drawings.
  - 4. CRI and lamp color temperature shall be same for all light fixtures of the same fixture type.
- C. LED Power Supply (driver)
  - 1. Combination of power supply and SSL – lamp shall be tested and certified by respective Manufacturers for performance and proper operation.
  - 2. Provide dimming type driver where indicated on Drawings. Driver and dimming equipment shall be tested and certified by respective Manufactures for performance and proper operation.
- D. Self-contained LED lamp and driver, integral “Screw-Base” and/or “Pin-Connect”, replacement assembly for incandescent lamps.
  - 1. Shall be dimmable. Dimmer and lamp shall be certified by respective Manufacturers for compatible correct operation with each other.

2. Optical system and operating temperature thermal performance shall be compatible with light fixture.
3. Comply with latest revisions of NEMA LSD-49 and SSL-6.

## **2.05 LIGHTING STANDARDS (SUPPORT POLES, POLE MOUNTED LIGHTING FIXTURES AND LUMINAIRES)**

### **A. General**

1. Lighting poles, pole bases, pole arms, lighting fixtures (luminaires), supports with all lighting pole attachments and anchors shall be designed and constructed to withstand not less than 100 miles per hour steady horizontal wind loading and 130 miles per hour horizontal wind gust loading, without any damage to the Lighting Standards.
2. Provide tamper-resistant "hand-hole" and cover on the pole, for access into wiring terminations inside the pole. Provide ground "lug" attachment for equipment bond conductor.
3. Provide factory applied weather protective base undercoat and final finish on all exposed and internal components. Color as indicated or as selected by Owner's Representative.

### **B. Base Plate**

1. Provide a base plate at the bottom of each pole to attach and secure the pole to the pole anchor bolts. The base plate shall be permanently attached to the bottom of the pole.

### **C. Anchors**

1. Anchor bolts shall be threaded the entire bolt length, not less than four bolts for each pole equally spaced around the pole base. Provide a minimum of two threaded nuts for each anchor bolt. Install a nut on the top and bottom sides of each base plate anchor bolt location. Not less than four threads shall be exposed after pole is installed and leveled.

## **PART 3 - EXECUTION**

### **3.01 LIGHT FIXTURE INSTALLATION**

#### **A. General**

1. The Contractor shall verify actual ceiling and wall construction types as defined on the Architectural Drawings and furnish all lighting fixtures with the correct mounting devices, trim rings, brackets whether or not such variations are indicated by fixture catalog number. The Contractor shall verify depth of all recessed lighting fixtures with Architectural Drawings prior to ordering fixtures. Any discrepancies that would cause recessed lighting fixtures not to fit into ceiling shall be reported to the Owner's Representative prior to release of order to the Supplier of the fixtures.
2. On acoustical tile ceilings, fixture outlets shall be accurately located in the center, at the intersection of the four corners or at the center of the joints of two tiles.
3. The Contractor shall aim the exterior adjustable lighting fixtures after dark in the presence of, and at a time convenient to the Owner's Representative.
4. Fixtures shall be ordered and furnished to operate correctly on the branch circuit voltage connected to the respective fixture as shown on the Site Plan and Floor Plan Electrical

Drawings. The voltages shown on the fixture schedule are for generic fixture information only.

5. Install and connect lighting fixtures to the circuits and control sequences indicated on the Drawings and to comply with respective Manufacturer's instructions/recommendations.
  6. Lighting fixtures in building interstitial spaces, in mechanical plumbing and electrical spaces/rooms, are shown in their approximate locations. Do not install lighting outlets or light fixtures until the mechanical, plumbing and electrical equipment/pipes/ductwork are installed; then adjust and install lighting in revised clear (non-interfering) locations to provide best even-illumination. Coordinate the locations with all other trades prior to lighting installation.
- B. Lighting fixtures installed in ceiling support grids - suspended lay-in "T-bar" and concealed spline ceilings.
1. Provide two seismic clips at opposite ends of each recessed light fixture, the clip shall connect to the ceiling grid main runners and the light fixture. The light fixture with seismic clips and ceiling grid runner connections shall resist a horizontal seismic force equal to the total weight of the light fixture assembly.
  2. Each light fixture weighing 40-pounds or less and where the respective ceiling grid system is "heavy duty" type, shall be suspended directly from the ceiling grid or shall be suspended independent of the ceiling grid support system as approved by the AHJ. Each light fixture weighing more than 40-pounds or where the ceiling grid system is not a "heavy duty" type shall be supported independent of the ceiling grid and independent of ceiling grid support system.
  3. Each light fixture supported independent of the ceiling grid system shall be supported with a minimum of four taut independent support wires, one wire at each fixture corner.
  4. Each light fixture supported directly from the ceiling grid or ceiling grid support system shall be additionally connected with a minimum of two independent slack safety support wires. One wire at each opposite diagonal fixture corner. Each 3-foot by 3-foot and larger light fixture shall be supported in the same manner, except provide a minimum of four independent slack safety wires, one at each fixture corner.
  5. Light fixtures surface mounted to a suspended ceiling shall be installed with a 1½-inch steel – "C" channel which spans across and above a minimum of two parallel main ceiling grid "runners" and concealed above the ceiling. Each channel or angle member shall be provided with a minimum of two threaded studs for attaching to the fixture housing through the lay-in ceiling tile. Two steel "C" channel members shall be installed for each 4-foot (or smaller) fixture. Install the channels within 6-inches of each end of the light fixture to span a minimum of two ceiling grid parallel main runners. Provide two seismic clips connecting the ceiling grid main runners to each steel – "C" channel. Provide a not less than two taut independent support wires connecting to each channel. Bolt the light fixtures to the threaded studs on the channels or angles, to support the light fixture tight to the ceiling surface.
- C. Fixture Supports
1. The support wires for light fixture support shall be 12-gauge steel (minimum). The wires including their building and light fixture attachments shall provide support capacity of not less than four times the weight of the light fixture assembly. Provide additional light fixture support wires and building anchors to meet these Requirements, as part of the

Contract. The support wires shall be anchored to the building structural elements above the ceiling.

2. Pendant mounting fixtures shall be supplied with swivel hangers. Fixtures shall swing in any direction a minimum of 45 degrees of gravity, position. Fixtures shall have special stem lengths to give the mounting height indicated on the Drawings. Stem to be single continuous piece without coupling, and to be finished the same color as the canopy and the fixture, unless otherwise noted. The Contractor shall check all lock nuts and set screws to rigidly secure the swivel socket to the stem, and the stem to the outlet box.

Fixtures shall be plumb and vertical. Where obstructions occur restricting 45-degrees free-swing of fixtures, the fixtures shall be "guy" wired to prevent fixtures from striking obstructions. The Owner's Representative shall approve method of guying. Swinging fixtures shall have an additional safety hanger cable attached to the structure and the fixture at each support, with the capacity of supporting four times the vertical weight of the light fixture assembly.

3. Suspended fixtures weighing in excess of 40-pounds shall be supported independently of the fixture outlet box. Provide "aircraft" (minimum 12 gauge) steel hanger cable for suspended fixtures route cable concealed or in pendant where possible. Each cable attachments shall support four times the weight of the fixture assembly. Securely attach the cable to the building structure.
4. Surface mounted fixtures installed on drywall or plaster ceilings and weighing less than 40-pounds may be supported from outlet box. Provide structural supports above drywall or plaster ceilings for installation of fixtures weighing more than 40-pounds and secure fixture to structural supports. The use of toggle bolts is prohibited.

D. Recessed Lighting Fixtures - Fire Rated Building Surfaces

1. Lighting fixtures recessed in ceiling or wall which has a fire resistive rating of 1-hour or more shall be enclosed in a fully enclosed backbox (except over fixture lens/diffuser). The material used to fabricate the "enclosed backbox" shall have a fire rating equal to that of the respective ceiling or wall.
2. The space from the fixture to the box enclosure shall be a minimum of 3-inches.
3. The backbox shall be concealed behind the fire rated ceiling and wall finish surface. The light fixture shall be provided with lamp ballast rated for (normal light output) operation in a "high" ambient temperature.

### 3.02 LAMPS

- A. Lamps shall be the type and Manufacturer as recommended by the Dimming System Manufacturer.
- B. Lamp and light fixture use during construction:
  1. All lamps in lighting fixtures that have been operated (ON) for a total of more than 300-hours prior to final completion of the Contract notice of completion shall be relamped by the Contractor. Remove the existing lamps with more than 300-hours of illuminated operation and provide new lamps of the type required by the contract documents, install lamps in respective light fixtures, typical for LED lamps.

### 3.03 LENS AND DIFFUSERS

Lens, diffusers, internal reflectors shall be completely cleaned of all dust, dirt and fingerprints after the installation of the light fixtures and lamps, and after all trades have completed work and prior to occupancy of the facility by the Owner.

### 3.04 COMMISSIONING LIGHTING FIXTURES (ADDITIONAL REQUIREMENTS)

#### A. General

1. Verify correct lighting control configurations and operation in each room.
2. Simulate normal source power failure by "opening" (turn off) building main service disconnect and verify connections and operation of each emergency lighting fixture.
3. Confirm "EXIT" sign directional arrows are visible in each "EXIT" sign.
4. Verify light fixture support-hangers, ceiling grid clips and seismic restraints comply with the Contract Documents.
5. Remove protective shipping/installation shields on fixtures. Verify fixtures and lamps are clean and free of construction debris. Clean light fixtures found to be contaminated or dirty.
6. Setup, program, and function test lighting control systems to perform each of the indicated control functions, area/room zones and sequences.
7. Provide "aiming", directional adjustment of light fixtures, both indoor and outdoor. Aiming shall comply with Manufacturer's aiming diagrams, and as directed by Owner's Representative.

#### B. Sample Spot-Check in each room the following lighting fixture information:

1. Lamp type and performance data.
2. Ballast type and performance data.
3. Combined lamp/ballast certification of performance and compatibility by respective Manufacturer.
4. Verify instructional signage is placed inside each lighting fixture in compliance with Contract Documents.

END OF SECTION 26 50 05  
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**SECTION 31 10 00  
SITE CLEARING**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. Clearing and protection of vegetation.
- B. Grubbing of root systems of trees and shrubs, abandoned utility lines and structures and other below grade obstructions and debris.
- C. Removal of existing debris.

**1.02 RELATED REQUIREMENTS**

- A. Section 01 10 00 - Summary: Limitations on Contractor's use of site and premises.
- B. Section 01 50 00 - Temporary Facilities and Controls: Site fences, security, protective barriers, and waste removal.
- C. Section 01 70 00 - Execution and Closeout Requirements: Project conditions; protection of bench marks, survey control points, and existing construction to remain; reinstallation of removed products.
- D. Section 01 74 19 - Construction Waste Management and Disposal: Limitations on disposal of removed materials; requirements for recycling.
- E. Section 02 41 00 - Demolition: Removal of built elements and utilities.
  - 1. Removal of paving and removal if indicated of abandoned utilities.
  - 2. Within building footprint, removal of designated walls, partitions, and other elements; capping and identifying utilities; and removal of concrete foundations.
  - 3. Sitework (Area of Work), removal of designated fences, walls, and other elements; capping and identifying utilities; landscape paving, and removal of concrete foundations.
- F. Section 31 23 16 - Excavation: Site preparation for structure and paving.
- G. Section 31 23 23 - Fill: Filling holes, pits, and excavations generated as a result of removal operations.

**1.03 SUBMITTALS**

- A. See Section 01 30 00 - Administrative Requirements, for submittal procedures.
- B. Site Plan: Showing:
  - 1. Areas for temporary construction and field offices.

**1.04 QUALITY ASSURANCE**

- A. Clearing Firm: Company specializing in the type of work required.
  - 1. Minimum of five years of documented experience.

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**PART 2 PRODUCTS**

**2.01 MATERIALS**

- A. Fill Material: As specified in Section 31 23 23 - Fill

**PART 3 EXECUTION**

**3.01 SITE CLEARING**

- A. Comply with other requirements specified in Section 01 70 00.
- B. Minimize production of dust due to clearing operations; do not use water if that will result in ice, flooding, sedimentation of public waterways or storm sewers, or other pollution.

**3.02 SURVEY STAKING IN UNCLEARED EASEMENTS**

- A. Flag centerline of utility lines prior to clearing. Contractor shall set offsets for clearing limits to suit the Work.
- B. When the clearing is completed, survey for utility construction in accordance with requirements specified in Section 01 70 00 - Execution and Closeout Requirements.
- C. Contractor shall replace all controls and stakes damaged or destroyed, at no change in Contract Time or Contract Price.

**3.03 EXISTING UTILITIES AND BUILT ELEMENTS**

- A. Coordinate work with utility companies; notify before starting work and comply with their requirements; obtain required permits.
- B. Protect existing utilities to remain from damage.
- C. Do not disrupt public utilities without permit from authority having jurisdiction.
- D. Protect existing structures and other elements that are not to be removed.

**3.04 CLEARING**

- A. Perform clearing Work within confines of Project area indicated on Drawings or specified elsewhere herein and with strict adherence to the Contract Documents and Geotechnical recommendations.

**3.05 VEGETATION**

- A. Scope: Remove trees, shrubs, brush, and stumps in areas to be covered by building structure, paving, lawns, and planting beds.
- B. Do not begin clearing until vegetation to be relocated has been removed.
- C. Do not remove or damage vegetation beyond the limits indicated on drawings.
- D. Install substantial, highly visible fences at least 3 feet high to prevent inadvertent damage to vegetation to remain:
  - 1. At vegetation removal limits.

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- E. Remove only trees within area to be cleared that have been marked for removal. Confirm trees to be removed with County and Architect before beginning removal process.
  - 1. Cut trunks close and parallel to ground.
  - 2. Remove roots where under or within five feet of proposed structures.
  - 3. Neither remove nor prune trees and shrubbery in public rights-of-way except by written approval of authorities having jurisdiction.
- F. In areas where vegetation must be removed but no construction will occur other than pervious paving, remove vegetation with minimum disturbance of the subsoil.
- G. Vegetation Removed: Do not burn, bury, landfill, or leave on site, except as indicated.
  - 1. Chip, grind, crush, or shred vegetation for mulching, composting, or other purposes; preference should be given to on-site uses.
  - 2. Trees: Sell if marketable; if not, treat as specified for other vegetation removed; remove stumps and roots to depth of 18 inches.
  - 3. Existing Stumps: Treat as specified for other vegetation removed; remove stumps and roots to depth of 18 inches.
  - 4. Sod: Re-use on site if possible; otherwise sell if marketable, and if not, treat as specified for other vegetation removed.
- H. Dead Wood: Remove all dead trees (standing or down), limbs, and dry brush on entire site; treat as specified for vegetation removed.
- I. Restoration: If vegetation outside removal limits or within specified protective fences is damaged or destroyed due to subsequent construction operations, replace at no cost to County.

**3.06 GRUBBING**

- A. At pipelines, remove all trees or stumps within five feet of the pipeline.
- B. Perform grubbing where indicated on Drawings or as specified herein. Grubbing shall include removal from the ground of all stumps, roots, buried logs and other vegetation not otherwise indicated to remain, and removal and disposal of resulting refuse.
- C. Completely grub areas where unsuitable surface material is to be removed.

**3.07 DAMAGED VEGETATION**

- A. Neatly prune damaged branches and severed roots.
- B. Apply wound paint to above-ground cuts and abrasions.
- C. If trees and shrubs indicated to remain are damaged excessively, as determined by AHJ, Architect or authorities having jurisdiction, remove and replace damaged plants with comparable plants.

**3.08 DEBRIS**

- A. Remove debris, junk, and trash from site.
- B. Remove logs, rocks and other debris.
- C. Dispose of Debris resulting from clearing and thoroughly clean rights-of-way.

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- D. Leave site in clean condition, ready for subsequent work.
- E. Clean up spillage and wind-blown debris from public and private lands.

**3.09 DISPOSAL**

- A. Debris Disposal: Dispose of all cleared and grubbed materials in a legal manner off site.
- B. Hazardous Materials:
  - 1. Immediately notify the County Representative should hazardous materials or suspected hazardous materials be encountered.
  - 2. Dispose of such materials in accordance with all applicable laws and regulations and as directed by authorities having jurisdiction.
  - 3. Unforeseen conditions will be resolved in accordance with the Conditions of the Contract.
- C. Saleable Materials:
  - 1. Unless otherwise indicated, all felled trees from which merchantable lumber or firewood can be produced shall become the property of the Contractor.
  - 2. Unless otherwise indicated, all metallic debris of salvageable value shall become the property of the Contractor.
  - 3. The Contractor shall remove all saleable materials from the site in a timely manner.
  - 4. Sale of salvaged and merchantable materials shall be done on site only with prior approval of the County.
- D. Stockpiling Vegetation: Only if specified or indicated under landscape work, stockpile vegetation for subsequent mulching.
- E. Burial and Burning: Debris shall not be buried or burned on site.

**3.10 DUST CONTROL**

- A. Refer to requirements of:
  - 1. Section 01 50 00 - Temporary Facilities and Controls.
  - 2. Section 31 22 00 - Grading.
- B. Minimize dust during clearing and grubbing to protect adjoining property and vehicles parked in the vicinity.
- C. Clean-up: Keep public thoroughfares clear of dust and debris by periodic sweeping and washing down, at least daily at the end of working hours.

**END OF SECTION**

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**SECTION 31 22 00  
GRADING**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. Coordinate work of this Section to compliment and coordinate with field conditions and Civil Drawing noted specific referenced requirements. Utilize the most stringent requirements.
- B. Removal of topsoil.
- C. Rough grading and consolidation/compaction the site for site structures.
  - 1. Preparation for excavation, trenching, backfilling and compacting Work.
- D. Excavation of subsoil, stockpiling for later reuse, and removal of excess from the site.
- E. Preparing of subgrade for walks, pavements and site retaining walls.
- F. Excavating, backfilling and compaction for wet utility lines.
- G. Finish grading for planting.

**1.02 RELATED REQUIREMENTS**

- A. Document 00 31 00 - Available Project Information: Subsurface Investigations.
- B. Section 01 40 00 - Quality Requirements.
- C. Section 01 45 33 - Code-Required Special Inspections.
- D. Section 01 70 00 - Execution and Closeout Requirements.
- E. Section 31 10 00 - Site Clearing.
- F. Section 31 23 16 - Excavation.
- G. Section 31 23 23 - Fill: Filling and compaction.
- H. Section 32 11 23 - Aggregate Base Courses
- I. Section 32 12 16 - Asphalt Paving.
- J. Section 32 13 13 - Site Concrete.

**1.03 SUBMITTALS**

- A. Project Record Documents: Accurately record actual locations of utilities remaining by horizontal dimensions, elevations or inverts, and slope gradients.
  - 1. Accurately record location of all changes in finish elevations and gradients which materially affect drainage.

**1.04 QUALITY ASSURANCE**

- A. Regulatory Requirements: For conditions not covered in this Section, refer to applicable provisions of the California Building Code (CBC), Chapter 18A - Soils and Foundations, as amended and adopted by authorities having jurisdiction.
- B. Perform Work in accordance with locally adopted {\rs\#1} standards.

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1. Maintain one copy on site.

### 1.05 PROTECTION

- A. Dust Control: Comply with requirements specified in Section 01 50 00 - Temporary Facilities and Controls.
- B. Protection:
  1. Comply with general requirements specified in Section 01 50 00 - Temporary Facilities and Controls.
  2. Provide protection for walks, curbs, drains, and trees and boxing around corners of existing buildings to prevent damage.
  3. Keep adjacent roads, streets and drives clear of dirt and debris from earthwork operations.
- C. Underground Utilities:
  1. Buried utility lines may exist.
  2. If such are encountered, notify County Representative, Architect and County and for directions to be followed for preservation, relocation or demolition of utilities.

## PART 2 PRODUCTS

### 2.01 MATERIALS

- A. Topsoil: Topsoil excavated on-site.
  1. Graded.
  2. Free of roots, rocks larger than 1/2 inch, subsoil, debris, large weeds and foreign matter.
- B. Shoring and Bracing: Provide all materials and services necessary to properly engineer and construct shoring for excavations. Selection of materials and design of shoring, underpinning and bracing of new and existing structures shall be solely the responsibility of the Contractor.
  1. Shoring design shall comply with State of California Trenching and Shoring Manual issued by Offices of Structure Construction; 2011.

## PART 3 EXECUTION

### 3.01 EXAMINATION

- A. Verify that survey bench mark and intended elevations for the Work are as indicated.
- B. Verify the absence of standing or ponding water.
- C. Upon discovery of unknown utility or concealed conditions, discontinue affected Work and notify AHJ, Architect and County for direction. Unforeseen conditions shall be resolved in accordance with the General Conditions.

### 3.02 PREPARATION

- A. Identify required lines, levels, contours, and datum.
- B. Stake and flag locations of known utilities.

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- C. Locate, identify, and protect from damage above- and below-grade utilities to remain.
  - 1. Maintain and protect existing utilities remaining which pass through Project area.
- D. Notify utility company to remove and relocate utilities, as required.
- E. Provide temporary means and methods to remove all standing or ponding water from areas prior to grading.
- F. Protect site features to remain, including but not limited to bench marks, survey control points, existing structures, fences, sidewalks, paving, and curbs, from damage by grading equipment and vehicular traffic.
- G. Protect trees to remain by providing substantial fencing around entire tree at the outer tips of its branches; no grading is to be performed inside this line.
- H. Protect plants, lawns, and other features to remain as a portion of final landscaping.

**3.03 ROUGH GRADING**

- A. Eliminate uneven areas and low spots. Remove debris, roots, branches, stones, in excess of 1 inch in size.
- B. Remove topsoil from areas to be further excavated, re-landscaped, or re-graded, without mixing with foreign materials.
  - 1. Coordinate topsoil with Section 10 00 - Site Clearing and Grubbing.
- C. Do not remove topsoil when wet.
- D. Remove subsoil from areas to be further excavated, re-landscaped, or re-graded.
- E. Do not remove wet subsoil , unless it is subsequently processed to obtain optimum moisture content.
- F. When excavating through roots, perform work by hand and cut roots with sharp axe.
- G. See Section 31 23 23 for filling procedures.
- H. Stability: Replace damaged or displaced subsoil to same requirements as for specified fill.
- I. Remove and replace soils deemed unsuitable by classification and which are excessively moist due to lack surface water control.
- J. Grade top perimeter of excavations to prevent surface water from draining into excavation.
  - 1. Provide dewatering of excavations as required to ensure suitable conditions for concrete and backfilling operations.
- K. Uniformly grade areas as shown on Drawings to tolerances specified in this Section..
  - 1. Evenly grade between points where elevations are shown or between points of Work and existing grades.
- L. Slope rough grade away from building perimeter at gradient indicated.
  - 1. Upaved area slope for a distance of 10 feet from the building: Not less than one unit vertical in 20 units horizontal or 5 percent.
    - a. CBC Section 1804A.4.
  - 2. When supported by soil conditions and climate; slope not less than 1:48 or 2 percent in unpaved areas.
    - a. CBC Section 1804A.4, Exception.

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M. Make grade changes gradual. Blend slopes into level areas.

**3.04 SOIL REMOVAL AND STOCKPILING**

- A. Stockpile topsoil to be re-used on site; remove remainder from site.
  - 1. Topsoil and vegetation layers, root zones, and similar surface materials should be stripped and stockpiled for either reuse in landscape surface areas or removed from the site.
- B. Stockpile subsoil on site for backfill, if soil is appropriate.
  - 1. Stockpile subsoil to depth not exceeding 8 feet.
- C. Remove all lumped subsoil, boulders and rock in excess of 3 inches in greatest dimension.
- D. Stockpile subsoil to be re-used on site; remove remainder from site.
- E. Stockpiles: Use areas designated on site; pile depth not to exceed 8 feet; cover to protect from erosion.

**3.05 FINISH GRADING**

- A. Before Finish Grading:
  - 1. Verify building and trench backfilling have been inspected.
  - 2. Verify subgrade has been contoured and compacted.
- B. Remove debris, roots, branches, stones, in excess of 1/2 inch in size. Remove soil contaminated with petroleum products.
  - 1. Comply with CBC Section 1804A.3.
- C. Where topsoil is to be placed, scarify surface to depth of 6 inches.
- D. In areas where vehicles or equipment have compacted soil, scarify surface to depth of 6 inches.
- E. Place topsoil in areas indicated.
- F. Place topsoil where required to level finish grade.
- G. Place topsoil during dry weather.
- H. Remove roots, weeds, rocks, and foreign material while spreading.
- I. Near plants spread topsoil manually to prevent damage.
- J. Fine grade topsoil to eliminate uneven areas and low spots. Maintain profiles and contour of subgrade.
- K. Lightly compact placed topsoil.
- L. Maintain stability of topsoil during inclement weather. Replace topsoil in areas where surface water has eroded thickness below specifications.

**3.06 TOLERANCES**

- A. Top Surface of Subgrade: Plus or minus 0.10 foot (1-3/16 inches) from required elevation.
- B. Top Surface of Finish Grade: Plus or minus 0.04 foot (1/2 inch).
- C. Top Surface Under Paving: Plus or minus 0.04 foot (1/2 inch) from required elevation.

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**3.07 REPAIR AND RESTORATION**

- A. Existing Facilities, Utilities, and Site Features to Remain: If damaged due to this work, repair or replace to original condition.
- B. Trees to Remain: If damaged due to this work, trim broken branches and repair bark wounds; if root damage has occurred, obtain instructions from Architect as to remedy.
- C. Other Existing Vegetation to Remain: If damaged due to this work, replace with vegetation of equivalent species and size.

**3.08 FIELD QUALITY CONTROL**

- A. See Section 31 23 23 for compaction density testing.
- B. Field Quality Control:
  - 1. Field inspections and testing shall be performed in accordance with requirements specified in Section 01 40 00 and 01 45 33.
  - 2. Make required quality control submittals in accordance with requirements specified.
- C. Non-compliance: Should grade elevations, tests of fill or backfill indicate non-compliance with required elevations or density, Contractor shall over-excavate, recompact and retest until specified grade or density is obtained.
  - 1. Costs and Time associated with remedial Work and retesting shall be in accordance with provisions of the General Conditions.
  - 2. Retesting to demonstrate compliance shall be by a testing laboratory acceptable to County and shall be at Contractor's expense.

**3.09 CLEANING**

- A. Remove unused stockpiled topsoil and subsoil. Grade stockpile area to prevent standing water.
- B. Leave site clean and raked, ready to receive landscaping.

**3.10 PROTECTION**

- A. Protect completed grading from erosion from weather and traffic.
- B. Over-excavate and recompact areas damaged by construction activities and weather.

**END OF SECTION**

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**SECTION 31 23 16  
EXCAVATION**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. Excavating for footings, slabs-on-grade, paving, and site structures.
- B. Trenching for utilities outside the building to on-site existing utilities.
- C. Temporary excavation support and protection systems.

**1.02 RELATED REQUIREMENTS**

- A. Document 00 31 00 - Available Project Information: Geotechnical report; bore hole locations and findings of subsurface materials.
- B. Section 01 40 00 - Quality Requirements: Inspection of bearing surfaces.
- C. Section 01 50 00 - Temporary Facilities and Controls: Dewatering excavations and water control.
- D. Section 01 70 00 - Execution and Closeout Requirements: Project conditions; protection of bench marks, survey control points, and existing construction to remain; reinstallation of removed products; temporary bracing and shoring. General requirements for dewatering of excavations and water control.
- E. Section 02 41 00 - Demolition: Shoring and underpinning existing structures.
- F. Section 31 10 00 - Site Clearing: Vegetation and existing debris removal.
- G. Section 31 22 00 - Grading: Grading.
- H. Section 31 23 23 - Fill: Fill materials, backfilling, and compacting.

**1.03 REFERENCE STANDARDS**

- A. 29 CFR 1926 - Safety and Health Regulations for Construction.

**1.04 REFERENCE STANDARDS**

**1.05 SUBMITTALS**

- A. See Section 01 30 00 - Administrative Requirements, for submittal procedures.
- B. Temporary Support and Excavation Protection Plan.
- C. Project Record Documents: Record drawings at project closeout according to 01 70 00 - Execution and Closeout Requirements. Show locations of installed support materials left in place, including referenced locations and depths, on drawings.
- D. Shoring Installer's Qualification Statement.
- E. Field Quality Control Submittals: Document visual inspection of load-bearing excavated surfaces.

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**1.06 QUALITY ASSURANCE**

- A. Temporary Support and Excavation Protection Plan:
  - 1. Indicate sheeting, shoring, and bracing materials and installation required to protect excavations and adjacent structures and property.
  - 2. Include drawings and calculations for bracing and shoring.
  - 3. Bracing and shoring design to meet requirements of OSHA’s Excavation Standard, 29 CFR 1926, Subpart P.
- B. Designer Qualifications: For design of temporary shoring and bracing, employ a Professional Engineer experienced in design of this type of work and licensed in California.
- C. Shoring Installer Qualifications: Company specializing in performing the shoring and bracing work of this section with minimum five years of documented experience.

**1.07 COORDINATION OF SPECIFICATION REQUIREMENTS**

- A. Coordinate these Specification Section requirements with specifications included on Drawings. Comply with more stringent requirements and with those requirements of authorities having jurisdiction.
- B. Comply in full with the direction (recommendations) given in the Geotechnical Report.

**PART 2 PRODUCTS**

**2.01 MATERIALS**

- A. Bedding and Fill to Correct Over-Excavation:
  - 1. See Section 31 23 23 for bedding and corrective fill materials at general excavations.

**PART 3 EXECUTION**

**3.01 DIG ALERT NOTIFICATION**

- A. Before any excavation in or near the public right-of-way, contact the Underground Service Alert of Southern California (Dig Alert) at 811 for information on buried utilities and pipelines.
- B. Delineation of the proposed excavation site is mandatory. Mark the area to be excavated with water soluble or chalk based white paint on paved surfaces or with other suitable markings such as flags or stakes on unpaved areas.
- C. Call at least Two (2) full working days prior to digging.
- D. If the members (utility companies) have facilities within the work area, they will mark them prior to the start of your excavation and if not, they will let you know there is no conflict. A different color is used for each utility type (electricity is marked in red, gas in yellow, water in blue, sewer in green, telephone and cable TV in orange).
- E. The Law requires to hand expose to the point of no conflict 24 inches on either side of the underground facility, to know its exact location before using power equipment.
- F. If caught digging without a Dig Alert ticket fines can be as much as \$50,000 per California government code 4216.

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### 3.02 EXAMINATION

- A. Verify that survey bench mark and intended elevations for the work are as indicated.
- B. Survey existing adjacent structures and improvements and establish exact elevations at fixed points to act as benchmarks.
  - 1. Resurvey benchmarks during installation of excavation support and protection systems and notify County if any changes in elevations or positions occur or if cracks, sags, or other damage is evident in adjacent construction.
- C. Determine the prevailing groundwater level prior to excavation. If the proposed excavation extends less than 1 foot into the prevailing groundwater, control groundwater intrusion with perimeter drains routed to sump pumps, or as directed by Architect. If the proposed excavation extends more than 1 foot into the prevailing groundwater, control groundwater intrusion with a comprehensive dewatering procedures, or as directed by Geotechnical Engineer.

### 3.03 PREPARATION

- A. Identify required lines, levels, contours, and datum locations.
- B. See Section 31 10 00 for clearing, grubbing, and removal of existing debris.
- C. See Section 31 22 00 for topsoil removal.
- D. Locate, identify, and protect utilities that remain and protect from damage.
- E. Protect bench marks, survey control points, existing structures, fences, sidewalks, paving, and curbs from excavating equipment and vehicular traffic.
- F. Grade top perimeter of excavation to prevent surface water from draining into excavation. Provide temporary means and methods, as required, to maintain surface water diversion until no longer needed, or as directed by Architect.
- G. See Sections 01 70 00 and 02 41 00 for underpinning and shoring of adjacent structures that could be damaged by excavating work.

### 3.04 TEMPORARY EXCAVATION SUPPORT AND PROTECTION

- A. Excavation Safety: Comply with OSHA's Excavation Standard, 29 CFR 1926, Subpart P.
  - 1. Excavations in stable rock or in less than 5 feet in depth in ground judged as having no cave-in potential do not require excavation support and protection systems.
  - 2. Depending upon excavation depth, time that excavation is open, soil classification, configuration and slope of excavation sidewalls, design and provide an excavation support and protection system that meets the requirements of 29 CFR 1926, Subpart P:
    - a. Sloping and benching systems.
    - b. Support systems, shield systems, and other protective systems.
- B. Shoring Design: Comply with State of California Trenching and Shoring Manual issued by Offices of Structure Construction; 2011.
  - 1. Provide all materials and services necessary to properly engineer and construct shoring for excavations. Selection of materials and design of shoring, underpinning and bracing of new and existing structures shall be solely the responsibility of the Contractor.

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- C. Underpin adjacent structures that could be damaged by excavating work, including utilities and pipe chases.
- D. Protect excavations from cave-in and from loose soil and other matter from falling in.
- E. Leave excavation support and protection systems, used as formwork or within 10 feet of existing foundations, permanently in place, unless otherwise noted.
  - 1. Cut off top 4 feet below grade, abandon remainder.
- F. Excavation support and protection systems not required to remain in place may be removed subject to approval of County or County's Representative.
  - 1. Remove temporary shoring and bracing in a manner to avoid harmful disturbance to underlying soils and damage to buildings, structures, pavements, facilities and utilities.

**3.05 EXCAVATING**

- A. Excavate to accommodate paving/site structures, new structures, construction operations, and paving/site structures.
  - 1. Excavate to the specified elevations.
  - 2. Excavate to the length and width required to safely install, adjust, and remove any forms, bracing, or supports necessary for the installation of the work.
  - 3. Cut utility trenches wide enough to allow inspection of installed utilities.
  - 4. Hand trim excavations. Remove loose matter.
  - 5. Excavate subsoil from areas to be filled with structural fill, to construct foundations, footings, slabs on grade, paving and to achieve final finish grades.
  - 6. Over-excavate to working elevations for backfilling and compaction operations.
  - 7. Where excavations are made to a depth greater than that indicated, such additional depth shall be filled with concrete having the same compressive strength as specified for the footing.
    - a. Correct unauthorized and erroneous excavation at no change in Contract Time or Contract Sum.
    - b. All over-excavations should extend to a depth where the project geologist, engineer or his representative has deemed the exposed soils as being suitable for receiving compacted fill. The materials exposed at the bottom of excavations should be observed by a representative of the geotechnical engineer or geologist from our office prior to the placement of any compacted fill soils to verify that all old fill is removed. Additional removals may be required as a result of observation and/or testing of the exposed subgrade subsequent to the required over-excavation.
- B. Notify Architect of unexpected subsurface conditions and discontinue affected Work in area until notified to resume work.
- C. Slope banks of excavations deeper than 4 feet to angle of repose or less until shored, per CalOSHA requirements for Type C Soil.
  - 1. Machine slope banks of excavations to minimum 1 to 1 ratio horizontal to vertical or angle of repose, if less, until shored.
    - a. Exception: If authorized in writing by Geotechnical Engineer.

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- b. Slope must comply with local codes, ordinances and requirements of agencies having jurisdiction.
- c. See Section 00 31 00 - Available Project Information.
- D. Do not interfere with 45 degree influence line of bearing splay of foundations.
  - 1. Avoid interference at footings by providing additional width, depth, and other provisions.
- E. Remove lumped subsoil, boulders, and rock up to 1/3 cu yd measured by volume.
- F. Provide temporary means and methods, as required, to remove all water from excavations until directed by Architect. Remove and replace soils deemed suitable by classification and which are excessively moist due to lack of dewatering or surface water control.

**3.06 SUBGRADE PREPARATION**

- A. See Section 31 23 23 for subgrade preparation at general excavations.

**3.07 FILLING AND BACKFILLING**

- A. Do not fill or backfill until all debris, water, unsatisfactory soil materials, obstructions, and deleterious materials have been removed from excavation.
- B. See Section 31 23 23 for fill, backfill, and compaction requirements at general excavations.
- C. See Section 31 22 00 for rough and final grading and topsoil replacement requirements.

**3.08 REPAIR**

- A. Correct areas that are over-excavated and load-bearing surfaces that are disturbed; see Section 31 23 23 at no additional cost.

**3.09 FIELD QUALITY CONTROL**

- A. See Section 01 40 00 - Quality Requirements, for general requirements for field inspection and testing.
- B. Provide for visual inspection of load-bearing excavated surfaces by Architect and geotechnical consultant before placement of foundations.
- C. Scarification, over excavation and all other excavations will be subject to the approval of the Geotechnical Engineer.

**3.10 CLEANING**

- A. Stockpile excavated material to be re-used in area designated on site in accordance with Section 31 22 00.
- B. Remove excavated material that is unsuitable for re-use from site.
- C. Remove excess excavated material from site.
  - 1. Geotechnical engineer or other consultant as selected by County to test soils prior to export for disposition.

**3.11 PROTECTION**

- A. Divert surface flow from rains or water discharges from the excavation.

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- B. Prevent displacement of banks and keep loose soil from falling into excavation; maintain soil stability.
- C. Protect open excavations from rainfall, runoff, freezing groundwater, or excessive drying so as to maintain foundation subgrade in satisfactory, undisturbed condition.
- D. Protect bottom of excavations and soil adjacent to and beneath foundation from freezing.
- E. Keep excavations free of standing water and completely free of water during concrete placement.

**END OF SECTION**

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**SECTION 31 23 16.13  
TRENCHING**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. Backfilling and compacting for utilities from 5 FEET outside the building to connection point on-site, where indicated on Drawings.

**1.02 RELATED REQUIREMENTS**

- A. 00 31 00 - Available Project Information: Geotechnical report; bore hole locations and findings of subsurface materials.
- B. Section 01 41 00 - Regulatory Requirements: Code Compliance.
- C. Section 31 22 00 - Grading: Site grading.
- D. Section 31 23 16 - Excavation: Building and foundation excavating.
- E. Section 31 23 23 - Fill: Backfilling at building and foundations.
- F. Section 33 14 16 - Site Water Utility Distribution Piping: Potable Water Systems.
- G. Section 33 31 13 - Site Sanitary Sewerage Gravity Piping: Sewer piping from building to municipal sewer.
- H. Section 33 42 11 - Stormwater Gravity Piping: Storm drainage piping from building to on-site or off-site storm drain system.

**1.03 DEFINITIONS**

- A. Finish Grade Elevations: Indicated on drawings.
- B. Subgrade Elevations: Indicated on drawings.

**1.04 REFERENCES**

- A. AASHTO T 180 - Standard Method of Test for Moisture-Density Relations of Soils Using a 4.54-kg (10-lb) Rammer and a 457-mm (18-in.) Drop.
- B. ASTM C136/C136M - Standard Test Method for Sieve Analysis of Fine and Coarse Aggregates.
- C. ASTM D698 - Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 ft-lbf/ft<sup>3</sup> (600 kN-m/m<sup>3</sup>)).
- D. ASTM D1556/D1556M - Standard Test Method for Density and Unit Weight of Soil in Place by Sand-Cone Method.
- E. ASTM D1557 - Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 ft-lbf/ft<sup>3</sup> (2,700 kN m/m<sup>3</sup>)).
- F. ASTM D2487 - Standard Practice for Classification of Soils for Engineering Purposes (Unified Soil Classification System).
- G. ASTM D6938 - Standard Test Methods for In-Place Density and Water Content of Soil and Soil-Aggregate by Nuclear Methods (Shallow Depth).

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H. SSPWC (Greenbook) - Standard Specifications for Public Works Construction.

**1.05 SUBMITTALS**

- A. See Section 01 30 00 - Administrative Requirements, for submittal procedures.
- B. Comply with the requirements listed in Section 31 23 23 - Fill.
- C. Fill Composition Test Reports: Results of laboratory tests on proposed and actual materials used.
- D. Compaction Density Test Reports.

**1.06 COORDINATION OF SPECIFICATION REQUIREMENTS**

- A. Coordinate these Specification Section requirements with specifications included on Drawings. Comply with more stringent requirements and with those requirements of the authorities having jurisdiction.

**1.07 DELIVERY, STORAGE, AND HANDLING**

- A. When necessary, store materials on site in advance of need.
- B. When fill materials need to be stored on site, locate stockpiles where designated.
  - 1. Separate differing materials with dividers or stockpile separately to prevent intermixing.
  - 2. Prevent contamination.
  - 3. Protect stockpiles from erosion and deterioration of materials.

**PART 2 PRODUCTS**

**2.01 FILL MATERIALS**

- A. For fill materials see Section 31 23 23 - Fill.
- B. For bed materials see Section 31 23 23 - Fill.
- C. General Fill: Subsoil excavated on-site.
- D. Structural Fill: Subsoil excavated on-site.
  - 1. Free of lumps larger than 3 inches, rocks larger than 2 inches, and debris.
- E. Concrete for Fill: Lean concrete.
- F. Granular Fill - Gravel: Pit run washed stone; free of shale, clay, friable material and debris.
  - 1. Graded in accordance with ASTM C136/C136M, within the following limits:
    - a. 3/4 inch sieve: 95 to 100 percent passing.
- G. Granular Fill - Pea Gravel: Natural stone; washed, free of clay, shale, organic matter.
  - 1. Grade in accordance with ASTM D2487 Group Symbol GM.
- H. Sand: Natural river or bank sand; washed; free of silt, clay, loam, friable or soluble materials, and organic matter.
  - 1. Grade in accordance with ASTM D2487 Group Symbol SW.
- I. Topsoil: Topsoil excavated on-site.
  - 1. Select.

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2. Graded.
3. Free of roots, rocks larger than 1/2 inch, subsoil, debris, large weeds and foreign matter.
4. Acidity range (pH) of 5.5 to 7.5.
5. Containing a minimum of 4 percent and a maximum of 25 percent inorganic matter.
6. Complying with ASTM D2487 Group Symbol OH.

**2.02 SOURCE QUALITY CONTROL**

- A. See Section 01 40 00 - Quality Requirements, for general requirements for testing and analysis of soil material.
- B. Where fill materials are specified by reference to a specific standard, test and analyze samples for compliance before delivery to site.
- C. If tests indicate materials do not meet specified requirements, change material and retest.
- D. Provide materials of each type from same source throughout the Work.

**PART 3 EXECUTION**

**3.01 DIG ALERT NOTIFICATION**

- A. Before any excavation in or near the public right-of-way, contact the Underground Service Alert of Southern California (Dig Alert) at 811 for information on buried utilities and pipelines.
- B. Delineation of the proposed excavation site is mandatory. Mark the area to be excavated with water soluble or chalk based white paint on paved surfaces or with other suitable markings such as flags or stakes on unpaved areas.
- C. Call at least Two (2) full working days prior to digging.
- D. If the members (utility companies) have facilities within the work area, they will mark them prior to the start of your excavation and if not, they will let you know there is no conflict. A different color is used for each utility type (electricity is marked in red, gas in yellow, water in blue, sewer in green, telephone and cable TV in orange).
- E. The Law requires to hand expose to the point of no conflict 24 inches on either side of the underground facility, to know its exact location before using power equipment.
- F. If caught digging without a Dig Alert ticket fines can be as much as \$50,000 per California government code 4216.

**3.02 EXAMINATION**

- A. Verify that survey bench marks and intended elevations for the work are as indicated.

**3.03 PREPARATION**

- A. Identify required lines, levels, contours, and datum locations.
- B. Locate, identify, and protect utilities that remain and protect from damage.
- C. Protect bench marks, survey control points, existing structures, fences, sidewalks, paving, and curbs from excavating equipment and vehicular traffic.
- D. Protect plants, lawns, rock outcroppings, and other features to remain.

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- E. Grade top perimeter of trenching area to prevent surface water from draining into trench. Provide temporary means and methods, as required, to maintain surface water diversion until no longer needed, or as directed by the Architect.

**3.04 TRENCHING**

- A. Excavate subsoil required for conduits, storm drain, sanitary sewer, water and gas piping to municipal utilities.
  - 1. Pipe Depths:
    - a. Domestic Water:
      - 1) PVC: 36 inches plus pipe diameter plus 4 inch bedding.
      - 2) Other: 36 inches plus pipe diameter plus 4 inch bedding.
    - b. Sewer: Minimum 30 inches plus pipe diameter plus 4 inch bedding.
    - c. Storm Drain: Minimum 24 inches plus pipe diameter plus 4 inch bedding.
    - d. Irrigation Water:
      - 1) 3 inch diameter or less: 18 inches plus pipe diameter plus 2 inch bedding.
      - 2) 4 inch diameter or more: Same as domestic water.
  - 2. Trench Widths:
    - a. Domestic Water: 8 inches plus pipe diameter, min.
    - b. Sewer: 6 inches plus pipe diameter min.
    - c. Storm Drain: 6 inches plus pipe diameter, min..
    - d. Gas: 8 inches plus pipe diameter, min.
  - 3. Joint Trench:
    - a. Joint trenches are allowed in accordance with the current edition of the SSPWC (Greenbook) and local jurisdiction standards.
    - b. Submit a trench plan to the project engineer for approval prior to proceeding with joint trenches not shown on the plans. Do not assume joint trenches are allowed during bidding, unless joint trenches are shown on the Drawings.
- B. Notify Architect of unexpected subsurface conditions and discontinue affected Work in area until notified to resume work.
- C. Slope banks of excavations deeper than 4 feet to angle of repose or less until shored.
- D. Trenches Parallel to Footings: Do not place the trench below a 1 vertical to 2 horizontal from 9 inches above the bottom edge of the footing and no closer than 18 inches from the face of footing. CBC Section 1809A.14.
- E. Do not interfere with 45 degree bearing splay of foundations.
- F. Cut trenches wide enough to allow inspection of installed utilities.
- G. Hand trim excavations. Remove loose matter.
  - 1. Hand trim for bell and spigot pipe joints.
- H. Remove large stones and other hard matter that could damage piping or impede consistent backfilling or compaction.

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- I. Remove lumped subsoil, boulders, and rock up to 1/3 cubic yard measured by volume. See Section 31 23 16.26 for removal of larger material.
- J. Remove excavated material that is unsuitable for re-use from site.
- K. Stockpile excavated material to be re-used in area designated in Section 31 22 00.
- L. Remove excess excavated material from site.
- M. Provide temporary means and methods, as required, to remove all water from trenching until directed by the Architect. Remove and replace soils deemed unsuitable by classification and which are excessively moist due to lack of dewatering or surface water control.
- N. Determine the prevailing groundwater level prior to trenching. If the proposed trench extends less than 1 foot into the prevailing groundwater, control groundwater intrusion with perimeter drains routed to sump pumps, or as directed by the Architect.

**3.05 PREPARATION FOR UTILITY PLACEMENT**

- A. Cut out soft areas of subgrade not capable of compaction in place. Backfill with general fill.
- B. Compact subgrade to density equal to or greater than requirements for subsequent fill material.
- C. Until ready to backfill, maintain excavations and prevent loose soil from falling into excavation.
- D. Support pipe and conduit during placement and compaction of bedding fill.

**3.06 BACKFILLING**

- A. Backfill to contours and elevations indicated using unfrozen materials.
- B. Fill up to subgrade elevations unless otherwise indicated.
- C. Employ a placement method that does not disturb or damage installed piping and conduits, or other work.
- D. Systematically fill and compact as as to achieve 90 percent relative compaction without damaging conduit or pipe. Do not fill over porous, wet, frozen or spongy subgrade surfaces.
- E. Maintain optimum moisture content of fill materials to attain required compaction density.
- F. Granular Fill: Place and compact materials in equal continuous layers not exceeding 6 inches compacted depth.
- G. Soil Fill: Place and compact material in equal continuous layers not exceeding 8 inches compacted depth or as directed by the Geotechnical Report.
- H. Slope grade away from building minimum 2 inches in 10 feet, unless noted otherwise. Make gradual grade changes. Blend slope into level areas.
- I. Correct areas that are over-excavated.
  - 1. Thrust bearing surfaces: Fill with concrete.
  - 2. Other areas: Use general fill, flush to required elevation, compacted to minimum 90 or 95 percent of maximum dry density as applicable for the fill area.
- J. Compaction Density Unless Otherwise Specified or Indicated:
  - 1. Under paving and similar construction: 95 percent of maximum dry density.

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- 2. At other locations: 90 percent of maximum dry density.
- K. Reshape and re-compact fills subjected to vehicular traffic.

**3.07 BEDDING AND FILL AT SPECIFIC LOCATIONS**

- A. Use general fill unless otherwise specified or indicated.
- B. Utility Piping, Conduits, and Duct Bank:
  - 1. Bedding: Use Fill Type SP or SW (ASTM D2487) or SM with sand equivalent of 30 or greater per ASTM D2419, 3 inches thick, compacted to 90 percent..
  - 2. Cover with Fill Type SP, SW, SM, GM per ASTM D2487.
  - 3. Fill up to subgrade elevation.
  - 4. Compact in maximum 8 inch lifts to 95 percent of maximum dry density.

**3.08 TOLERANCES**

- A. Top Surface of General Backfilling: Plus or minus 1.2 inch from required elevations.
- B. Top Surface of Backfilling Under Paved Areas: Plus or minus 1.2 inch from required elevations.

**3.09 FIELD QUALITY CONTROL**

- A. See Section 01 40 00 - Quality Control, for general requirements for field inspection and testing.
- B. Perform compaction density testing on compacted fill in accordance with ASTM D1556 or ASTM D6938.
- C. See Section 31 23 23 for compaction density testing.
- D. Correct unauthorized excavation at no cost to County.
- E. Evaluate results in relation to compaction curve determined by testing uncompacted material in accordance with ASTM D1557 ("modified Proctor"), AASHTO T 180, or ASTM D698 ("standard Proctor").
- F. If tests indicate work does not meet specified requirements, remove work, replace and retest at no additional cost to County.
- G. Correct areas over excavated by error in accordance with Section 31 23 23 - Fill.
- H. Frequency of Tests: See Section 31 22 00 - Grading.

**3.10 CLEANING**

- A. Leave unused materials in a neat, compact stockpile.
- B. Remove unused stockpiled materials, leave area in a clean and neat condition. Grade stockpile area to prevent standing surface water.
- C. Leave borrow areas in a clean and neat condition. Grade to prevent standing surface water.

**3.11 PROTECTION OF FINISHED WORK**

- A. Protect finished Work under provisions of Section 01 50 00 - Temporary Construction Facilities and Controls.

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B. Recompact fills subjected to vehicular traffic.

**END OF SECTION**

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**SECTION 31 23 23**  
**FILL**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. Filling, backfilling, and compacting for footings, slabs-on-grade, paving, and site structures.
- B. Filling holes, pits, and excavations generated as a result of removal (demolition) operations.

**1.02 RELATED REQUIREMENTS**

- A. Document 00 31 00 - Available Project Information: Geotechnical report; bore hole locations and findings of subsurface materials.
- B. Section 01 57 13 - Temporary Erosion and Sediment Control: Slope protection and erosion control.
- C. Section 03 30 00 - Cast-in-Place Concrete.
- D. Section 31 22 00 - Grading: Removal and handling of soil to be re-used.
- E. Section 31 22 00 - Grading: Site grading.
- F. Section 31 23 16 - Excavation: Removal and handling of soil to be re-used.

**1.03 DEFINITIONS**

- A. Finish Grade Elevations: Indicated on drawings.
- B. Subgrade Elevations: Indicated on drawings.

**1.04 REFERENCE STANDARDS**

- A. ACI 302.2R - Guide for Concrete Slabs that Receive Moisture-Sensitive Flooring Materials.
- B. ASTM D4829 - Standard Test Method for Expansion Index of Soils.
- C. ASTM D1556/D1556M - Standard Test Method for Density and Unit Weight of Soil in Place by Sand-Cone Method.
- D. ASTM D1557 - Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 ft-lbf/ft<sup>3</sup> (2,700 kN m/m<sup>3</sup>)).
- E. ASTM D2487 - Standard Practice for Classification of Soils for Engineering Purposes (Unified Soil Classification System).
- F. ASTM D6938 - Standard Test Methods for In-Place Density and Water Content of Soil and Soil-Aggregate by Nuclear Methods (Shallow Depth).
- G. DTSC-Clean Fill - California Department of Toxic Substances Control - Clean Imported Fill Material.
- H. Greenbook - Greenbook: Standard Specifications for Public Works Construction.

**1.05 SUBMITTALS**

- A. See Section 01 30 00 - Administrative Requirements, for submittal procedures.

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- B. Soil Samples: 10 pounds sample of each type of fill; submit in air-tight containers to testing laboratory.
  - 1. Submit samples directly to Geotechnical Engineer for testing and analysis copy transmittals to Architect and County.
- C. Materials Sources: Submit name of imported materials source.
- D. Fill Composition Test Reports: Results of laboratory tests on proposed and actual materials used, including manufactured fill.
- E. Compaction Density Test Reports.
- F. Manufacturer's Instructions.
- G. Manufacturer's Qualification Statement.
- H. Specimen Warranty.
- I. Provide proof that all imported materials conform to the requirements of DTSC-Clean Fill Imported Fill Materials for School Sites by proper documentation for the imported materials.

**1.06 QUALITY ASSURANCE**

- A. Manufacturer Qualifications: Company specializing in manufacturing products specified in this section, with not less than ten years of documented experience.
- B. Testing Agency Qualifications: Independent firm specializing in performing testing and inspections of the type specified in this section.
- C. Copies of Documents at Project Site: Maintain at the project site a copy of each referenced document that prescribes execution requirements.

**1.07 DELIVERY, STORAGE, AND HANDLING**

- A. When necessary, store materials on site in advance of need.
- B. When fill materials need to be stored on site, locate stockpiles where agreed to.
  - 1. Separate differing materials with dividers or stockpile separately to prevent intermixing.
  - 2. Prevent contamination.
  - 3. Protect stockpiles from erosion and deterioration of materials.

**1.08 WARRANTY**

- A. See Section 01 78 00 - Closeout Submittals, for additional warranty requirements.
- B. Correct defective Work within a five year period after Date of Substantial Completion.

**PART 2 PRODUCTS**

**2.01 FILL MATERIALS**

- A. General Fill: Subsoil excavated on-site.
  - 1. Graded.
  - 2. Free of lumps larger than 3 inches, rocks larger than 3 inches, and debris.
  - 3. Complying with ASTM D2487 Group Symbol CL.

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- B. Structural Fill: Subsoil excavated on-site.
  - 1. Graded.
  - 2. Free of organic matter, debris, and oversize particles (e.g., cobbles, rubble, etc. that are larger than 3 inches, rocks larger than 3 inches. Fill shall contain at least fifty percent of material smaller than 1/4 inch in size.
  - 3. Imported fill materials: The soil shall be tested for potential contamination in accordance with DTSC-Clean Fill protocols. Submit to Geotechnical Engineer.
    - a. Import sandy soil shall be free of organics, debris and oversize particles (e.g., cobbles, rubble, rocks, etc. that are greater than 3 inches in the largest dimension).
    - b. Additionally, import soils shall not have any corrosion impacts to buried concrete; and be non-expansive (Expansion Index less than 21 per ASTM D4829).
    - c. Prior to import, geotechnical consultant shall evaluate and test the import soils in order to confirm the quality of the material.
  - 4. On-site soils should only be used as specified in the Soils Report.
  - 5. Complying with ASTM D2487 Group Symbol CL.
- C. Concrete for Fill: See Section 03 30 00; compressive strength of 2,500 psi.
  - 1. Exception: Concrete used under footings and foundations to correct over-excavation shall be same as for footings and foundation.
- D. Granular Fill- Fill Type GM, GW: Coarse aggregate, conforming to Uniform Standard Specifications for Public Works Construction Off-Site Improvements standard.
- E. Granular Fill - Pea Gravel: Natural stone; washed, free of clay, shale, organic matter.
  - 1. Grade in accordance with ASTM D2487 Group Symbol GP.
- F. Sand: Natural river or bank sand; free of silt, clay, loam, friable or soluble materials, and organic matter.
  - 1. Grade in accordance with ASTM D2487 Group Symbol SP or SW.
- G. Topsoil: Topsoil excavated on-site.
  - 1. Unclassified.
    - a. The soil shall be tested for potential contamination in accordance with DTSC-Clean Fill protocols.
  - 2. Graded.
  - 3. Free of roots, rocks larger than 1/2 inch, subsoil, debris, large weeds and foreign matter.
  - 4. Acidity range (pH) of 5.5 to 7.5.
  - 5. Containing a minimum of 4 percent and a maximum of 25 percent inorganic matter.
  - 6. Complying with ASTM D2487 Group Symbol OH.
  - 7. Limit decaying matter to 5 percent of total content by volume.
- H. Type F - Subsoil: Reused, free of rocks larger than 3 inch size, and debris.
  - 1. Existing fill and alluvium or older alluvium may be considered suitable for re-use as compacted fills provided the recommendations of the geotechnical report and observations of the geotechnical engineer are followed.



**2.02 ACCESSORIES**

- A. Geotextile Fabric: Non-biodegradable, non-woven; Geotex 801 manufactured by Propex Geotextile Systems, geotextile.com.

**2.03 SOURCE QUALITY CONTROL**

- A. See Section 01 40 00 - Quality Requirements, for general requirements for testing and analysis of soil material.
- B. Where fill materials are specified by reference to a specific standard, test and analyze samples for compliance before delivery to site.
- C. If tests indicate materials do not meet specified requirements, change material and retest.
- D. Provide materials of each type from same source throughout the Work.
- E. Comply with EPA/DTSC-Clean Fill requirements.

**PART 3 EXECUTION**

**3.01 EXAMINATION**

- A. Verify structural or other backfill materials to be reused or imported are acceptable to the satisfaction of the Geotechnical Engineer. Approval shall be obtained in advance of re-use or importation onto the site.
  - 1. Test soil for potential contamination in accordance with DTSC-Clean Fill protocols.
  - 2. Provide imported fill materials compatible with on-site soils in addition to being suitable for its intended use with the following criterion, as allowed by the Geotechnical Engineer.
    - a. Predominantly granular in nature.
    - b. Containing no rocks larger than 3 inches maximum dimension.
    - c. Free of organic material (loss on ignition less-than 2 percent).
    - d. Very low expansion potential (with an Expansion Index less than 21).
    - e. Low corrosion impact to the proposed improvements.
- B. Verify that survey bench marks and intended elevations for the Work are as indicated.
- C. Identify required lines, levels, contours, and datum locations.
- D. See Section 31 22 00 for additional requirements.
- E. Verify subdrainage, dampproofing, or waterproofing installation has been inspected.
- F. Verify structural ability of unsupported walls to support imposed loads by the fill.
- G. Verify areas to be filled are not compromised with surface or ground water.

**3.02 PREPARATION**

- A. Scarify and proof roll subgrade surface to a depth of 8 inches to identify soft spots.
- B. Cut out soft areas of subgrade not capable of compaction in place. Backfill with AWS D1.4/D1.4M Type II or concrete fill and compact to density equal to or greater than requirements for subsequent backfill material.

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- C. Compact subgrade to density equal to or greater than requirements for subsequent fill material.
- D. Prior to placement of aggregate base course material at paved areas, compact subsoil to 95 percent of its maximum dry density in accordance with ASTM D1557.
- E. Until ready to fill, maintain excavations and prevent loose soil from falling into excavation.

**3.03 FILLING**

- A. Fill to contours and elevations indicated using unfrozen materials.
- B. Fill up to subgrade elevations unless otherwise indicated.
  - 1. Place fill soils compacted in horizontal lifts to a relative compaction of 90 percent or more in general accordance with ASTM D1557.
  - 2. Lift thickness for fill soils will vary depending on the type of compaction equipment used but should generally be placed in horizontal lifts not exceeding 8 inches in loose thickness.
  - 3. Place fill soils at slightly above optimum moisture content as evaluated by ASTM D1557.
  - 4. Avoid damage to wet and dry utility lines when compacting fill and subgrade materials.
- C. Employ a placement method that does not disturb or damage other work.
  - 1. Do not disturb or damage foundation perimeter drainage and foundation waterproofing and protective cover utilities in trenches.
- D. Systematically fill and compact per geotechnical report. Do not fill over porous, wet, frozen or spongy subgrade surfaces.
- E. Maintain optimum moisture content of fill materials to attain required compaction density.
- F. Granular Fill: Place and compact materials in equal continuous layers not exceeding 6 inches compacted depth.
- G. Soil Fill: Place and compact material in equal continuous layers not exceeding 8 inches compacted depth.
- H. Slope grade away from building minimum 2 inches in 10 feet, unless noted otherwise. Make gradual grade changes. Blend slope into level areas.
- I. Correct areas that are over-excavated.
  - 1. Load-bearing foundation surfaces: Fill with concrete.
  - 2. Other areas: Use general fill, flush to required elevation, compacted to minimum 90 or 95 percent of maximum dry density in subgrade zone.
- J. Compaction Density Unless Otherwise Specified or Indicated:
  - 1. Under paving, slabs-on-grade, and similar construction: 90 percent of maximum dry density.
  - 2. At upper 12 inches beneath vehicular pavements: 95 percent of maximum dry density.
  - 3. At other locations: At least 90 percent of maximum dry density.
- K. Reshape and re-compact fills subjected to vehicular traffic.

- L. Maintain temporary means and methods, as required, to remove all water while fill is being placed as required, or until directed by the Architect. Remove and replace soils deemed unsuitable by classification and which are excessively moist due to lack of dewatering or surface water control.
- M. Remove surplus fill and backfill materials from site.

**3.04 FILL AT SPECIFIC LOCATIONS**

- A. Use general fill unless otherwise specified or indicated.
- B. Structural Fill:
  - 1. Use general fill.
  - 2. Fill up to subgrade elevations.
  - 3. Maximum depth per lift: 6 inches, compacted.
  - 4. Compact to minimum at least 90 percent of maximum dry density.
- C. Under Interior Slabs-On-Grade:
  - 1. Comply with CALGreen Section 4.505.2.1 Capillary Break and AWWA C508
  - 2. Use granular fill. Type Class 2 Aggregate base or No. 8 or No. 89, 1/2 inch or larger.
  - 3. Depth: 4 inches deep.
  - 4. Compact to at least 90 percent of maximum dry density.
- D. Over Buried Utility Piping, Conduits, and Duct Bank in Trenches:
  - 1. Bedding: Use general fill.
  - 2. Cover with general fill.
  - 3. Fill up to subgrade elevation.
  - 4. Compact in maximum 8 inch lifts to at least 90 percent of maximum dry density. Compact to at least 95 percent in subgrade zone.
- E. At Planting Areas Other Than Lawns :
  - 1. Use general fill.
  - 2. Fill up to finish grade elevations.
  - 3. Compact to at least 90 percent of maximum dry density.
  - 4. See Section 31 22 00 for topsoil placement.
- F. Under Monolithic Paving :
  - 1. Compact subsoil to at least 90 percent of its maximum dry density before placing fill.
  - 2. Use general fill.
  - 3. Fill up to subgrade elevation.
  - 4. Compact to at least 90 percent of maximum dry density; , 95 percent in upper 12 inches.
  - 5. See Section 32 11 23 for aggregate base course placed over fill.

**3.05 TOLERANCES**

- A. Top Surface of General Filling: Plus or minus 1 inch from required elevations.

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- B. Top Surface of Filling Under Paved Areas: Plus or minus 1/2 inch from required elevations.

**3.06 FIELD QUALITY CONTROL**

- A. See Section 01 40 00 - Quality Requirements, for general requirements for field inspection and testing.
  - 1. Laboratory Tests and Analyses: Where backfill is required to be compacted to a specified density, tests for compliance shall be made in accordance with requirements specified in Section 01 40 00 - Quality Requirements.
- B. Perform compaction density testing on compacted fill in accordance with ASTM D1556 or ASTM D6938.
  - 1. Field inspections and testing shall be performed and submitted in accordance with requirements specified in Section 01 40 00 - Quality Requirements.
  - 2. Allow testing service to inspect and approve each subgrade and fill layer before further fill, backfill or construction Work is performed.
  - 3. Alternate Density Test Method:
    - a. Field density tests may also be performed by the nuclear method in accordance with ASTM D6938, providing that calibration curves are periodically checked and adjusted to correlate to tests performed using ASTM D1556/D1556M.
    - b. In conjunction with each density calibration check, check the calibration curves furnished with the moisture gages in accordance with ASTM D6938.
    - c. If field tests are performed using nuclear methods, make calibration checks of both density and moisture gages at beginning of Work, on each different type of material encountered, and at intervals as directed by Architect or County's testing and inspection agency.
- C. Evaluate results in relation to compaction curve determined by testing uncompacted material in accordance with ASTM D 1557 ("modified Proctor") or AASHTO T 180.
- D. Non-compliance: If tests indicate work does not meet specified requirements, remove work, replace and retest.
  - 1. Should tests of fill or backfill indicate non-compliance with required density, Contractor shall over-excavate, recompact and retest until specified density is obtained.
  - 2. Costs and Time associated with remedial Work and retesting shall be in accordance with provisions of the General Conditions.
  - 3. Retesting to demonstrate compliance shall be by a testing laboratory acceptable to County and shall be at Contractor's expense.
- E. Frequency of Tests:
  - 1. Footing Subgrade Testing:
    - a. For each strata of soil on which footings will be placed, perform at least one in-place density test to verify required design bearing capacities.
    - b. Subsequent verification and approval of each footing subgrade may be based on a visual comparison of each subgrade with related tested strata when acceptable to Geotechnical Engineer.

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- 2. Paved Areas and Building Slab Subgrade Testing:
    - a. Perform at least one field density test of subgrade for every 2,000 sf of paved area or building slab, but in no case fewer than three tests.
    - b. In each compacted fill layer, perform one field density test for every 2,000 sf of overlaying building slab or paved area, but in no case fewer than three tests.
  - 3. Foundation Wall Backfill Testing: Perform at least two field density tests at locations and elevations as directed.
- F. Proof roll compacted fill at surfaces that will be under slabs-on-grade.

**3.07 CLEANING**

- A. See Section 01 74 19 - Construction Waste Management and Disposal, for additional requirements.
- B. Remove unused stockpiled materials, leave area in a clean and neat condition. Grade stockpile area to prevent standing surface water.
- C. Leave borrow areas in a clean and neat condition. Grade to prevent standing surface water.

**END OF SECTION**

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**SECTION 32 01 90  
OPERATION AND MAINTENANCE OF PLANTING**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. Maintain plants in manner that promotes health, growth, color and appearance, to quality levels specified; replace dead, dying, and damaged plants at no extra cost to County.
  - 1. It is Contractor's responsibility to determine type and quantity of soil amendments and fertilizer required.
  - 2. Perform soil analysis to determine type and quantity of soil amendments; test enough soil samples to obtain a comprehensive analysis; submit reports.
- B. Maintain newly planted landscape plants, including turf (lawns), trees, palms, shrubs, grasses, vines, ground cover, agave, aloes, cactus, cholla, and ocotillo.
- C. Maintain established landscape plants, including turf (lawns), trees, pals, shrubs, grasses, vines, ground cover, agave, aloes, cactus, cholla, and ocotillo.
- D. Operate permanent irrigation system.
- E. Clean up landscaped areas.
- F. Maintenance Period: The time frame covered by these requirements is 90 days:
  - 1. Start Date: Project Date of Substantial Completion.

**1.02 RELATED REQUIREMENTS**

- A. Section 32 84 23 - Irrigation System.
- B. Section 32 93 00 - Planting.

**1.03 REFERENCE STANDARDS**

- A. ANSI A300 Part 1 - American National Standard for Tree Care Operations - Tree, Shrub, and Other Woody Plant Management - Standard Practices (Pruning).
- B. ANSI Z133.1 - American National Standard for Arboricultural Operations - Safety Requirements.
- C. ASTM C602 - Standard Specification for Agricultural Liming Materials.
- D. ASTM D4972 - Standard Test Methods for pH of Soils.

**1.04 PROPOSAL SUBMITTALS**

- A. Submit complete maintenance plan, showing:
  - 1. Irrigation watering schedule, volume and frequency.
  - 2. Fertilizer type, quantity, and schedule of application.
  - 3. Soil amendment type, quantity, and schedule of application.
  - 4. Personnel assigned, including supervisor.

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5. Inspection procedures, diagnostics, and remedies.

**1.05 SUBMITTALS**

- A. See Section 01 30 00 - Administrative Requirements, for submittal procedures.
- B. Soil Tests and Analysis: Submit report showing number of samples, test results, and recommendations for soil amendments and fertilizer prior to any planting.
- C. Product Data: Manufacturer's data sheets on each fertilizer, herbicide, pesticide, and other chemical material to be used, showing trade name, chemical composition, mixing instructions, recommended application rate, storage and handling instructions, and application instructions.
  1. Pesticides and Herbicides: Also include U.S. EPA registration number and Material Safety Data Sheets.
- D. Certificates: Certification of composition of the following as delivered:
  1. Fertilizer.
  2. Mulch.
  3. Pesticides.
  4. Herbicides.
  5. Other chemical materials.
- E. Installer Qualifications: As specified.
- F. Site Reports: Include date, time, personnel, condition of plants, activities, temperature, precipitation, irrigation applied; record:
  1. Each visit for maintenance purposes.
  2. Volume of water applied, and area applied to.
  3. Diagnosis for treatment of unhealthy plants.
  4. Pesticide application: provide all additional reports and recordkeeping required by law.
  5. Herbicide application: provide all additional reports and recordkeeping required by law.
  6. Removal of dead plants, with quantity and diagnosis.
  7. Replanting.

**1.06 QUALITY ASSURANCE**

- A. Installer Qualifications:
  1. Maintenance Contractor: The contractual entity that performed the planting installation.
  2. Pruners: Certified member, or supervised by certified member, of International Society of Arboriculture.
  3. Pesticide Applicators: Certified by authorities having jurisdiction.
  4. Herbicide Applicators: Certified by authorities having jurisdiction.

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**1.07 DELIVERY, STORAGE, AND HANDLING**

- A. Deliver U.S. EPA-controlled materials to site in original containers with legible labels indicating registration number and registered uses.
- B. Deliver fertilizer and manufactured soil amendments to site in original containers bearing manufacturer's chemical analysis, name, trade name or trademark, and indication of compliance with applicable state and federal laws and regulations ; alternatively, bulk delivery with equivalent certificate is acceptable.
- C. Store fertilizer, soil amendments, and mulch in dry locations away from contaminants.
- D. Do not store pesticides, herbicides, or other chemical treatment materials in locations where they could damage seeds or plants.

**PART 2 PRODUCTS**

**2.01 MANUFACTURERS**

- A. Fertilizers:
  - 1. Provide product based on soil report recommendations.

**2.02 FERTILIZERS AND SOIL AMENDMENTS**

- A. Fertilizers: Free flowing granular organic type containing nitrogen, phosphorus, and potassium, plus trace minerals and micro-nutrients; controlled release type is preferred.
  - 1. Determine type and quantity based on soil analysis.
- B. Soil Amendments: Type and quantity as required to achieve specified results, based on soil analysis.
- C. pH Adjuster: ASTM C602 Class O limestone.
- D. Gypsum: Commercially packaged, free flowing, minimum 95 percent calcium sulfate by volume.
- E. Sand: Clean and free of materials harmful to plants; 95 percent by weight, minimum, passing No.10 ( sieve and 10 percent by weight, minimum, passing No.16 ( sieve).

**2.03 APPLIED MATERIALS**

- A. Organic Mulch: As specified on the plans. Maintain a uniform appearance; match existing mulch may be removed; use one of the following types:
- B. Pesticides: U.S. EPA registered.
  - 1. Insecticide: Submit for review.
  - 2. Rodenticide: Submit for review.
- C. Herbicides for Use on Turf: U.S. EPA registered.
  - 1. Pre-Emergence Type: Do not use.
  - 2. Post-Emergence Type: Submit for review.
- D. Water: Suitable for irrigation.

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**PART 3 EXECUTION**

**3.01 EXAMINATION**

- A. If soil analysis has not already been performed, take sufficient samples to obtain a comprehensive analysis; perform analysis in accordance with ASTM D4972.

**3.02 LANDSCAPE MAINTENANCE - GENERAL**

- A. Obtain and follow the maintenance instructions provided by the installer of new plant materials.
- B. Protect existing vegetation, pavements, and facilities from damage due to maintenance activities; restore damaged items to original condition or replace, at no extra cost to County.
- C. General Cleanup: Remove debris from all landscape areas at least once a week and from turf areas before each mowing.
  - 1. Debris consists of trash, rubbish, dropped leaves, downed branches and limbs of all sizes, dead vegetation, rocks, and other material not belonging in landscaped areas.
  - 2. Remove debris from site and dispose of properly.
- D. Watering, Soil Erosion, and Sedimentation Control: Comply with federal, state, local, and other regulations in force; prevent over-watering, run-off, erosion, puddling, and ponding.
  - 1. Site grading and planting have been designed to resist erosion once fully grown, with temporary measures in place during establishment period.
  - 2. Repair temporary erosion control mechanisms provided by others.
  - 3. Repair eroded areas and replant, when caused by inadequate maintenance.
  - 4. Prevent sediment from entering storm drains.
- E. Trees: Exercise care to avoid girdling trees; provide protective collars if necessary; remove protective collars at end of maintenance period.
- F. Fertilizing: Apply fertilizer only when necessary.
- G. Earth Mound Watering/Percolation Basins: Maintain in good condition and as required to permit efficient application of water without waste; reapply mulch if soil surface shows.
- H. Health Maintenance: Inspect all plants regularly for health:
  - 1. Eradicate diseases and damaging pests, regardless of severity or speed of effect.
  - 2. Treat accidental injuries and abrasions.
  - 3. If a plant is unhealthy but not yet dead, according to specified definitions, determine reason(s) and take remedial action immediately.
  - 4. Remove dead plants immediately upon determining that they are dead.
- I. Pesticide and Herbicide Application: Comply with manufacturer's instructions and recommendations and applicable regulations.
  - 1. Obtain County's approval prior to each application.
  - 2. Apply in manner to prevent injury to personnel and damage to property due to either direct spray or drifting, both on and off County's property.
  - 3. Use backflow preventers on hose bibbs used for mixing water; prevent spills.

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4. Inspect equipment daily before application; repair leaks, clogs, wear, and damage.
  5. Do not dispose of excess mixed material, unmixed material, containers, residue, rinse water, or contaminated articles on site; dispose of off site in legal manner.
  6. Rinse water may be used as mix water for next batch of same formulation.
  7. Contractor is responsible for all recordkeeping, submissions, and reports required by laws and regulations.
- J. Replanting: Perform replacement and replanting immediately upon removal of dead plant.

**3.03 IRRIGATION**

- A. Irrigation: Do not allow plants to wilt; apply water as required to supplement rainfall; do not waste water; do not water plants or areas not needing water; do not water during rainfall; shut off water flow when finished; repair leaks.
1. New automatic irrigation system may be used.
  2. County's water source is to be used.
  3. Do not drive water trucks over turf, sodded areas, or planting beds.
- B. Automatic Irrigation System: Obtain and follow manufacturer's operating and maintenance instructions.
1. Adjust to water landscape areas only.
  2. Adjust sprinkler heads, drippers, valves, pumps, and controllers as required for optimum operation to comply with the State Water Ordinance.
  3. Drain and prepare for freezing weather; prepare and start up in spring.
  4. During system warranty period notify Architect and system installer promptly of defects and leaks that adversely affect irrigation performance.
  5. After end of system warranty period, service and repair all defects and leaks.

**3.04 PLANTING BED MAINTENANCE**

- A. Planting beds include all planted areas except turf.
- B. Begin maintenance immediately after plants have been installed; inspect at least once a week and perform needed maintenance promptly.
- C. Keep planting beds free of pests; remove weeds and grass by hand before reaching 1 inch height.
- D. Do not allow climbing, twining, or creeping plants to encroach into other species.
- E. Shrubs and Ground Cover:
1. Trim to encourage dense, well-developed growth covering intended areas.
  2. Do not allow plants to grow up trees or encroach into adjacent walkways or other site elements.
  3. Remove existing plants grown up trees and shrubs.
- F. Replace mulch as required and remove debris.

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**3.05 TREE AND SHRUB MAINTENANCE**

- A. Trees will be considered dead when main leader has died back or when 25 percent or more of crown has died ; except as otherwise indicated for palm trees.
- B. Shrubs will be considered dead when 25 percent or more of plant has died.
- C. Inspect woody plants for health by scraping up to 1/16 inch square area of bark; no green cambium layer below bark shall be evidence of death.
- D. Adjust stakes, guys and turnbuckles, ties, and trunk wrap as required to promote growth and avoid girdling.
- E. Fertilizing: Fertilize all trees at least once during maintenance period, preferably in the Fall; use accepted standards for determining type and method of fertilization.
- F. Pruning: Unless otherwise indicated, prune only to maintain balanced natural shape; follow recommendations of ANSI A300 and ANSI Z133.1 and best local practices for species involved.
- G. Shrubs: Prune at least once during maintenance period at best time to influence ultimate shape and size for the particular species.
  - 1. Prune to balance the plant's form and according to its natural growth characteristics.
  - 2. Remove water shoots, suckers, and branches not complying with desired shape and size.
- H. Young Trees: Prune at least once during maintenance period at best time to influence ultimate shape and size for the particular species; do not remove or cut off leader.
- I. Palm Trees: Palm trees are extremely susceptible to disease. Wounds in the bark must be avoided as puncture wounds never heal.
  - 1. Remove diseased and damaged fronds and all seed pods and fruit clusters; do not remove any green fronds; cut fronds close to trunk.
  - 2. Unless fronds come off easily, do not pull or rip them off as this causes permanent wounds to the trunk.
  - 3. Preferred tool is manual pruning saw. Do not use a machete to remove fronds as an overstrike will wound the trunk. Be very careful using chain saws for the same reason.
  - 4. Do not use climbing spikes.
  - 5. Prior to pruning each tree, disinfect tools with 50 percent chlorine bleach solution, or other approved disinfectant to prevent transmission of diseases.

**3.06 CLEANING**

- A. Remove fallen deciduous leaves in Fall; removal may wait until all leaves have fallen.
- B. Clean adjacent pavements of plant debris and other debris generated by maintenance activities.
- C. Remove and dispose of general cleanup debris and biodegradable debris in a proper manner; County's trash collection facilities may not be used.
- D. Remove and dispose of general cleanup debris and biodegradable debris in a proper manner.

**3.07 CLOSEOUT ACTIVITIES**

- A. 10 days prior to end of maintenance period, submit request for final inspection.

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B. Final inspection will be conducted by County.

**END OF SECTION**

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**SECTION 32 11 23  
AGGREGATE BASE COURSES**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. Aggregate base course.
- B. Paving aggregates.
- C. Soil sterilization.

**1.02 RELATED REQUIREMENTS**

- A. Section 31 22 00 - Grading: Preparation of site for base course.
- B. Section 31 23 16.13 - Trenching: Compacted fill over utility trenches under base course.
- C. Section 31 23 23 - Fill: Compacted fill under base course.
- D. Section 32 12 16 - Asphalt Paving: Finish and binder asphalt courses.
- E. Section 32 13 13 - Site Concrete: Finish concrete surface course.
- F. Section 32 18 16.13 - Playground Protective Surfacing.

**1.03 REFERENCE STANDARDS**

- A. AASHTO T 180 - Standard Method of Test for Moisture-Density Relations of Soils Using a 4.54-kg (10-lb) Rammer and a 457-mm (18-in.) Drop.
- B. ASTM D698 - Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 ft-lbf/ft<sup>3</sup> (600 kN-m/m<sup>3</sup>)).
- C. ASTM D1556/D1556M - Standard Test Method for Density and Unit Weight of Soil in Place by Sand-Cone Method.
- D. ASTM D1557 - Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 ft-lbf/ft<sup>3</sup> (2,700 kN m/m<sup>3</sup>)).
- E. ASTM D2487 - Standard Practice for Classification of Soils for Engineering Purposes (Unified Soil Classification System).
- F. ASTM D6938 - Standard Test Methods for In-Place Density and Water Content of Soil and Soil-Aggregate by Nuclear Methods (Shallow Depth).
- G. SSPWC (Greenbook) - Standard Specifications for Public Works Construction.

**1.04 SUBMITTALS**

- A. See Section 01 30 00 - Administrative Requirements for submittal procedures.
- B. Samples: 10 lb sample of each type of aggregate; submit in air-tight containers to testing laboratory.
- C. Materials Sources: Submit name of imported materials source.
- D. Certificates of Conformance: Aggregate and sterilant materials.
- E. Installer's Qualification Statement.

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- F. Aggregate Composition Test Reports: Results of laboratory tests on proposed and actual materials used.
- G. Compaction Density Test Reports.

**1.05 QUALITY ASSURANCE**

- A. Regulatory Requirements: Where reference is made to Standard Specifications, the following shall apply.
  - 1. Perform off-site Work in public rights-of-way in accordance with requirements of authorities having jurisdiction, including SSPWC (Greenbook). For conditions not indicated otherwise on Contract Drawings, conform to Standard Details adopted by authorities having jurisdiction.
  - 2. Perform on-site Work as indicated and referenced on Contract Drawings and as specified herein.
- B. The quantity of volatile organic compounds (VOC) used in weed killer, tack coat, primer and other materials shall not exceed limits permitted under current regulations of:
  - 1. South Coast Air Quality Management District (AQMD).
- C. Source Quality Control: Obtain materials from one source throughout.

**1.06 DELIVERY, STORAGE, AND HANDLING**

- A. When necessary, store materials on site in advance of need.
- B. When aggregate materials need to be stored on site, locate where directed by County.
- C. Aggregate Storage, General:
  - 1. Separate differing materials with dividers or stockpile separately to prevent intermixing.
  - 2. Prevent contamination.
  - 3. Protect stockpiles from erosion and deterioration of materials.

**PART 2 PRODUCTS**

**2.01 MATERIALS**

- A. Aggregate Type Class II: Coarse or crushed aggregate, conforming to Municipality, SSPWC Section 200-2.2..
- B. Coarse Aggregate: Pit run washed stone; free of shale, clay, friable material and debris.
  - 1. Graded in accordance with ASTM D2487 Group Symbol GW.
- C. Herbicide: Comply with all applicable environmental protection and hazardous materials laws and regulations .
  - 1. Comply with current EPA acceptable standard and the California Department of Pesticide Regulations for soils sterilant.
  - 2. Comply with the "Healthy Schools Act" as amended in 2014.
  - 3. Obtain product approval from County, prior to purchase and use.
  - 4. Sterilant: Commercial grade for commercial application.

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- a. Selected as appropriate for the environment in which is it to be placed.
- 5. Contractor shall be licensed with the State of California to apply sterilant.
- 6. Sterilant: Commercial grade for commercial application.
- 7. Payment for soil sterilization: Include full compensation for application and all materials and incidental work required.
- 8. Application Rate: Follow manufacturer recommendations.
- 9. Acceptable Manufacturers:
  - a. Dow AgroSciences; Spike 80DF: [www.dowagro.com](http://www.dowagro.com).
  - b. Pro-Serve Inc.; Bare-Spot Monobor-Chlorate: [www.pro-serveinc.com](http://www.pro-serveinc.com).
  - c. Casoron 50W by Uniroyal Chemical Co., Inc.
  - d. Substitutions: See Section 01 60 00 - Product Requirements.
- D. Geotextile Fabric: Non-biodegradable, non-woven, placed under base;.

**2.02 SOURCE QUALITY CONTROL**

- A. See Section 01 40 00 - Quality Requirements for general requirements for testing and analysis of aggregate materials.
- B. Where aggregate materials are specified using ASTM D2487 classification, testing of samples for compliance shall be provided before delivery to site.
- C. If tests indicate materials do not meet specified requirements, change material and retest.
- D. Provide materials of each type from same source throughout the Work.

**PART 3 EXECUTION**

**3.01 EXAMINATION**

- A. Establishment of Grades
  - 1. Set grade stakes per Section 01 70 00 - Execution and Closeout Requirements.
  - 2. All work shall conform to the lines, elevations, and grades shown on the Drawings.
    - a. Use three consecutive points set on the same slope together so that any variation from a straight grade can be detected.
    - b. Report any such variation to the Architect. Contractor shall be responsible for any error in the grade of the finished work.
  - 3. Grade or location stakes lost or disturbed, shall be reset by the Surveyor at no additional expense to County.
  - 4. Areas having drainage gradients of 2 percent or more, provide elevation stakes, set with instrument, at grid intervals of 25 feet.
    - a. Intermediate stakes may be set by using a tightly-drawn string line over the tops of adjacent stakes.
    - b. Grade stakes must be set at all grade breaks, grade changes, etc.
  - 5. Areas having drainage gradients of less than 2 percent; provide elevation stakes, set with instrument, at 10 foot intervals.

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- a. Grade stakes must be set at all grade breaks, grade changes, etc.
- B. Verify that survey bench marks and intended elevations for the work are as indicated.
- C. Verify substrate has been inspected, gradients and elevations are correct, and is dry.

**3.02 PREPARATION**

- A. Stockpiling:
  - 1. Clear and level storage sites prior to stockpiling of material.
  - 2. Stockpile all materials, including approved material available from excavation and grading, in the manner and at the locations designated.
  - 3. Aggregates shall be stockpiled on the cleared and leveled areas designated by the County Representative to prevent segregation.
  - 4. Materials obtained from different sources shall be stockpiled separately.
- B. Soil Sterilant:
  - 1. Sterilize soil areas to receive paving.
  - 2. Apply soil sterilant in accordance with manufacturer's instructions and applicable environmental regulations.
  - 3. Take care to confine application to the areas to be paved. Sterilant shall not be applied within 2 feet of planting areas.
- C. Correct irregularities in substrate gradient and elevation by scarifying, reshaping, and re-compacting.
- D. Do not place aggregate on soft, muddy, or frozen surfaces.

**3.03 INSTALLATION**

- A. Place and compact aggregate base material in accordance with SSPWC (Greenbook), Subsection 301-2. Place aggregate base below curbs and gutters and paving also, compacted to 95 percent at vehicular traffic and 90 percent at pedestrian-only traffic.
- B. Application of Base Course:
  - 1. After preparing the subgrade, Avoid all vehicular or machine traffic on the subgrade.
    - a. Should it be necessary to haul over the prepared subgrade, drag and roll the traveled way as frequently as may be necessary to remove ruts, cuts, and breaks in the surface.
    - b. Rake and hand tamp all cuts, ruts, and breaks in the surface of the subgrade that are not removed by the above operations.
    - c. Equip with pneumatic tires all equipment used for transporting materials over the prepared subgrade.
  - 2. Do not permit continued use of sections of prepared subgrade for hauling, so as to cut up or deform it from the true cross-section. Protect the prepared subgrade from all traffic.
  - 3. Maintain the surface in its finished condition until the succeeding layer is placed.
- C. Under Bituminous Concrete Paving:

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1. Compact to 95 percent of maximum dry density and 90 percent at pedestrian-only traffic.
  2. It is required that areas of exterior asphalt pavement be underlain by a layer of aggregate base material which meets the requirements, Thickness of base layer is as shown on the Drawings and varies per the Usage Type area.
    - a. It is required that the upper 12 inches of soils below asphalt pavement base material be over-excavated and consist predominantly of satisfactory soil materials and/or approved imported fill.
      - 1) Engineered Fill: See Section 31 23 23 - Fill.
    - b. It is required that the exposed bottom surface soils, below overexcavation, be scarified to the recommended depth of 8 inches, moisture conditioned to achieve optimum moisture content, but not higher than 2 percent above optimum, and then re-compacted to a minimum 90 percent relative compaction before any fill materials are placed.
  3. The above subgrade preparation recommendations are based on the assumption that soils encountered during field exploration are representative of soils throughout the site.
    - a. However, there can be unforeseen and unanticipated variations in soils between points of subsurface exploration. For this reason, the actual subgrade preparation will have to be determined on the basis of in-grading observations and testing performed by representatives of the project geotechnical consultant.
  4. Provide grade stakes and elevations by a California Licensed Surveyor (LS) for the Geotechnical Engineer.
    - a. Verify that the over-excavation depths, shown on the construction drawings for asphalt concrete pavement structural sections, have been achieved prior to re-compaction.
  5. Correct irregularities by dressing down or filling as may be required, to bring areas to true subgrade elevations.
  6. Where filling is required, scarify the subgrade to bond the new material to the in place material; use additional material as required at no additional cost. Subject to the approval of the Architect.
  7. Remove excess material from the site to a legal disposal area.
- D. Under Portland Cement Concrete Paving:
1. Compact to 95 percent of maximum dry density and 90 percent at pedestrian-only traffic.
- E. Place aggregate in maximum 4 inch layers and roller compact to specified density.
- F. Level and contour surfaces to elevations and gradients indicated.
- G. Add small quantities of fine aggregate to coarse aggregate as appropriate to assist compaction.
- H. Add water to assist compaction. If excess water is apparent, remove aggregate and aerate to reduce moisture content.
- I. Use mechanical tamping equipment in areas inaccessible to compaction equipment.

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J. Apply herbicide to finished surface.

**3.04 TOLERANCES**

- A. Subgrade Tolerances:
  - 1. Subgrade for Pavement: Do not vary more than 0.02 ft..
  - 2. Subgrade for Subbase or Base Material: Do not vary more than 0.04 ft..
  - 3. Variations within the above specified tolerances shall be compensating so that the average grade and cross section specified are met.
- B. Flatness: Maximum variation of 1/4 inch measured with 10 foot straight edge.
- C. Scheduled Compacted Thickness: Within 1/4 inch.
- D. Variation From Design Elevation: Within 1/2 inch.

**3.05 FIELD QUALITY CONTROL**

- A. See Section 01 40 00 - Quality Requirements for general requirements for field inspection and testing.
- B. Compaction density testing shall be performed on compacted aggregate base course in accordance with ASTM D1556 or ASTM D6938.
- C. Results will be evaluated in relation to compaction curve determined by testing uncompacted material in accordance with AASHTO T 180, ASTM D698 ("standard Proctor"), or ASTM D1557 ("modified Proctor").
- D. If tests indicate work does not meet specified requirements, remove work, replace and retest.
- E. Proof roll compacted aggregate at surfaces that are under slabs-on-grade and paving.

**3.06 CLEANING**

- A. Remove unused stockpiled materials, leave area in a clean and neat condition. Grade stockpile area to prevent standing surface water.
- B. Leave borrow areas in a clean and neat condition. Grade to prevent standing surface water.

**END OF SECTION**

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**SECTION 32 12 16  
ASPHALT PAVING**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. Aggregate base course.
- B. Single course bituminous concrete paving.
- C. Double course bituminous concrete paving.
- D. Surface sealer.
- E. This section compliments and shall be coordinated with Civil Drawing specifications / requirements. The most stringent requirements shall be utilized.
- F. Asphaltic concrete paving for vehicular traffic and curbs, including necessary patching and repair of damaged new and existing paving.
- G. Patching and repair of existing asphaltic concrete paving for previous damage, for underground utility work and where damaged by new construction.
  - 1. Bituminous Surfacing Repair: Areas removed for utility trenches, heaved by tree roots, cracked areas, protruding areas where pavement meets hard surfaces, depressed areas, holes and areas around new structures, and raveled bituminous pavement.
  - 2. Areas heaved by tree roots, cracked areas, holes, and trenches.

**1.02 RELATED REQUIREMENTS**

- A. Section 02 41 00 - Demolition: Selective demolition, site demolition, structure removal.

**1.03 REFERENCE STANDARDS**

- A. AASHTO T 283 - Standard Method of Test for Resistance of Compacted Asphalt Mixtures to Moisture-Induced Damage.
- B. AASHTO T 324 - Standard Method of Test for Hamburg Wheel-Track Testing of Compacted Asphalt Mixtures.
- C. ADA Standards - Americans with Disabilities Act (ADA) Standards for Accessible Design.
- D. AI MS-2 - Asphalt Mix Design Methods.
- E. AI MS-19 - Basic Asphalt Emulsion Manual.
- F. ASTM A276/A276M - Standard Specification for Stainless Steel Bars and Shapes.
- G. ASTM C117 - Standard Test Method for Materials Finer than 75- $\mu$ m (No. 200) Sieve in Mineral Aggregates by Washing.
- H. ASTM C136/C136M - Standard Test Method for Sieve Analysis of Fine and Coarse Aggregates.
- I. ASTM D5261 - Standard Test Method for Measuring Mass per Unit Area of Geotextiles.
- J. ASTM D6140 - Standard Test Method to Determine Asphalt Retention of Paving Fabrics Used in Asphalt Paving for Full-Width Applications.
- K. CBC - California Building Code.

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- L. CBC Ch. 11B - California Building Code-Chapter 11B.
- M. ASTM D4632/D4632M - Standard Test Method for Grab Breaking Load and Elongation of Geotextiles.
- N. ASTM D5035 - Standard Test Method for Breaking Force and Elongation of Textile Fabrics (Strip Method).
- O. ASTM D5199 - Standard Test Method for Measuring the Nominal Thickness of Geosynthetics.
- P. ASTM D4533/D4533M - Standard Test Method for Trapezoid Tearing Strength of Geotextiles.
- Q. ASTM D946 - Standard Specification for Penetration-Graded Asphalt Cement for Use in Pavement Construction.
- R. SSPWC (Greenbook) - Standard Specifications for Public Works Construction.

**1.04 SUBMITTALS**

- A. Materials List: List source and quality standard for all asphaltic concrete materials.
- B. Mix Design:
  - 1. Formulate a job-mix formula using the Hveem method in accordance with SSPWC (Greenbook) Section 203-6.2 and submit for approval.
  - 2. Submit designs for asphaltic concrete prepared by a materials laboratory under direct supervision of a Civil Engineer licensed in the State of California or a standard mix design proven in actual performance.
  - 3. Resultant Mixture: Hveem properties conforming to SSPWC (Greenbook) Section 203-6.4.4.
- C. Certifications:
  - 1. Weighmaster's Certificates or certified delivery tickets for each truckload of bituminous material delivered to site.
  - 2. Certificates of Conformance: Asphalt, aggregate and sterilant materials.
    - a. 20 days prior to the delivery of aggregates, asphalt materials, and paving mixes to the project site, submit certificates and test results of compliance of such materials with these specifications.
    - b. Submit certificates of compliance from the supplier for bituminous materials for paint binder, asphaltic concrete, and seal coat.
    - c. Submit weigh master's certificates or certified delivery tickets for each truck load of asphaltic material delivered to the project site.
    - d. Upon completion of the weed control treatment, and as a condition for final acceptance, furnish a written certificate stating the brand name of the sterilant and the manufacturer, and that the sterilant used had at least the minimum required concentration, and that the rate and method of application complied in every respect with the conditions and standards contained herein.
- D. Samples:

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1. Prior to the delivery of specified aggregate to the site, submit samples of the material for the Inspector's acceptance in accordance with SSPWC (Greenbook) Section 4-1.4. Samples shall be typical of materials to be furnished from the proposed source and in conformance with the specified requirements.
2. Provide aggregate base gradation and quality certifications, dated within 30 days of submittal.

**1.05 QUALITY ASSURANCE**

- A. Perform Work in accordance with locally adopted {\rs\#1}.
- B. Mixing Plant: Conform to Locally adopted SSPWC (Greenbook).
  1. Asphaltic Concrete Producers Qualifications: Use only materials furnished by a bulk asphaltic concrete producer regularly engaged in production of hot mix, hot laid bituminous concrete.
  2. Applicator Qualifications: Paving machine and roller operators shall be fully trained and experienced in the installation of asphaltic concrete paving on projects of similar size and complexity.
- C. Testing and analysis of granular base material and asphaltic concrete paving mix shall be performed under provisions of Division 01.
- D. Obtain materials from same source throughout.

**1.06 FIELD CONDITIONS**

- A. Do not place asphalt when ambient air or base surface temperature is less than 40 degrees F, or surface is wet or frozen; or when rain is imminent.
  1. Tack Coats: Minimum surface temperature of 60 deg F.
  2. Asphalt Base Course: Minimum surface temperature of 40 deg F and rising at time of placement.
  3. Asphalt Surface Course: Minimum surface temperature of 60 deg F at time of placement.
- B. Place bitumen mixture when temperature is not more than 15 F degrees below bitumen supplier's bill of lading and not more than maximum specified temperature.

**PART 2 PRODUCTS**

**2.01 REGULATORY REQUIREMENTS**

- A. Comply with applicable code for paving work on public property.
- B. Where reference is made to SSPWC (Greenbook), the following shall apply.
  1. For conditions not indicated otherwise on Contract Drawings, conform to Standard Details adopted by authorities having jurisdiction, including Standard Details for Public Works Construction, as amended and adopted by those authorities.
  2. Perform on-site Work as indicated and referenced on Contract Drawings and as specified herein.

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- C. The quantity of volatile organic compounds (VOC) used in weed killer, seal coat, tack coat, primer, and other materials shall not exceed limits permitted under current regulations of local Air Quality Management District (AQMD).
- D. Conform to California Code of Regulations (CCR), Volume 2, Part 2, Chapters 18A and 19A.
- E. Conform to California Building Code (CBC), Chapter 11B and ADA Standards for accessibility requirements.
  - 1. Paving shall be stable, firm, and slip resistant and shall comply with CBC Ch. 11B-302 and 11B-403.
  - 2. Paving along accessible routes of travel shall be at least as slip-resistant as that described as a medium salted finish for slopes of less than 6%, and slip resistant at slopes of 6% or greater; CBC Ch. 11B-403.2.
  - 3. Accessible routes of travel, walks, paving, and sidewalks, shall have a continuous common surface with minimum width of 48 inches per CBC Ch. 11B-403.5.1, not interrupted by steps or by abrupt changes in level.
    - a. CBC Ch. 11B-303.2 Vertical: Changes in level exceeding 1/4 inch high maximum shall be permitted to be vertical and without edge treatment.
    - b. CBC Ch. 11B-303.3 Beveled: Changes in level between 1/4 inch high minimum and 1/2 inch high maximum shall be beveled with a slope not steeper than 1:2.
  - 4. Surface cross slopes shall not exceed 2 percent on any accessible path of travel.

**2.02 MATERIALS**

- A. General: Aggregate base, prime coat paint binder, bituminous surface course and other materials shall be as noted on the Contract Drawings and shall comply with requirements of authorities having jurisdiction.
- B. Asphalt Cement: ASTM D 946.
- C. Asphalt Concrete Materials: SSPWC (Greenbook), Subsection 203-6.
- D. Aggregate for Base Course: See Section 32 11 23 - Aggregate Base Course.
- E. Aggregate for Binder Course : Angular crushed washed stone; free of shale, clay, friable material and debris.
  - 1. Graded in accordance with ASTM D2487 Group Symbol GW.
- F. Mineral Filler: Finely ground particles of limestone, hydrated lime or other mineral dust, free of foreign matter.
- G. Fiber Reinforcement: Synthetic fibers shown to have long-term resistance to deterioration when in contact with alkalis and moisture; 1/2 inch length.
- H. Geotextile Fabric: Non-biodegradable, non-woven Petromat Enviro manufactured by Propex Operating Company, LLC.
  - 1. Geotextile Construction: Needle-punched nonwoven geotextile composed of 100% polypropylene or polypropylene / recycled polyester blend, staple fiber and heat calendered on one side.
- I. Crack Filler:
  - 1. Cracks less than 1/2 inch in width: GuardTop Crackfiller or equal.

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- 2. Cracks 1/2 inch or greater in width: #4 Sheet mix asphalt.
- J. Primer: In accordance with locally adopted {\rs\#1}.
- K. Tack Coat: Homogeneous, medium curing, liquid asphalt.
- L. Seal Coat: AI MS-19, slurry type.
  - 1. Asphalt Emulsion, www.aema.org, SS1-h, per SSPWC (Greenbook) Section 203-9.
  - 2. Acceptable Manufacturers:
    - a. Blue Diamond Asphalt; Satin Seal: www.bluediamondasphalt.com.
    - b. Diversified Asphalt Product; Over Kote: www.diversifiedasphalt.com.
    - c. Gold Star Asphalt Products: goldstarsphalt.com
    - d. SealMaster Pavement Products & Equipment; MasterSeal: sealmaster.net.
    - e. Vulcan Materials Company; GuardTop: www.vulcanmaterials.com.
    - f. Western Colloid Products; Park Top: www.westerncolloid.com.
    - g. Substitutions: See Section 01 60 00 - Product Requirements.

**2.03 GEOTEXTILE INTERLAYER FOR BITUMINOUS PAVEMENT OVERLAYS**

- A. Geotextile Fabric: Non-biodegradable, non-woven manufactured by Propex Operating Company, LLC., or equal.
- B. The geotextile construction shall be a needle-punched nonwoven geotextile composed of 100% polypropylene or polypropylene / recycled polyester blend, staple fiber and heat calendered on one side.
- C. Geotextile Property Values:

Mass Per Unit Area (1) ASTM D5261	153 (4.5) g/m2 (oz/yd2)
Asphalt Retention (4) ASTM D6140	0.9 (0.20)l/m2 (gal/yd2)
Grab Tensile Strength (2) (MD, CMD, 45 bias) ASTM D4632/D4632M	400 (90)N (lbs)
Grab Elongation (2) (MD, CMD, 45 bias) ASTM D4632/D4632M	> 25 Percent
Strip Tensile Strength (1) (MD, CMD, 45 bias) ASTM D5035	200 (45) N (lbs)
Strip Elongation (1) (MD, CMD, 45 bias) ASTM D5035	> 25 Percent
Asphalt Saturated Grab Tensile Strength (4) (MD, CMD, 45 bias) ASTM D6140, ASTM D4632/D4632M	1023 (230) N (lbs)
Asphalt Saturated Grab Elongation (4) (MD, CMD, 45 bias) ASTM D6140, ASTM D4632/D4632M	> 25 Percent
Thickness (1) ASTM D5199	0.89 (35) mm (mils)
Asphalt Saturated Thickness (4) ASTM	1.78 (70) mm (mils)

D6140, ASTM D5199	
Melting Point (2) ASTM A276/A276M	160 (320) Degrees C (F)
Solar Reflectance Temperature Reduction, Measured	10 (50) Degrees C (F)
Trapezoidal Tear Strength (2) ASTM D4533/D4533M	< 45 lbs
Asphalt Saturated Trapezoidal Tear Strength (3), ASTM D6140, ASTM D4533/D4533M	< 25 lbs
Milled Enviro RAP Particle Size Distribution (5)	ASTM C117 100 % passing 1.0" ASTM C136/C136M 95% passing 0.75"
Dry Tensile Strength (6), AASHTO T 283: Recycled Pavement Enhancement with 30% Enviro RAP	psi
TSR – Tensile Strength Ratio, AASHTO T 283	> 200 %
Maximum Rut Depth at 20,000 passes (6) AASHTO T 324	> 0.9 mm
Asphalt Stripping at 20,000 passes (6) AASHTO T 324	<2.9
Flexibility Index with Enviro RAP (6), I-FIT6	None >4.5

(1) Minimum Average Roll Value (MARV) values shown represent weaker principal direction.

(2) Typical (Average) values shown represent weaker principal direction.

(3) Maximum Test Value (MaxTV) per ASTM D8102 performed annually by third party testing.

(4) Minimum Test Value (MinTV) per ASTM D8102 performed annually by third party testing.

(5) Field evaluation and testing by NCAT (National Center for Asphalt Technology) or an independent third party approved by project engineer.

(6) I-FIT - Illinois Flexibility Index Test

#### 2.04 ASPHALT PAVING MIXES AND MIX DESIGN

- A. Asphalt Surfacing Materials: Provide asphalt surfacing meeting the following requirement, furnished from a commercial asphalt central mixing plant.
- B. Use dry material to avoid foaming. Mix uniformly.
- C. Base Course: 4.5 to 5.8 percent of asphalt cement by weight in mixture in accordance with SSPWC (Greenbook) Section 203-6.4.4, Type B.



- D. Binder Course: 4.5 to 6 percent of asphalt cement by weight in mixture in accordance with AI MS-2.
  - 1. CSS-1 h and conform to the requirements of SSPWC (Greenbook), Section 203-3 Emulsified Asphalt.
- E. Parking Lot Wearing Course: 4.6 to 6.0 percent of asphalt cement by weight in mixture in accordance with Section 203-6.4.3, Type C2.
  - 1. Provide at least two courses of asphalt when Type C2 asphalt pavement is greater than 3 inches.
  - 2. Surface Course Minimum Thickness: 1 inch and a maximum of 2 inches.
- F. Submit proposed mix design of each class of mix for review prior to beginning of work.

**2.05 SOURCE QUALITY CONTROL**

- A. Test mix design and samples in accordance with AI MS-2.
- B. Submit asphaltic concrete mix design proposed by the Contractor to the Engineer for review.
- C. Proposed mix to be tested for conformance with the specifications, including grading, asphalt content and stability.

**2.06 ACCESSORIES**

- A. Headers and Stakes:
  - 1. 2 x 6 inch nominal Redwood, Construction Heart Grade, or preservative treated Douglas Fir (PTDF), except at curves provide laminated 1 x 6 inch nominal PTDF., unless indicated otherwise on Drawings
  - 2. Stakes: 2 x 4 x 18 inch long Redwood, or 2 x 3 x 18 inch long PTDF; at 48 inch on center maximum.
  - 3. Nails: Common, use hot dipped galvanized only, 12d minimum.
- B. Pavement Reinforcing Fabric: Non-woven polypropylene fabric conforming to SSPWC (Greenbook), Subsection 213-1.
  - 1. Basis of Design Product: Petromat as manufactured by Propex Fabrics inc.; [www.geotextile.com](http://www.geotextile.com), or approved equal.

**PART 3 EXECUTION**

**3.01 EXAMINATION**

- A. Verify that compacted subgrade and granular base is dry and ready to support paving and imposed loads.
- B. Verify gradients and elevations of base are correct.
- C. Fine grading, checking, shaping, and compacting of subgrade shall be complete before start of asphaltic concrete Work.
- D. Soil Sterilant: Sterilize soil areas to receive asphaltic concrete paving. Apply soil sterilant in accordance with manufacturer's instructions and applicable environmental regulations. Take care to confine application to the areas to be paved.

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- E. Curbs and Gutters: Gutters shall be in place and cured prior to start of asphaltic concrete Work. Provide lumber ramping at all locations where rolling equipment or vehicles cross new concrete paving, curbs and gutters.
- F. Headers: Place headers with tops flush with finish asphaltic concrete surfaces. Back headers with stakes.
  - 1. Install headers along edge of bituminous surfacing abutting turf, earth, or planting area, unless indicated otherwise.
  - 2. Install headers so the bottom surface has continuous bearing on solid grade. Where excavation for headers is undercut, thoroughly tamp soil under the header. Compact backfill on both sides of header to the density of adjacent undisturbed earth.
  - 3. Fasten headers in place with redwood or Douglas fir stakes of length necessary to extend into solid grade a minimum of 12 inches. Stakes shall be of sound material, neatly pointed, driven vertically, and securely nailed to headers. Space stakes, not to exceed 4 feet on centers with top of stakes set one inch below top of header. Provide a minimum of 2-12d galvanized common nails through each stake.
  - 4. Remove existing headers where new surfacing is installed adjacent to existing surfacing.
  - 5. Install temporary headers at transverse joints of paving where continuous paving operations are not maintained.
  - 6. Provide additional stakes and anchorage as required to fasten headers in place
- G. Do not asphalt concrete on any surface, which contains ponded water or excessive moisture in the opinion of the Architect or consulting engineer.
  - 1. If paving operations are in progress and rain or fog forces a shut down, loaded trucks in transit shall return to the plant, and no compensation will be allowed therefore.
  - 2. Provide canvas tarpaulins to cover all loads of asphalt from the time that the mixture is loaded until it is discharged from the delivery vehicle, unless otherwise directed in writing.

**3.02 PAVEMENT REPAIR REMOVAL**

- A. Remove bituminous and concrete pavement in accordance with applicable provisions of SSPWC (Greenbook) Section 300 - Earthwork.
- B. Pavement Heaved By Roots:
  - 1. Remove pavement to limits of distortion and expose roots.
  - 2. Trim roots to provide at least 12 inch clearance to pavement.
- C. Remove protruding bituminous surfaces flush with the surrounding grade using a suitable tool or equipment so that adjacent finishes are not blackened.
- D. Remove raveled and depressed bituminous pavement to limits indicated or required.
- E. Saw cut existing improvements, trim holes and trenches in bituminous and concrete pavement to permit mechanical hand tampers to compact the fill.
- F. Remove broken concrete by saw cutting. If the required cut line is within 30 inches of a score or joint line or edge, cut and remove to the score, joint line, or edge.

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**3.03 EXCAVATING, BACKFILLING AND COMPACTING FOR REPAIR**

- A. Conform to requirements in Section 31 23 16.13 - Trenching, as required.
- B. Where subgrade or base is deemed to be unstable or otherwise unsuitable, excavate such materials to firm earth, and replace with a required material. Install and compact fill materials in accordance with the requirements of related Specification sections.

**3.04 HEADERS**

- A. Install headers along edge of bituminous surfacing abutting turf, earth, or planting area, unless indicated otherwise.
- B. Install headers so the bottom surface has continuous bearing on solid grade.
  - 1. Where excavation for headers is undercut, thoroughly tamp soil under the header.
  - 2. Compact backfill on both sides of header to the density of the adjacent undisturbed grade.
- C. Fasten headers in place with redwood or Douglas fir stakes of length necessary to extend into solid earth a minimum of 12 inches.
  - 1. Stakes shall be of sound material, neatly pointed, driven vertically, and securely nailed to headers.
  - 2. Space stakes, not to exceed 4 feet on centers with top of stakes set one inch below top of header.
  - 3. Provide a minimum of two 12d galvanized common nails through each stake.
- D. Remove existing headers where new surfacing is installed adjacent to existing surfacing.
- E. Install temporary headers at transverse joints of paving where continuous paving operations are not maintained.
- F. Provide additional stakes and devices as required to fasten headers.

**3.05 RESURFACING**

- A. Holes and Trenches:
  - 1. Remove loose dirt and backfill with cement-sand slurry allowing for surfacing one inch thicker than existing.
  - 2. Resurface flush with existing adjoining pavement installing the same type of materials and section provided in existing improvements.
- B. Other Areas:
  - 1. Other surface improvements damaged or removed shall be cut to a neat even line and excavated one inch below the bottom of the existing pavement.
  - 2. Resurface by following the original grades and installing the same type of materials provided in existing improvements.
- C. Where bituminous surfacing abuts concrete, masonry, walks or paving, tamp joint smooth, if necessary, as described above to obtain a uniformly even joint, true to line and grade. Tamp and smooth materials before asphalt cools.

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**3.06 AGGREGATE BASE COURSE**

- A. Place and compact aggregate base course.
- B. Unless otherwise indicated, base course shall be crushed aggregate base, fine grade, 3 inches thick or equal to thickness of the existing base, whichever is greater.
- C. Inspector will examine the base before the paving has begun. Correct any deficiencies before the paving is started.
- D. Wherever asphaltic pavement does not terminate against a curb, gutter, or another pavement, provide and install a redwood or pressure treated Douglas fir header at the line of termination.

**3.07 PREPARATION - PRIMER**

- A. Apply primer in accordance with manufacturer's instructions.
- B. Apply primer on aggregate base or subbase at uniform rate of 0.25 gal/sq yd.
- C. Apply primer to contact surfaces of curbs, gutters.
- D. Use clean sand to blot excess primer.

**3.08 PREPARATION - TACK COAT**

- A. Apply tack coat in accordance with SSPWC (Greenbook) Section 302-5.4.
- B. Apply tack coat on asphalt or concrete surfaces over subgrade surface at uniform rate of 0.10 gal/sq yd.
- C. Apply tack coat to contact surfaces of curbs, gutters and previously placed or existing paving.
- D. Joining Pavement: Expose, cut and clean edges of existing pavement to straight, vertical surfaces for full depth of existing pavement.
  - 1. Paint edge with asphalt emulsion before placing new asphaltic concrete.
  - 2. Joints in New Paving: In accordance with SSPWC (Greenbook).

**3.09 PLACING ASPHALT PAVEMENT - SINGLE COURSE**

- A. Install Work in accordance with {rs\#1} Subsection 302-5.
- B. Asphalt concrete of the class indicated in Part 2 shall be laid in courses conforming to SSPWC (Greenbook) Table 302-5.5(A), unless otherwise stated herein.
- C. Place asphalt within 24 hours of applying primer or tack coat.
- D. Place thickness as indicated on Civil Drawings to minimum 1 inch compacted thickness.
  - 1. Asphalt concrete work shall include full depth patching and variable thick asphalt concrete transition areas.
  - 2. Provide daily the Inspector, with copies of certificates of weight for all materials delivered to the job site and/or incorporated in the work.
  - 3. At no time shall the coarse aggregate that has segregated from the mix be scattered across the paved mat.
- E. Install gutter drainage grilles and frames and manhole frames in correct position and elevation.

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- F. Compact pavement by rolling to specified density. Do not displace or extrude pavement from position.
  - 1. Compact (roll) asphaltic concrete in accordance with SSPWC (Greenbook), Subsection 302-5.6, using machine rollers.
    - a. Compaction by vehicular traffic is prohibited.
    - b. Compact areas inaccessible to rolling equipment with machine-powered tamper.
- G. Perform rolling with consecutive passes to achieve even and smooth finish without roller marks.

**3.10 PLACING ASPHALT PAVEMENT - DOUBLE COURSE**

- A. Provide at least two courses of asphalt when Type D2 asphalt pavement is greater than 1-1/2 inches. The surface course shall be a minimum thickness of 1 inch and a maximum of 1-1/2 inches.
- B. Provide at least two courses of asphalt when Type C2 asphalt pavement is greater than 3 inches. The surface course shall be a minimum thickness of 1 inch and a maximum of 2 inches.
- C. Install Work in accordance with SSPWC (Greenbook) Subsection 302-5.
- D. Place asphalt binder course within 24 hours of applying primer or tack coat.
- E. Place binder course to thickness as indicated on Civil Drawings, minimum 1 inch compacted thickness.
- F. Place asphalt wearing course within two hours of placing and compacting binder course.
- G. Place wearing course to thickness as indicated on Civil Drawings, minimum 1 inch compacted thickness.
- H. Install gutter drainage grilles and frames and manhole frames in correct position and elevation.
- I. Compact pavement by rolling to specified density. Do not displace or extrude pavement from position.
  - 1. Compact (roll) asphaltic concrete in accordance with SSPWC (Greenbook), Subsection 302-5.6, using machine rollers.
    - a. Compaction by vehicular traffic is prohibited.
    - b. Compact areas inaccessible to rolling equipment with machine-powered tamper.
- J. Perform rolling with consecutive passes to achieve even and smooth finish, without roller marks.

**3.11 SEAL COAT**

- A. Apply seal coat after surface course application, in accordance with manufacturer's recommendations.
- B. Apply seal coat to surface course and asphalt curbs in accordance with  $\{\rs\#1\}$ , Subsection 302-8.2.
- C. Add water to specified seal coat material. When air temperatures of 90 degrees F or more are encountered during application, consult manufacturer for recommendations.

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- D. If pavement surface exhibits imperfections of roller marks, rock pockets, ridges or depressions as determined by the Architect, the addition of sand aggregate to seal coat, and amounts thereof, shall be as recommended by the manufacturer.
- E. A second application shall be made after first coat has dried to the touch. When sand is added to the first seal coat, two additional coats without extra sand shall be applied.
- F. Allow seal coat to dry before permitting traffic or striping.

**3.12 PAVEMENT REPAIR AND PAVING**

- A. Preparation of existing pavement: Where indicated, remove loose asphaltic concrete, cleanout "pot holes" and cracks, remove dirt, oil and other foreign materials.
- B. Repair holes with full paving section as specified. Repair "alligating" with asphalt "skin-patch". Fill all cracks larger than 1/4 inch wide with asphalt emulsion slurry.
- C. Repair of Existing Surfacing:
  - 1. Fill cracks 1/2 inch wide and less with RS-1 emulsion and silica sand or other required material.
  - 2. Cracks larger than 1/2 inch wide shall be filled with Type C2 Asphalt Concrete as specified.
    - a. Cracks shall be filled to the level of adjacent surfacing.
  - 3. Where low areas, holes, or depressions occur in existing surfacing, repair with emulsified asphalt.
    - a. Install material, strike off the emulsified asphalt with a straightedge flush with adjoining surfacing.
    - b. Finish with a steel trowel, and after dehydration, compact by rolling or tamping.
- D. Tack Coat: Apply asphalt oil AR-4000 or AR-8000, as required for jobsite condition, at metered application rate of no less than a range from 0.2 to 0.3 gallons per square yard of fabric or as directed by manufacturer and to provide 100 percent fabric saturation and ample bonding for paving section.
- E. Fabric Reinforcement: Place fabric smooth side up in tack coat with 2 to 4 inch overlap. Hand-broom to remove wrinkles. Apply addition tack coat to joints and between overlapped fabric layers.
- F. Overlay Asphalt: Place single course asphalt, 1-1/2 inch compacted thickness, in conformance with specified standards in this section.

**3.13 TOLERANCES**

- A. Flatness: Maximum variation of 1/4 inch measured with 10 foot straight edge.
- B. Compacted Thickness: Within 1/4 inch of specified or indicated thickness.
- C. Variation from True Elevation: Within 1/2 inch.

**3.14 FIELD QUALITY CONTROL**

- A. See Section 01 40 00 - Quality Requirements, for general requirements for quality control.
- B. Provide field inspection and testing. Take samples and perform tests in accordance with AI MS-2.

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1. Flood test entire area in presence of the Project Inspector.
  2. Test entire area to verify it is free of standing water or puddles.
- C. Pavement at all longitudinal joints shall have a Field Density of 95%, as described in SSPWC (Greenbook), Section 302-5.6.2.
1. When the test results of the field cores are less than 95% Relative Compaction, remove a 1 foot wide section on each side of the longitudinal joint.
  2. Replace the removed pavement with an asphalt mix that meets the job specification at no additional cost to the County.
- D. Test: Flood test all paving to demonstrate positive drainage.
1. Before acceptance, water test all pavements to ensure proper drainage as directed by the Inspector.
  2. Flooding Method: By water tank truck.
  3. Fill depressions where the water ponds to a depth of more than 1/8 inch; or the slope corrected to provide proper drainage.
  4. The edges of the fill shall be feathered and smoothed so that the joint between the fill and the original surface is invisible.
  5. No standing water shall remain 1-hour after test.

**3.15 PROTECTION**

- A. Immediately after placement, protect pavement from mechanical injury for 2 days or until surface temperature is less than 140 degrees F.
1. After final rolling, prohibit all traffic on asphaltic concrete until mix has fully cooled and set. Minimum time, in all cases shall be 6 hours.

**3.16 CLEANING**

- A. After completion of paving operations, clean all existing and new improvements that have been soiled, especially by oil tracking from asphalt tanks or placement in general.
- B. For Substantial Completion review, broom clean and wash paving with hoses. Clean residue from landscaping installation.

**END OF SECTION**

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**SECTION 32 13 13  
SITE CONCRETE**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. Concrete area paving, sidewalks, stair steps, integral curbs, gutters, parking areas, cast-in-place walls, and general site applications.

**1.02 RELATED REQUIREMENTS**

- A. Section 03 10 00 - Concrete Forming and Accessories.
- B. Section 07 92 00 - Joint Sealants: Sealing joints.
- C. Section 31 22 00 - Grading: Preparation of site for paving.
- D. Section 31 23 23 - Fill: Compacted subbase for paving.
- E. Section 32 11 23 - Aggregate Base Courses: Gravel base course.
- F. Section 32 17 13 - Concrete Wheel Stops: Precast concrete parking bumpers.
- G. Section 32 17 23 - Pavement Markings.
- H. Section 32 17 26 - Tactile Warning Surfacing: Plastic tactile and detectable warning tiles for pedestrian walking surfaces.

**1.03 REFERENCE STANDARDS**

- A. ACI 211.1 - Standard Practice for Selecting Proportions for Normal, Heavyweight, and Mass Concrete.
- B. ACI 301 - Specifications for Concrete Construction.
- C. ACI 305R - Guide to Hot Weather Concreting.
- D. ACI 306R - Guide to Cold Weather Concreting.
- E. ACI 318 - Building Code Requirements for Structural Concrete.
- F. ADA Standards - Americans with Disabilities Act (ADA) Standards for Accessible Design.
- G. ASTM A615/A615M - Standard Specification for Deformed and Plain Carbon-Steel Bars for Concrete Reinforcement.
- H. ASTM C1315 - Standard Specification for Liquid Membrane-Forming Compounds Having Special Properties for Curing and Sealing Concrete.
- I. ASTM C33/C33M - Standard Specification for Concrete Aggregates.
- J. ASTM C39/C39M - Standard Test Method for Compressive Strength of Cylindrical Concrete Specimens.
- K. ASTM C94/C94M - Standard Specification for Ready-Mixed Concrete.
- L. ASTM C150/C150M - Standard Specification for Portland Cement.
- M. ASTM C309 - Standard Specification for Liquid Membrane-Forming Compounds for Curing Concrete.

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- N. ASTM C494/C494M - Standard Specification for Chemical Admixtures for Concrete.
- O. CBC - California Building Code.
- P. CBC Ch. 11B - California Building Code-Chapter 11B.
- Q. SSPWC (Greenbook) - Standard Specifications for Public Works Construction.

**1.04 SUBMITTALS**

- A. See Section 01 30 00 - Administrative Requirements, for submittal procedures.
- B. Product Data: Provide data on joint filler, admixtures, and curing compound.

**1.05 QUALITY ASSURANCE**

- A. Lines and Levels: Established by State of California licensed Surveyor or registered Civil Engineer. Costs of surveying services shall be included in the Contract Sum.
- B. Installer Qualifications: Company specializing in performing work of the type specified and with minimum three years of documented experience.

**PART 2 PRODUCTS**

**2.01 PAVING ASSEMBLIES**

- A. Comply with applicable requirements of ACI 301.
- B. Concrete Sidewalks: 4,000 psi 28 day concrete, thickness as indicated on Drawings, minimum 4 inches, natural grey color Portland cement.
- C. Site Concrete: 4,000 psi 28 day concrete, thickness as indicated on Drawings, minimum 4 inches, natural grey color Portland cement.

**2.02 REGULATORY REQUIREMENTS**

- A. Conform to California Code of Regulations (CCR), Volume 2, Part 2, Chapters 18A and 19A.
- B. Conform to California Building Code (CBC), Chapter 11B and ADA Standards for accessibility requirements.
  - 1. Portland cement concrete paving shall be stable, firm, and slip resistant and shall comply with CBC Ch. 11B-302 and 11B-403.
  - 2. Concrete paving and concrete finishes along accessible routes of travel shall be at least as slip-resistant as that described as a medium salted finish for slopes of less than 6%, and slip resistant at slopes of 6% or greater; CBC Ch. 11B-403.2.
  - 3. Accessible routes of travel, walks, paving, and sidewalks, shall have a continuous common surface with minimum width of 48 inches per CBC Ch. 11B-403.5.1, not interrupted by steps or by abrupt changes in level.
    - a. CBC Ch. 11B-303.2 Vertical: Changes in level exceeding 1/4 inch high maximum shall be permitted to be vertical and without edge treatment.
    - b. CBC Ch. 11B-303.3 Beveled: Changes in level between 1/4 inch high minimum and 1/2 inch high maximum shall be beveled with a slope not steeper than 1:2.
  - 4. Surface cross slopes shall not exceed 2 percent on any accessible path of travel.
- C. Albedo Reflectance of Finish Concrete: 0.30, minimum.

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### 2.03 FORM MATERIALS

- A. Form Materials: As specified in Section 03 10 00, comply with ACI 301.
- B. Joint Filler: Preformed; non-extruding bituminous type (ASTM D1751) or sponge rubber or cork (ASTM D1752).
  - 1. Thickness: 1/2 inch.

### 2.04 REINFORCEMENT

- A. Reinforcing Steel: ASTM A615/A615M, Grade 60 (60,000 psi) yield strength; deformed billet steel bars; unfinished.
- B. Dowels: ASTM A615/A615M, Grade 60 - 60,000 psi yield strength; deformed billet steel bars; unfinished finish.
- C. Provide supports for reinforcement to position the bars at mid depth of the concrete. Plastic and/or steel chairs, and dobies are acceptable.

### 2.05 CONCRETE MATERIALS

- A. Obtain cementitious materials from same source throughout.
- B. Cement: ASTM C150/C150M, Sulfate Resistant - Type V Portland cement, gray color.
- C. Fine and Coarse Mix Aggregates: ASTM C33/C33M.
- D. Water: Clean, and not detrimental to concrete.
- E. Chemical Admixtures: ASTM C494/C494M, Type A - Water Reducing, Type C - Accelerating, and Type G - Water Reducing, High Range and Retarding.
  - 1. Do not use chemicals that will result in soluble chloride ions in excess of 0.1 percent by weight of cement.

### 2.06 ACCESSORIES

- A. Curing Compound: ASTM C309, Type 1-D, Class A.
  - 1. Comply with all applicable air pollution requirements.
- B. Liquid Surface Sealer: <>
  - 1. Penetrating High solids, acrylic curing and sealing compound: Minimum 25% non-yellowing, acrylic solids curing compound; shall conform to ASTM C309 and/or ASTM C1315, Type I, Class A, VOC compliant.
    - a. Products:
      - 1) Laticrete International, Inc.; L&M Aquapel Plus: [www.lmcc.com](http://www.lmcc.com).
      - 2) L.M. Scofield Company (Sika Brand); Cureseal-W: [www.scofield.com](http://www.scofield.com).
      - 3) W. R. Meadows Company; Intraguard: [www.wrmeadows.com](http://www.wrmeadows.com).
      - 4) Substitutions: See Section 01 6000 - Product Requirements.
- C. Slab Isolation Joint Filler: 1/2 inch thick, height equal to slab thickness, with removable top section that will form 1/2 inch deep sealant pocket after removal.
  - 1. Material: Closed-cell, non-absorbent, compressible polymer foam in sheet form.
- D. Tactile Warning Surfaces: See Section 32 17 26.

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**2.07 CONCRETE MIX DESIGN**

- A. Proportioning Normal Weight Concrete: Comply with ACI 211.1 recommendations.
- B. Concrete Strength: Establish required average strength for each type of concrete on the basis of field experience or trial mixtures, as specified in ACI 301.
- C. Admixtures: Add acceptable admixtures as recommended in ACI 211.1 and at rates recommended by manufacturer.
- D. Concrete Properties:
  - 1. Compressive strength, when tested in accordance with ASTM C39/C39M at 28 days; As scheduled.
  - 2. Water-Cement Ratio: Maximum 40 percent by weight, or according to indicated concrete strength..
  - 3. Maximum Slump: 4 inches.

**2.08 MIXING**

- A. Transit Mixers: Comply with ASTM C94/C94M.

**PART 3 EXECUTION**

**3.01 EXAMINATION**

- A. Verify compacted subgrade is acceptable and ready to support paving and imposed loads.
- B. Verify gradients and elevations of base are correct.

**3.02 SUBBASE**

- A. See Section 32 11 23 for construction of base course for work of this Section, where indicated on Drawings.

**3.03 PREPARATION**

- A. Project Conditions:
  - 1. Water and Dust Control: Maintain control of concrete dust and water at all times. Do not allow adjacent planting areas to be contaminated.
- B. Moisten base to minimize absorption of water from fresh concrete.
- C. Notify Architect minimum 24 hours prior to commencement of concreting operations.

**3.04 COORDINATION WITH EXISTING CONSTRUCTION**

- A. Connection to Existing Construction: Where new concrete is doweled to existing construction, drill holes in existing concrete, insert steel dowels and pack with non-shrinking grout.
- B. Preparation of Existing Concrete: Prepare previously placed concrete by cleaning with steel brush and apply bonding agent in accordance with manufacturer's instructions.

**3.05 FORMING**

- A. Place and secure forms to correct location, dimension, profile, and gradient.

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- B. Assemble formwork to permit easy stripping and dismantling without damaging concrete.
- C. Place joint filler vertical in position, in straight lines. Secure to formwork during concrete placement.

**3.06 REINFORCEMENT**

- A. Place reinforcement at midheight of slabs-on-grade.
  - 1. Locate reinforcement to provide required cover by concrete. If not otherwise indicated on Drawings, provide concrete cover in compliance with ACI 318.
  - 2. Reinforcement Spacing: Space reinforcement as indicated on Drawings or in Standard Specifications, whichever is more stringent. If not indicated, maintain clear spacing of two times bar diameter but not less than 1-1/2 inch nor less than 1-1/3 times maximum size aggregate.
  - 3. Reinforcement Supports: Provide load bearing pads under supports or provide precast concrete block bar supports.
- B. Interrupt reinforcement at contraction and expansion joints.
- C. Place dowels to achieve pavement and curb alignment as detailed.
  - 1. Secure tie dowels in place before depositing concrete.
  - 2. Provide No. 3 bars, 18 inch long at 24 inches O.C. for securing dowels where no other reinforcement is provided.

**3.07 COLD AND HOT WEATHER CONCRETING**

- A. Follow recommendations of ACI 305R when concreting during hot weather.
- B. Follow recommendations of ACI 306R when concreting during cold weather.
- C. Do not place concrete when base surface temperature is less than 40 degrees F, or surface is wet or frozen.

**3.08 PLACING CONCRETE**

- A. Place concrete in accordance with ACI 304R.
  - 1. Mixing: If batch plant is within travel time not exceeding maximum limits, transit mix concrete in accordance with ASTM C94/C94M. If travel time exceeds limits, provide alternative means for mixing and submit for review and approval.
- B. Do not place concrete when base surface is wet.
- C. Ensure reinforcement, inserts, embedded parts, formed joints are not disturbed during concrete placement.
- D. Place concrete continuously over the full width of the panel and between predetermined construction joints. Do not break or interrupt successive pours such that cold joints occur.
- E. Place concrete to pattern indicated.

**3.09 JOINTS**

- A. Align curb, gutter, and sidewalk joints.
- B. Place 1/2 inch wide expansion joints at 20 foot intervals and to separate paving from vertical surfaces and other components and in pattern indicated.

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1. Form joints with joint filler extending from bottom of pavement to within 1/2 inch of finished surface.
  2. Secure to resist movement by wet concrete.
  3. If expansion joints are not indicated, conform to SSPWC (Greenbook) and standard details and specifications of authorities having jurisdiction.
- C. Provide scored joints.
1. Tooled Joints: 1-inch deep by 3/16-inch wide tooled joints with 1/8-inch radius corners.
  2. At 5 feet intervals for pedestrian paving.
  3. At 10 feet intervals for vehicle paving.
  4. Between sidewalks and curbs.
  5. Between curbs and pavement.
- D. Provide keyed joints as indicated.
- E. Saw cut contraction joints 3/16 inch wide at an optimum time after finishing. Cut 1/3 into depth of slab.

### 3.10 FINISHING

- A. Area Paving: Light broom, texture perpendicular to pavement direction.
- B. Sidewalk Paving: Medium broom, texture perpendicular to pavement direction with troweled and radiused edge.
- C. Curbs and Gutters: Light broom, texture parallel to pavement direction.
- D. Place curing compound on exposed concrete surfaces immediately after finishing. Apply in accordance with manufacturer's instructions.

### 3.11 TOLERANCES

- A. ACI 301, Class B, except paving in public rights-of-way shall conform to SSPWC (Greenbook).
- B. Maximum Variation of Surface Flatness: 1/4 inch in 10 ft.
- C. Maximum Variation From True Position: 1/4 inch.
- D. Control-joint grooves and other conspicuous lines:
  1. 1/4 inch maximum in any 20 feet.
  2. 1/2 inch maximum in any 40 feet.
- E. Variation in Cross-Sectional Thickness of Slabs:
  1. Minus 1/4 inch.
  2. Plus 1/2 inch.
- F. Variation in Radii
  1. In radii of less than 10 feet:
    - a. 1/8 inch in any 5 feet.
    - b. 1/4 inch in any 10 feet.
  2. In radii of 20 feet:
    - a. 1/4 inch in any 10 feet.

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- b. 3/8 inch in any 20 feet
  - 3. In radii of 30 feet or more:
    - a. 1/2 inch in any 20 feet.
    - b. 1 inch in any 30 feet.
- G. Coefficient of Friction for Finish Surface:
  - 1. Pedestrian Vehicular Finish Surface: Minimum 0.6 static coefficient of friction is required for all concrete paving finish surface. All concrete paving surfaces to be broom finish.
  - 2. Ramps: Minimum 0.8 static coefficient of friction is required for all concrete paving finish surfaces on ramps. All concrete paving surfaces on ramps to be broom finish.

**3.12 FIELD QUALITY CONTROL**

- A. An independent testing agency will perform field quality control tests, as specified in Section 01 40 00 - Quality Requirements.
  - 1. Provide free access to concrete operations at project site and cooperate with appointed firm.
  - 2. Submit proposed mix design of each class of concrete to inspection and testing firm for review prior to commencement of concrete operations.
  - 3. Tests of concrete and concrete materials may be performed at any time to ensure compliance with specified requirements.
- B. Compressive Strength Tests: ASTM C39/C39M; for each test, mold and cure three concrete test cylinders. Obtain test samples for every 75 cu yd or less of each class of concrete placed.
  - 1. Take one additional test cylinder during cold weather concreting, cured on job site under same conditions as concrete it represents.
  - 2. Perform one slump test for each set of test cylinders taken.
- C. Maintain records of placed concrete items. Record date, location of pour, quantity, air temperature, and test samples taken.

**3.13 PROTECTION**

- A. Immediately after placement, protect pavement from premature drying, excessive hot or cold temperatures, and mechanical injury.
  - 1. Provide lumber ramping and plywood covering where curbs and gutters are subject to vehicular and equipment traffic during construction.

**END OF SECTION**

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**SECTION 32 15 00  
AGGREGATE SURFACING**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. Crushed stone surfacing. (Stabilized decomposed granite walkways)
- B. Walkway edging installation.

**1.02 RELATED REQUIREMENTS**

- A. Section 31 10 00 - Site Clearing.
- B. Section 31 22 00 - Grading: Preparation of subbase.

**1.03 REFERENCE STANDARDS**

- A. ASTM C136/C136M - Standard Test Method for Sieve Analysis of Fine and Coarse Aggregates.
- B. ASTM D1557 - Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 ft-lbf/ft<sup>3</sup> (2,700 kN m/m<sup>3</sup>)).
- C. ASTM D2419 - Standard Test Method for Sand Equivalent Value of Soils and Fine Aggregate.
- D. ASTM D4873/D4873M - Standard Guide for Identification, Storage, and Handling of Geosynthetic Rolls and Samples.
- E. CBC Ch. 11B - California Building Code-Chapter 11B.
- F. SSPWC (Greenbook) - Standard Specifications for Public Works Construction.

**1.04 SUBMITTALS**

- A. See Section 01 30 00 - Administrative Requirements for submittal procedures.
- B. Products Data: For each product specified. Submit a 5 lb. sample and sieve analysis for grading of decomposed granite or crushed 3/8" or 1/4" minus aggregate to be sent to Manufacturer prior to any construction – (allow 2 week turn around).
- C. Test Reports:
  - 1. Submit sieve analysis of proposed material to insure it meets grading requirements.
  - 2. Test Results: Supplied by an independent testing laboratory for compliance of gradation of decomposed granite material in accordance with ASTM C136/C136M.
- D. Sieve analysis and color of decomposed granite screenings shall be approved in writing from the Architect before any material is delivered to the project site.
- E. Manufacturer's Instructions: Include aggregate base course placement, installation procedures, and fill placement.
- F. Manufacturer's qualification statement.
- G. Installer's qualification statement.
- H. Samples:

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1. Products: Five lb. sample and sieve analysis for grading of decomposed granite. Color shall be as specified on the Drawings, or as selected by Architect.
- I. Certificates: Certify that products of this section meet or exceed specified requirements.
- J. Provide County Representative with the following excess materials for use in future Stabilized Aggregate repair: 40 to 50 lb. Bags of the Stabilized Aggregate blended with proper amount of Stabilizer

**1.05 QUALITY ASSURANCE**

- A. Manufacturer Qualifications: Company specializing in manufacturing products specified in this section, with not less than three years of documented experience.
- B. Installer Qualifications: Company specializing in installing work of the type specified in this section, and with at least three years of documented experience and approved by manufacturer.
- C. Paving: Replace without additional cost to the County all areas of decomposed granite surface that may become defective within one (1) year after date of acceptance.
- D. Sterilization: Maintain all areas of decomposed granite surface free of vegetation growing through from below for (90) days after date of acceptance. Any procedure required for eradication of such vegetation growth shall be done by the Contractor at no additional cost to the County.
- E. Regulatory Requirements:
  1. Placement of surfacing to comply with CBC Ch. 11B-302 Floor and Ground Surfaces, 11B-303 Changes in Level, and 11B-403 Walking Surfaces.
  2. Surfacing shall be stable, firm, and slip resistant and shall comply with CBC Ch. 11B-302 and 11B-403.

**1.06 MOCK-UPS:**

- A. Install 4 ft. wide x 10 ft. long mock-up of decomposed granite with stabilizer additive at location as directed by Architect.
- B. Mock to be the standard from which the work will be judged and incorporated into the work.

**1.07 DELIVERY, STORAGE, AND HANDLING**

- A. See Section 01 60 00 - Product Requirements for additional requirements.
- B. Identify, store, and handle geosynthetics according to ASTM D4873/D4873M.
- C. Protect geosynthetic materials from sunlight and other ultraviolet light sources during storage.
- D. Handle geosynthetics with care and prevent dragging, dropping, or imbalanced lifting.

**1.08 FIELD CONDITIONS**

- A. Use lightweight hauling equipment.
- B. Exercise care in using equipment, avoiding damage to adjacent paving, walls and plant materials.
- C. Do not install decomposed granite surface material during rainy conditions or below 40 degrees.

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- D. Temperature Requirements: Do not place geosynthetic when ambient air or base surface temperature is less than 40 degrees F or above 140 degrees F (60 degrees C).
- E. Surface Requirements: Do not place geosynthetic when the receiving surface is saturated or has ponded water.

**1.09 WARRANTY**

- A. See Section 01 78 00 - Closeout Submittals for additional warranty requirements.
- B. Manufacturer Warranty: Provide one year manufacturer warranty for performance. Complete forms in County's name and register with manufacturer.
- C. Installer Special Warranty: Provide 2-month (60 days) warranty for unconditional maintenance and repairs as required commencing on the Date of Substantial Completion.

**PART 2 PRODUCTS**

**2.01 MANUFACTURER**

- A. Basis of Design Product: Decomposed Granite as manufactured by Gail Materials, or approved equal.
- B. Acceptable Supplier:
  - 1. Gail Materials: [www.gailmaterials.net](http://www.gailmaterials.net)
  - 2. Southwest Boulder & Stone: [www.southwestboulder.com](http://www.southwestboulder.com), or equal.
  - 3. Or Equal Substitutions: See Section 01 60 00 - Product Requirements.

**2.02 MATERIALS**

- A. Crushed Stone Surfacing: Natural, washed, 3/8 inch (1 cm) stone; free of shale, clay, friable material, and debris.
  - 1. Decomposed Natural Friable Granite Screenings for Walkways.
  - 2. Conform to the grading requirements shown below.
    - a. Do not use limestone screenings or stone dust.
  - 3. Color(s): To be selected by Architect from manufacturer's full range.
  - 4. Sieve Analysis: In accordance with ASTM C136/C136M.

SIEVE DESIGNATION	PERCENT PASSING
1/2 inch	100
3/8 inch	90 - 100
No. 4	50 - 100
No. 30 (0.600 mm)	25 - 55
No. 100 (0.150 mm)	10 - 20
No. 200 (0.075 mm)	5 - 18

- a. Sand Equivalent: 30 minimum in accordance with ASTM D2419.
- 5. Provide screenings of clean, hard, durable particles of fragments of select granite.
  - a. Evenly mix fines throughout the aggregate.

- b. Material with one fractured face produced from gravel; Provide 50 percent retained on a No. 4 sieve, by weight.
  - 6. Source Quality Control:
    - a. See Section 01 40 00 - Quality Requirements, for additional requirements.
    - b. Provide the entire quantity required from a single supply source.
- B. Stabilizer Binder:
  - 1. Patented, non-toxic, organic binder that is a colorless and odorless concentrated powder that binds decomposed granite together to produce a firm surface.
  - 2. Products:
    - a. Basis of Design Product: Natracil as Distributed by Gail Materials, or approved equal.
    - b. Minick Materials; Natracil: [www.minickmaterial.com](http://www.minickmaterial.com).
    - c. Stabilizer Solutions, Inc.; Stabilizer® for Stabilized Aggregate: [stabilizersolutions.com](http://stabilizersolutions.com).
    - d. Technisoil Global, Inc.; TechniSoil G3 - Commercial Stabilizer : [technisoil.com](http://technisoil.com).
    - e. Or Equal Substitutions: See Section 01 60 00 - Product Requirements.
- C. Geosynthetic Fabric: Comply with SSPWC (Greenbook) Section 213-2 – “Geosynthetics”, Type N90.
- D. Aggregate Base Course: According to surface reinforcement manufacturer's recommendations.

**2.03 ACCESSORIES**

- A. Steel Edging:
  - 1. Dimensions: 3/16 inch thick by 4 inches deep, with overlapping joints.
  - 2. Stakes: 3/16 inch by 16 inches long x 1-3/4 inch wide at top tapering to point at bottom; located 36 inches o.c. maximum.
  - 3. Finish: Baked-on green paint, Baked-on brown paint, Baked-on black paint, or Hot-dipped galvanized.
  - 4. Color(s): To be selected by Architect from manufacturer's full range.
- B. Redwood Edging:
  - 1. Material: RIS Merchantable Heart Grade.
  - 2. Dimensions: Nominal 1 x 4 inches.
  - 3. Stakes: Nominal 2 x 2 inches by 16 inches long; located 36 inches o.c. maximum.
- C. Recycled Plastic Lumber Edging:
  - 1. Material: Lumber made from recycled polyethylene and UV stabilizers.
  - 2. Dimensions: Nominal 2 x 4 inches.
  - 3. Steel Stakes: 3/16 inch by 16 inches long x 1-3/4 inch wide at top tapering to point at bottom; located 36 inches o.c. maximum.
  - 4. Color(s): To be selected by Architect from manufacturer's full range.

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## **PART 3 EXECUTION**

### **3.01 EXAMINATION**

- A. Verify that subgrade has been prepared correctly, is smooth, and is at proper grade and level.
- B. Do not begin work until subgrade is correct.

### **3.02 INSTALLATION**

- A. Edging: Install flush with stabilized decomposed granite surfacing.
  - 1. Provide sufficient stakes to secure in place.
- B. Install aggregate base course according to surface reinforcement manufacturer's recommendations.
  - 1. Base shall be 3 inch compacted layer of recommended crushed granular road base. Make any corrections necessary to base furnished and installed to bring gravel to the elevations shown on the drawing.
  - 2. Pre-soak base material with water and compact to 95% determined by Test Method ASTM D1557 prior to installing Stabilized Aggregate. Compaction testing to be provided by project owner, one test per 2,000 square feet of base.
  - 3. Although porous, it is recommended to have proper drainage available to ensure no standing water on surface or adjacent to Stabilized Aggregate, including downspouts when placed under roof overhang and surface drains.
  - 4. Blending Stabilizer:
    - a. Thoroughly pre-mix stabilizer with aggregate at the rate of 15-lbs of stabilizer per 1-ton of aggregate. Verify with manufacturer correct stabilizer rate for your project and climate. Drop spreading of stabilizer over pre-placed aggregate or mixing by rototilling is not acceptable. Mechanically pre-mix stabilizer per manufacturer's recommendations using an approved mechanical blending unit to adequately blend stabilizer with aggregate (Bucket blending is not an approved blending apparatus). Always dry blend stabilizer and aggregate.
  - 5. Placement:
    - a. After pre-blending, place Stabilized Aggregate directly on prepared sub-grade. Level to desired grade and cross section. Depth of pathways shall be 3" for heavy foot traffic and light vehicles. DO NOT place on filter fabric. Contact manufacturer for installation on slopes greater than 8%.
  - 6. Watering:
    - a. Water heavily for full-depth moisture penetration of profile. Water activates stabilizer. Apply 25 to 45-gallons of water per 1-ton to achieve saturation. Randomly test for depth using a probing device, which reaches full depth.
    - b. Wait a minimum of 6 – 72 hours or until such time that the stabilized aggregate is able to accept compaction from a 1 to 5 ton roller without separation, plowing or any other physical compromise of the aggregate.

- c. If surface aggregate dries significantly quicker than subsurface material, lightly mist surface before compaction.
7. Compaction:
- a. Compact stabilized aggregate to 85% relative compaction by equipment such as; a 2 to 5-ton double drum roller making 3 to 4 passes. Do not begin compaction for 6 hours after placement and up to 72 hours. DO NOT use a vibratory plate compactor or vibration feature on roller, as vibration separates large aggregate particles. If pumping or pancaking of surface occurs, surface is still too wet to roll.
  - b. Take care in compacting surface when adjacent to planting and irrigation systems, use 8" or 10" hand tamp. Install stabilized aggregate more than 3" thick, in lifts. If 4" thick compacted (2) 2" lifts. If 5" thick compacted (2) 2.5" lifts. If stabilized aggregate is pre-moistened before installation entire 4" or 5" lift may be installed.
  - c. Lightly spray surface area following compaction. Do not disturb aggregate surface with spray action.
- C. Place surfacing or aggregate-turf pavement in maximum 4 inch (100 mm) layers.

**3.03 CLEANING**

- A. Remove unused or stockpiled fill, base, and reinforcement.
- B. Clean adjacent surfaces of excess sand, gravel, soil, and debris. Sweep broom clean.

**3.04 PROTECTION**

- A. Furnish and install construction fence around new surface to prevent public access. Fencing to be maintained in place for a minimum of 12 - 72 hours after completion of installation, or as directed by the County Representative. Drying period may take longer due to weather conditions.
- B. Contractor shall notify County Representative that landscape irrigation shall be restricted near Stabilized Aggregate surface until drying period is complete. Standing water on surface and adjacent to path shall be restricted at all times.

**3.05 MAINTENANCE**

- A. Remove debris, such as paper, grass clippings, or organic material by mechanically blowing or hand raking as needed. When plowing snow, use rubber baffle on plow blade or wheels on plow to lift blade 1/4" off the surface.
- B. During first year, minor amounts of loose aggregate may appear on surface (1/16 to 1/4"). If material exceeds a 1/4", redistribute over entire surface. Water to 1" depth and compact with power roller of no less than 1000-lbs. Repeat as needed. If cracking occurs, sweep fines into cracks, water thoroughly and hand tamp with an 8" – 10" hand tamp.

**3.06 REPAIRS**

- A. Excavate damaged area to the depth of the Stabilized Aggregate and square off sidewalls.
- B. If area is dry, moisten damaged portion lightly.
- C. Pre-blend the dry required amount of Stabilizer® with the proper amount of aggregate in a concrete mixer.

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- D. Add water to the pre-blended Stabilized Aggregate. Thoroughly moisten mix with 25 to 45 gallons per 1-ton of pre-blended material or to approximately 10% moisture content.
- E. Apply moistened pre-blended Stabilized Aggregate to excavated area to finish grade.
- F. Compact with an 8" to 10" hand tamp or 250 to 300 pound roller. Keep traffic off areas for 12 to 48 hours after repair has been completed.

**END OF SECTION**

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**SECTION 32 17 13  
CONCRETE WHEEL STOPS**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. Precast concrete parking bumpers and anchorage.

**1.02 RELATED REQUIREMENTS**

- A. Section 32 17 23 - Pavement Markings.

**1.03 REFERENCE STANDARDS**

- A. ASTM A615/A615M - Standard Specification for Deformed and Plain Carbon-Steel Bars for Concrete Reinforcement.
- B. ASTM C150/C150M - Standard Specification for Portland Cement.
- C. ASTM C260/C260M - Standard Specification for Air-Entraining Admixtures for Concrete.
- D. ASTM C330/C330M - Standard Specification for Lightweight Aggregates for Structural Concrete.

**1.04 SUBMITTALS**

- A. See Section 01 30 00 - Administrative Requirements, for submittal procedures.
- B. Product Data: Provide unit configuration, dimensions.

**PART 2 PRODUCTS**

**2.01 MATERIALS**

- A. Parking Bumpers: Precast concrete, complying with the following:
  - 1. Profile: Manufacturer's standard.
  - 2. Cement: ASTM C150/C150M, Portland Type I - Normal; white color.
  - 3. Concrete Materials: ASTM C330/C330M aggregate, water, and sand.
  - 4. Reinforcing Steel: ASTM A615/A615M, deformed steel bars; unfinished, strength and size commensurate with precast unit design.
  - 5. Air Entrainment Admixture: ASTM C260/C260M.
  - 6. Concrete Mix: Minimum 5,000 psi compressive strength after 28 days, air entrained to 5 to 7 percent.
  - 7. Use rigid molds, constructed to maintain precast units uniform in shape, size and finish. Maintain consistent quality during manufacture.
  - 8. Embed reinforcing steel, and drill or sleeve for two dowels.
  - 9. Cure units to develop concrete quality, and to minimize appearance blemishes such as non-uniformity, staining, or surface cracking.

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- 10. Minor patching in plant is acceptable, providing appearance of units is not impaired.
- B. Dowels: Cut reinforcing steel, 1/2 inch diameter, 18 inch long, pointed tip.
- C. Adhesive: Epoxy type.

**PART 3 EXECUTION**

**3.01 INSTALLATION**

- A. Install units without damage to shape or finish. Replace or repair damaged units.
- B. Install units in alignment with adjacent work.
- C. Fasten units in place with 2 dowels per unit.

**END OF SECTION**

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**SECTION 32 17 23  
PAVEMENT MARKINGS**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. Painted pavement markings.
  - 1. Accessible Parking Spaces.
  - 2. Existing Striping: Confirm compliance at all accessible parking spaces on site and path of travel with California Building Code and Access requirements.
    - a. Remove non-compliant and provide all striping and modifications necessary for compliance.
- B. Raised pavement markings.

**1.02 RELATED REQUIREMENTS**

- A. Section 32 12 16 - Asphalt Paving.
- B. Section 32 13 13 - Site Concrete.
- C. Section 32 17 13 - Concrete Wheel Stops.
- D. Section 32 17 26 - Tactile Warning Surfacing.

**1.03 REFERENCE STANDARDS**

- A. AASHTO M 237 - Standard Specification for Epoxy Resin Adhesives for Bonding Traffic Markers to Hardened Portland Cement and Asphalt Concrete.
- B. AASHTO M 247 - Standard Specification for Glass Beads Used in Pavement Markings.
- C. AASHTO MP 24 - Standard Specification for Waterborne White and Yellow Traffic Paints.
- D. ADA Standards - Americans with Disabilities Act (ADA) Standards for Accessible Design.
- E. CBC Ch. 11B - California Building Code-Chapter 11B.
- F. FS TT-B-1325 - Beads (Glass Spheres) Retro-Reflective.
- G. FS TT-P-1952 - Paint, Traffic and Airfield Marking, Waterborne.
- H. SAE AMS-STD-595 - Colors Used in Government Procurement.
- I. SAE AMS-STD-595A - Colors Used in Government Procurement.
- J. SCAQMD 1113 - Architectural Coatings.
- K. SSPWC (Greenbook) - Standard Specifications for Public Works Construction.

**1.04 ADMINISTRATIVE REQUIREMENTS**

- A. Coordination: Coordinate the work of this section with adjoining work.
- B. Preinstallation Meeting: Conduct a preinstallation meeting one week prior to the start of the work of this section; require attendance by affected installers.

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**1.05 SUBMITTALS**

- A. See Section 01 30 00 - Administrative Requirements for submittal procedures.
- B. Product Data: Manufacturer's data sheets on each product to be used.
- C. Certificates: Submit for each batch stating compliance with specified requirements.
  - 1. Painted pavement markings.
  - 2. Raised pavement markings.
- D. Manufacturer's Instructions:
  - 1. Preparation instructions and recommendations.
  - 2. Storage and handling requirements and recommendations.
  - 3. Installation methods.
- E. Manufacturer's qualification statement.
- F. Installer's qualification statement.
- G. Maintenance Materials: Furnish the following for County's use in maintenance of project.
  - 1. See Section 01 60 00 - Product Requirements for additional provisions.
  - 2. Extra Paint: 2 containers, 1 gallon size, of each type and color.
  - 3. Extra Markers: 5 percent, of each type and color.

**1.06 QUALITY ASSURANCE**

- A. Manufacturer Qualifications: Company specializing in manufacturing products specified in this section, with not less than three years of documented experience.
- B. Installer Qualifications: Company specializing in performing work of the type specified and with at least three years of documented experience.

**1.07 DELIVERY, STORAGE, AND HANDLING**

- A. Deliver paint in containers of at least 5 gallons accompanied by batch certificate.
- B. Deliver glass beads in containers suitable for handling and strong enough to prevent loss during shipment, accompanied by batch certificate.
- C. Store products in manufacturer's unopened packaging until ready for installation.
- D. Store and dispose of solvent-based materials, and materials used with solvent-based materials, in accordance with requirements of local authorities having jurisdiction.

**1.08 FIELD CONDITIONS**

- A. Do not install products under environmental conditions outside manufacturer's absolute limits.
- B. Do not apply paint if temperature of surface to be painted or the atmosphere is less than 50 degrees F or more than 95 degrees F.
  - 1. Do not apply marking paint when weather is foggy or rainy, or when such conditions are anticipated within eight hours of application.

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- 2. Do not apply marking paint when wind velocity causes uncontrollable overspray or excessively rapid drying.
- C. Sequence and Schedule: Apply pavement markings after asphaltic concrete and portland cement concrete and interlocking concrete paving Work are complete and properly cured and, if applicable, sealer has been applied to asphaltic concrete and landscaping Work is complete.
  - 1. Allow new pavement surfaces to cure for a period of not less than 14 days before application of marking materials.

**1.09 SEQUENCING**

- A. Allow new pavement surfaces to cure for a period of not less than 14 days before application of markings.

**PART 2 PRODUCTS**

**2.01 REGULATORY REQUIREMENTS:**

- A. Comply with CalGreen requirements.
  - 1. Comply at time of installation with Air Quality standards of:
    - a. South Coast Air Quality Management District, SCAQMD 1113.
    - b. California Air Resources Board (CARB).
- B. For accessibility markings see Part 3 Article "Installation".
- C. Conform to State of California, Department of Transportation (CALTRANS) Standard Specifications, Section 84, Traffic Control Markings, as amended and adopted by authorities having jurisdiction.
- D. Where reference is made to Standard Specifications, the following shall apply.
  - 1. Perform off-site Work in public rights-of-way in accordance with requirements of authorities having jurisdiction. For conditions not indicated otherwise on Contract Drawings, conform to Standard Details adopted by authorities having jurisdiction, including SSPWC (Greenbook).
  - 2. Perform on-site Work as indicated and referenced on the Contract Drawings and as specified herein.

**2.02 MANUFACTURERS**

- A. Painted Pavement Markings:
  - 1. Vista Paint Corporation; 6700 100%Acrylic Traffic Marking Paint: [www.vistapaint.com](http://www.vistapaint.com).
  - 2. Behr: [www.behr.com](http://www.behr.com).
  - 3. Dunn Edwards: [www.dunnedwards.com](http://www.dunnedwards.com).
  - 4. Sherwin Williams; 2 Coats of SW Armorseal 8100 with Armorseal High Wear Additive in second coat: [www.sherwin.com](http://www.sherwin.com).
  - 5. Substitutions: Or equal.
- B. Raised Pavement Markings:
  - 1. Traffice Signs Corporation: [www.trafficsigns.com](http://www.trafficsigns.com).

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- 2. Substitutions: Or equal.

**2.03 PAINTED PAVEMENT MARKINGS**

- A. General: Provide standard factory-mixed, quick drying and non-bleeding colors, conforming to Standard Specifications, as amended and adopted by the AHJ, City, and County, as applicable.
- B. Painted Pavement Markings: As indicated on drawings.
  - 1. Marking Paint: In accordance with AASHTO MP 24.
    - a. Parking Lots: Color(s) as indicated.
      - 1) Fast-dry type. If required by authorities having jurisdiction for Work in public rights-of-way, include reflective material in paint. Paint for marking curbs shall not require reflective material. See Color Schedule in Part 3.
    - b. Symbols and Text: Color(s) as indicated.
      - 1) Accessibility Symbols: Provide blue and white, per CBC Ch. 11B-503 and CBC Ch. 11B-703.7.2.
        - (a) Blue shall conform to Color No. 15090; SAE AMS-STD-595A (formerly 595C).
  - 2. Reflective Glass Beads at Accessible Parking Spaces: Type 1 (low index of refraction), Gradation A (coarse, drop-on); with silicone or other suitable waterproofing coating to ensure free flow, in accordance with AASHTO MP 24 or FS TT-P-1952.
    - a. Comply with CBC Section 11B-502.6.4 Marking.
  - 3. Obliterating Paint: Type I, in accordance with AASHTO MP 24 or FS TT-P-1952.
    - a. Bituminous Pavement: Black.
    - b. Concrete Pavement: Gray.
- C. Temporary Marking Tape: Preformed, reflective, pressure sensitive adhesive tape in color(s) required; Contractor is responsible for selection of material of sufficient durability as to perform satisfactorily during period for which its use is required.

**2.04 RAISED PAVEMENT MARKINGS**

- A. Surface Reflectors: Bidirectional, visible to approaching traffic; capable of withstanding pavement-rated loading.
  - 1. For on-site fire hydrant locations, placed as required by local fire department.
  - 2. Housing: Plastic, blue.
  - 3. Lens: Prismatic, acrylic, blue.
    - a. Optical Performance: Reflective intensity of reflecting surface at 1/5 degree divergence angle shall be not less than the following when the incident light is parallel.

<u>Horiz. Eng. Angle</u>	<u>Blue</u>
0 Degrees	3.0
20 Degrees	1.5

- 4. Dimensions: 4 inches by 4 inches (102 mm by 102 mm).
- 5. Mounting Adhesive: Type I, in accordance with AASHTO M 237.

- 6. Pavement Projection: 1/2 inch (12 mm).

**PART 3 EXECUTION**

**3.01 EXAMINATION**

- A. Identify existing markings for removal.
- B. Verification of Conditions: Verify that pavement is dry and ready for installation.
- C. Notify Architect of unsatisfactory conditions before proceeding.

**3.02 PREPARATION**

- A. Establish survey control points for locating and dimensioning of markings.
  - 1. Lay out markings as shown on Drawings. Use guide lines, templates and forms for precise edges and spacings.
    - a. At off-site and on-site public rights-of-way, obtain review and approval of layout by authorities having jurisdiction.
- B. Clean surfaces prior to installation.
  - 1. Remove dust, dirt, and other debris.
  - 2. Remove rubber deposits, existing paint markings, and other coatings.
- C. Temporary Markings: Apply as directed by Architect.
- D. Apply paint stencils by type and color at necessary intervals.

**3.03 INSTALLATION**

- A. Regulatory Accessibility Requirements for Installation:
  - 1. Pavement markings for disability requirements shall meet requirements of California Building Code (CBC), Title 24, Part 2, CBC Ch. 11B and ADA Standards, per latest amendments.
    - a. Accessible parking spaces serving a particular building or facility shall be located on the shortest accessible route to an entrance complying with CBC Ch. 11B-208.3.1.
    - b. Accessible parking spaces serving more than one accessible entrance shall be dispersed and located on the shortest accessible route to the accessible entrances.
    - c. Accessible parking spaces in a parking facility not serving a particular building or facility shall be located on the shortest accessible route to an accessible pedestrian entrance of the parking facility. CBC Ch. 11B-208.3.1
    - d. Minimum number of required accessible parking spaces shall be provided in accordance with CBC Ch. 11B Table 11B-208.2 for each parking facility provided on a site.
    - e. For every six or fraction of six accessible parking spaces, at least one shall be an accessible van parking space. CBC Ch. 11B-208.2.4
    - f. Accessible parking spaces and access aisles shall comply with CBC Ch. 11B-502 and shall be dimensioned to the centerline of the marked lines as follows:

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- 1) Parking spaces and access aisles shall be marked according to CBC Ch. 11B Figures 11B-502.2, 11B-502.3, and 11B-502.3.3.
  - (a) Their surfaces shall comply with CBC Ch. 11B-302 and shall be at the same level with slopes not steeper than 1:48 in any direction. CBC Ch. 11B-502.4.
- 2) Parking spaces shall be 9 x 18 feet minimum and van parking spaces shall be 12 x 18 feet minimum with an adjacent access aisle of 5 x 18 feet minimum.
  - (a) Access aisles shall be placed on either side of the parking spaces except be located on the passenger side for van parking spaces.
  - (b) Van parking spaces shall be permitted to be 9 x 18 feet minimum where the access aisle is 8 x 18 feet minimum.
- 3) Access aisles shall be marked by a blue painted borderline around their perimeter.
  - (a) The area within the blue borderlines shall be marked with hatched lines a maximum of 36 inches on center in a color contrasting with that of the aisle surface, preferably blue or white.
  - (b) Access aisle markings may extend beyond the minimum required length. CBC Ch. 11B-502.3.3
  - (c) At drive aisle provide minimum 12 inch high white letters with the text "NO PARKING" per CBC Ch. 11B Figure 11B-502.3.3.
- 4) Access aisles (parking spaces as well- similar application) shall not overlap the vehicular way. CBC Ch. 11B-502.3.4
- 5) A vertical clearance of 98 inches minimum shall be provided for accessible parking spaces, access aisles, and vehicular routes serving them. CBC Ch. 11B-502.5

B. General:

1. Position pavement markings as indicated on drawings.
2. Field location adjustments require approval of Architect.

C. Painted Pavement Markings:

1. Apply in accordance with manufacturer's instructions.
2. Obliterating Paint: Apply as necessary to cover existing markings completely.
3. Marking Paint: Apply uniformly, with sharp edges.
  - a. Applications: One coat.
  - b. Wet Film Thickness: 0.015 inch, minimum.
  - c. Stencils: Lay flat against pavement, align with striping, remove after application.
  - d. Glass Beads: Apply directly to paint, 10 second lag time, 6 lbs/gal of paint, uniform thickness and coverage.
  - e. Length Tolerance: Plus or minus 3 inches.
  - f. Width Tolerance: Plus or minus 1/8 inch.
4. Curbs: Paint full vertical face and first 6-inches of horizontal plane at top of curb or combination curb/paving. Provide minimum 2 coats paint.

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- a. Provide stenciled text in the height, spacing and typeface as indicated on Drawings.
- 5. Parking Lots: Apply parking space lines, entrance and exit arrows, painted curbs, and other markings indicated on drawings.
  - a. Mark the International Symbol of Accessibility at indicated parking spaces.
    - 1) Accessibility Logo: Provide minimum of 2 coats paint.
      - (a) Comply with CBC Ch. 11B Figure 703.7.2.1.
    - 2) Stall Marking:
      - (a) Use single-line style striping between parking stalls, unless otherwise indicated.
      - (b) Comply with local agency regulatory requirements.
      - (c) Accessible Stalls: Comply with ADA Standards, CBC Ch. 11B, and local agency regulatory requirements.
        - (1) Painted lines and markings on pavement shall be minimum 3 inches wide, color as indicated on Drawings
        - (2) Tactile warning lines shall comply with CBC Ch. 11B-705.1.2.5 Hazardous Vehicular Areas.
        - (3) Tactile warning devices shall comply with CBC Ch. 11B, see Section 32 17 26 - Tactile Warning Surfacing.
    - 3) Hatching: Provide hatching in parking areas, including accessible parking stalls, as indicated on Contract Drawings or as required by Standard Details. Should Contract Drawings and Standard Details conflict, comply with the more stringent.
  - b. Hand application by pneumatic spray is acceptable.
- 6. Symbols: Use a suitable template that will provide a pavement marking with true, sharp edges and ends, of the design and size indicated.
- 7. Recreational Areas: Provide minimum 2 coats paint.
- D. Raised Pavement Markings:
  - 1. Install in accordance with manufacturer's instructions in manner necessary to maintain manufacturer's warranty.
  - 2. Surface Reflectors:
    - a. Cut pavement and remove depth equal to height of reflector.
    - b. Partially fill area with road marker epoxy adhesive.
    - c. Press reflector into adhesive and apply pressure.

**3.04 TOLERANCES**

- A. Maximum Variation From True Position: 3 inches (76 mm).
- B. Maximum Offset From True Alignment: 3 inches (76 mm).

**3.05 FIELD QUALITY CONTROL**

- A. See Section 01 40 00 - Quality Requirements for additional requirements.
- B. Perform field inspection for deviations from true alignment or material irregularities.

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- C. If inspections indicate work does not meet specified requirements, rework and reinspect at no cost to County.
- D. Allow the pavement marking to set at least the minimum time recommended by manufacturer.

**3.06 CLOSEOUT ACTIVITIES**

- A. Temporary Markings: Remove without damaging surfaces.

**3.07 PROTECTION**

- A. Replace damaged or removed markings at no additional cost to County.
- B. Preserve survey control points until pavement marking acceptance.

**3.08 COLOR SCHEDULE**

- A. Parking and On-Site Roadways

<u>Location</u>	<u>Color</u>	<u>Reflectance*</u> *
Driving lane striping	White	82%
Parking space striping	White	82%
Accessible Parking, field behind ISA, and zone markings	Blue No. 15090 per SAE AMS-STD-595A (formerly FED-STD-595C)	52%
Accessible Parking ISA, loading and cross-hatching	A. White with Blue perimeter at Asphalt Paving. B. Blue at Concrete Paving*	82% / 52% 52%
12 inch high Text: "NO PARKING", "LOADING ZONE", and "FIRE LANE", etc.	White	82%
Firelanes / No Parking zone markings Special Use Markings	Red No. 31350 per SAE AMS-STD-595A (formerly FED-STD-595C)	52%
Loading zone markings	Orange Yellow No. 33538 perSAE AMS-STD-595A (formerly FED-STD-595C)	52%
Directional arrows	White	82%
Speed Bumps	Orange Yellow No. 33538 per SAE AMS-STD-595A (formerly FED-STD-595C)	52%
Black special-use pavement markings, if indicated on Drawings	Black No. 37038 per SAE AMS-STD-595A (formerly FED-STD-595C)	NA

\*Contrasting color per CBC.

a. See also Division of the State Architect IR 11B-7.

\*\*Daylight directional reflectance (without glass beads) , when tested in accordance with Federal Test Method Standard 141A, Method 612.

**END OF SECTION**

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**SECTION 32 17 26  
TACTILE WARNING SURFACING**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. Plastic tactile and detectable warning tiles for pedestrian walking surfaces.

**1.02 RELATED REQUIREMENTS**

- A. Section 32 13 13 - Site Concrete: Concrete sidewalks.
- B. Section 32 17 23 - Pavement Markings: Crosswalk and curb markings.

**1.03 REFERENCE STANDARDS**

- A. 49 CFR 37 - Transportation Services for Individuals with Disabilities (ADA).
- B. AASHTO LRFD - Bridge Design Specifications.
- C. ADA Standards - Americans with Disabilities Act (ADA) Standards for Accessible Design.
- D. ASTM A666 - Standard Specification for Annealed or Cold-Worked Austenitic Stainless Steel Sheet, Strip, Plate, and Flat Bar.
- E. ASTM B117 - Standard Practice for Operating Salt Spray (Fog) Apparatus.
- F. ASTM C501 - Standard Test Method for Relative Resistance to Wear of Unglazed Ceramic Tile by the Taber Abraser.
- G. ASTM C903 - Standard Practice for Preparing Refractory Specimens by Cold Gunning.
- H. ASTM D2047 - Standard Test Method for Static Coefficient of Friction of Polish-Coated Flooring Surfaces as Measured by the James Machine.
- I. ASTM D543 - Standard Practices for Evaluating the Resistance of Plastics to Chemical Reagents.
- J. ASTM D570 - Standard Test Method for Water Absorption of Plastics.
- K. ASTM D638 - Standard Test Method for Tensile Properties of Plastics.
- L. ASTM D695 - Standard Test Method for Compressive Properties of Rigid Plastics.
- M. ASTM D790 - Standard Test Methods for Flexural Properties of Unreinforced and Reinforced Plastics and Electrical Insulating Materials.
- N. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials.
- O. ASTM G155 - Standard Practice for Operating Xenon Arc Lamp Apparatus for Exposure of Materials.
- P. ATBCB PROWAG - Proposed Accessibility Guidelines for Pedestrian Facilities in the Public Right-of-Way.
- Q. CBC Ch. 11B - California Building Code-Chapter 11B.
- R. SAE AMS-STD-595 - Colors Used in Government Procurement.
- S. SAE AMS-STD-595A - Colors Used in Government Procurement.

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#### 1.04 SUBMITTALS

- A. See Section 01 30 00 - Administrative Requirements, for submittal procedures.
- B. Product Data: Submit manufacturer's product data, standard details, details specific to this project; written installation and maintenance instructions.
- C. Samples: For each product specified provide two samples, 8 inches square, minimum; show actual product, color, and patterns.
- D. Shop Drawings: Submit plan and detail drawings. Indicate:
  - 1. Locations on project site. Demonstrate compliance with referenced accessibility standards.
  - 2. Sizes and layout.
  - 3. Pattern spacing and orientation.
  - 4. Attachment and fastener details, if applicable
- E. Manufacturer's Qualification Statement.
- F. Installer's Qualification Statement.
- G. Warranty: Submit manufacturer warranty; complete forms in County's name and register with manufacturer.

#### 1.05 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Company specializing in manufacturing products specified in this section, with not less than five years documented experience.
- B. Installer Qualifications: Company certified in writing by product manufacturer as having successfully completed work substantially similar to the work of this section.

#### 1.06 DELIVERY, STORAGE, AND HANDLING

- A. Deliver to project site in manufacturer's protective wrapping and in manufacturer's unopened packaging.
- B. Store covered and elevated above grade and in manufacturer's unopened packaging until ready for installation. Maintain at ambient temperature between 40 and 90 degrees F.

#### 1.07 WARRANTY

- A. See Section 01 78 00 - Closeout Submittals, for additional warranty requirements.
- B. Plastic Tiles: Provide manufacturer's standard five year warranty against manufacturing defects, breakage or deformation.

### PART 2 PRODUCTS

#### 2.01 REGULATORY REQUIREMENTS

- A. Detectable warnings shall comply with California Building Code, CBC Ch. 11B-705.1 requirements, CBC Ch. 11B-705.1.2 Locations and CBC Ch. 11B-705.1.2.5 Blended Transitions, for special warnings for disabled persons.
- B. Nominal dimensions meeting CBC Ch. 11B-705.1.2 Locations.

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- C. Detectable warning surfaces at transit boarding platform edges, bus stops, hazardous vehicle areas, reflecting pools, and track crossings shall be yellow and approximate to Federal Color No. 33538 of SAE AMS-STD-595A (Table IV of Federal Standard No. 595A).
  - 1. Detectable warning surfaces at other locations shall be the aforementioned yellow or a color providing a 70 percent minimum visual contrast with that of adjacent walking surfaces.
  - 2. The material used to provide visual contrast shall be an integral part of the surface. CBC Ch. 11B-705.1.1.3.
- D. Detectable warning surfaces shall differ from adjoining surfaces in resiliency or sound-on-cane contact. Such constraint shall not be required for detectable warning surfaces at curb ramps, islands, or cut-through medians. CBC Ch. 11B-705.1.1.4 Resiliency.
- E. Truncated dome pattern in-line, not staggered.

**2.02 TACTILE AND DETECTABLE WARNING DEVICES**

- A. Plastic Tactile and Detectable Warning Tiles: ADA Standards compliant, glass fiber and carbon fiber reinforced, exterior grade, matte finish polyester sheet with truncated dome pattern, solid color throughout, internal reinforcing of sheet and of truncated domes, integral radius cut lines on back face of tile; with factory-applied removable protective sheeting.
  - 1. Material Properties:
    - a. Water Absorption: 0.20 percent, maximum, when tested in accordance with ASTM D570.
    - b. Slip Resistance: 0.50 minimum dry static coefficient of friction, when tested in accordance with ASTM D2047.
    - c. Compressive Strength: 25,000 pounds per square inch, minimum, when tested in accordance with ASTM D695.
    - d. Tensile Strength: 10,000 pounds per square inch, minimum, when tested in accordance with ASTM D638.
    - e. Flexural Strength: 25,000 pounds per square inch minimum, when tested in accordance with ASTM D790.
    - f. Chemical Stain Resistance: No reaction to 1 percent hydrochloric acid, motor oil, calcium chloride, gum, soap solution, bleach, or antifreeze, when tested in accordance with ASTM D543.
    - g. Abrasion Resistance: 300, minimum, when tested in accordance with ASTM C501.
    - h. Flame Spread Index: 25, maximum, when tested in accordance with ASTM E84.
    - i. Accelerated Weathering: Delta-E of less than 5.0 at 2,000 hours exposure, when tested in accordance with ASTM G155.
    - j. Adhesion: No delamination of tile prior to board failure in a temperature range of 20 to 180 degrees F, when tested in accordance with ASTM C903.
    - k. Loading: No damage when tested according to AASHTO LRFD test method HS20.
    - l. Salt and Spray Performance: No deterioration or other defect after 200 hours of exposure, when tested in accordance with ASTM B117.

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2. Concrete Installation Method: Cast in place.
3. Shape: Rectangular.
4. Dimensions: 36 inches by 48 inches, nominal. Other sizes may be indicated on Drawings.
5. Pattern: In-line pattern of truncated domes complying with ADA Standards.
6. Edge: ADA Standards compliant bevel.
7. Joint: Butt.
8. Color: SAE AMS-STD-595, Table IV, Federal Yellow No. 33538.
9. At Flush Concrete Application Basis of Design Product: Armor-Tile as manufactured by Engineered Plastics, or approved equal.
10. Concrete Recessed/Flush Products:
  - a. Access Tile, a brand of Access Products, Inc; Cast in Place Replaceable Tactile Warning Tile: [www.accesstile.com/#sle](http://www.accesstile.com/#sle).
  - b. ADA Solutions, a division of SureWerx USA; Cast in Place Replaceable (Wet-Set): [www.adatale.com/#sle](http://www.adatale.com/#sle).
  - c. Armor Tile by Engineered Plastics Inc.; Vitrified Polymer Composite (VPC) Cast In Place Detectable/Tactile Warning Surface Tile: [armor-tile.com](http://armor-tile.com).
  - d. Detectable Warning Systems, Inc.; alertcast (Replaceable Cast-in-Place): [detectable-warning.com](http://detectable-warning.com).
  - e. Or Equal Substitutions: See Section 01 60 00 - Product Requirements.

### 2.03 ACCESSORIES

- A. Fasteners: ASTM A666, Type 304 stainless steel
  1. Type: Countersunk, color matched composite sleeve anchors
  2. Size: 1/4 inch diameter and 1-1/2 inches long.
- B. Adhesive: Type recommended and approved by surfacing tile manufacturer.
- C. Sealant: Elastomeric sealant of color to match adjacent surfaces; approved by surfacing tile manufacturer.

## PART 3 EXECUTION

### 3.01 EXAMINATION

- A. When installation location is near site boundary or property line, verify required location using property survey.
- B. Verify that work area is ready to receive work:
  1. Examine work area with installer present.
  2. If existing conditions are not as required to properly complete the work of this section, notify Architect.
  3. Do not proceed with installation until deficiencies in existing conditions have been corrected.

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- C. Verify that dimensions, tolerances, and attachment methods for work in this section are properly coordinated with other work on site.

**3.02 INSTALLATION, GENERAL**

- A. Install in accordance with manufacturer's written instructions.
  - 1. Do not install damaged, warped, bowed, dented, abraded, or otherwise defective units.
  - 2. Do not install when ambient or substrate temperature has been below 40 degrees F during the preceding 8 daylight hours.
- B. Field Adjustment:
  - 1. Cut units to size and configuration shown on drawings. (If required)
  - 2. Do not cut plastic tiles to less than 9 inches wide in any direction.
  - 3. Locate relative to curb line in compliance with ATBCB PROWAG, Sections 304 and 305.
  - 4. Orient so dome pattern is aligned with the direction of ramp.
  - 5. Align truncated dome pattern between adjacent units.
- C. Install units fully seated to substrate, square to straight edges and flat to required slope.
- D. Align units so that tops of adjacent units are flush and joints between units are uniform in width.

**3.03 INSTALLATION, CAST IN PLACE PLASTIC TILES**

- A. Concrete:
  - 1. See Section 32 13 13 - Site Concrete.
  - 2. Slump: 4 to 7 percent.
- B. When installing multiple adjacent units, leave a 3/16 inch gap between units to allow for expansion.
- C. Tamp and vibrate units as recommended by manufacturer.
- D. Place and position weights on units while concrete cures as recommended by manufacturer. Ensure no voids or air pockets exist between top surface of concrete and underside of units.

**3.04 CLEANING PLASTIC UNITS**

- A. Remove protective plastic sheeting within 24 hours of installation.
- B. Remove excess sealant or adhesive from joints and edges.
- C. Clean four days prior to date of scheduled inspection.

**3.05 PROTECTION**

- A. Protect installed units from traffic, subsequent construction operations or other imposed loads until concrete is fully cured.
- B. Touch-up, repair or replace damaged products prior to Date of Substantial Completion.

**END OF SECTION**

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**SECTION 32 84 23  
IRRIGATION SYSTEM**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. Pipe and fittings, valves, sprinkler heads, emitters, bubblers, and accessories.
- B. Irrigation control system.

**1.02 RELATED REQUIREMENTS**

- A. Division 26 - Electrical:
  - 1. Low-Voltage Electrical Power Conductors and Cables.
  - 2. Conduit.
- B. Section 31 23 16.13 - Trenching: Excavating and backfilling for irrigation piping.

**1.03 REFERENCE STANDARDS**

- A. ASME B1.20.1 - Pipe Threads, General Purpose, Inch.
- B. ASME B1.20.7 - Hose Coupling Screw Threads (Inch).
- C. ASTM D1785 - Standard Specification for Poly(Vinyl Chloride) (PVC) Plastic Pipe, Schedules 40, 80, and 120.
- D. ASTM D2241 - Standard Specification for Poly(Vinyl Chloride) (PVC) Pressure-Rated Pipe (SDR Series).
- E. ASTM D2466 - Standard Specification for Poly(Vinyl Chloride) (PVC) Plastic Pipe Fittings, Schedule 40.
- F. ASTM D2564 - Standard Specification for Solvent Cements for Poly(Vinyl Chloride) (PVC) Plastic Piping Systems.
- G. ASTM D2672 - Standard Specification for Joints for IPS PVC Pipe Using Solvent Cement.
- H. ASTM D2855 - Standard Practice for the Two-Step (Primer and Solvent Cement) Method of Joining Poly (Vinyl Chloride) (PVC) or Chlorinated Poly (Vinyl Chloride) (CPVC) Pipe and Piping Components with Tapered Sockets.
- I. ASTM F402 - Standard Practice for Safe Handling of Solvent Cements, Primers, and Cleaners Used for Joining Thermoplastic Pipe and Fittings.
- J. ASTM F656 - Standard Specification for Primers for Use in Solvent Cement Joints of Poly(Vinyl Chloride) (PVC) Plastic Pipe and Fittings.
- K. NEMA 250 - Enclosures for Electrical Equipment (1000 Volts Maximum).
- L. UL 493 - Thermoplastic-Insulated Underground Feeder and Branch-Circuit Cables.

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**1.04 ADMINISTRATIVE REQUIREMENTS**

- A. Coordination: Coordinate the work with site backfilling, landscape grading and delivery of plant life.
- B. Preinstallation Meeting: Convene one week prior to commencing work of this Section.

**1.05 SUBMITTALS**

- A. See Section 01 30 00 - Administrative Requirements, for submittal procedures.
- B. Product Data: Provide component and control system and wiring diagrams.
- C. Irrigation system submittal requirements are indicated on the approved plans.
- D. Operation and Maintenance Data:
  - 1. Provide instructions for operation and maintenance of system and controls, seasonal activation and shutdown, and manufacturer's parts catalog.
  - 2. Provide watering schedule that complies with the State Water Ordinance.
- E. Record Documents: Record actual locations of all concealed components piping system. Refer to approved plan for record drawings and controller chart requirements
  - 1. Three laminated copies of the system map/station controller chart.
- F. Maintenance Materials: Provide the following for County's use in maintenance of project.
  - 1. See Section 01 60 00 - Product Requirements, for additional provisions.
  - 2. Extra Sprinkler Heads: Six of each type and size.
  - 3. Extra Valve Keys for Manual Valves: Two, 30 inch.
  - 4. Extra Valve Box Keys: Two.
  - 5. Extra Valve Marker Keys: Two.
  - 6. Extra Quick Coupler Keys: Four keys and quick coupler locking four ways.
  - 7. Extra Controller Box Keys: Six.
  - 8. Extra Ball Valve: One, five foot long valve handle to fit specified valve.
  - 9. Wrenches: Two for each type head core and for removing and installing each type head.

**1.06 QUALITY ASSURANCE**

- A. Manufacturer Qualifications: Company specializing in manufacturing products specified in this section, with not less than three years of documented experience.
- B. Installer Qualifications: Company specializing in performing the work of this section with minimum three years of experience.
- C. Warranty for the sprinkler irrigation system shall be made in accordance with the following form. The general conditions and supplementary conditions of these specifications shall be filed with the County or its representative prior to acceptance of the irrigation system.
- D. A copy of the warranty form shall be included in the operations and maintenance manual.
- E. The warranty form shall be retyped onto the Contractor's letterhead and contain the following information:

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**WARRANTY FOR SPRINKLER IRRIGATION SYSTEM**

We hereby warranty that the sprinkler irrigation system we have furnished and installed is free from defects in materials and workmanship, and the work has been completed in accordance with the drawings and specifications, ordinary wear and tear and unusual abuse or neglect expected.

We agree to repair or replace any defects in material or workmanship that may develop during the period of one year from the date of acceptance, at the end of the 90-day maintenance period. We agree to repair and replace such defects at no additional cost to the County. We shall make such repairs or replacements within a reasonable time, as determined by the County. After receipt of written notice from the County, we authorize the County to proceed to have said repairs or replacement made at our expense and we will pay the costs and charges incurred upon demand.

PROJECT: \_\_\_\_\_

CONTRACTOR: \_\_\_\_\_

ADDRESS: \_\_\_\_\_

\_\_\_\_\_

PHONE: \_\_\_\_\_

BY: \_\_\_\_\_

DATE OF ACCEPTANCE: \_\_\_\_\_

BY: \_\_\_\_\_

**PART 2 PRODUCTS**

**2.01 REGULATORY REQUIREMENTS**

- A. Comply with applicable code for piping and component requirements.

**2.02 PERFORMANCE REQUIREMENTS**

- A. General Requirements: Designed for uniform coverage over entire spray area indicated at available water pressure.
- B. Location and Arrangement: Drawings indicate diagrammatic location and arrangement of piping systems. Install piping as generally indicated unless deviations are approved on Coordination Drawings.
- C. Irrigation Zone Control: Automatic operation with controller and automatic control valves.
- D. Location of Sprinklers and Specialties: Design location is approximate. Make minor adjustments necessary to avoid plantings and obstructions such as signs and light standards. Maintain 100 percent irrigation coverage of areas indicated.

**2.03 AUTOMATIC IRRIGATION CONTROLLER**

- A. Existing as indicated on the plans.

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**2.04 PIPE MATERIALS**

- A. PVC Sch 40 Pipe for both Main and lateral lines: ASTM D2241; 280 psi pressure rated upstream from controls, 200 psi downstream; solvent welded sockets.
- B. Fittings: Type and style of connection to match pipe.
- C. Pipe Risers at Valves: 200 psi PVC pipe.
- D. Solvent Cement: ASTM D2564 for PVC pipe and fittings.
  - 1. Primer: ASTM F656.
- E. Sleeve Material: PVC.

**2.05 OUTLETS**

- A. Emitter for shrubs and groundcover plans: Point Source irrigation as specified on the approved plans.
- B. Bubbler for trees and palms: Multi-stream bubblers as specified on the approved plans.
- C. Quick Coupler:
  - 1. Factory-fabricated, brass, two-piece assembly approved for non-potable use as indicated on Drawings.
    - a. Include coupler water-seal valve; removable upper body with spring-loaded or weighted, rubber-covered cap; hose swivel with ASME B1.20.7, 3/4-11.5NH threads for garden hose on outlet; and operating key.
    - b. Locking-Top Option: Vandal-resistant locking feature. Include two matching key(s).

**2.06 VALVES**

- A. Ball Valves: Bronze construction as specified on the plans.
- B. Drip zone control kit, flush and air relief valves: As indicated on Drawings.
- C. Valve Box and Cover:
  - 1. Plastic Boxes:
    - a. Description: Box and cover, with open bottom and openings for piping; designed for installing flush with grade.
      - 1) Size: As required for valves and service.
      - 2) Shape: Round or rectangular.
      - 3) Sidewall Material: PVC.
      - 4) Cover Material: PVC.
    - b. Lettering: Heat brand each lid per irrigation details as indicated on Drawings.
- D. Drain Valve: Spring-loaded-ball type of corrosion-resistant construction and designed to open for drainage if line pressure drops below 2-1/2 to 3 psi.

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- E. Drainage Backfill: Cleaned gravel or crushed stone, graded from 3/4 inch minimum to 3 inches maximum.

**PART 3 EXECUTION**

**3.01 EXAMINATION**

- A. Verify location of existing utilities.
- B. Verify that required utilities are available, in proper location, and ready for use.

**3.02 PREPARATION**

- A. Piping layout indicated is diagrammatic only. Route piping to avoid plants, ground cover, and structures.
- B. Layout and stake locations of system components.
- C. Review layout requirements with other affected work. Coordinate locations of sleeves under paving to accommodate system.

**3.03 TRENCHING**

- A. Trench and backfill in accordance with Section 31 23 16.13.
- B. Trench Size:
  - 1. Minimum Width: 8 inches.
  - 2. Minimum Cover Over Installed Supply Piping: Per details on the approved plans.
  - 3. Minimum Cover Over Installed Branch Piping: Per details on the approved plans.
  - 4. Minimum Cover Over Installed Outlet/Drain Piping: Per details on the approved plans.
  - 5. Minimum Cover Over Sleeves: Per details on the approved plans.
- C. Trench to accommodate grade changes and slope to drains.
- D. Install warning tape directly above pressure piping as required per notes indicated on the plans and details.
- E. Maintain trenches free of debris, material, or obstructions that may damage pipe.

**3.04 INSTALLATION**

- A. Install pipe, valves, controls, and outlets in accordance with manufacturer's instructions.
- B. Install groups of pipes parallel to each other, spaced to permit valve servicing.
- C. Install fittings for changes in direction and branch connections.
- D. Install unions adjacent to valves and to final connections to other components with NPS 2 or smaller pipe connection.
- E. Install flanges adjacent to valves and to final connections to other components with NPS 2-1/2 or larger pipe connection.
- F. Install expansion loops in control-valve boxes for plastic piping.
- G. Install PVC piping in dry weather when temperature is above 40 deg F. Allow joints to cure at least 24 hours at temperatures above 40 deg F before testing.

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H. Joint Construction:

1. Ream ends of pipes and tubes and remove burrs. Bevel plain ends of steel pipe.
2. Remove scale, slag, dirt, and debris from inside and outside of pipe and fittings before assembly.
3. Threaded Joints: Thread pipe with tapered pipe threads according to ASME B1.20.1. Cut threads full and clean using sharp dies. Ream threaded pipe ends to remove burrs and restore full ID. Join pipe fittings and valves as follows:
  - a. Apply appropriate tape or thread compound to external pipe threads unless dry seal threading is specified.
  - b. Damaged Threads: Do not use pipe or pipe fittings with threads that are corroded or damaged. Do not use pipe sections that have cracked or open welds.
4. Flanged Joints: Select rubber gasket material, size, type, and thickness for service application. Install gasket concentrically positioned. Use suitable lubricants on bolt threads.
5. PE Piping Fastener Joints: Join with insert fittings and bands or fasteners according to piping manufacturer's written instructions.
6. PVC Piping Solvent-Cemented Joints: Clean and dry joining surfaces. Join pipe and fittings according to:
  - a. Comply with ASTM F402 for safe-handling practice of cleaners, primers, and solvent cements.
  - b. PVC Pressure Piping: Join schedule number, ASTM D1785, PVC pipe and PVC socket fittings according to ASTM D2672. Join other than schedule number PVC pipe and socket fittings according to ASTM D2855.
  - c. PVC Nonpressure Piping: Join according to ASTM D2855.

I. Connect to utilities.

J. Set outlets and box covers at finish grade elevations.

K. Provide for thermal movement of components in system.

L. Slope piping at minimum uniform slope of 0.5 percent for self-drainage to drain valves or gravel filled well point.

1. Lay piping on solid subbase, uniformly sloped without humps or depressions.

M. Use threaded nipples for risers to each outlet.

N. Install irrigation control wires in accordance with manufacture's recommendations and specifications and notes indicated on the plans.

O. Valves: Install for underground piping in boxes for automatic control valves as indicated on the Drawings.

P. Identification:

1. Warning Tapes: Arrange for installation of continuous, underground, detectable warning tapes over underground piping during backfilling of trenches per notes and details indicated on the plans.

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- Q. After piping is installed, but before outlets are installed and backfilling commences, open valves and flush system with full head of water.

**3.05 FIELD QUALITY CONTROL**

- A. Field inspection and testing will be performed under provisions of Section 01 40 00 - Quality Requirements.
- B. Prior to backfilling, test system for leakage per requirements indicated on the approved plans.
- C. System is acceptable if no leakage or loss of pressure occurs and system self-drains during test period.
- D. Operational Test: After electrical circuitry has been energized, operate controllers and automatic control valves to confirm proper system operation.
- E. Test and adjust controls and safeties. Replace damaged and malfunctioning controls and equipment.
- F. Prepare test and inspection reports.

**3.06 BACKFILLING**

- A. Backfill above piping as indicated on the plans.
- B. Backfill trench and compact to specified subgrade elevation. Protect piping from displacement.

**3.07 SYSTEM STARTUP**

- A. Prepare and start system in accordance with manufacturer's instructions.
- B. Adjust control system to achieve time cycles required.
- C. Adjust automatic control valves to provide flow rate at rated operating pressure required for each sprinkler circuit.
- D. Adjust sprinklers and devices, except those intended to be mounted aboveground, so they will be flush with, or not more than 1/2 inch, finish grade.
- E. Adjust head types for full water coverage as directed.

**3.08 CLOSEOUT ACTIVITIES**

- A. Instruct County's personnel in operation and maintenance of system, including adjusting of sprinkler heads. Use operation and maintenance data as basis for demonstration.

**3.09 MAINTENANCE**

- A. See Section 01 70 00 - Execution and Closeout Requirements, for additional requirements relating to maintenance service.
- B. Provide a separate maintenance contract for specified maintenance service.
- C. Provide one complete spring start-up and a fall shutdown by installer, at no extra cost to County.

**END OF SECTION**

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**SECTION 32 93 00  
PLANTING**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. Preparation of subsoil.
- B. New trees, plants, and ground cover.
- C. Mulch and Fertilizer.
- D. Tree Pruning.

**1.02 RELATED REQUIREMENTS**

- A. Section 32 01 90 - Operation and Maintenance of Planting
- B. Section 31 22 00 - Grading.
- C. Section 32 84 23 - Irrigation System.

**1.03 DEFINITIONS**

- A. Weeds: Include Dandelion, Jimsonweed, Quackgrass, Horsetail, Morning Glory, Rush Grass, Mustard, Lambsquarter, Chickweed, Cress, Crabgrass, Canadian Thistle, Nutgrass, Poison Oak, Blackberry, Tansy Ragwort, Bermuda Grass, Johnson Grass, Poison Ivy, Nut Sedge, Nimble Will, Bindweed, Bent Grass, Wild Garlic, Perennial Sorrel, and Brome Grass.
- B. Plants: Living trees, plants, and ground cover specified in this Section, and described in ANSI Z60.1.

**1.04 REFERENCE STANDARDS**

- A. ANSI A300 Part 1 - American National Standard for Tree Care Operations - Tree, Shrub, and Other Woody Plant Management - Standard Practices (Pruning).

**1.05 SUBMITTALS**

- A. See Section 01 30 00 - Administrative Requirements, for submittal procedures.
- B. Maintenance Data: Include cutting and trimming method; types, application frequency, and recommended coverage of fertilizer.
- C. Submit items indicated on the approved plans under "SUBMITTAL".
- D. Maintenance Contract.

**1.06 QUALITY ASSURANCE**

- A. Nursery Qualifications: Company specializing in growing and cultivating the plants with three years documented experience.
- B. Installer Qualifications: Company specializing in installing and planting the plants with three years' experience.

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- C. Tree Pruner Qualifications: Company specializing in pruning trees with proof of Arborist Certification.
- D. Tree Pruning: Comply with ANSI A300 Part 1.
- E. Maintenance Services: Performed by installer.

**1.07 DELIVERY, STORAGE, AND HANDLING**

- A. Deliver fertilizer in waterproof bags showing weight, chemical analysis, and name of manufacturer.
- B. Protect and maintain plant life until planted.
- C. Deliver plant life materials immediately prior to placement. Keep plants moist.

**1.08 FIELD CONDITIONS**

- A. Do not install plant life when ambient temperatures may drop below 35 degrees F or rise above 100 degrees F.
- B. Do not install plant life when wind velocity exceeds 30 mph.

**1.09 WARRANTY**

- A. See Section 01 78 00 - Closeout Submittals, for additional warranty requirements.
- B. Provide one year warranty.
- C. Warranty: Include coverage for one continuous growing season; replace dead or unhealthy plants.
- D. Replacements: Plants of same size and species as specified, planted in the next growing season, with a new warranty commencing on date of replacement.

**1.10 MAINTENANCE (SEE END OF SECTION)**

- A. See Section 01 70 00 - Execution and Closeout Requirements, for additional requirements relating to maintenance service.
- B. Provide a separate maintenance contract for specified maintenance service.
- C. Provide a separate maintenance contract for the service and maintenance of work specified in this section for one years from Date of Substantial Completion.

**PART 2 PRODUCTS**

**2.01 PLANTS**

- A. Plants: Species and size identified in plant schedule, grown in climatic conditions similar to those in locality of the work.

**2.02 SOIL AMENDMENT MATERIALS**

- A. Fertilizer: Amend soil based on soil report prepared prior to any planting.
  - 1. Nitrogen: 20 percent.
  - 2. Phosphoric Acid: 10 percent.

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- 3. Soluble Potash: 5 percent.
- B. Planting Tablets: Tightly compressed chip-type, long-lasting, slow-release, commercial-grade planting fertilizer in tablet form. Tablets shall break down with soil bacteria, converting nutrients into a form that can be absorbed by plant roots.
  - 1. Agriform Blue Chip Tablets.
  - 2. Size: 21 gram tablets.
  - 3. Nutrient Composition: 20 percent nitrogen, 10 percent phosphorous, and 5 percent potassium, by weight plus micronutrients.
- C. Water: Clean, fresh, and free of substances or matter that could inhibit vigorous growth of plants.

**2.03 MULCH MATERIALS**

- A. Mulching Material: organic rock mulch to match existing or as specified on the approved plans.

**2.04 ACCESSORIES**

- A. Wrapping Materials: Burlap.
- B. Stakes: Softwood lumber, pointed end.
- C. Root Barrier: Bio Barrier as specified on the approved plans. Install per manufacturer’s specifications and recommendations.

**2.05 SOURCE QUALITY CONTROL**

- A. Provide analysis of soil as indicated on the approved plans under “SOIL MANAGEMENT PLAN”.

**PART 3 EXECUTION**

**3.01 EXAMINATION**

- A. Verify that prepared subsoil and planters are ready to receive work.
- B. Saturate soil with water to test drainage.
- C. Verify that required underground utilities are available, in proper location, and ready for use.

**3.02 PREPARATION OF SUBSOIL**

- A. Prepare subsoil to eliminate uneven areas. Maintain profiles and contours. Make changes in grade gradual. Blend slopes into level areas.
- B. Remove foreign materials, weeds and undesirable plants and their roots. Remove contaminated subsoil.
- C. Scarify subsoil to a depth of 12- inches where plants are to be placed. Repeat cultivation in areas where equipment, used for hauling and spreading topsoil, has compacted subsoil.
- D. Dig pits and beds 6 inches larger than plant root system.

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**3.03 PLACING TOPSOIL**

- A. Spread topsoil to a minimum depth of 4 inches over area to be planted. Rake smooth.
- B. Place topsoil during dry weather and on dry unfrozen subgrade.
- C. Remove vegetable matter and foreign non-organic material from topsoil while spreading.
- D. Grade topsoil to eliminate rough, low or soft areas, and to ensure positive drainage.
- E. Install topsoil into pits and beds intended for plant root balls, to a minimum thickness of 6 inches.

**3.04 FERTILIZING**

- A. Apply fertilizer in accordance with manufacturer's instructions.
  - 1. Place planting tablets in each planting hole at the rates indicated on the plans.
- B. Apply per soil amendments.
- C. Mix thoroughly into upper 2 inches of topsoil.
- D. Lightly water to aid the dissipation of fertilizer.

**3.05 PLANTING**

- A. Place plants as indicated.
- B. Set plants vertical.
- C. Remove non-biodegradable root containers.
- D. Set plants in pits or beds, partly filled with prepared plant mix, at a minimum depth of 6 inches under each plant. Remove burlap, ropes, and wires, from the root ball.
- E. Saturate soil with water when the pit or bed is half full of topsoil and again when full.

**3.06 PLANT SUPPORT**

- A. Stake trees per details on Drawings.

**3.07 TREE PRUNING**

- A. Prune trees as recommended in ANSI A300 Part 1.
- B. Prune newly planted trees as required to remove dead, broken, and split branches.

**3.08 FIELD QUALITY CONTROL**

- A. Perform field inspection and testing in accordance with Section 01 40 00.
- B. Plants will be rejected if a ball of earth surrounding roots has been disturbed or damaged prior to or during planting.

**3.09 MAINTENANCE**

- A. See Section 32 01 90 - Operation and Maintenance of Planting for post-occupancy maintenance.

**END OF SECTION**

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**SECTION 33 41 00  
SUBDRAINAGE**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. Retaining Wall Drainage Systems.
  - 1. Drainage system at vertical waterproofed walls, as complete designed working drainage system channeling water to subdrainage system piping, or to wall face.
  - 2. Geotextile pipe wrap.
  - 3. Subdrainage piping system, complete with necessary couplings and accessories.
- B. Filter aggregate and fabric and bedding.

**1.02 RELATED REQUIREMENTS**

- A. Section 07 13 00 - Sheet Waterproofing: Below grade waterproofing and drainage board.
- B. Section 31 23 16 - Excavation: Excavating for subdrainage system piping and surrounding filter aggregate.
- C. Section 31 23 23 - Fill: Backfilling over filter aggregate, up to subgrade elevation.

**1.03 REFERENCE STANDARDS**

- A. ASTM D2729 - Standard Specification for Poly(Vinyl Chloride) (PVC) Sewer Pipe and Fittings.

**1.04 DEFINITIONS**

- A. Geotextile: Any permeable textile used with foundation, soil, rock, earth, or any other geotechnical material, as an integral part of man-made product, structure, or system.
- B. Normal Direction: Direction perpendicular to the plane of a geotextile.
- C. Permittivity: Volumetric flow rate of water per unit cross sectional area per unit head under laminar flow conditions, in the normal direction through a geotextile.
- D. Permeability: Rate of flow of a liquid under a differential pressure through a material.
- E. Transmissivity: Flow or amount of liquid water per foot of material width passing through composite system at certain maximum soil pressure against geotextile at defined hydraulic gradient.

**1.05 SUBMITTALS**

- A. See Section 01 30 00 - Administrative Requirements, for submittal procedures.
- B. Product Data: Provide data on pipe drainage products, pipe accessories, and connectors.
- C. Shop Drawings: Indicate dimensions, layout of piping, high and low points of pipe inverts, gradient of slope between corners and intersections, and depths of footings.
- D. Manufacturer's Certificate: Certify that products meet or exceed specified requirements.

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- E. Project Record Documents: Record location of pipe runs, connections, cleanouts and principal invert elevations.

**1.06 PRE-INSTALLATION MEETING**

- A. Pre-Installation Conference: Include subdrainage system conference with conference scheduled for waterproofing materials.

**1.07 SEQUENCING AND SCHEDULING**

- A. Schedule subdrainage material installation after waterproofing installation and curing and protection board placement, and just prior to backfilling operations.

**PART 2 PRODUCTS**

**2.01 REGULATORY REQUIREMENTS**

- A. Comply with applicable code for materials and installation of the work of this section.

**2.02 PIPE MATERIALS**

- A. Polyvinyl Chloride Pipe: ASTM D2729; plain end, 4 inch inside diameter; with required fittings.
- B. Use perforated pipe at subdrainage system; unperforated through sleeved walls.
  - 1. Foundation drainage:
    - a. Provide perforated drainage pipe at footings and below grade walls.
    - b. Shop perforate pipe with 1/4 inch minimum to 3/8 inch maximum holes or nominal 1/4 by 4 inch long slots.
    - c. Perforations shall occur within maximum arc of 160 degrees.
  - 2. Drain lines: Provide solid drainage pipe to conduct water from footings and below grade walls, to storm drain lateral, outlet, or curb face as indicated.

**2.03 AGGREGATE AND BEDDING**

- A. Filter Aggregate and Bedding Material: Granular fill as specified in Section 31 23 23.
- B. Filter Sand and Bedding Material: Sand as specified in Section 31 23 23.
- C. Impervious Fill Material: Type as specified in Section 31 23 23.

**2.04 ACCESSORIES**

- A. Pipe Couplings: Solid plastic.
- B. Joint Covers: 10 mil thick polyethylene.
- C. Filter Fabric: Water pervious type, black polyolefin.
- D. Furring strips: Pressure treated lumber specified in Rough Carpentry section.
- E. Sleeve: Unperforated PVC type for foundation wall.

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## **PART 3 EXECUTION**

### **3.01 EXAMINATION**

- A. Verify that trench cut is ready to receive work and excavations, dimensions, and elevations are as indicated on layout drawings.
- B. Verification of Conditions: Verify that waterproofing protection board is in place, if specified in applicable waterproofing Section. Verify one percent minimum slope to underslab collection pipes.
- C. Substrate: Examine substrates to determine suitability in accordance with manufacturer's instructions and recommendations. Correct all deficiencies before proceeding with subdrainage system installation.

### **3.02 PREPARATION**

- A. Excavate trenches to lines and grades required for pipe positions and slopes to drain.
- B. Hand trim excavations to required elevations. Correct over-excavation with bedding aggregate.
- C. Remove large stones or other hard matter that could damage drainage piping or impede consistent backfilling or compaction.
- D. Bedding: Place bedding aggregate to depths and arrangements shown on Drawings, taking care to provide uniform and solid bearing for full length of each pipe segment.

### **3.03 INSTALLATION**

- A. Install and join pipe and pipe fittings in accordance with pipe manufacturer's instructions.
  - 1. Form piping into a continuous system, using such fittings and accessories as are recommended by manufacturer of pipe or tile materials, starting at highest required drainage elevation and continuing to point of approved discharge.
- B. Place drainage pipe on clean cut subsoil.
- C. Lay pipe to slope gradients noted on drawings; with maximum variation from true slope of 1/8 inch in 10 feet.
- D. Loosely butt pipe ends. Place joint cover strip 12 inches wide, around pipe diameter centered over joint.
- E. Take care to prevent potential blockage of system through inadvertent soil or debris intrusions.
- F. Place pipe with perforations facing down. Mechanically join pipe ends.
- G. Install pipe couplings.
- H. Install filter aggregate at sides, over joint covers and top of pipe. Provide top cover compacted thickness of 12 inches.
- I. Provide cleanouts to grade at ends of each run for system cleaning and checking.
- J. Place filter fabric over levelled top surface of aggregate cover prior to subsequent backfilling operations.

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- 1. Install geotextile as detailed on Drawings in "taco" fashion, as referred to in construction trade, with sides brought together and attached to wall with wood furring strip. Lap end joints of geotextile fabric in accordance with manufacturer's installation instructions.
- K. Place aggregate in maximum 4 inch lifts, consolidating each lift.
  - 1. Install aggregate backfill shown on Drawings and in accordance with Section 31 23 16.13 - Trenching, taking care to prevent crushing of pipe.
  - 2. Provide protection over subdrainage piping until placement of next succeeding layer or increment of construction.
- L. Refer to Section 31 23 23 for compaction requirements. Do not displace or damage pipe when compacting.
- M. Place impervious fill over drainage pipe aggregate cover and compact.
- N. Connect to storm drain system with unperforated pipe, through installed sleeves.
- O. Coordinate the Work with connection to on site storm drain system, and trenching.

**3.04 FIELD QUALITY CONTROL**

- A. Section 01 40 00 - Quality Requirements: Field inspection and testing.
- B. Request inspection prior to and immediately after placing aggregate cover over pipe.

**3.05 PROTECTION**

- A. Protect pipe and aggregate cover from damage or displacement until backfilling operation begins.

**END OF SECTION**

County of Riverside, Facilities Management <b>EOC Parking Lot Expansion (FM08200012205)</b> RCA Project No. 3-75-80		Subdrainage 33 41 00 - 4
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**STANDARD FORM OF CONSTRUCTION CONTRACT BETWEEN  
COUNTY AND CONTRACTOR**

by and between

**CONTRACTOR'S NAME**

(the "Contractor")

And

**THE COUNTY OF RIVERSIDE**

(the "County")

FOR:

**WESTERN EMERGENCY OPERATION CENTER PARKING EXPANSION PROJECT  
FM08200012205**

**450 E. ALESSANDRO BOULEVARD  
RIVERSIDE, CA 92508**

# **STANDARD FORM OF CONSTRUCTION CONTRACT** **BETWEEN COUNTY AND CONTRACTOR**

**THIS STANDARD FORM OF CONSTRUCTION CONTRACT BETWEEN COUNTY AND CONTRACTOR** (“Agreement”) is entered into as of the date of the last signature on the signature page of this contract by and between **THE COUNTY OF RIVERSIDE**, a political subdivision of the State of California (“County”) and **text**, a **text** (“Contractor”) whose principal place of business is located at **text**, **text**, **text**.

## **ARTICLE 1** **DEFINITIONS**

Capitalized terms used in the Contract Documents shall have the meanings assigned to them in the General Conditions. If not defined in the General Conditions, they shall have the meanings assigned to them elsewhere in the Contract Documents. If not defined in the General Conditions or elsewhere, they shall have the meanings reasonably understood to apply to them by the context in which they are used.

## **ARTICLE 2** **PERFORMANCE OF WORK**

### **2.1 SCOPE OF WORK**

Contractor shall execute the entire Work called for by the Contract Documents, except to the extent specifically indicated in the Contract Documents to be the responsibility of others.

### **2.2 STANDARD OF PERFORMANCE**

In addition to and without limiting Contractor’s other obligations under the Contract Documents, Contractor shall at all times in its performance of its obligations under the Contract Documents conform to the following general standards of performance:

**2.2.1** the requirements of the Contract Documents;

**2.2.2** the requirements and conditions of Applicable Laws;

**2.2.3** the standard of care applicable to those who provide construction of the type called for by this Construction Contract for projects of a scope and complexity comparable to the Project;

**2.2.4** Contractor shall furnish efficient business administration of the Work, utilizing sufficient senior level management and other qualified personnel to manage the Work; and

**2.2.5** Contractor shall apply its best and highest skill and attention to completing the Work in an expeditious and economical manner, consistent with the expressed best interests of the County and within the limitations of the Contract Price and Contract Time.

## ARTICLE 3 CONTRACT TIME

### 3.1 CONTRACT TIME

**3.1.1 Substantial Completion.** Subject to Contract Adjustments permitted by the Contract Documents, Contractor shall achieve Substantial Completion of the entire Work not later than ~~Ninety~~ (90) Days after the Date of Commencement.

**3.1.2 Final Completion.** Subject to Contract Adjustments permitted by the Contract Documents, Contractor shall achieve Final Completion of the Work not later than ~~Thirty~~ (30) Days after the actual occurrence of Substantial Completion.

**3.1.3 Contract Adjustments.** The Contract Time shall be extended or shortened only in accordance with the provisions of the Contract Documents governing Contract Adjustments to the Contract Time.

### 3.2 LIQUIDATED DAMAGES TO COUNTY

**3.2.1 County's Right.** County and Contractor acknowledge that if Contractor fails to Substantially Complete the Work within the Contract Time for Substantial Completion, County will suffer substantial Losses, which would be both extremely difficult and impracticable to ascertain. On that basis they agree, as a reasonable estimate of those Losses and not a penalty, to the assessment and recovery by County of liquidated damages under this Section 3.2.

**3.2.2 Per Diem Rate.** If Contractor fails to actually achieve Substantial Completion of the entire Work within the Contract Time for Substantial Completion, Contractor shall pay to County as liquidated damages the amount of ~~Seven Hundred Fifty~~ Dollars (\$750) per Day for each Day occurring after the expiration of the Contract Time for Substantial Completion until Contractor achieves Substantial Completion of the entire Work.

**3.2.3 Adjustment for Extensions of Time.** Subject to the provisions of Paragraph 8.2.8 of the General Conditions dealing with concurrency of Delays, liquidated damages shall not be charged to Contractor for a period of time for which the Contractor is entitled under the Contract Documents to a Contract Adjustment to the Contract Time for Substantial Completion.

**3.2.4 Partial Completion.** The liquidated damages provided for under this Section 3.2 shall not be reduced or apportioned: (1) for Substantial Completion of portions of the Work prior to Substantial Completion of the entirety of the Work; or (2) if portions of the Work are deleted pursuant to (a) the County's right to order Deleted Work; or (b) a termination by County of a portion of the Construction Contract or a deletion of portion of Work for the convenience of the County or due to an Event of Contractor Default.

**3.2.5 Remedies.** County may deduct any liquidated damages payable under this Section 3.2 from money due or to become due to Contractor under the Contract Documents, or pursue any other legal remedy to collect such liquidated damages from Contractor and/or its Surety.

**3.2.6 Not a Limitation.** County's rights under this Section 3.2 shall not be interpreted as precluding or limiting: (1) any right or remedy of County arising from an Event of Contractor Default other than a failure to achieve Substantial Completion of the Work within the Contract Time for Substantial Completion; or (2) County's right to order an acceleration, at Contractor's Own Expense, of performance of the Work to overcome Delay, including, without limitation, a Delay for which County has the right to assess liquidated damages under this Section 3.2.

### 3.3 LIQUIDATED DAMAGES TO CONTRACTOR

**3.3.1 Contractor's Right.** County and Contractor acknowledge and agree that if Contractor is unable due to Compensable Delay to actually achieve Substantial Completion of the Work within the Contract Time for Substantial Completion, Contractor and its affected Subcontractors will suffer Losses that would be both extremely difficult and

impracticable to ascertain. On that basis they agree, as a reasonable estimate of those Losses and not a penalty, to the payment by County to Contractor of liquidated damages under this Section 3.3.

**3.3.2 Daily Rate.** Subject to the provisions of Paragraph 8.2.8 of the General Conditions dealing with concurrency of Delays, the Contract Price shall be increased by Change Order or Unilateral Change Order in the amount of Five Hundred Dollars (\$500) per Day as liquidated damages for each Day for which Contractor is entitled under the Contract Documents to a Contract Adjustment extending the Contract Time for Substantial Completion due to Compensable Delay, with no additional amount added thereto or calculated thereon for Allowable Markup or any other markup for overhead or profit to Contractor or any Subcontractor, of any Tier.

**3.3.3 Payment by County.** A Change Order or Unilateral Change Order setting forth a Contract Adjustment to the Contract Price for liquidated damages permitted by this Section 3.3 shall be executed following, and not before, actual Substantial Completion and prior to or contemporaneously with Final Completion. Notwithstanding any other provision of the Contract Documents to the contrary and without limitation to the County's rights of withholding payment to Contractor as permitted elsewhere in the Contract Documents or under Applicable Laws, any amounts due to the Contractor under this Section 3.3 shall be payable as part of, and not prior to the due date for payment of, Final Payment to Contractor.

**3.3.4 Deleted Work.** A Contract Adjustment shall be made pursuant to Subparagraph 8.2.6.2 of the General Conditions reducing the Contract Price and Contract Time in the event that the Contract Time is shortened due to (1) Deleted Work; or (2) a termination by County of a portion of the Construction Contract for convenience or due to an Event of Contractor Default.

**3.3.5 Termination.** County shall have no liability to Contractor to pay any liquidated damages under this Section 3.3, nor shall County have any other liability to Contractor or any Subcontractor for any Loss due to Delay (including, without limitation, Compensable Delay) in the event the Construction Contract is wholly terminated (whether such termination is a termination for cause by County or Contractor or a termination for convenience by County) at any time prior to expiration of the Contract Time for Substantial Completion set forth in Paragraph 3.1.1, above.

**3.3.6 Exclusive Remedy.** Liquidated damages payable by County under this Section 3.3 constitute the Contractor's sole and exclusive right and remedy for recovery from County of Losses to Contractor and its Subcontractors, of every Tier, that are attributable to Compensable Delay, regardless of the cause, duration or timing of the Compensable Delay and no other Contract Adjustment, or other form of compensation or reimbursement, of any kind, shall be made to Contractor or any Subcontractor, of any Tier, for any Loss resulting, directly or indirectly, from, or attributable to, any of the following: (1) Unexcused Delay or acceleration to overcome Unexcused Delay; (2) Excusable Delay or any acceleration not authorized by County in writing to overcome Excusable Delay; or (3) concurrency of a Compensable Delay with any different type or class of Unexcused Delay or Excusable Delay, whether such concurrency is a concurrency in cause or in effect.

**3.3.7 WAIVER BY CONTRACTOR.**

**CONTRACTOR WAIVES THE RIGHT TO FURTHER RECOURSE OR RECOVERY OF COSTS OR DAMAGES BY REASON OF OR RELATED TO ANY DELAY (INCLUDING, WITHOUT LIMITATION, COMPENSABLE DELAY) THAT IS IN EXCESS OF OR NOT RECOVERED BY CONTRACTOR AS PART OF THE LIQUIDATED DAMAGES PAYABLE TO CONTRACTOR UNDER THIS SECTION 3.3.**

**ARTICLE 4  
CONTRACTOR COMPENSATION**

**4.1 CONTRACT PRICE**

**4.1.1 Contract Price.** County shall pay the Contractor in current funds for the Contractor's performance of the Work in accordance with the Contract Documents the Contract Price, exclusive of Contract Adjustments, of ~~text~~ Dollars (\$xx).

**4.1.2 Basis.** The Contract Price set forth in Paragraph 4.1.1, above, is based on the Bid submitted by Contractor as adjusted for Alternates accepted by County as set forth in Section 4.2, below.



**4.1.3 Adjustments.** The Contract Price is only subject to adjustment as permitted by the General Conditions for Contract Adjustments due to Compensable Changes, Deleted Work or Compensable Delay.

**4.1.4 All-Inclusive Price.** The Contract Price as adjusted for Contract Adjustment permitted by the Contract Documents is the total amount payable by County to Contractor for performance of the Work under the Contract Documents and is deemed to cover all Losses, foreseeable or unforeseeable, arising out of or related to past, present or future circumstances within or outside the control of the Contractor or its Subcontractors affecting the time or cost of performing the Work, including, without limitation, the effects of natural elements upon the Work, unforeseen difficulties or obstructions affecting the performance of the Work (including, without limitation, unforeseen conditions at the Site that do not constitute Differing Site Conditions) and unforeseen fluctuations in market conditions and price escalations (whether occurring locally, nationally or internationally).

**4.2 ALTERNATES**

The Contract Price includes the following Alternates, which are described in the Contract Documents and are hereby accepted by County:

Number	Description	Dollar Amount

**4.3 UNIT PRICES**

Unit prices agreed to by County and Contractor are as follows:

Description	Measurement Unit	Dollar Amount

**ARTICLE 5  
ENUMERATION OF CONTRACT DOCUMENTS**

**5.1 LIST OF CONTRACT DOCUMENTS**

The Contract Documents include, without limitation, the following:

**5.1.1 Construction Contract.** The Contract Documents include this executed Standard Form of Construction Contract Between County and Contractor.

**5.1.2 General Conditions.** The Contract Documents include the  General Conditions of the Standard Form of Construction Contract Between County and Contractor (Long Form) or  General Conditions of the Standard Form of Construction Contract Between County and Contractor (Short Form).

**5.1.3 Specifications.** The Contract Documents include the following Specifications:

Title	Date	Divisions
SEE EXHIBIT 'A ' WITH TABLE OF CONTENTS FOR SPECIFICATIONS AS APPROVED BY BOARD OF SUPERVISORS ON <u>Date</u> AND INCORPORATED HEREIN.		

**5.1.4 Drawings.** The Contract Documents include the following Drawings dated January 11, 2024, unless a different date is shown below:

Sheet Number	Title	Date	Pages
SEE EXHIBIT 'B' WITH LIST OF DRAWINGS INCLUDED IN SPECIFICATIONS APPROVED BY BOARD OF SUPERVISORS ON <u>Date</u> AND INCORPORATED HEREIN.			

**5.1.5 Addenda.** The Contract Documents include the following Addenda:

Addendum Number	Title	Date	Pages

**5.1.6 Reference Documents.** The Contract Documents include the following Reference Documents:

Title	Author	Date	Pages

**5.1.7** Federal Provisions Attachment of the American Rescue Plan Act (ARPA)

**ARTICLE 6  
SPECIAL REQUIREMENTS**

**6.1 LABOR CODE SECTION 1861 CERTIFICATION**

By signing below, Contractor certifies that he/she/it is aware of the provisions of Section 3700 of the California Labor Code which require every employer to be insured against liability for Worker's Compensation or to undertake self-insurance in accordance with the provisions of the California Labor Code, and that he/she/it will comply with such provisions before commencing the performance of the Work.

**CONTRACTORS ARE REQUIRED BY LAW TO BE LICENSED AND REGULATED BY THE CONTRACTORS' STATE LICENSE BOARD WHICH HAS JURISDICTION TO INVESTIGATE COMPLAINTS AGAINST CONTRACTORS IF A COMPLAINT REGARDING A PATENT ACT OR OMISSION IS FILED WITHIN FOUR YEARS OF THE DATE OF THE ALLEGED VIOLATION. A COMPLAINT REGARDING A LATENT ACT OR OMISSION PERTAINING TO STRUCTURAL DEFECTS MUST BE FILED WITHIN 10 YEARS OF THE DATE OF THE ALLEGED VIOLATION. ANY QUESTIONS CONCERNING A CONTRACTOR MAY BE REFERRED TO THE REGISTRAR, CONTRACTORS' STATE LICENSE BOARD, P.O. BOX 26000, SACRAMENTO, CALIFORNIA, 95826.**

**IN WITNESS WHEREOF**, the parties hereto have made and executed three (3) originals of this Construction Contract, on \_\_\_\_\_ [to be filled in by Clerk of the Board].

**[SIGNATURES ON FOLLOWING PAGE (PM'S PLEASE EDIT THE POSITIONING OF THIS STATEMENT ACCORDINGLY AND DELETE THIS NON-BOLDED TEXT AFTERWARD)]**

**“COUNTY”**

**COUNTY OF RIVERSIDE**

By: \_\_\_\_\_  
Chairman, Board of Supervisors

**ATTEST:**

KIMBERLY RECTOR  
Clerk of the Board

By: \_\_\_\_\_  
(Deputy)

(SEAL)

**APPROVED AS TO FORM:**  
MINH C. TRAN  
County Counsel

By: \_\_\_\_\_

Deputy County Counsel

**“CONTRACTOR”**

\_\_\_\_\_

(Sign on line above)

By: \_\_\_\_\_  
(Type name)

Title: \_\_\_\_\_

The following information must be provided concerning the Contractor:

State whether Contractor is corporation, Individual, partnership, joint venture or other:

\_\_\_\_\_

If “other”, enter legal form of business:

\_\_\_\_\_

Enter address:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Telephone: \_\_\_\_\_

Facsimile: \_\_\_\_\_

Email: \_\_\_\_\_

Employer State Tax ID #: \_\_\_\_\_

State Contractor License #: \_\_\_\_\_

Department of Industrial Relations

Registration No: \_\_\_\_\_

If Contractor is not an individual or corporation, list Names of 4 representatives who have authority to contractually bind Contractor:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

If Contractor is a corporation, state:

Name of President: \_\_\_\_\_

Name of Secretary: \_\_\_\_\_

State of Incorporation: \_\_\_\_\_

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Since additional funding has been allocated through use of federal American Rescue Plan Act (ARPA; (Title VI of the Social Security Act Section 602 et seq.) funds, the COUNTY will administer and distribute those funds in accordance with ARPA. ARPA requires that payments from the Coronavirus Fiscal Recovery Fund be used to respond to the public health emergency or its negative economic impacts, to respond to workers performing essential work during the COVID-19 public health emergency by providing premium pay, provide government services to the extent the reduction of revenue due to COVID-19 public health emergency, and to make necessary investments in water, sewer or broadband infrastructure. It is effective beginning May 17, 2021 and ends on December 31, 2026.

Subrecipient acknowledges and agrees that this Agreement is subject to the federal requirements, including the federal provisions provided below:

1. **NON-DISCRIMINATION.** Subrecipient shall not be discriminate in the provision of services, allocation of benefits, accommodation in facilities, or employment of personnel on the basis of ethnic group identification, race, religious creed, color, national origin, ancestry, physical handicap, medical condition, marital status or sex in the performance of this Agreement; and, to the extent they shall be found to be applicable hereto, shall comply with the provisions of the California Fair Employment and Housing Act (Gov. Code 12900 et. seq), the Federal Civil Rights Act of 1964 (P.L. 88-352), the Americans with Disabilities Act of 1990 (42 U.S.C. S1210 et seq.) and all other applicable laws or regulations.

2. **EQUAL EMPLOYMENT OPPORTUNITY/ FAIR EMPLOYMENT PRACTICES/ FEDERAL PROVISIONS.** During the performance of this Agreement, the Subrecipient shall not deny benefits to any person on the basis of religion, color, ethnic group identification, sex, age, physical or mental disability, nor shall they discriminate unlawfully against any employee or applicant for employment because of race, religion, color, national origin, ancestry, physical handicap, mental disability, medical condition, marital status, age, or sex. Subrecipient shall ensure that the evaluation and treatment of employees and applicants for employment are free of such discrimination.

A. Subrecipient shall comply with the provisions of the Fair Employment and Housing Act (Government Code, Section 12900 et seq.), the regulations promulgated thereunder (California Code of Regulations, Title 2, Section 11000 et seq.), the provisions of Executive Order 11246 of Sept. 23, 1965 and of the rules, regulations, and relevant orders of the Secretary of Labor, the provisions of Article 9.5, Chapter 1, Part 1, Division 3, Title 2 of the Government Code (Government Code, Sections 11135-11139.8), and of the rules, regulations or standards adopted by the County to implement such article.

B. The Subrecipient shall comply with the provisions of the Copeland “Anti-Kickback” Act, 18 U.S.C. § 874, 40 U.S.C. § 3145, and the requirements of 29 C.F.R. pt. 3 as may be applicable, which are incorporated by reference into this Agreement.

3. **CLEAN AIR ACT.** The Subrecipient agrees to comply with all applicable standards, orders, or regulations issued pursuant to the Clean Air Act, as amended, 42 U.S.C. Section 7401 et seq. The Subrecipient agrees to report each violation to the County and understands and agrees that the County will, in turn, report each violation as required to assure notification to the California Governor's Office of Emergency Services, Federal Emergency Management Agency (FEMA), and the appropriate Environmental Protection Agency Regional Office. The Subrecipient agrees to include these requirements in each subcontract exceeding \$150,000 financed in whole or in part with Federal assistance provided by FEMA.

4. **FEDERAL WATER POLLUTION CONTROL ACT**

The Subrecipient agrees to comply with all applicable standards, orders, or regulations issued pursuant to the Federal Water Pollution Control Act, as amended, 33 U.S.C. Sections 1251 et seq.

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The Subrecipient agrees to report each violation to the County and understands and agrees that the County will, in turn, report each violation as required to assure notification to the Federal Emergency Management Agency (FEMA), and the appropriate Environmental Protection Agency Regional Office.

The Subrecipient agrees to include these requirements in each subcontract exceeding \$150,000 financed in whole or in part with Federal assistance provided by FEMA.

5. DEBARMENT AND SUSPENSION CLAUSE

This Agreement is a covered transaction for purposes of 2 C.F.R. pt. 180 and 2 C.F.R. pt. 3000. As such the Subrecipient is required to verify that none of the Subrecipient, its principals (defined at 2 C.F.R. § 180.995), or its affiliates (defined at 2 C.F.R. § 180.905) are excluded (defined at 2 C.F.R. § 180.940) or disqualified (defined at 2 C.F.R. § 180.935).

The Subrecipient must comply with 2 C.F.R. pt. 180, subpart C and 2 C.F.R. pt. 3000, subpart C and must include a requirement to comply with these regulations in any lower tier covered transaction it enters into. This certification is a material representation of fact relied upon by the County. If it is later determined that the Subrecipient did not comply with 2 C.F.R. pt. 180, subpart C and 2 C.F.R. pt. 3000, subpart C, in addition to remedies available to the County, the Federal Government may pursue available remedies, including but not limited to suspension and/or debarment.

The bidder or proposer agrees to comply with the requirements of 2 C.F.R. pt. 180, subpart C and 2 C.F.R. pt. 3000, subpart C while this offer is valid and throughout the period of any contract that may arise from this offer. The bidder or proposer further agrees to include a provision requiring such compliance in its lower tier covered transactions.

6. BYRD ANTI- LOBBYING AMENDMENT, 31 U.S.C. § 1352 (AS AMENDED)

Subrecipients who apply or bid for an award of \$100,000 or more shall file the required certification. Each tier certifies to the tier above that it will not and has not used Federal appropriated funds to pay any person or organization for influencing or attempting to influence an officer or employee of any agency, a member of Congress, officer or employee of Congress, or an employee of a member of Congress in connection with obtaining any Federal contract, grant, or any other award covered by 31 U.S.C. § 1352. Each tier shall also disclose any lobbying with non-Federal funds that takes place in connection with obtaining any Federal award. Such disclosures are forwarded from tier to tier up to the recipient who in turn will forward the certification(s) to the County.

APPENDIX A, 44 C.F.R. PART 18- CERTIFICATION REGARDING LOBBYING

The undersigned [Subrecipient] certifies, to the best of his or her knowledge, that:

A. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

B. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

C. The undersigned shall require that the language of this certification be included in the award documents for all sub-awards at all tiers (including subcontracts, sub-grants, and contracts under grants, loans, and cooperative agreements) and that all sub-recipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this

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transaction imposed by 31, U.S.C. § 1352 (as amended by the Lobbying Disclosure Act of 1995). Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

The Subrecipient certifies or affirms the truthfulness and accuracy of each statement of its certification and disclosure, if any. In addition, the Subrecipient understands and agrees that the provisions of 31 U.S.C. § 3801 et seq., apply to this certification and disclosure, if any.

SUBRECIPIENT

By \_\_\_\_\_  
Date \_\_\_\_\_

7. PROCUREMENT OF RECOVERED MATERIALS

In the performance of this Agreement, the Subrecipient shall make maximum use of products containing recovered materials that are EPA-designated items unless the product cannot be acquired

- A. Competitively within a timeframe providing for compliance with the contract performance schedule;
- B. Meeting contract performance requirements; or
- C. At a reasonable price.

Information about this requirement, along with the list of EPA-designated items, is available at EPA's Comprehensive Procurement Guidelines web site, <https://www.epa.gov/smm/comprehensive-procurement-guideline-cpg-program>

The Subrecipient also agrees to comply with all other applicable requirements of Section 6002 of the Solid Waste Disposal Act.

8. ACCESS TO RECORDS

The following access to records requirements apply to this Agreement:

- A. The Subrecipient agrees to provide the County, the FEMA Administrator, the Comptroller General of the United States, or any of their authorized representatives access to any books, documents, papers, and records of the Subrecipient which are directly pertinent to this Agreement for the purposes of making audits, examinations, excerpts, and transcriptions.
- B. The Subrecipient agrees to permit any of the foregoing parties to reproduce by any means whatsoever or to copy excerpts and transcriptions as reasonably needed.
- C. The Subrecipient agrees to provide the FEMA Administrator or his or her authorized representatives access to construction or other work sites pertaining to the work being completed under the contract.
- D. In compliance with the Disaster Recovery Act of 2018, the County and the Subrecipient acknowledge and agree that no language in this contract is intended to prohibit audits or internal reviews by the FEMA Administrator or the Comptroller General of the United States.

9. DEPARTMENT OF HOMELAND SECURITY SEAL, LOGO, FLAGS

The Subrecipient shall not use the DHS seal(s), logos, crests, or reproductions of flags or likenesses of DHS agency officials without specific FEMA pre-approval.

10. COMPLIANCE WITH FEDERAL LAW, REGULATIONS, AND EXECUTIVE ORDERS

This is an acknowledgement that FEMA financial assistance will be used to fund all or a portion of the contract. The Subrecipient will comply with all applicable Federal law, regulations, executive orders, FEMA policies, procedures, and directives.

11. NO OBLIGATION BY FEDERAL GOVERNMENT

The Federal Government is not a party to this Agreement and is not subject to any obligations or liabilities to the non-Federal entity, contractor, or any other party pertaining to any matter resulting from the contract.

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12. PROGRAM FRAUD AND FALSE OR FRAUDULENT STATEMENTS OR RELATED ACTS  
The Subrecipient acknowledges that 31 U.S.C. Chapter 38 (Administrative Remedies for False Claims and Statements) applies to the Subrecipient's actions pertaining to this Agreement.

13. FEDERAL PREVAILING WAGE  
DAVIS-BACON ACT COMPLIANCE (applicable to construction contracts in excess of \$2,000 awarded by grantees and subgrantees when required by Federal grant program legislation)

To the extent required by any Federal grant programs applicable to expected funding or reimbursement expenses incurred in connection with the services provided under this Agreement, Subrecipient agrees to comply with the Davis-Bacon Act (40 U.S.C. §§ 3141-3144 and 3146-3148) as supplemented by Department of Labor regulations (29 CFR Part 5) as set forth below.

A. The Subrecipient shall be bound to the provisions of the Davis-Bacon Act, and agrees to be bound by all the provisions of Labor Code section 1771 regarding prevailing wages. All labor on this project shall be paid neither less than the greater of the minimum wage rates established by the U.S. Secretary of Labor (Federal Wage Rates), or by the State of California Director of Department of Industrial Relations (State Wage Rates). Current DIR requirements may be found at <http://www.dir.ca.gov/lcp.asp>. Additionally, wages are required to be paid not less than once a week.

B. The general prevailing wage rates may be accessed at the Department of Labor Home Page at [www.wdol.gov](http://www.wdol.gov). Under the Davis Bacon heading, click on "Selecting DBA WDs." In the drop down menu for State, select, "California." In the drop down menu for County, select "Riverside." In the drop down menu for Construction Type, make the appropriate selection. Then, click Search.

The Federal minimum wage rates for this project are predetermined by the United States Secretary of Labor. If there is a difference between the minimum wage rates predetermined by the Secretary of Labor and the general prevailing wage rates determined by the Director of the California DIR for similar classifications of labor, the Subrecipient and subcontractors shall pay not less than the higher wage rate. The County will not accept lower State wage rates not specifically included in the Federal minimum wage determinations. This includes "helper" (or other classifications based on hours of experience) or any other classification not appearing in the Federal wage determinations. Where Federal wage determinations do not contain the State wage rate determination otherwise available for use by the Subrecipient and subcontractors, the Subrecipient and subcontractors shall pay not less than the Federal minimum wage rate which most closely approximates the duties of the employees in question.

14. CONTRACT WORK HOURS AND SAFETY STANDARDS (applicable to all contracts in excess of \$100,000 that involve the employment of mechanics or laborers, but not to purchases of supplies or materials or articles ordinarily available on the open market, or contracts for transportation or transmission of intelligence)

A. Compliance: Subrecipient agrees that it shall comply with Sections 3702 and 3704 of the Contract Work Hours and Safety Standards Act (40 U.S.C. §§ 3701-3708) as supplemented by Department of Labor regulations (29 CFR Part 5), which are incorporated herein.

B. Overtime: No contractor or subcontractor contracting for any part of the work under this Agreement which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.

C. Violation; liability for unpaid wages; liquidated damages: In the event of any violation of the provisions of paragraph B of this section, the Subrecipient and any subcontractor responsible therefore shall be liable for the unpaid wages. In addition, such Subrecipient and subcontractor shall be liable to the United States for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or

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mechanic employed in violation of the provisions of paragraph B, in the sum of \$10 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by paragraph B.

D. Withholding for unpaid wages and liquidated damages: Subrecipient shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set for in paragraph C of this section.

E. Subcontracts: The contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraphs A through D of this section and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs A through D of this section.

15. RIGHTS TO INVENTIONS MADE UNDER A CONTRACT OR AGREEMENT— Contracts or agreements for the performance of experimental, developmental, or research work shall provide for the rights of the Federal Government and the recipient in any resulting invention in accordance with 37 CFR part 401, “Rights to Inventions Made by Nonprofit Organizations and Small Business Firms Under Government Grants, Contracts and Cooperative Agreements,” and any implementing regulations issued by HUD.

16. RIGHTS TO DATA AND COPYRIGHTS – Subrecipients and consultants agree to comply with all applicable provisions pertaining to the use of data and copyrights pursuant to 48 CFR Part 27.4, Federal Acquisition Regulations (FAR).

17. PROHIBITION ON CONTRACTING FOR COVERED TELECOMMUNICATIONS EQUIPMENT OR SERVICES

A. Definitions. As used in this clause, the terms backhaul; covered foreign country; covered telecommunications equipment or services; interconnection arrangements; roaming; substantial or essential component; and telecommunications equipment or services have the meaning as defined in FEMA Policy, #405-143-1 Prohibitions on Expending FEMA Award Funds for Covered Telecommunications Equipment or Services As used in this clause—

B. Prohibitions.

(1) Section 889(b) of the John S. McCain National Defense Authorization Act for Fiscal Year 2019, Pub. L. No. 115-232, and 2 C.F.R. § 200.216 prohibit the head of an executive agency on or after Aug.13, 2020, from obligating or expending grant, cooperative agreement, loan, or loan guarantee funds on certain telecommunications products or from certain entities for national security reasons.

(2) Unless an exception in paragraph (c) of this clause applies, the contractor and its subcontractors may not use grant, cooperative agreement, loan, or loan guarantee funds from the Federal Emergency Management Agency to:

(i) Procure or obtain any equipment, system, or service that uses covered telecommunications equipment or services as a substantial or essential component of any system, or as critical technology of any system;

(ii) Enter into, extend, or renew a contract to procure or obtain any equipment, system, or service that uses covered telecommunications equipment or services as a substantial or essential component of any system, or as critical technology of any system;

(iii) Enter into, extend, or renew contracts with entities that use covered telecommunications equipment or services as a substantial or essential component of any system, or as critical technology as part of any system; or (iv) Provide, as part of its performance



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of this contract, subcontract, or other contractual instrument, any equipment, system, or service that uses covered telecommunications equipment or services as a substantial or essential component of any system, or as critical technology as part of any system.

C. Exceptions.

(1) This clause does not prohibit contractors from providing—

a. A service that connects to the facilities of a third-party, such as backhaul, roaming, or interconnection arrangements; or

b. Telecommunications equipment that cannot route or redirect user data traffic or permit visibility into any user data or packets that such equipment transmits or otherwise handles.

(2) By necessary implication and regulation, the prohibitions also do not apply to:

a. Covered telecommunications equipment or services that:

i. Are not used as a substantial or essential component of any system; and

ii. Are not used as critical technology of any system.

b. Other telecommunications equipment or services that are not considered covered telecommunications equipment or services.

D. Reporting requirement.

(1) In the event the contractor identifies covered telecommunications equipment or services used as a substantial or essential component of any system, or as critical technology as part of any system, during contract performance, or the contractor is notified of such by a subcontractor at any tier or by any other source, the contractor shall report the information in paragraph (d)(2) of this clause to the recipient or subrecipient, unless elsewhere in this contract are established procedures for reporting the information.

(2) The Subrecipient shall report the following information pursuant to paragraph (d)(1) of this clause:

(i) Within one business day from the date of such identification or notification: The contract number; the order number(s), if applicable; supplier name; supplier unique entity identifier (if known); supplier Commercial and Government Entity (CAGE) code (if known); brand; model number (original equipment manufacturer number, manufacturer part number, or wholesaler number); item description; and any readily available information about mitigation actions undertaken or recommended.

ii) Within 10 business days of submitting the information in paragraph (d)(2)(i) of this clause: Any further available information about mitigation actions undertaken or recommended. In addition, the contractor shall describe the efforts it undertook to prevent use or submission of covered telecommunications equipment or services, and any additional efforts that will be incorporated to prevent future use or submission of covered telecommunications equipment or services. Page 10

E. Subcontracts. The Subrecipient shall insert the substance of this clause, including this paragraph (e), in all subcontracts and other contractual instruments.

## 18. REPORTING OF MATTERS RELATED TO RECIPIENT INTEGRITY AND PERFORMANCE

### A. General Reporting Requirement

If the total value of your currently active grants, cooperative agreements, and procurement contracts from all Federal awarding agencies exceeds \$10,000,000 for any period of time during the period of performance of this Federal award, then you as the recipient during that period of time must maintain the currency of information reported to the System for Award Management (SAM) that is made available in the designated integrity and performance system (currently the Federal Awardee Performance and Integrity Information System (FAPIIS)) about civil, criminal, or administrative proceedings described in paragraph 2 of this award term and condition. This is a statutory requirement under section 872 of [Public Law 110-417](#), as amended ([41 U.S.C. 2313](#)). As required by section 3010 of [Public Law 111-212](#), all information posted in

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the designated integrity and performance system on or after April 15, 2011, except past performance reviews required for Federal procurement contracts, will be publicly available.

**B. Proceedings About Which You Must Report**

Submit the information required about each proceeding that:

a. Is in connection with the award or performance of a grant, cooperative agreement, or procurement contract from the Federal Government;

b. Reached its final disposition during the most recent five-year period; and

c. Is one of the following:

(1) A criminal proceeding that resulted in a conviction, as defined in paragraph 5 of this award term and condition;

(2) A civil proceeding that resulted in a finding of fault and liability and payment of a monetary fine, penalty, reimbursement, restitution, or damages of \$5,000 or more;

(3) An administrative proceeding, as defined in paragraph 5. of this award term and condition, that resulted in a finding of fault and liability and your payment of either a monetary fine or penalty of \$5,000 or more or reimbursement, restitution, or damages in excess of \$100,000; or

(4) Any other criminal, civil, or administrative proceeding if:

(i) It could have led to an outcome described in paragraph 2.c.(1), (2), or (3) of this award term and condition;

(ii) It had a different disposition arrived at by consent or compromise with an acknowledgment of fault on your part; and

(iii) The requirement in this award term and condition to disclose information about the proceeding does not conflict with applicable laws and regulations.

**C. Reporting Procedures**

Enter in the SAM Entity Management area the information that SAM requires about each proceeding described in paragraph 2 of this award term and condition. You do not need to submit the information a second time under assistance awards that you received if you already provided the information through SAM because you were required to do so under Federal procurement contracts that you were awarded.

**D. Reporting Frequency**

During any period of time when you are subject to the requirement in paragraph 1 of this award term and condition, you must report proceedings information through SAM for the most recent five year period, either to report new information about any proceeding(s) that you have not reported previously or affirm that there is no new information to report. Recipients that have Federal contract, grant, and cooperative agreement awards with a cumulative total value greater than \$10,000,000 must disclose semiannually any information about the criminal, civil, and administrative proceedings.

**E. Definitions**

For purposes of this award term and condition:

a. Administrative proceeding means a non-judicial process that is adjudicatory in nature in order to make a determination of fault or liability (*e.g.*, Securities and Exchange Commission Administrative proceedings, Civilian Board of Contract Appeals proceedings, and Armed Services Board of Contract Appeals proceedings). This includes proceedings at the Federal and State level but only in connection with performance of a Federal contract or grant. It does not include audits, site visits, corrective plans, or inspection of deliverables.

b. Conviction, for purposes of this award term and condition, means a judgment or conviction of a criminal offense by any court of competent jurisdiction, whether entered upon a verdict or a plea, and includes a conviction entered upon a plea of *nolo contendere*.

c. Total value of currently active grants, cooperative agreements, and procurement contracts includes -

(1) Only the Federal share of the funding under any Federal award with a recipient cost share or match; and

(2) The value of all expected funding increments under a Federal award and options, even if not yet exercised.

**GENERAL CONDITIONS OF**  
**THE STANDARD FORM CONSTRUCTION CONTRACT**  
**BETWEEN COUNTY AND CONTRACTOR**

**(LONG FORM)**

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**GENERAL CONDITIONS OF**  
**THE STANDARD FORM CONSTRUCTION CONTRACT**  
**BETWEEN COUNTY AND CONTRACTOR**

(LONG FORM)

**ARTICLE 1**  
**GENERAL PROVISIONS**

**1.1 DEFINITIONS**

1.1.1 **Acceptance.** "Acceptance" means the point that the Project is formally accepted by the Board of Supervisors and a Notice of Completion is recorded by County.

1.1.2 **Act of God.** "Act of God" means earthquake, natural flood, tornado or other unusually severe natural or weather phenomenon occurring at the Site and causing Delay to performance of the Work at the Site; provided, however, that precipitation and winds shall not be an Act of God unless it exceeds in any given month the 10-year average of monthly levels as established by the National Oceanic and Atmospheric Administration ("NOAA") according to NOAA's records of measurable precipitation and winds taken at NOAA's recording station located within the Riverside County basin area that is nearest to the Site.

1.1.3 **Addendum.** "Addendum" means written or graphic information (including, without limitation, Drawings or Specifications) issued prior to the Bid Closing Deadline, which modifies or interprets the Bidding Documents by additions, deletions, clarifications or corrections.

1.1.4 **Admitted Surety.** "Admitted Surety" means a surety insurer that is duly certified pursuant to California Insurance Code §995.120 to transact business as a surety in the State of California.

1.1.5 **Allowable Costs.** "Allowable Costs" means those costs listed in Paragraph 7.7.3, below, that are used in calculating Contract Adjustments to the Contract Price.

1.1.6 **Allowable Markups.** "Allowable Markups" means those percentage markups listed in Paragraph 7.7.5, below, used in calculating Contract Adjustments to the Contract Price.

1.1.7 **Alternate.** "Alternate" means a proposed alternative described in the Bidding Documents adding to, or deleting from, the Bidding Documents a particular material, system, product or method of construction.

1.1.8 **Applicable Laws.** "Applicable Laws" means all statutes, ordinances, rules, regulations, policies and guidelines enacted by Governmental Authorities (including, without limitation, Environmental Laws and Disability Laws), codes adopted or promulgated by Governmental Authorities (including, without limitation, building and health and safety codes), lawful orders of Governmental Authorities and common law, including, but not limited to, principles of equity applied by the courts of the State of California, which are in effect at the time the Work is performed.

1.1.9 **Application for Payment.** "Application for Payment" means Contractor's itemized application for Progress Payment or Final Payment prepared, submitted and substantiated in accordance with the requirements of the Contract Documents.

1.1.10 **Architect.** "Architect" means the design professional retained by County that is primarily responsible for the preparation of the Drawings and Specifications for the Project.

1.1.11 **Award.** "Award" means either (1) a minute order duly adopted by the Board of Supervisors approving County's entering into the Construction Contract with Contractor or (2) execution of the Construction Contract by the Clerk of the Board.

1.1.12 **Base Bid.** “Base Bid” means the sum of money stated in a Bid for which the Bidder proposes to perform the Work, exclusive of adjustments for Alternates.

1.1.13 **Bid.** “Bid” means the completed and signed Bid Form and other Bid Submittals submitted by a Bidder to County in response to the Notice Inviting Bids and in accordance with the Instructions to Bidders.

1.1.14 **Bid Amount.** “Bid Amount” means the dollar amount that is used as the basis for determining which Bidder has submitted the lowest Bid price for purposes of Award pursuant to the County’s chosen method of Award set forth in Paragraph 4.5.3 of the Instructions to Bidders.

1.1.15 **Bid Bond.** “Bid Bond” means alternative form of Bid Security submitted by a Bidder that consists of a surety bond issued by a Surety.

1.1.16 **Bid Closing Deadline.** “Bid Closing Deadline” means the deadline (date and time) for receipt of Bids by County that is stated in the Bidding Documents, as adjusted by Addendum.

1.1.17 **Bid Form.** “Bid Form” means the form prescribed by the Bidding Documents to be completed and signed by a Bidder showing the dollar amount(s) of its Bid.

1.1.18 **Bid Security.** “Bid Security” means a deposit of cash, certified or cashier’s check or bond submitted by a Bidder in accordance with the Bidding Documents guaranteeing that if Award is made to the Bidder, the Bidder will enter into the Construction Contract and furnish the Performance Bond and Payment Bond and other Post-Award Submittals.

1.1.19 **Bid Submittal.** “Bid Submittal” means a document that Bidder is required by the Bidding Documents to submit with or as part of its Bid.

1.1.20 **Bidder.** “Bidder” means a person or entity submitting a Bid for Award of the Construction Contract.

1.1.21 **Bidding Documents.** “Bidding Documents” means the following collection of documents prepared and issued by County relating to the Project:

- .1 Notice Inviting Bids;
- .2 Instructions to Bidders;
- .3 Bid Form;
- .4 Standard Form of Construction Contract Between County and Contractor (unsigned);
- .5 General Conditions to Standard Form of Construction Contract Between County and Contractor (Long Form);
- .6 Specifications;
- .7 Plans and Drawings;
- .8 Addenda;
- .9 Reference Documents;
- .10 Safety Program; and
- .11 those documents, or those portions or provisions of documents, that, although not listed in Subparagraph 1.1.22.2 through Subparagraph 1.1.22.10, above, are expressly cross-referenced therein or attached thereto, including, without limitation, all documents submitted by Contractor as part of its Bid or Post-Award Submittals.

1.1.22 **Board of Supervisors.** “Board of Supervisors” means the Board of Supervisors for the County of Riverside.

1.1.23 **Change.** “Change” means a modification, change, addition, substitution or deletion in the Work or in Contractor’s means, methods, manner, time or sequence of performing the Work arising from any cause or circumstances, including, without limitation, either directly at the request of County or constructively by reason of other circumstances. Use of the term “Change,” in any context, in the Contract Documents shall not be interpreted as implying that Contractor is entitled to a Contract Adjustment on any basis other than as permitted by the terms of the Contract Documents for Compensable Change, Deleted Work or Compensable Delay.

1.1.24 **Change Order.** “Change Order” means a written instrument, signed in accordance with the requirements of the General Conditions, setting forth the agreement of County and Contractor on the terms of a Contract Adjustment.

1.1.25 **Change Order Request.** “Change Order Request” means Contractor’s written request for a Contract Adjustment pursuant to Paragraph 7.6.2, below.

1.1.26 **Claim.** “Claim” means a written demand or assertion by Contractor seeking, as a matter of right, an interpretation of contract, payment of money, recovery of damages or other relief. A Claim does not include the following: (1) tort claims for personal injury or death; (2) stop payment notice claims; (3) a determination of the right of County to specific performance or injunctive relief to compel performance; (4) a determination of the right of County to suspend, revoke or limit the Contractor’s Prequalification status or rating or to debar Contractor from bidding or contracting with County; or (5) a determination of the right of County under Applicable Laws to terminate the Construction Contract and/or recovery of penalties imposed upon Contractor for violation of statutory obligations under Public Contract Code §4100 *et seq.*

1.1.27 **Close-Out Documents.** “Close-Out Documents” means all Record Documents, warranties, guarantees, technical information, operations manuals, replacement parts, excess and attic stock and other documents (including, without limitation, electronic versions and hard copies) and things required to be submitted by Contractor under the Contract Documents as a condition of Final Completion or Final Payment.

1.1.28 **Compensable Change.** “Compensable Change” means circumstances involving the performance of Extra Work:

- .1 that are the result of
  - (1) Differing Site Conditions,
  - (2) amendments or additions to Applicable Laws, which amendments or additions are enacted after the Bid Closing Deadline,
  - (3) a Change requested by County in accordance with the conditions of authorization applicable to Compensable Changes set forth in Article 7, below, or
  - (4) other circumstances involving a Change in the Work for which Contractor is given under the Contract Documents a specific and express right to a Contract Adjustment to the Contract Price;
- .2 that are not caused, in whole or in part, by an act or omission of Contractor or a Subcontractor, of any Tier, constituting negligence, willful misconduct, or violation of an Applicable Law, or by a failure of Contractor or a Subcontractor, of any Tier, to comply with the Contract Documents;
- .3 for which a Contract Adjustment is neither prohibited by nor waived under the terms of the Contract Documents; and
- .4 that if performed would require Contractor to incur additional and unforeseeable Allowable Costs that would not have been required to be incurred in the absence of such circumstances.

1.1.29 **Compensable Delay.** “Compensable Delay” means a Delay to the critical path of activities affecting Contractor’s ability to achieve Substantial Completion of the entirety of the Work within the Contract Time:

- .1 that is the result of
  - (a) a Compensable Change,
  - (b) the active negligence of County, Architect, a County Consultant or a Separate Contractor,
  - (c) a breach by County of an obligation under the Contract Documents, or
  - (d) other circumstances involving Delay for which Contractor is given under the Contract Documents a specific and express right to a Contract Adjustment adjusting the Contract Price;
- .2 that is not caused, in whole or in part, by an act or omission of Contractor or a Subcontractor, of any Tier, constituting negligence, willful misconduct, or a violation of an Applicable Law, or a failure by Contractor or any Subcontractor, of any Tier, to comply with the Contract Documents; and
- .3 for which a Contract Adjustment to the Contract Time is neither prohibited by nor waived under the terms of the Contract Documents.

1.1.30 **Construction Change Directive.** “Construction Change Directive” means a written instrument signed in accordance with the requirements of Article 7, below, that: (1) directs the performance of a Change that does not involve a Contract Adjustment; (2) establishes a mutually agreed basis for compensation to Contractor for a Compensable Change under circumstances where performance of the Compensable Change needs to proceed in advance of the County performing a full evaluation of the Contractor’s rights relative to a Contract Adjustment; or (3) directs performance of Work or a Change with respect to which there exists a dispute or question regarding the terms of a Contract Adjustment.

1.1.31 **Construction Contract.** “Construction Contract” means the written form of Standard Form of Construction Contract Between County and Contractor included in the Bidding Documents signed by County and Contractor.

1.1.32 **Construction Schedule.** “Construction Schedule” means the detailed, critical path schedule prepared by Contractor in accordance with the requirements of the Contract Documents showing Contractor’s plan for performance of the Work within the Contract Time.

1.1.33 **Contract Adjustment.** “Contract Adjustment” means an adjustment, additive or deductive, to the Contract Price or Contract Time that is permitted by the Contract Documents due to circumstances constituting a Compensable Change, Compensable Delay or Deleted Work.

1.1.34 **Contract Documents.** “Contract Documents” means the following collection of documents:

- .1 Construction Contract;
- .2 Addenda;
- .3 General Conditions;
- .4 Specifications;
- .5 Plans and Drawings;
- .6 Modifications;

- .7 Reference Documents;
- .8 Change Orders;
- .9 Unilateral Change Orders;
- .10 Construction Change Directives;
- .11 Safety Program;
- .12 other documents that comprise exhibits, attachments or riders to the documents listed in preceding Subparagraph 1.1.35.1 through Subparagraph 1.1.35.11, above;
- .13 executed Declaration of Sufficiency of Funds;
- .14 executed Non-Collusion Declaration; and
- .15 if the Bidding Documents limit bidding to Prequalified Bidders, those written representations, obligations or responsibilities made, acknowledged or assumed by the Bidder as part of the applicable Prequalification conducted by County, including, without limitation, any continuing obligations assumed by Contractor to disclose false or misleading information, report changes in ownership or management and comply with minimum safety requirements.

1.1.35 **Contract Price.** "Contract Price" means the dollar amount set forth in the Construction Contract as the total compensation payable by County to Contractor for complete performance by Contractor in accordance with the Contract Documents of the Work and other obligations assumed by Contractor under the Contract Documents.

1.1.36 **Contract Time.** "Contract Time" means the total number of Days set forth in the Construction Contract within which Contractor is obligated to achieve Substantial Completion and/or Final Completion of the Work, as extended or shortened by Contract Adjustments.

1.1.37 **Contractor.** "Contractor" means the person or entity identified by County as the Bidder receiving Award of the Construction Contract.

1.1.38 **Contractor Amount.** "Contractor Amount" means the component amount calculated on behalf of Contractor pursuant to Paragraph 15.1.5, below, that is used to determine the total net amount payable to Contractor or County in the event of a partial or full termination or discontinuance of the Work.

1.1.39 **Contractor's Own Expense.** "Contractor's Own Expense" means that Contractor agrees to assume sole responsibility to pay and be responsible for any resulting or associated Loss and Delay, without any Contract Adjustment and without any other form of compensation or reimbursement, of any kind, by County.

1.1.40 **County.** "County" means the County of Riverside, a political subdivision of the State of California.

1.1.41 **County Amount.** "County Amount" means the component amount calculated on behalf of County pursuant to Paragraph 15.1.5, below, that is used to determine the total net amount payable to Contractor or County in the event of a partial or full termination or discontinuance of the Work.

1.1.42 **County Consultant.** "County Consultant" means a consultant, other than Architect, engaged by County (or engaged as a subconsultant to the Architect or a County Consultant) to provide professional advice to County with respect to the design, construction or management of the Project.

1.1.43 **County Review Date.** "County Review Date" means an end date set forth in the Construction Schedule or Submittal Schedule within which County, Architect or a County Consultant is to provide information, review documents or render decisions, approvals or disapprovals.

1.1.44 **County Review Period.** “County Review Period” means a period of time set forth in the Construction Schedule or Submittal Schedule within which County, Architect or a County Consultant is to provide information, review documents or render decisions, approvals or disapprovals.

1.1.45 **County Risk Manager.** “County Risk Manager” means the individual employee of the County acting as its risk manager.

1.1.46 **County Website.** “County Website” means the website maintained by County at <http://www.rivcoeda.org>.

1.1.47 **Date of Commencement.** “Date of Commencement” means the starting date used for calculation of the Contract Time, and is the date, no earlier than the first working day following issuance of the Notice to Proceed, that is fixed in the Notice to Proceed issued by the County or, if no Notice to Proceed is issued, the Day that the Contractor actually commences Work at the Site in accordance with Paragraph 8.1.1, below.

1.1.48 **Day.** “Day”, whether capitalized or not, and unless otherwise specifically provided, means calendar day, including weekends and Holidays.

1.1.49 **Declaration of Sufficiency of Funds.** “Declaration of Sufficiency of Funds” means the declaration, in the form included in the Bidding Documents, required to be submitted by Contractor under circumstances where Contractor has not executed a collective bargaining agreement covering the workers who will be employed to perform the Work.

1.1.50 **Defective Work.** “Defective Work” means materials, equipment, labor, workmanship, construction services or other construction work comprising the Work by Contractor or a Subcontractor that (1) is faulty, omitted, incomplete, or deficient, or (2) does not conform to Applicable Laws, the Contract Documents, or the requirements of any inspection, reference standard, test, code or approval specified in the Contract Documents.

1.1.51 **Delay.** “Delay” means any circumstances involving delay, disruption, hindrance or interference.

1.1.52 **Deleted Work.** “Deleted Work” means Work that is eliminated or its scope or cost reduced pursuant to a Change Order or Unilateral Change Order.

1.1.53 **Department of Industrial Relations.** “Department of Industrial Relations” means The Department of Industrial Relations of the State of California.

1.1.54 **Design Discrepancy.** “Design Discrepancy” means an error, omission, conflict, ambiguity, lack of coordination or noncompliance with Applicable Laws contained in the Bidding Documents, Contract Documents, Reference Documents or other information made available by County to Contractor prior to or after the Bid Closing Deadline.

1.1.55 **Design Documents.** “Design Documents” means all originals, copies and drafts of plans, drawings, tracings, specifications, programs, reports, calculations, presentation materials, models, building information models and other writings or materials containing designs, specifications or engineering information related to the Work or Project prepared by Architect, County Consultants, Contractor, Separate Contractors or Subcontractors including, without limitation, computer aided design materials, electronic data files and paper copies. The term “Design Documents” includes both the written documents and all building and other designs depicted therein.

1.1.56 **Design Intent.** “Design Intent” means the general intended design objectives of the Design Documents prepared by Architect and County Consultants, as described in Paragraph 1.2.1, below.

1.1.57 **Designation of Subcontractors.** “Designation of Subcontractors” means the list of proposed Subcontractors prepared by the Bidder pursuant to California Public Contract Code §§4100 et seq.

1.1.58 **Differing Site Condition.** “Differing Site Condition” means an unforeseen condition that constitutes a basis for Contract Adjustment pursuant to Paragraph 4.3.8, below.

1.1.59 **Director of Facilities Management.** “Director of Facilities Management” means the Director for Facilities Management, or his/her designee.

1.1.60 **Disability Laws.** “Disability Laws” means applicable federal, state, local or municipal laws, rules, orders, regulations, statutes, ordinances, codes, decrees, or requirements of any Government Authority, which regulate, relate to or impose liability or standards of conduct with respect to, or accessibility for, persons with disabilities, including, without limitation, the Americans with Disabilities Act (42 USCA §§ 12101 et seq.) and the Fair Housing Amendments Act of 1988 (42 USCA §§ 3604 et seq.).

1.1.61 **Discovery Date.** “Discovery Date”, generally used in reference to Contractor’s obligation to give written notice of certain facts, conditions or circumstances, means the earlier of the dates that Contractor or any Subcontractor either: (1) discovered such facts, conditions or circumstances; or (2) should have discovered such facts, conditions or circumstances in the exercise of the level of care required by the terms of the Standard of Performance.

1.1.62 **Drawings.** “Drawings” means graphic and pictorial documents showing the design, location and dimensions of the Project, and generally includes plans, elevations, subparagraphs, details, schedules and diagrams. The term “Drawings” is used interchangeably with “Plans”.

1.1.63 **Environmental Laws.** “Environmental Laws” means all applicable federal, state, local or municipal laws, rules, orders, regulations, statutes, ordinances, codes, decrees and permits or other requirements of any Governmental Authority, which regulate, relate to, or impose liability or standards of conduct concerning any Hazardous Substance (including, without limitation, the use, handling, transportation, production, disposal, discharge or storage thereof), occupational or environmental conditions on, under, or about the Site or Existing Improvements (including, without limitation, soil, groundwater, and indoor and ambient air conditions), environmental protection (natural or manmade resources), or occupational health or industrial hygiene (but only to the extent related to Hazardous Substances on, under, or about the Site or Existing Improvements), as now or may at any later time be in effect, including without limitation, the Comprehensive Environmental Response, Compensation and Liability Act of 1980 [42 U.S.C.A. §§ 9601 et seq.]; the Resource Conservation and Recovery Act of 1976 [42 U.S.C.A. §§ 6901 et seq.]; the Clean Water Act (also known as the Federal Water Pollution Control Act) [33 U.S.C.A. §§ 1251 et seq.]; the Toxic Substances Control Act [15 U.S.C.A. §§ 2601 et seq.]; the Hazardous Substances Transportation Act [49 U.S.C.A. §§ 1801 et seq.]; the Insecticide, Fungicide, Rodenticide Act [7 U.S.C.A. §§ 136 et seq.]; the Superfund Amendments and Reauthorization Act [42 U.S.C.A. §§ 6901 et seq.]; the Clean Air Act [42 U.S.C.A. §§ 7401 et seq.]; the Safe Drinking Water Act [42 U.S.C.A. §§ 300f et seq.]; the Solid Waste Disposal Act [42 U.S.C.A. §§ 6901 et seq.]; the Surface Mining Control and Reclamation Act [30 U.S.C.A. §§ 1201 et seq.]; the Emergency Planning and Community Right to Know Act [42 U.S.C.A. §§ 11001 et seq.]; the Occupational Safety and Health Act [29 U.S.C.A. §§ 655 and 657]; the Residential Lead-Based Paint Exposure Act (Title X of the Housing and Community Development Act of 1992) [15 U.S.C.A. §§ 2681 et seq.]; the Lead-Based Paint Poisoning Prevention Act [42 U.S.C.A. §§ 4821 et seq.]; the Federal Endangered Species Act, the California Endangered Species Act, the Migratory Bird Treaty Act, the National Environmental Policy Act, the California Environmental Quality Act, Porter Cologne Water Quality Act (California Water Code §§ 13000 et seq), and all similar federal, state or local laws, rules, orders, regulations, statutes, ordinances, codes, decrees, or requirements.

1.1.64 **Escrow Agent.** “Escrow Agent” means an entity serving as escrow agent pursuant to California Public Contract Code §22300 in connection with the deposit of securities or retention.

1.1.65 **Escrow Bid Documents.** “Escrow Bid Documents” means all written documentation and electronic files reflecting the basis for and calculation of a Bid, including, without limitation, estimates, quantity take-offs, price quotations, product data, pricing data, memoranda, narratives, add/deduct sheets and reports (including, without limitation, reports on conditions at, under, or in the vicinity of the Site). The term “Escrow Bid Documents” does not include copies of Bidding Documents if they are not needed to comply with the requirements of the Bidding Documents applicable to submission of Escrow Bid Documents.

1.1.66 **Event of Contractor Default.** “Event of Contractor Default” means any of the events constituting default by Contractor as set forth in Paragraph 15.1.1, below.

1.1.67 **Evidence of Insurance.** “Evidence of Insurance” means the statement, completed by Bidder in the form included in the Bidding Documents, evidencing the Bidder’s compliance with the insurance requirements of the Bidding Documents.



1.1.68 **Excusable Delay.** "Excusable Delay" means a Delay, other than a Compensable Delay, to Contractor's ability to achieve Substantial Completion or Final Completion of the Work within the Contract Time that is: (1) not caused, in whole or in part, by an act or omission of Contractor or a Subcontractor, of any Tier, constituting negligence, willful misconduct, a violation of an Applicable Law or a failure by Contractor or any Subcontractor, of any Tier, to comply with the Contract Documents; (2) unforeseeable, unavoidable and beyond the control of Contractor and the Subcontractors, of every Tier; and (3) the result of a Force Majeure Event. Without limitation to the foregoing, neither the bankruptcy, insolvency nor financial inability of Contractor or a Subcontractor, of any Tier, nor any failure by a Subcontractor, of any Tier, to perform any obligation imposed by contract or Applicable Laws shall constitute a ground for Excusable Delay.

1.1.69 **Existing Improvements.** "Existing Improvements" means all improvements located on the Site as of the Bid Closing Deadline, whether above or below the surface of the ground, including, but not limited to, existing buildings, utilities, infrastructure improvements and other facilities.

1.1.70 **Extra Work.** "Extra Work" means labor, materials, equipment, services or other work, not reasonably inferable by Contractor or its Subcontractors from the design and other information set forth in the Bidding Documents, the performance of which requires the expenditure by Contractor of additional and unforeseen Allowable Costs. References to Extra Work shall not be interpreted to mean or imply that Contractor is entitled to a Contract Adjustment unless such Extra Work constitutes a Compensable Change.

1.1.71 **Final Completion, Finally Complete.** "Final Completion" and "Finally Complete" mean the point at which the following conditions have occurred with respect to the entire Work:

- .1 the Work is fully completed, including all minor corrective, or "punch list," items;
- .2 all permits, approvals and certificates by Governmental Authorities, such as, but not necessarily limited to, a permanent or temporary certificate of occupancy required to occupy and use the Work have been issued free of any conditions that are the result of an act or omission of Contractor or a Subcontractor, of any Tier, constituting negligence, willful misconduct, a violation of an Applicable Law or a failure by Contractor or any Subcontractor, of any Tier, to comply with the Contract Documents;
- .3 the Work and the related portions of the Site have been thoroughly cleared of all construction debris and cleaned in accordance with the requirements of the Contract Documents, including, but not necessarily limited to where applicable, the following: removal of temporary protections; removal of marks, stains, fingerprints and other soil and dirt from painted, decorated and natural-finished woodwork and other Work; removal of spots, plaster, soil and paint from ceramic tile, marble and other finished materials; all surfaces, fixtures, cabinet work and equipment are wiped and washed clean and in an undamaged, new condition; all aluminum and other metal surfaces are cleaned in accordance with recommendations of the manufacturer; and all stone, tile and resilient floors are cleaned thoroughly in accordance with the manufacturer's recommendations and buff dried by machine to bring the surfaces to sheen;
- .4 all conditions set forth in the Contract Documents for Substantial Completion of the Work have been, and continue to be, fully satisfied;
- .5 all conditions pertaining to the Work and required for the release of County's obligations (including, but not limited to, release of County's bond obligations) to Governmental Authorities (including, but not limited to, matters involving grading, flood control, public works, transportation and traffic) have been satisfied; and
- .6 Contractor has delivered to County all Close-Out Documents.

1.1.72 **Final Completion Punch List.** "Final Completion Punch List" means the list of minor items of Work to be completed or corrected by Contractor for Final Completion.

1.1.73 **Final Payment.** "Final Payment" means payment by County to Contractor of the entire unpaid balance of the Contract Price due to Contractor following Final Completion.

1.1.74 **FM.** "FM" means Facilities Management for the County of Riverside.

**1.1.75 Force Majeure Event.** "Force Majeure Event" means, and is restricted to, any the following: (1) Acts of God occurring at the Site; (2) terrorism or other acts of a public enemy; (3) orders of Governmental Authorities (including, without limitation, unreasonable and unforeseeable Delay in the issuance of permits or approvals by Governmental Authorities that are required for the Work); (4) epidemics or quarantine restrictions; (5) strikes and other organized labor action occurring at the Site and the effects thereof on the Work to the extent such strikes and other organized labor action are beyond the control of Contractor and its Subcontractors, of every Tier, and to the extent the effects thereof cannot be avoided by use of replacement workers or implementation of a dual gate system of entry to the Site; or (6) unusual shortages in materials that are supported by documented proof that (a) Contractor made every effort to obtain such materials from all available sources, (b) such shortage is due to the fact that such materials are not physically available from single or multiple sources or could have been obtained only at exorbitant prices entirely inconsistent with current rates taking into account the quantities involved and the usual industry practices in obtaining such quantities, and (c) such shortages and the difficulties in obtaining alternate sources of materials could not have been known or anticipated as of the Bid Closing Deadline.

**1.1.76 Fragnet.** "Fragnet" means a contemporaneous, fragmentary scheduling network, which graphically identifies the sequencing of all critical and non-critical new activities and/or activity revisions affected by a Compensable Delay or Excusable Delay with logic ties to all affected existing activities noted on the Construction Schedule, that isolates and quantifies a time impact of a specific issue, determines and demonstrates any such specific Delay in relation to past and/or other current Delays and provides a method for incorporating all Contract Adjustments to the Contract Time into an update of the approved Construction Schedule.

**1.1.77 General Conditions.** "General Conditions" means the herein set forth general terms and conditions governing performance of the Work.

**1.1.78 General Requirements.** "General Requirements" means the portion of the Specifications so titled setting forth additional requirements for administration of the Work.

**1.1.79 Good Faith Determination.** "Good Faith Determination" means a determination made by the Director of Facilities Management or other authorized representative of County, which he/she believes in good faith to be a proper exercise of County's rights and to have a reasonable basis in fact, whether or not such determination is in fact proper, reasonable or correct or adjudged to be so.

**1.1.80 Governmental Authority.** "Governmental Authority" means the United States, the State of California, the County of Riverside (acting in its regulatory, rather than proprietary, capacity), the City in which the Project is located, any other local, regional, state or federal political subdivision, authority, agency, department, commission, board, bureau, court, judicial or quasi-judicial body, and any legislative or quasi-legislative body, or instrumentality of any of them, which exercises jurisdiction over the Project, Work, Site, Contractor or County, including, without limitation, any Governmental Authority having jurisdiction to review and approve or reject the Contract Documents or the Work based on compliance or non-compliance with Applicable Laws.

**1.1.81 Governmental Authority Review Period.** "Governmental Authority Review Period" means a period of time set forth in the Construction Schedule or Submittal Schedule for Governmental Authority review, and/or approval, of the Work.

**1.1.82 Guarantee To Repair Period.** "Guarantee To Repair Period" means the period of time set forth in Section 13.3, below, for repair or replacement of Defective Work.

**1.1.83 Hazardous Substance.** "Hazardous Substance" means either of the following: (1) any chemical, material or other substance defined as or included within the definition of "hazardous substances," "hazardous wastes," "extremely hazardous substances," "toxic substances," "toxic material," "restricted hazardous waste," "special waste," "contamination" or words of similar import under any Environmental Law, including, without limitation, the following: petroleum (including crude oil or any fraction thereof), asbestos, asbestos-containing materials, polychlorinated biphenyls ("PCBs") and PCB-containing materials, whether or not occurring naturally; or (2) any substance that because of its quantity, concentration or physical or chemical characteristics poses a significant present or potential hazard to human health and safety or to the environment, and which has been determined by any Governmental Authority to be a hazardous waste or hazardous substance.

1.1.84 **Holiday.** “Holiday” means a Day recognized by County as being a legal holiday for its staff and employees.

1.1.85 **Indemnitees.** “Indemnitees” means those persons or entities listed in Paragraph 3.18.1, below, as the “Indemnitees”.

1.1.86 **Inspector of Record.** “Inspector of Record” means a person designated by the County to perform inspections on behalf of the County, who may be an employee or an independent consultant to County.

1.1.87 **Installation Subcontractor.** “Installation Subcontractor” means a Subcontractor who performs a portion of the Work that includes providing substantial, rather than minor and incidental, services for the installation of temporary or permanent materials, equipment or facilities at the Site.

1.1.88 **Instructions to Bidders.** “Instructions to Bidders” means the portion of the Bidding Documents setting forth the requirements to be followed by Bidders in preparing and submitting Bids.

1.1.89 **Intellectual Property Rights.** “Intellectual Property Rights” means all intellectual property rights, including, without limitation, patent, trademark, trade dress, copyright, industrial design rights, priority rights and trade secrets.

1.1.90 **Key Personnel, Key Persons.** “Key Personnel” and “Key Persons” mean those individuals employed by Contractor as described in Paragraph 3.8.1, below, and any replacements thereto approved by County, whose personal performance is deemed of the essence to the Construction Contract.

1.1.91 **Loss, Losses.** “Loss” and “Losses” mean any and all economic and non-economic losses, costs, liabilities, claims, damages, cost escalations, actions, judgments, settlements, expenses, fines, penalties and punitive damages including, without limitation, actual attorney’s fees, expert and non-expert witness fees, arbitrator and arbitration fees, court costs (statutory and non-statutory), and mediation and mediator fees.

1.1.92 **Modification.** “Modification” means a document, other than a Change Order or Construction Change Directive, approved and signed by County and Contractor after execution of the Construction Contract, agreeing to alter, amend or modify the Contract Documents.

1.1.93 **Mold.** “Mold” means mold, mildew, spores or other microorganisms of any type, nature or description, or any by-product thereof, the presence of which poses an actual or potential threat to human health, including, without limitation, any species of organisms of the kingdoms of fungi or mycota, including yeasts, smuts, ruts, mildews, mold and mushrooms, or any microbial contamination, either airborne or surface, which arises out of or is related to the presence of fungi or spores (including, without limitation, aspergillus, cladosporium, penicillium and stachybotrys chartarum).

1.1.94 **Non-Collusion Declaration.** “Non-Collusion Declaration” means the form, so titled, required by California Public Contract Code §7106 and the Bidding Documents to be submitted by Bidder with its Bid.

1.1.95 **Notice Inviting Bids.** “Notice Inviting Bids” means the notice issued by or on behalf of County inviting submission of Bids for the Project.

1.1.96 **Notice Inviting Prequalification Statements.** “Notice Inviting Prequalification Statements” means the formal notice issued by County inviting contractors to participate in County’s process for Prequalification of Bidders.

1.1.97 **Notice of Change.** “Notice of Change” means a formal written notice required to be submitted by Contractor pursuant to Paragraph 7.6.1, below, notifying County of circumstances that Contractor believes may give rise to a Contract Adjustment.

1.1.98 **Notice of Completion.** “Notice of Completion” means a “notice of completion” as defined in California Civil Code §9204.

1.1.99 **Notice of Delay.** "Notice of Delay" means a formal written notice prepared and submitted by Contractor pursuant to Paragraph 8.2.2, below, notifying County of circumstances that Contractor believes may give rise to a Contract Adjustment to the Contract Time for Excusable Delay or Compensable Delay or a Contract Adjustment to the Contract Price for Compensable Delay.

1.1.100 **Notice of Final Completion.** "Notice of Final Completion" means the written notice by County confirming the date of actual Final Completion.

1.1.101 **Notice of Intent to Award.** "Notice of Intent to Award" means the written notice by or on behalf of County stating County's intent to Award the Construction Contract.

1.1.102 **Notice of Substantial Completion.** "Notice of Substantial Completion" means the written notice by County confirming the date of actual Substantial Completion.

1.1.103 **Notice to Proceed.** "Notice to Proceed" means the written notice issued by County to Contractor to begin the Work.

1.1.104 **Payment Bond, Performance Bond.** "Payment Bond" and "Performance Bond" mean the surety bonds required to be provided by Contractor pursuant to Article 12, below.

1.1.105 **Plans.** "Plans" means the graphic and pictorial portions of the Contract Documents prepared by Architect or its Subconsultants showing the design, location and dimensions of the Work, including, without limitation, plans, elevations, details, schedules and diagrams. The term "Plans" is used interchangeably with "Drawings".

1.1.106 **Post-Award Submittals.** "Post-Award Submittals" means the documents described in the Bidding Documents that the apparent successful Bidder is required to submit after opening of Bids as a condition of Award.

1.1.107 **Pre-Bid Conference.** "Pre-Bid Conference" means the conference, specified in the Notice Inviting Bids as either mandatory or optional, held prior to the Bid Closing Deadline for the purpose of, without limitation, introducing the Bidders to the Project, and which conference may, or may not, include a review of the Site.

1.1.108 **Prequalification.** "Prequalification" means a process for Prequalification of contractors for bidding that is conducted by County pursuant to California Public Contract Code §20101 or as otherwise permitted by Applicable Laws.

1.1.109 **Prequalification Documents.** "Prequalification Documents" means the collection of documents issued to and submitted by individuals or entities pursuant to a Prequalification conducted by County.

1.1.110 **Prequalified Bidder.** "Prequalified Bidder" means a contractor that is prequalified as part of a Prequalification conducted by County pursuant to Public Contract Code §20101.

1.1.111 **Product Data.** "Product Data" means illustrations, standard schedules, charts, instructional brochures, diagrams and other information furnished by Contractor to illustrate a material, product or system for the Work.

1.1.112 **Progress Payment.** "Progress Payment" means a monthly payment of a portion of the Contract Price prior to Final Completion based on Contractor's progressed performance of the Work.

1.1.113 **Project.** "Project" means the improvements comprising, or necessary or appurtenant to the use of, the work of improvements described generally in the Bidding Documents, of which the Work may be the entirety of such improvements or only a part.

1.1.114 **Project Documents.** "Project Documents" means all writings (hard copy and electronic) in the possession of Contractor at the Site or elsewhere that relate in any way to the Project or Work.

1.1.115 **Project Team.** "Project Team" means County, Architect, County Consultants, Contractor, the Subcontractors, the Separate Contractors, Inspectors of Record and other firms or individuals retained by County, or

retained by others with County's approval, participating in the planning, programming, design, construction or inspection of the Work.

**1.1.116 Reasonable Order of Magnitude Estimate.** "Reasonable Order of Magnitude Estimate" means a general estimate prepared by Contractor, or jointly by Contractor and County, without the benefit of complete or definitive pricing by Subcontractors, of the projected additional cost and time associated with Contractor's performance of a particular item or items of Extra Work or Deleted Work described in a Construction Change Directive. Unless otherwise agreed to in writing between County and Contractor, a Reasonable Order of Magnitude Estimate does not constitute either an authorization or agreement by County to any Contract Adjustment or a guarantee or promise by Contractor with respect to the amount of any Contract Adjustment that may be associated with a Compensable Change or Deleted Work.

**1.1.117 Record Documents.** "Record Documents" means the collection of documents assembled and prepared by Contractor (including, without limitation, the Record Drawings and Specifications) showing the condition of the Work as actually built.

**1.1.118 Record Drawings, Record Specifications.** "Record Drawings" and "Record Specifications" mean the Drawings and Specifications marked by Contractor to show the condition, location and placement of the Work as actually built, including, without limitation, the locations of mechanical, electrical, plumbing or similar portions of the Work that are depicted diagrammatically in the Drawings.

**1.1.119 Reference Documents.** "Reference Documents" means reports, studies, surveys and other information provided by County for Contractor's review and consideration in preparing its Bid, including, without limitation, information describing the Site (including surface or subsurface conditions), Existing Improvements or Hazardous Substances at the Site.

**1.1.120 Request for Extension.** "Request for Extension" means a formal written request submitted by Contractor pursuant to Paragraph 8.2.3, below, setting forth the justification and support for Contractor's request for a Contract Adjustment to the Contract Time.

**1.1.121 Request for Information.** "Request for Information" means a written request by Contractor for clarification of what it perceives to be a discrepancy in the Contract Documents (including, without limitation, information in the Contract Documents constituting a Design Discrepancy or a variance between the information in the Bidding Documents or Contract Documents and conditions at the Site or in Existing Improvements).

**1.1.122 Safety Program.** "Safety Program" means the formal, written program prepared by Contractor setting forth detailed procedures and precautionary measures for protecting persons and property from injury or damage.

**1.1.123 Samples.** "Samples" means physical examples that, when approved by County and Architect, illustrate materials, equipment or workmanship by which the Work is to be evaluated and judged as part of the Submittal process.

**1.1.124 Schedule of Values.** "Schedule of Values" means a detailed, itemized breakdown of the Contract Price, which provides for an allocation of the dollar values to each of the various parts of the Work.

**1.1.125 Self-Performed Work.** "Self-Performed Work" means Work related to a Compensable Change or Deleted Work that is performed or to be performed by Contractor's own laborers who are employed by Contractor, rather than by the employees of a Subcontractor, using materials and equipment purchased by Contractor directly from a supplier or manufacturer.

**1.1.126 Separate Contractor.** "Separate Contractor" means a contractor, subcontractor, supplier or vendor under contract directly to County to provide services, materials, labor, equipment or other work to the Project.

**1.1.127 Shop Drawing.** "Shop Drawing" means a drawing, diagram, schedule and other data specially prepared for the Work by Contractor or a Subcontractor to illustrate some portion of the Work.

1.1.128 **Site.** "Site" means: (1) the parcel of land owned by County on which the Project is to be constructed and such additional parcels as may be purchased by County for such construction; (2) all areas adjacent to such parcels that may be used by Contractor or the Subcontractors for staging, storage, parking or temporary offices; and (3) all land areas, both private and public, adjacent to such parcels on which Work is required to be performed under the Contract Documents, Applicable Laws or permits relating to the Project.

1.1.129 **Specifications.** "Specifications" means the portion of the Contract Documents consisting of the written requirements for materials, equipment, standards and workmanship for the Work and performance of related services.

1.1.130 **Standard of Performance.** "Standard of Performance" means the general standard governing Contractor's performance of its obligations under the Construction Contract and General Conditions as set forth in Section 2.2 of the Construction Contract.

1.1.131 **State Water Resources Control Board.** "State Water Resources Control Board" means the State Water Resources Control Board of the State of California.

1.1.132 **Storm Water Permit.** "Storm Water Permit" means any applicable storm water, urban runoff or statewide general NPDES permit issued by the State of California or the United States pursuant to the provisions of the Clean Water Act (Title 33U.S.C. §§1251 et seq.) and/or Porter Cologne Water Quality Control Act (California Water Code §§13000 et seq.) and including any related regulations issued by the State of California or the United States.

1.1.133 **Sub-Bidder.** "Sub-Bidder" means a person or entity that submits a bid to a Bidder for some portion of the Work that is to be performed by that person or entity acting as a first-Tier Subcontractor.

1.1.134 **Subcontractor.** "Subcontractor" means a person or entity that has a contract to perform a portion of the Work, including without limitation, subcontractors, sub-subcontractors, suppliers, equipment operators, manufacturers and vendors, of any and every Tier.

1.1.135 **Submittal.** "Submittal" means a Shop Drawing, Product Data, Sample, detailed design, exemplar, fabrication and installation drawing, list, graph, operating instruction or other document required to be submitted by Contractor under the Contract Documents.

1.1.136 **Submittal Schedule.** "Submittal Schedule" means the schedule prepared by Contractor showing the timing for submission and review of Submittals during construction.

1.1.137 **Substantial Completion, Substantially Complete.** "Substantial Completion" and "Substantially Complete" mean the point at which the following conditions have occurred with respect to the entire Work or a portion of the Work designated by County in writing to be Substantially Completed prior to Substantial Completion of the entire Work:

.1 such Work is sufficiently and entirely complete in accordance with Contract Documents so that such Work can be fully enjoyed and beneficially occupied and utilized by County for its intended purpose (except for minor items which do not impair County's ability to so occupy and use such Work);

.2 all permits, approvals and certificates by Governmental Authorities, such as, but not necessarily limited to, a permanent or temporary certificate of occupancy required to occupy and use such Work have been issued free of any conditions that are the result of an act or omission of Contractor or a Subcontractor, of any Tier, constituting negligence, willful misconduct, a violation of an Applicable Law or a failure by Contractor or any Subcontractor, of any Tier, to comply with the Contract Documents; and

.3 all building systems included in such Work are operational as specified, all designated or required inspections and certifications by Governmental Authorities have been made and posted and instruction of County's personnel in the operation of the systems has been completed.

1.1.138 **Substantial Completion Punch List.** "Substantial Completion Punch List" means the list of items of Work to be completed or corrected by Contractor for Substantial Completion.

1.1.139 **Substitution.** "Substitution" means a material, product or item of material or equipment proposed by the Bidder or Contractor in place of that specified in the Bidding Documents or Contract Documents.

1.1.140 **Substitution Request Form.** "Substitution Request Form" means the form, so titled, that is included in the Bidding Documents for use by the Bidders when requesting a Substitution.

1.1.141 **Supplementary Conditions.** "Supplementary Conditions" means those portions of the Specifications that supplement, by addition, modification or deletion, a specific portion of the General Conditions.

1.1.142 **Surety.** "Surety" means Contractor's surety(ties) issuing the Bid Bond, Performance Bond or Payment Bond.

1.1.143 **Tier.** "Tier" means the contractual level of a Subcontractor with respect to Contractor. For example, a "first-tier" Subcontractor is under contract with Contractor. A sub-subcontractor under contract with a first-tier Subcontractor is in the "second tier," and so on. Use of the phrase "of every Tier", or similar phraseology, in the Contract Documents shall not be interpreted as implying that other provisions of the Contract Documents, where such phrase is not used, are intended to be limited in application to only the first Tier or to only certain other Tiers of Subcontractors.

1.1.144 **Time Impact Analysis.** "Time Impact Analysis" means a written report evaluating the impact of an Excusable or Compensable Delay, which shall include, at a minimum, the following: (1) a narrative description of the Delay and its impact on the critical path to achievement of a Substantial Completion or Final Completion of the Work or a portion of the Work designated by County within the Contract Time; (2) a Fragnet; (3) the number of Days of extension sought by Contractor as a Contract Adjustment to the Contract Time; (4) a computation of the Days of Compensable Delay multiplied times the liquidated damages payable to Contractor pursuant to Section 3.3 of the Construction Contract, if any, sought by Contractor; (5) a statement that Contractor has complied with the requirements of the General Conditions for written notice of Delays, along with the dates and copies of such notices; (6) the measures taken by Contractor and Subcontractors to prevent or minimize the Delay; and (7) Contractor's recommendations for reordering or re-sequencing the Work to avoid or minimize further Delay.

1.1.145 **Unexcused Delay.** "Unexcused Delay" means any Delay that is not a Compensable Delay or Excusable Delay or that constitutes a Compensable Delay or Excusable Delay for which Contractor is not entitled to a Contract Adjustment to the Contract Time, including, without limitation, the following: (1) Delay caused by an act or omission of Contractor or a Subcontractor, of any Tier, constituting negligence, willful misconduct, a violation of an Applicable Law or a failure by Contractor or any Subcontractor, of any Tier, to comply with the Contract Documents; (2) Delay for which Contractor has failed to provide a timely and complete Notice of Delay or Request for Extension; or (3) Delay associated with any circumstances where the costs or risk associated with such circumstances are designated in the Contract Documents as being at Contractor's risk or Contractor's Own Expense.

1.1.146 **Unilateral Change Order.** "Unilateral Change Order" means a writing signed by County in accordance with Article 7, below, in which County unilaterally sets forth its Good Faith Determination of the undisputed portion of an otherwise disputed Contract Adjustment.

1.1.147 **Work.** "Work" means all labor, materials, equipment, services, permits, licenses, taxes and other things necessary for Contractor to perform its obligations under the Contract Documents, including, without limitation, any Changes requested by County, in accordance with the Contract Documents and all Applicable Laws. The Work may constitute the whole or a part of the Project.

1.1.148 **Worker's Compensation Certificate.** "Worker's Compensation Certificate" means the statement, completed by Bidder in the form included in the Instruction to Bidders, evidencing the Bidder's compliance with the worker's compensation insurance requirements of the Bidding Documents and Applicable Laws.

## 1.2 CORRELATION, INTERPRETATION AND INTENT OF CONTRACT DOCUMENTS

1.2.1 **Design Intent.** The intent of the Contract Documents is for Contractor to provide all items necessary to produce a work of improvement that is complete as a whole and that is, in all of its parts, suitable for use and occupancy for its intended purpose, including, without limitation, all equipment, casework, mechanical, electrical and similar devices of whatever nature, completely installed, hooked-up and made fully operational and functional.

1.2.2 **Complementary.** Contract Documents are complementary, and what is called for by one shall be as binding as if called for by all. Any Work called for on the Drawings and not mentioned in the Specifications, or vice versa, shall be performed as though fully set forth in both.

1.2.3 **Technical Words.** Unless otherwise stated in the Contract Documents, technical words and abbreviations contained in the Contract Documents are used in accordance with commonly understood construction industry meanings and non-technical words and abbreviations are used in accordance with their commonly understood meanings.

1.2.4 **Trade Names.** It is not the intention of the Contract Documents to go into detailed descriptions of any materials or methods commonly known to the trade under a "trade name" or "trade term." The mere mention or notation of such "trade name" or "trade term" shall be considered a sufficient notice to the Contractor that it will be required to complete the Work so named with all its appurtenances according to first-class practices of the trade.

1.2.5 **Incidental Items.** The naming of any material or equipment shall mean furnishing and installing of same, including all incidental and accessory items thereto and labor therefor, in accordance with first-class practices of the trade involved, unless specifically noted otherwise.

1.2.6 **Drawing Dimensions.** Figured, derived or numerical dimensions on scale Drawings shall govern over Drawings without figured dimensions. The Drawings shall not be scaled to determine dimensions, and (except in the case of diagrammatic Drawings) dimensions shall be calculated from figures shown on the Drawings. Obvious discrepancies between scale and figured dimensions, not marked "not to scale," must be brought to the Architect's attention before proceeding with the Work affected by the discrepancy. Contractor shall carefully check and compare all portions of the Drawings and Specifications so as to correctly interpolate the intended dimensions for any portion of the Work that is not explicitly dimensioned in the Contract Documents.

1.2.7 **Drawings, Specifications.** In general, the Drawings will show dimensions, positions, and kind of construction and the Specifications will define materials, quality and standards. Work not particularly shown, detailed, marked or specified shall be the same as similar parts that are shown, detailed, marked or specified.

1.2.8 **Typical Work.** Work not particularly shown, detailed, marked or specified shall be the same as similar parts that are shown, detailed, marked or specified.

1.2.9 **Divisions of the Work.** All the Work mentioned or indicated in the Contract Documents shall be performed by Contractor as part of the Work unless specifically indicated in the Contract Documents to be done by others. The organization of the Specifications into divisions, sections and articles and the arrangement of the Drawings shall not control Contractor in dividing the Work among the Subcontractors or in establishing the extent of the Work to be performed by the Subcontractors.

1.2.10 **Applicable Laws.** Compliance with Applicable Laws shall be considered as a part of the Work.

1.2.11 **Interpretations of Laws.** In the event of a conflict between or among Applicable Laws governing performance of the Work, the more stringent shall govern. Contractor assumes, at Contractor's Own Expense, sole responsibility for, and the risk associated with, interpretations of Applicable Laws made by Contractor not predicated on written orders issued by Governmental Authorities that by their terms are applicable to the Project, including, without limitation, interpretations or assumptions made by Contractor based on decisions, orders or approvals (written or unwritten) issued by or on behalf of Governmental Authorities in connection with work on other projects or properties near or in the general vicinity of the Site.

1.2.12 **Modifiers.** The Contract Documents may omit modifying words such as "all" and "any," and articles such as "the" and "an." If a modifier or an article is not included in one statement and appears in another, it is not intended to affect the interpretation of either statement. The use of the word "including," when following any general statement, shall not be construed to limit such statement to specific items or matters set forth immediately following such word or to similar items or matters whether or not non-limiting language (such as "without limitation," "but not limited to," or words of similar import) is used with reference thereto, but rather shall be deemed to refer to all other items or matters that could reasonably fall within the broadest possible scope of such general statement.



1.2.13 **Singular, Gender, Captions.** When appropriate to the context, the use of the singular number shall be deemed to include the plural and vice versa. Each gender shall be deemed to include any other gender, and each shall include corporation, partnership, trust or other legal entity whenever the context so requires. The captions and headings of the various subdivisions of the Contract Documents are intended only as a matter of reference and convenience and in no way define, limit, or prescribe the scope or intent of the Contract Documents or any subdivision thereof.

1.2.14 **Cross-References.** Any cross-references indicated between various paragraphs or other portions of the Specifications, Drawings or other Contract Documents are provided for the convenience of Contractor and shall not be deemed to be all-inclusive.

1.2.15 **Diagrammatic Design.** Drawings and diagrams for mechanical, plumbing, electrical, fire sprinkler, fire alarm and low voltage Work shall be considered as diagrammatic only and shall not be used for any structural guidance or physical layout. Because such Drawings are diagrammatic, Contractor shall be responsible to provide any and all numbers and lengths of fittings, wire, conduit, connections, attachments or similar materials or devices needed to complete the Work, without Contract Adjustment, whether or not they exceed the numbers of pieces or the lengths indicated by such Drawings. Contractor is solely responsible to carefully plan and coordinate in advance, by means of coordination drawings prepared by Contractor or a Subcontractor, the installation of any Work shown diagrammatically and shall do so in such a manner as to make maximum use of the space available and anticipate and avoid wherever possible conflict and interferences among such portions of the Work and with other portions of the Work, including structural members.

1.2.16 **Demolition.** Existing Improvements at the Site of which no specific description is made in the Contract Documents, but which could be reasonably assumed to interfere with the satisfactory completion of the Work, shall be removed and disposed of by Contractor without Contract Adjustment. If Contractor is unsure whether a specific Existing Improvement at the Site which is not specifically described in the Contract Documents should be removed and disposed of, Contractor shall promptly ask the County whether such Existing Improvement is to be removed or remain in place, and shall comply with any directive given in response.

1.2.17 **Omissions.** Items missing from the Contract Documents shall nevertheless be provided by the Contractor, without Contract Adjustment, to the extent reasonably inferable from the Contract Documents as being necessary to satisfy the Design Intent.

1.2.18 **Conflicts.** Notwithstanding the provisions of Paragraph 1.2.19, below, in the event of conflict between any of the Contract Documents, the provision placing a more stringent requirement or greater burden on the Contractor or requiring the greater quantity or higher quality material or workmanship shall prevail, unless otherwise directed by the County in writing.

1.2.19 **Order of Precedence.** Conflicts that cannot be resolved in accordance with the rules of interpretation set forth elsewhere in this Section 1.2, shall be interpreted in accordance with the following order of precedence (the first being the highest order of precedence):

.1 Applicable Laws (provided, however, and notwithstanding Subparagraph 1.2.19.10, below, where the Contract Documents or manufacturer's recommendations or specifications require standards higher than those of Applicable Laws, the Contract Documents or manufacturer's recommendations or specifications shall control);

.2 Change Orders, Unilateral Change Orders and Construction Change Directives;

.3 Addenda;

.4 Construction Contract;

.5 Supplementary Conditions;

.6 General Conditions;

.7 General Requirements;

.8 Specifications;

.9 Drawings, subject to the following: (1) large scale plans and details take precedence over small scale Drawings in all cases; (2) full scale Drawings have precedence over both large and small scale Drawings in all cases; (3) detailed Plans and/or Drawings shall have precedence over general Plans and/or Drawings; (4) architectural and structural Drawings take precedence over electrical and mechanical Drawings in regard to location and arrangement of fixtures, outlets, and equipment; and (5) electrical and mechanical Drawings take precedence in describing and specifying equipment and in describing the diagrammatic requirements;

.10 standard and reference specifications which include industry norms, such as, but not limited to, ANSI and ASTM; and

.11 Reference Documents.

1.2.20 **Conditions Precedent.** Wording used in the Contract Documents indicating that a right of the Contractor or an obligation of the County is subject to or conditioned upon the occurrence of a condition or event, whether or not such condition or event is within the control of Contractor, County or others and whether or not such condition or event is expressly stated to be a "condition precedent", shall be understood and interpreted to mean that the stated condition or event is a condition precedent to the existence, arising, performance and exercise of such right or obligation.

### 1.3 OWNERSHIP AND USE OF DRAWINGS, SPECIFICATIONS AND OTHER DOCUMENTS

1.3.1 **Property of County.** Subject to the provisions of Paragraph 2.4.4, below, all Design Documents, Contract Documents and Project Documents that are prepared by Contractor or a Subcontractor, of any Tier, for use in connection with the Project, including any designs, building designs or other depictions underlying or shown in them, and the Intellectual Property Rights thereto, shall be deemed the sole and exclusive property of County and ownership thereof is irrevocably vested in County, whether the Project is executed or not.

1.3.2 **Assignment of Rights.** Contractor shall, without further consideration, obtain any and all Intellectual Property Rights in the Project Documents and Design Documents prepared by Contractor or any Subcontractor, of any Tier, for use in connection with the Project, including any designs, building designs or other depictions underlying or shown in them, free and clear of any liens or other encumbrances, claims or rights of third parties, transfer such rights, if necessary in writing, to County and cooperate with County in securing and registering such rights, such that County shall own all Intellectual Property Rights and any other tangible and/or intangible property rights associated therewith. Such transfer and assignment will be effective for the entire duration of the copyrights and include, but are not be limited to, all rights in related plans, specifications, documentation, derivative works and moral rights.

1.3.3 **Contractor's Warranty.** Contractor represents and warrants that the Project Documents and Design Documents prepared by Contractor or any Subcontractor for use on the Project, and the use of such Project Documents in the ordinary course, are free of any claim of infringement or any other violation of any Intellectual Property Right or other right of any third party.

1.3.4 **Non-Exclusive License.** Without derogation of County's rights under this Section 1.3, Contractor and Subcontractors, of every Tier, are granted a limited, non-exclusive license, revocable at will of County, to use and reproduce applicable portions of the Design Documents, Contract Documents and Project Documents as appropriate to and for use in the execution of the Work and for no other purpose.

1.3.5 **Reproduction.** Contractor shall do all reproduction and distribution of such reproducible prints of Contract Documents and Design Documents as are necessary for the complete pricing and performance of the Work, including, without limitation, all Changes. The costs of such reproduction shall be at Contractor's Own Expense.

1.3.6 **Delivery to County.** All Design Documents and Contract Documents (including originals and copies), and one (1) copy of all other Project Documents, in the possession of Contractor or Subcontractors shall be delivered to County upon the earlier of Final Completion of the Work or termination of the Construction Contract; provided, however, that Contractor shall have the right to retain one (1) copy of the Contract Documents and Submittals as a permanent record.

1.3.7 **Subcontractors.** Contractor shall take all necessary steps to ensure that a provision is included in all contracts with Subcontractors, of every Tier, who perform Work on the Project protecting and preserving County's rights as set forth in this Section 1.3.

## ARTICLE 2 COUNTY RIGHTS AND OBLIGATIONS

### 2.1 INFORMATION, APPROVALS AND SERVICES REQUIRED OF COUNTY

2.1.1 **Legal Descriptions.** County shall furnish, within a reasonable time after written request by Contractor, a legal description of the Site and information describing legal limitations affecting the Site that are recorded with applicable Governmental Authorities, such as, but not limited to, easements.

2.1.2 **Permits and Fees.** County shall secure and pay for only those permits and fees which are expressly stated to be the responsibility of County under the Contract Documents. County shall pay for all hook-up fees (not including "tap fees", which are the responsibility of Contractor pursuant to Paragraph 3.14.3, below) in order to establish a new account with a utility provider.

2.1.3 **County Approvals.** Information, approvals and decisions required of County or a County Consultant for which a County Review Period or County Review Date is included in the Construction Schedule that is approved by County shall be provided in accordance with the Construction Schedule. If a County Review Period or County Review Date is not set forth in the Construction Schedule approved by County, then such information, approvals and decisions shall be provided upon written request by Contractor without unreasonable Delay. Notwithstanding the foregoing, failure by County, Architect or a County Consultant to provide any information, approvals or decisions shall not be considered as a basis for Contract Adjustment to the Contract Time unless and until, and in calculating a Contract Adjustment any Delay or extension of the Contract Time resulting from a late-issuance of such information, approval or decision shall not commence until after:

.1 in the case of information, approval or decision for which there is a County-approved County Review Period or County Review Date in the County-approved Construction Schedule, seven (7) Days have passed since the County and the individual from whom such information, approval or decision is sought have received from Contractor a written notice containing all the following:

- (1) a detailed description of the information, approval or decision required;
- (2) a statement that the County Review Period or County Review Date has expired or passed; and
- (3) a statement, prominently displayed, that: "PURSUANT TO PARAGRAPH 2.1.3 OF THE GENERAL CONDITIONS, THE FAILURE TO PROVIDE THE REQUESTED INFORMATION, APPROVAL OR DECISION WITHIN 7 CALENDAR DAYS FROM THIS NOTICE MAY RESULT IN A REQUEST FOR A CONTRACT ADJUSTMENT"; or

.2 in the case of information, approval or decision for which there is no County Review Period or County Review Date set forth in the County-approved Construction Schedule, thirty (30) Days have passed since the County and the individual from whom such information, approval or decision is sought have received from Contractor a written notice that includes the statements set forth Clauses (1) and (2) of Subparagraph 2.1.3.1, above, and that includes a statement, prominently displayed, that: "PURSUANT TO PARAGRAPH 2.1.3 OF THE GENERAL CONDITIONS, THE FAILURE TO PROVIDE THE REQUESTED INFORMATION, APPROVAL OR DECISION WITHIN 30 CALENDAR DAYS FROM THIS NOTICE MAY RESULT IN A REQUEST FOR A CONTRACT ADJUSTMENT".

**2.1.4 Approvals.** Contractor shall not be relieved of its obligations to perform the Work in accordance with the Contract Documents either by the activities or duties of County, Architect or any other Project Team member, or by tests, inspections or approvals required or performed by persons other than the Contractor.

**2.1.5 Non-Specified Items.** County reserves the right to approve materials and sources of supply of materials that are not specified in the Contract Documents and that are used for the performance of the Work.

## **2.2 COUNTY'S RIGHT TO STOP THE WORK**

If Contractor fails to correct Defective Work as required by Section 13.2 of these General Conditions, fails to perform the Work in accordance with the Contract Documents or violates any Applicable Law, County may immediately order Contractor to stop the Work, or any portion thereof, until the cause for such direction has been eliminated by Contractor. Contractor shall immediately comply with such notice at Contractor's Own Expense. Nothing stated herein or elsewhere in the Contract Documents shall be interpreted as placing upon County a duty or responsibility to Contractor or any other party to exercise its right to stop the Work.

## **2.3 COUNTY'S RIGHT TO CARRY OUT THE WORK**

If Contractor fails to carry out the Work in accordance with the Contract Documents, fails to provide sufficient labor, materials, equipment, tools and services to maintain the Construction Schedule, or otherwise fails to comply with any requirement of the Contract Documents, and fails to cure such failure in the manner required by Subparagraph 15.1.1.4, below, County may correct such failure. In such case, County shall be entitled to recover from Contractor or deduct from payments then or thereafter due Contractor for any Loss resulting from such failure, including compensation for the additional services and expenses of County, County Consultants and others whose services are reasonably required and made necessary thereby. If payments then or thereafter due Contractor are not sufficient to cover such amounts, Contractor shall promptly pay the amount of the shortfall to County.

## **2.4 ACCOUNTING, RECORDS AND AUDIT**

**2.4.1 Accounting System.** Contractor shall exercise such controls as may be necessary for proper financial management of the Work. Such accounting and control systems shall comply with prevailing custom and practice for similar projects, be satisfactory to County and shall include preservation of the books and records described in Paragraph 2.4.2, below, subject to Contractor's obligations under Paragraph 1.3.6, above, for a period of ten (10) years after Final Completion of the Work, or for such longer period as may be required by Applicable Laws.

**2.4.2 Books and Records.** Contractor shall keep, and shall require provisions to be included in all contracts entered into by Subcontractors, of every Tier, requiring the Subcontractors, of every Tier, to keep, full and detailed books, records, information, materials and data, of every kind and character (hard copy, as well as computer readable data if it exists) that have any bearing on or pertain to any matters, rights, duties or obligations relating to the Project, Work or Construction Contract, including, without limitation, agreements, purchase orders, leases, contracts, commitments, arrangements, notes, change orders, change order requests, estimates, field orders, construction change directives, schedules, requests for information, diaries, logs, reports, shop drawings, samples, exemplars, drawings, specifications, invoices, delivery tickets, receipts, vouchers, cancelled checks, memoranda, accounting records; job cost reports, job cost files (including complete documentation of negotiated settlements), backcharges, general ledgers; documentation of cash and trade discounts earned, insurance rebates and dividends, and other documents relating in any way to any claims, charges or time extensions asserted by Contractor or any of the Subcontractors, of any Tier, or relating to any credits, rebates or discounts owing to County.

**2.4.3 Inspection and Copying.** Contractor shall allow, and shall require provisions to be included in all contracts entered into by Subcontractors, of every Tier, allowing, County and the auditor for the State of California (and the authorized representative(s), auditors, attorneys and accountants of each) upon twenty-four (24) hours notice to Contractor, full access to inspect and copy all its aforesaid books and records at a location within the Southern California area. Such right of audit may be exercised by either County or the auditor for the State of California as often as reasonably necessary to verify Contractor's continuing compliance with the Contract Documents.

**2.4.4 Confidential Information.** Nothing stated in this Section 2.4 or elsewhere in the Contract Documents shall be interpreted as a waiver by Contractor or any Subcontractor of any rights of privilege or confidentiality that are

provided for by Applicable Law nor as authorizing the inspection of books and records that contain information concerning estimating means or methods that is not, in whole or part, relevant to a charge or demand being asserted by Contractor or a Subcontractor involving Extra Work, Deleted Work, Delay or a Claim.

**2.4.5 Withholding of Payment.** In addition to and without limitation upon County's other rights and remedies for breach, including any rights of County to withhold payment that are set forth elsewhere in the Contract Documents, County shall have the right, exercised in its sole discretion, to withhold from any payment due to Contractor under an Application for Payment a sum of up to ten percent (10%) of the total amount set forth in such Application for Payment until Contractor and the Subcontractors have complied with any outstanding and unsatisfied obligation under this Section 2.4. Upon compliance with this Section 2.4, any such monies withheld shall be released to Contractor.

**2.4.6 Specific Performance.** Contractor agrees that any failure to provide access to books and records as required by this Section 2.4 will result in irreparable harm and prejudice to County and shall, without the necessity of posting of any bond or undertaking, be specifically enforceable by means of a mandatory injunctive order (temporary, preliminary, provisional or otherwise) issued by a court of competent jurisdiction, which order the County and Contractor hereby consent to being issued based upon affidavits and without the necessity of oral testimony.

## **2.5 COUNTY FURNISHED MATERIALS**

**2.5.1 Supply by County.** County shall have the right to furnish materials, products or equipment directly for processing and incorporation by Contractor in lieu of Contractor providing materials, products or equipment specified in the Contract Documents to be provided by Contractor as part of the Work.

**2.5.2 Deleted Work.** If the materials, products or equipment provided by County pursuant to Paragraph 2.5.1, above, then a Change Order shall be executed deleting such materials, products or equipment from the Work along with a Contract Adjustment reducing the Contract Price in the manner provided for in Article 7, below, applicable to Contract Adjustments for Deleted Work.

**2.5.3 Delivery Deadlines.** Without limitation to Contractor's obligations under Article 8, below, upon receipt of written instruction by County of its intent to provide materials, products or equipment pursuant to this Section 2.6, Contractor shall notify County promptly in writing of any deadlines within which such materials, products or equipment must be received at the Site in order to avoid Delay.

**2.5.4 Delivery to Site.** Contractor shall, upon their delivery to the Site, properly receive and unload materials, products or equipment furnished by County pursuant to this Section 2.5.

**2.5.5 Care, Custody and Control.** Contractor assumes full and unconditional responsibility for care, custody and control of the materials, products or equipment that are furnished by County pursuant to this Section 2.5, whether or not they have been accepted by County, and assumes sole responsibility for any subsequent loss, injury or damage thereto occurring prior to Final Completion.

**2.5.6 Notice of Deficiencies.** Contractor shall carefully inspect any materials, products or equipment furnished by County pursuant to this Section 2.5 and immediately notify County of any defect or deficiency in such materials, products or equipment or any nonconformity in such materials, products or equipment with the requirements of the Contract Documents or with the requirements of the other documentation provided to Contractor setting forth the conditions of County's purchase. Contractor shall not accept any materials, products or equipment furnished by County with respect to which Contractor has provided such notice of defect, deficiency or non-conformity unless and until instructed to do so in writing by County.

**2.5.7 Incorporation in Work.** Contractor shall, as part of the Work and without Contract Adjustment, provide any and all processing, fabrication, cutting, shaping, fitting, assembly and installation of materials, products or equipment furnished by County pursuant to this Section 2.5 in full compliance with the requirements of the Contract Documents and the manufacturer's instructions and recommendations.

## 2.6 COUNTY INSTALLED ITEMS

Contractor shall notify County, a reasonable time in advance, of the Contractor's scheduled dates for installation of items that are specified in the Contract Documents to be placed on, attached to or incorporated into the Work by County or Separate Contractors. In the event that Contractor fails to do so or if due to Unexcused Delay the County is unable after such notice by Contractor to so place, affix or incorporate such items, then Contractor shall be responsible, in addition to any amounts due to County for liquidated damages, to reimburse County for costs of storage or rental of temporary replacement items until such time as the Work is in a condition suitable for such items to be placed, affixed or incorporated.

## 2.7 COUNTY'S ADDITIONAL RIGHTS

The rights stated in this Article 2 are in addition to and not in limitation of any other rights of County granted elsewhere in the Contract Documents or under Applicable Laws.

# ARTICLE 3 CONTRACTOR PERFORMANCE

## 3.1 CONTRACTOR STATUS

**3.1.1 Independent Contractor.** Contractor is, and shall at all times be deemed to be, an independent contractor and is wholly responsible for the performance of the obligations required of it by the terms of the Contract Documents.

**3.1.2 Agents, Employees.** Contractor wholly assumes responsibility for the acts and omissions of its agents and employees and the agents and employees of each Subcontractor, of every Tier, as they relate to the Work. Contractor, its agents and employees, shall not be entitled to any rights or privileges of County's employees and nothing contained in the Contract Documents and no course of conduct shall be construed as creating the relationship of employer and employee, or principal and agent, between County and any agent or employee of Contractor or any Subcontractor. County shall have the right, but not the obligation, to monitor the employment and other activities of Contractor and the Subcontractors to determine compliance with the terms of the Contract Documents.

**3.1.3 Licenses.** Contractor and the Subcontractors, of every Tier, shall maintain, such contracting, professional and business licenses as may be required by Applicable Laws for the duration of time that Contractor is performing the Work under the Contract Documents, including the period of any warranty provided covering all or any portion of the Work.

**3.1.4 Subcontractors.** Contractor is responsible to County for acts and omissions of the Subcontractors and their agents and employees and other persons performing portions of the Work under a contract with a Subcontractor, of any Tier.

**3.1.5 Design Services.** Contractor shall provide professional services if such services are expressly, or by reasonable implication, required by the Contract Documents for a portion of the Work or are required in order for Contractor to carry out the Contractor's responsibilities for construction means, methods, techniques, sequences and procedures. Professional design services or certifications so required of Contractor shall be furnished by design professionals exercising the highest standard of care and utilizing designs and engineering that comply with all systems, materials or equipment, performance and design criteria set forth in the Contract Documents. Certification by a properly licensed design professional, including such professional's signature and seal, shall appear on all drawings, calculations, specifications, certifications and other documents prepared by such professional. Submittals related to the Work designed or certified by such professional, if prepared by others, shall bear such professional's written approval when submitted. County, Architect and County Consultants shall be entitled to rely upon the adequacy, accuracy and completeness of the services, certifications or approvals performed by such design professionals.

## 3.2 REVIEW OF DOCUMENTS, SITE AND EXISTING IMPROVEMENTS

3.2.1 **Contractor's Duty of Review.** Contractor's submission of its Bid and execution of the Construction Contract constitutes its representation, acknowledgement and agreement that it had sufficient time, access and opportunity prior to the Bid Closing Deadline to conduct a careful and thorough examination, to its satisfaction, of:

.1 the Bidding Documents, Contract Documents, Reference Documents and other information provided by County to Contractor prior to the Bid Closing Deadline concerning the Project, Site or Existing Improvements;

.2 the visible conditions at the Site and its surroundings, visible conditions of Existing Improvements and their existing uses by County or the public, routes of ingress and egress, and local conditions in the vicinity of the Site (including, without limitation, sources and availability of labor, materials and equipment);

.3 the status of any construction at the Site concurrently under construction; and

.4 all information concerning visible and concealed conditions above and below the surface of the ground at the Site and in Existing Improvements (including, without limitation, surveys, reports, data, as-built drawings of Existing Improvements and utility sources, capacities and locations) that was either (1) provided by County to Contractor or other Bidders (including, but not limited to, the Bidding Documents and Reference Documents) or (2) reasonably available to Contractor for review in the public records of the County of Riverside or the City in which the Project is located.

### 3.2.2 Contract Adjustments.

.1 **Differing Site Conditions.** Except as otherwise provided in Subparagraph 3.2.3, below, the Contractor's right to a Contract Adjustment in the event Contractor encounters conditions at the Site or in Existing Improvements that vary from those indicated by the Contract Documents or other information that was either reviewed by Contractor or that Contractor was given the opportunity to review prior to the Bid Closing Deadline shall be governed exclusively by Paragraph 4.3.8, below, pertaining to Differing Site Conditions.

.2 **Design Discrepancies.** Except as otherwise provided in Subparagraph 3.2.3, below, and subject to the Contractor's compliance with the other provisions of the Contract Documents governing the Contractor's right to a Contract Adjustment (including, without limitation, Article 7 and Article 8, below), Contractor shall be entitled to a Contract Adjustment due to Design Discrepancies, subject to the following conditions and limitations:

(1) **Compensable Change.** There shall be no Contract Adjustment to the Contract Price for Extra Work that the Contractor is required to perform as a result of a Design Discrepancy unless all of the following conditions have been met prior to Contractor or any Subcontractor performing any portion of the Work involving or affected by such Design Discrepancy:

(a) the circumstances giving rise to such Extra Work conform to all of the requirements of Subparagraph 1.1.29.2 through Subparagraph 1.1.29.4, above, applicable to Compensable Changes;

(b) Contractor has submitted to County and Architect a Request for Information in compliance with Paragraph 3.2.5, below, seeking clarification of such Design Discrepancy;

(c) Contractor has submitted to County a timely and complete Notice of Change in accordance with Article 7, below, describing such Extra Work in detail;

(d) Contractor has received a Construction Change Directive signed by County in accordance with Article 7, below, directing that Contractor perform the portion of the Work in question; and

(e) unless otherwise provided in such Construction Change Directive, Contractor has submitted to County a Change Order Request in accordance with the requirements of Article 7, below, setting forth the particulars of its request for Contract Adjustment on account of such Extra Work.

**(2) Compensable Delay.** There shall be no Contract Adjustment to the Contract Price or Contract Time for Delay as a result of a Design Discrepancy unless all of the following conditions have been met prior to Contractor or any Subcontractor performing any portion of the Work involving or affected by such Design Discrepancy:

**(a)** if the Delay is the result, in whole or in part, of Extra Work, all of the requirements of Subparagraph 3.2.2.2 (1), (a) through (e), above, have been met;

**(b)** the circumstances giving rise to such Delay conform to all of the requirements of Subparagraph 1.1.30.2 and Subparagraph 1.1.30.3, above, applicable to Compensable Delay; and

**(c)** Contractor has submitted to County a timely and complete Notice of Delay and a timely and complete Request for Extension in accordance with Article 8, below, setting forth the particulars of its request for Contract Adjustment on account of such Compensable Delay.

**(3) Differing Site Conditions.** The Contractor's right to a Contract Adjustment as a result of variances between (a) the Contract Documents or other documents or information described in Paragraph 3.2.1, above, that, prior to the Bid Closing Deadline was either reviewed by Contractor or was available to Contractor for review prior to the Bid Closing Deadline and (b) conditions at the Site or in Existing Improvements shall, notwithstanding the fact that the circumstances asserted by Contractor as a basis for such Contract Adjustment may involve, relate to or arise out of a Design Discrepancy, be governed by the provisions of the Contract Documents setting forth the Contractor's right to Contract Adjustments on the grounds of Differing Site Conditions.

### **3.2.3 WAIVER BY CONTRACTOR.**

**CONTRACTOR AGREES THAT IT SHALL NOT BE ENTITLED TO, AND HEREBY CONCLUSIVELY WAIVES, ANY RIGHT TO CONTRACT ADJUSTMENT, AS WELL AS THE RIGHT TO ANY OTHER OR FURTHER RECOURSE OR RIGHT OF RECOVERY FROM COUNTY, ON ACCOUNT OF LOSSES OR DELAYS THAT ARE A RESULT OF EITHER A DIFFERING SITE CONDITION OR A DESIGN DISCREPANCY, IF PRIOR TO THE BID CLOSING DEADLINE SUCH DIFFERING SITE CONDITION OR DESIGN DISCREPANCY WAS:**

**(1) DISCOVERED BY CONTRACTOR AND CONTRACTOR, NOTWITHSTANDING SUCH DISCOVERY, FAILED TO REPORT SUCH DIFFERING SITE CONDITION OR DESIGN DISCREPANCY TO COUNTY IN WRITING PRIOR TO THE BID CLOSING DEADLINE;**

**(2) ALTHOUGH NOT ACTUALLY DISCOVERED BY CONTRACTOR PRIOR TO THE BID CLOSING DEADLINE WAS REASONABLY DISCOVERABLE BY CONTRACTOR UNDER THE STANDARD OF PERFORMANCE SPECIFIED IN THE CONSTRUCTION CONTRACT, INCLUDING, WITHOUT LIMITATION, A DIFFERING SITE CONDITION OR DESIGN DISCREPANCY THAT WAS OVERLOOKED BY CONTRACTOR DUE TO A FAILURE BY CONTRACTOR TO FULLY FAMILIARIZE ITSELF PRIOR TO THE BID CLOSING DEADLINE WITH ANY OF THE DOCUMENTS, INFORMATION OR CONDITIONS REFERRED TO IN PARAGRAPH 3.2.1, ABOVE.**

**3.2.4 Continuing Obligation.** In addition and without limitation to Contractor's obligations under Paragraph 3.2.1, above, or elsewhere in the Contract Documents, Contractor shall have the continuing obligation until Final Completion to promptly report to County, by means of submission by Contractor of a Request for Information that complies with the requirements of Paragraph 3.2.5, below, any and all of the following:

**.1** information contained in the Bidding Documents, Contract Documents, Reference Documents or other documentation that was either reviewed by Contractor or that Contractor was given the opportunity to review prior to the Bid Closing Deadline, as well as any visible conditions at the Site, in Existing Improvements or in the vicinity of the Project, that Contractor knows, or in the exercise by Contractor of its duties under the Standard of Performance should have known, may render a portion of the Work in any respect, wholly or partially, unsuitable or incomplete to meet the requirements of the Contract Documents, the Design Intent or Applicable Laws, and

**.2** conditions in the Work that constitute Defective Work or that cause or are likely to cause any other portion of the Work to be Defective Work.



Without limitation to County's other rights under the Contract Documents, any portion of the Work, Existing Improvements or the work of Separate Contractors or County's own forces requiring replacement, repair or correction due to a failure by Contractor or any Subcontractor, of any Tier, to comply with its continuing obligation under this Paragraph 3.2.4 shall be promptly replaced, repaired or corrected to County's satisfaction, at Contractor's Own Expense.

### 3.2.5 **Requests for Information.**

**.1 Time for Submittal.** Requests for Information shall be submitted no later than three (3) Days after the date Contractor learns of the circumstances giving rise to the question contained in the Request for Information. Requests for Information shall be submitted by or through the Contractor and not directly by Subcontractors.

**.2 Content.** Each Request for Information shall, in addition to the Contractor's specific question or request, include the following:

**(1)** a detailed description of the circumstances giving rise to the Contractor's request or question, including, without limitation, any related Design Discrepancy;

**(2)** Contractor's request for clarification, including, without limitation, any request for further detailing or correction of the Contract Documents; and

**(3)** a statement of whether Contractor believes it is entitled to a Contract Adjustment by reason of the circumstances described.

**.3 Form.** Contractor shall submit Requests for Information using forms provided or approved by County.

**.4 Unnecessary, Multiple Requests.** Contractor shall carefully review, coordinate and consolidate (where appropriate to prevent piecemeal submission) Requests for Information (whether originating with Contractor or the Subcontractors) prior to submitting them in order to eliminate unnecessary or duplicative requests.

**.5 Responses.** Responses to Requests for Information shall be furnished with reasonable promptness so as to not unreasonably Delay progress of the Work; provided, however, that the timing of a response by the Architect, County or a County Consultant to a Request for Information shall not constitute grounds for a Contract Adjustment unless Contractor has complied with the requirements set forth in this Paragraph 3.2.5 and, if applicable, Paragraph 2.1.3, above.

**.6 Back Charges by County.** County shall have the right to deduct from payments due to Contractor sums expended by County for the services of the Architect, Inspectors of Record or County Consultants due to a failure by Contractor to comply with this Paragraph 3.2.5.

### **.7 WAIVER BY CONTRACTOR.**

**FAILURE BY CONTRACTOR TO SUBMIT A REQUEST FOR INFORMATION IN ACCORDANCE WITH AND UNDER CIRCUMSTANCES IN WHICH A REQUEST FOR INFORMATION WAS REQUIRED BY THIS PARAGRAPH 3.2.5 SHALL RESULT IN CONTRACTOR WAIVING ITS RIGHT TO A CONTRACT ADJUSTMENT ON ACCOUNT OF ANY LOSS OR DELAY THAT COULD HAVE BEEN AVOIDED IF SUCH REQUEST FOR INFORMATION HAD BEEN PROPERLY PREPARED AND TIMELY SUBMITTED.**

**3.2.6 Correction of Work.** Contractor shall, at Contractor's Own Expense, correct or replace in accordance with the direction of County any portion of the Work that is performed by Contractor or a Subcontractor knowing that it involves, or that Contractor or Subcontractor in the exercise of reasonable care and diligence should have known involves, a portion of the Contract Documents that contains an error, omission, conflict, ambiguity, lack of coordination or noncompliance with Applicable Laws, without first notifying and obtaining the written approval of County and Architect.

### 3.3 SUPERVISION AND CONSTRUCTION PROCEDURES

3.3.1 **General Obligation.** Contractor shall provide competent, fully qualified personnel to supervise, administer, manage and direct the Work, competently and efficiently, at all times devoting their best skill and attention to perform the Work in accordance with the Contract Documents.

3.3.2 **Supervisory Staff.** Contractor shall employ a competent project manager, superintendent, scheduler, forepersons and necessary assistants during performance of the Work. Contractor's superintendent and forepersons shall be present at the Site at all times that the Work is in progress and at any time that any employee of Contractor or a Subcontractor is present at the Site. Contractor's project manager and superintendent shall, unless excused from attendance by the County, attend all job meetings. Contractor's project manager and superintendent must be able to fluently read and write in English. Contractor's superintendent shall not perform the Work of any trade, pick up materials, or perform any Work not directly related to the supervision of the Work and shall be available twenty-four (24) hours a Day, seven (7) Days a week, to respond to emergencies.

3.3.3 **County Supplementary Personnel.** Without limitation upon any of the rights or remedies of the County under the Contract Documents or under Applicable Laws, in the event that Contractor fails to have personnel on Site to supervise the Work, the County shall have the right, but not the obligation, upon twenty-four (24) hours' telephonic or email notice by the County to Contractor, to provide such supervision on a temporary basis and to deduct from the sums owing to Contractor the actual costs of such temporary supervision. Contractor shall, notwithstanding the County's providing such temporary supervision, remain solely responsible for all actions and omissions of its personnel and of the Subcontractors.

3.3.4 **Means, Methods, Procedures.** Contractor shall be solely responsible for and have control over construction means, methods, techniques, sequences and procedures and coordinating all portions of the Work, unless the Contract Documents specify other specific instructions concerning these matters. If the Contract Documents give specific instructions concerning construction means, methods, techniques, sequences or procedures, Contractor shall nonetheless be fully and solely responsible for the adequacy and safe implementation of such means, methods, techniques, sequences or procedures. If Contractor believes that such specified means, methods, techniques, sequences or procedures may not be safe or adequate, Contractor shall give written notice to County and Architect and shall not proceed with that portion of the Work without further written instruction from County or Architect. In response to such notice, County may order Contractor to improve the character or increase the efficiency of the means, methods, techniques, sequences or procedures employed, and Contractor shall conform to such order; but the failure of County to order such improvement or increase of efficiency will neither relieve Contractor from its sole responsibility for safety at the Site nor relieve Contractor from its obligation to perform the Work in accordance with the Contract Documents and Applicable Laws.

### 3.4 LABOR, MATERIALS AND EQUIPMENT

3.4.1 **Costs of Work.** Contractor shall provide and pay for labor, materials, tools, equipment, machinery, water, heat, utilities, transportation, facilities and services necessary for proper execution and completion of the Work, whether temporary or permanent and whether incorporated or to be incorporated into the Work.

3.4.2 **Coordination.** Contractor shall provide supervision sufficient to ensure proper coordination for the timely and efficient performance and completion of the Work.

3.4.3 **Field Conditions.** Before commencing the Work or any activities on the Site, Contractor shall take field measurements and verify field conditions and carefully compare such field measurements and conditions with the information in the Contract Documents and other information obtained by or available to Contractor.

3.4.4 **Layout.** Contractor is solely responsible for (1) the accurate layout of all portions of the Work, (2) the accuracy of the Project lines and levels, (3) erection of the Work square, plumb, level, true to line and grade, in the exact plane, and to the correct elevation and (4) sloping of surfaces to drain as indicated by the Contract Documents, or, if not indicated, as needed to provide for adequate drainage.

#### 3.4.5 **Materials, Equipment**

**.1 Delivery, Storage, Inventory.** Materials and equipment shall be: (1) furnished in ample quantities and at such times as to ensure uninterrupted progress of the Work; and (2) if located on the Site, properly stored and protected as reasonable and necessary, or as directed by County, to prevent Loss from any foreseeable cause, including, without limitation, theft. In the event that County gives direction as to the location for storage or protection of materials or equipment on the Site, Contractor shall nonetheless remain solely responsible for its safe and secure storage and protection. No part of any such stored materials and equipment shall be removed from its place of storage except for immediate installation in the Work. Contractor shall keep an accurate inventory of all such stored materials and/or equipment in a manner satisfactory to County.

**.2 Purchases.** Contractor shall place orders for materials and/or equipment as specified so that delivery of same may be made without Delay to the Work. Contractor shall, upon request from County, furnish to County documentary evidence showing that orders have been placed. County reserves the right in the event Contractor fails, within three (3) Days after receipt of written notice by County to Contractor to comply with the requirements of this Subparagraph 3.4.5.2, to deduct the costs paid or payable by County associated with such purchases from payments otherwise owing to Contractor. Contractor shall, if requested by County, accept assignment of any such contracts entered into by County without a Contract Adjustment.

**.3 Title.** No material, supplies or equipment for the Work shall be purchased subject to any chattel mortgage or under a conditional sale or other agreement by which an interest therein or in any part thereof is retained by seller or supplier. Contractor warrants good title to all material, supplies and equipment installed or incorporated in the Work and agrees upon Final Completion to deliver the Work, including the premises, land, improvements and appurtenances on or to which the Work is placed, located or affixed, to County free from any claims, liens, or charges. Contractor further agrees that neither it nor any person, firm, or corporation furnishing any materials or labor for any of the Work shall have any right of lien upon the Site, or any Existing Improvement or appurtenance thereon, except that (1) nothing stated in this Subparagraph 3.4.5.3 shall be interpreted as a waiver by Contractor or any Subcontractor of its right under Applicable Laws to serve a stop payment notice for Work that is not paid for by County as required under the terms of the Contract Documents; and (2) Contractor may install metering devices or other equipment of utility companies or political subdivisions, title to which may be retained by such utility company or political subdivision, provided that in the event of installation of any such metering device or utility equipment, Contractor shall advise County as to the owner, and the precise location, thereof.

**.4 Substitutions.** No substitution of materials, equipment, articles, processes or other items of the Work required under the Contract Documents will be made without written approval of County, which approval may be granted or denied in the sole and absolute discretion of County. With respect to any such substitution made or requested by Contractor, neither the occurrence of a substitution made or requested by Contractor nor the approval or disapproval by County of a substitution that is made in accordance with this Subparagraph 3.4.5.4 shall give rise to any right of Contractor to a Contract Adjustment. Contractor shall, notwithstanding County's or Architect's approval, remain solely responsible for the sufficiency and suitability of all substitutions requested by Contractor and approved, or otherwise made, by Contractor.

**.5 Parts List.** Contractor will provide a printed parts list for all items which might be subject to replacement and for which parts lists are either expressly required by the Contract Documents or customarily provided according to usual commercial practices.

**.6 Manuals.** As part of its obligation for submission of Record Documents, four (4) hard copies and one (1) electronic version of operations and maintenance manuals shall be prepared and transmitted by Contractor to County prior to and as a condition of Final Completion. Final Payment will not be due until County has received all such manuals and all other manuals covering the Work that are either required to be provided by the terms of the Contract Documents or if not required are customarily provided according to usual commercial practices applicable to the portion of Work involved. Operating instructions will be included within the equipment manuals and will state all information necessary for County to operate, use, maintain and service the equipment fully and efficiently.

**.7 Start Up.** Contractor will be responsible for start-up of all systems and equipment purchased as part of the Work and has included sufficient amounts in its Bid to cover contingencies arising out of the start-up of such systems and equipment. Contractor will comply fully with each manufacturer's specifications and instructions. Systems and equipment specified to be furnished with manufacturer's supervision of start-up will be placed in operation only under such supervision.

### 3.5 CONTRACTOR'S WARRANTY

**3.5.1 General Warranty.** In addition to other warranties and guarantees required by the Contract Documents, Contractor shall, and hereby does, warrant and guarantee that: (1) the Work will conform to the requirements of Contract Documents, including, without limitation, any performance standards that are part thereof; (2) all Work for which there is not a specific requirement, criteria, specification or standard set forth in the Contract Documents will conform to the Standard of Performance; (3) all labor, equipment, materials and other items of Work will be when installed new and free of liens, claims and security interests; (4) without limitation to the other requirements of this warranty, all labor, installation and workmanship will be performed in a good and workmanlike manner; and (5) all labor, materials, equipment, services and work shall be free of defects for a period of one (1) year after Final Completion. If required by County, Contractor shall furnish satisfactory evidence as to the kind and quality of services, labor, installation, materials and equipment used. Manufactured items installed in the Work, unless otherwise specifically stated in the Contract Documents, are to be installed in strict accordance with manufacturer's current printed instructions.

**3.5.2 Repair, Replacement.** Without limitation upon the County's other rights or remedies under the Contract Documents or Applicable Laws, any and all Work that, for reasons other than (1) ordinary wear and tear or (2) abuse or neglect by persons or entities other than the Contractor or the Subcontractors, is not in conformance with the warranties or guarantees required by the Contract Documents or Applicable Laws shall be repaired or replaced, together with the repair or replacement of any other Work, Existing Improvements or the work of the Separate Contractors, the County's own forces or others, which may be removed, displaced or damaged in so doing. The Contractor shall notify the County in writing upon completion of such repair or replacement. In the event of failure by the Contractor to commence and pursue with diligence said replacement or repair within ten (10) Days after being notified by the County, the County is hereby authorized to proceed with such replacement and repair as the County deems necessary and expedient and to charge such costs to Contractor at Contractor's Own Expense.

**3.5.3 Not a Limitation.** The warranties stated in this Section 3.5 are in addition to any other warranties or guarantees that are required under any other provision of the Contract Documents or Applicable Laws. Nothing stated in this Section 3.5 shall be interpreted as a limitation upon the County's rights under any warranties or guarantees provided for under any other provision of the Contract Documents or under Applicable Laws that afford the County greater rights than the rights afforded to County under this Section 3.5.

**3.5.4 Assignment.** Contractor does hereby unconditionally and irrevocably assign to County all warranties and guarantees issued or made by any Subcontractor, of any Tier (including, without limitation, any manufacturer, supplier and distributor) in connection with the Work. Such assignment shall not relieve Contractor of, or otherwise limit, any of its obligations contained in the Contract Documents, including, without limitation, the general responsibility and liability of Contractor for a breach by a Subcontractor (including, without limitation, any manufacturer, supplier and distributor, of any Tier) of a warranty or guarantee given by such Subcontractor in connection with the Work.

**3.5.5 Close-Out.** Unless sooner requested by County, Contractor shall furnish to County, as part of the Close-Out Documents and as a condition to Final Payment, all written guarantees or warranties that are required by the terms of the Contract Documents. All such guarantees and warranties shall be: (1) in writing; (2) indexed and bound; (3) accompanied by such certifications and instruction materials as may be required by the Contract Documents; and (4) issued to County or assignable by their terms, and in fact assigned, to County.

### 3.6 TAXES

**3.6.1 Payment by Contractor.** Contractor shall pay, at Contractor's Own Expense, all local, state and federal taxes, including, without limitation, all sales, consumer, business license, use and similar taxes on materials, labor or other items furnished for the Work or portions thereof provided by Contractor or the Subcontractors, of all Tier, all taxes arising out of its operations under the Contract Documents and all benefits, insurance, taxes and contributions for social security and unemployment insurance which are measured by wages, salaries or other remuneration paid to Contractor's employees. If under federal excise tax law any transaction hereunder constitutes a sale on which a federal excise tax is imposed, and the sale is exempt from such excise tax because it is a sale to a state or local government, then County, upon request, will execute documents necessary to show: (1) that County is a political subdivision of the State for the purposes of such exemption; and (2) that the sale is for the exclusive use of County. No excise tax for

such materials shall be included in any price (including, without limitation, the Bid) submitted by Contractor for the Work or for Changes in the Work.

**3.6.2 Tax Exempt Projects.** If applicable to the Project, Contractor shall comply with Applicable Laws concerning tax-exempt construction projects.

**3.6.3 Records of Taxes.** Contractor and the Subcontractors shall keep sufficient records to verify the amount of sales and use taxes paid. Copies shall be submitted with each monthly Application for Payment. Failure to keep or submit such records, resulting in the inability of County to claim a refund for taxes for such materials, shall render Contractor liable to County for the amount of such tax refund.

### **3.7 PERMITS, FEES AND LEGAL NOTICES**

**3.7.1 Permits.** Contractor shall obtain and pay for all permits and approvals that are not stated in the Contract Documents to be the responsibility of the County. Such permits and approvals that are the responsibility of the Contractor may include local building or land use permits, California Department of Fish and Game Streambed Alteration Agreements (Section 1600 et seq.), California Department of Fish and Game collection permits, U.S. Army Corps of Engineers 404 fill and dredge authorization, Clean Water Act Section 401 authorization (managed by the local California Regional Water Quality Control Boards) land owner agreements, or other regulatory permits or approvals required for the implementation of the Project. All permits, licenses and certificates obtained by Contractor shall be delivered to County prior and as a condition to Final Completion and Contractor's right to Final Payment.

**3.7.2 Applicable Laws, Notices.** Contractor shall comply with, and give notices required by, Applicable Laws bearing on performance of the Work.

**3.7.3 Bonds, Undertakings.** Contractor shall, without Contract Adjustment, procure and obtain all bonds required of the County or the Contractor by the municipality in which the Project is located or by any other public or private body with jurisdiction over the Project. In connection with such bonds, the Contractor shall prepare all applications, supply all necessary back-up material and furnish the surety with any required personal undertakings. The Contractor shall also obtain and pay, without Contract Adjustment, all charges for all approvals for street closings, parking meter removal and other similar matters as may be necessary or appropriate from time to time for the performance of the Work.

**3.7.4 Notice of Violations.** Contractor shall immediately notify County in writing of any instruction received from County, or any other Project Team member that, if implemented, would cause a violation of any Applicable Law.

**3.7.5 Governmental Authority Approvals.** Where the Contract Documents state, or Applicable Laws require, that materials, processes or procedures must be approved by a Governmental Authority, Contractor shall be responsible for satisfying the requirements and obtaining the approval of such Governmental Authority.

### **3.8 CONTRACTOR'S PERSONNEL**

**3.8.1 Key Persons.** Contractor's employees acting as project manager, scheduler and superintendent constitute Key Persons. Individuals acting as Key Persons who are not already identified in Contractor's Post-Award Submittals shall be identified in writing to County prior to commencement of the Work.

**3.8.2 Background Check.** Contractor shall perform, prior to commencing Work on the Site, a thorough background check of each of the Key Persons and shall not, without prior written approval of County, employ any person to act as a Key Person if such background check, or other information known to Contractor, discloses a felony conviction or other matter which casts any reasonable doubt on the competency, reliability or honesty of such person.

**3.8.3 Project Manager.** The Key Person acting as project manager shall be deemed to have full authority to contractually bind Contractor, including, without limitation, the authority to bind Contractor to the terms of Contract Adjustments.

3.8.4 **Transfer.** Contractor's Key Personnel are deemed of essence to the Construction Contract. No Key Person shall, for so long as he/she is employed by Contractor, be transferred to any other project nor any of his/her responsibilities reassigned at any time during performance of the Work without the prior written approval of County, which approval may be granted or withheld in County's sole and absolute discretion.

3.8.5 **Removal.** County shall have the right, at any time, to direct the removal and replacement of any Key Person if his/her performance is determined by County, in its sole and absolute discretion, to be unsatisfactory.

3.8.6 **Replacement.** Any individual proposed by Contractor as a replacement for a Key Person must be approved in advance by County, such approval not to be unreasonably withheld, after submission by Contractor to County of complete information concerning such individual's experience and qualifications.

3.8.7 **Communications.** Important communications by Key Persons shall be confirmed in writing by Contractor. Other communications by Key Persons shall be confirmed on written request in each case.

3.8.8 **Contact Information.** Contractor shall provide to County, prior to the start of the Work, telephone numbers where Key Persons can be reached 24-hours a day, 7 Days a week.

3.8.9 **Signatures.** Prior to commencing the Work, Contractor shall submit to County a facsimile of the signatures of the Key Person acting as project manager, as well as any other representatives of Contractor with authority to sign on behalf of and contractually bind Contractor.

3.8.10 **Exclusion from Site.** Contractor shall at all times maintain good discipline and order at the Site among its employees and the employees of the Subcontractors. Any person in the employ of Contractor or any of the Subcontractors, of any Tier, whom County deems, in its sole and absolute discretion, incompetent, unfit, intemperate, troublesome or otherwise undesirable shall be excluded from the Site and shall not again be employed on the Site except with written approval of County.

### 3.9 **CONTRACTOR'S CONSTRUCTION SCHEDULE**

3.9.1 **Preparation.** Within twenty-one (21) Days after issuance by County of the Notice of Intent to Award, the Contractor shall prepare and submit a Construction Schedule for the Work, both in hard copy and electronically, for the County's approval. The Construction Schedule shall in all respects conform to and be consistent with the time requirements for the Project set forth in the Construction Contract.

3.9.2 **Format.** The Construction Schedule shall be in the form of a critical path progress schedule that shows, in graphic form, a plan for performance of the Work within the Contract Time. It shall be prepared, using Primavera P3, as a time-scaled bar chart showing: (1) continuous flow from left to right and activities and milestones that are critical to Substantial Completion and Final Completion of the Work; (2) identification of "float"; and (3) a clearly highlighted critical path. Durations and specific calendar days shall be clearly and legibly shown for the early and late start and finish of each activity. With the exception of County Review Periods and Governmental Authority Review Periods, any activity with more than fifteen (15) Days in duration will be segmented into fifteen (15) Day increments. No more than ten percent (10%) of the activities shall be shown as critical. Techniques or methods designed to suppress depiction of available float are strictly prohibited.

3.9.3 **Detail.** Activities shown in the Construction Schedule shall be in sufficient detail to demonstrate a practical plan to complete the design, engineering, fabrication and construction within the Contract Time and shall, at a minimum, include the following:

- .1 the start and finish date of each activity;
- .2 the anticipated percent of completion at the end of each month;
- .3 the weighted labor value expressed as a percentage of the total labor cost of the Work for each activity;

- .4 the final manpower curves by trade;
- .5 the anticipated purchase and delivery of major materials and equipment;
- .6 the County's occupancy requirements;
- .7 receipt and incorporation of materials, products or equipment to be furnished by County (if any);
- .8 County Review Periods and County Review Dates that are acceptable to and approved by County;
- .9 Governmental Authority Review Periods; and
- .10 the activities identified as being on the critical path to Substantial Completion and Final Completion of the Work.

3.9.4 **Updates.** Throughout the performance of the Work, weekly updates shall be delivered, in hard copy and, if required by County, in an electronic form satisfactory to County. In addition, Contractor shall regularly prepare and submit to County short term, three (3) week "look-ahead" schedules generated from the Construction Schedule approved by County. Except to the extent permitted by Contract Adjustment to the Contract Time approved by County in a duly executed Change Order or Unilateral Change Order, in no event shall the Contractor's updates or "look ahead" schedules alter the dates for Substantial Completion or Final Completion set forth in the Construction Schedule approved by County.

3.9.5 **Governing Schedule.** The governing schedule for the Work shall be the updated Construction Schedule approved by the County. Unless otherwise directed in a writing signed by County, no other schedule shall be used or relied upon by the Contractor or its Subcontractors in planning or performing the Work or in connection with any request for a Contract Adjustment to the Contract Time.

3.9.6 **Submittal Schedule.** Within twenty-one (21) Days after the receipt by the Contractor of the Notice of Intent to Award, the Contractor shall prepare and submit, in accordance with the Contract Documents, a Submittal Schedule for the County's approval. The Submittal Schedule shall be coordinated with the Construction Schedule and allow time for review of the Submittals as may be required by the Contract Documents, or if none is required, a reasonable time for such review. Contractor shall keep the Submittal Schedule current and updated in the same manner as required for updating of the Construction Schedule.

3.9.7 **Schedule Responsibility.** Contractor is and shall remain solely responsible, notwithstanding the County's review or approval thereof, for the accuracy, suitability and feasibility of all schedules it prepares for the Project, including, without limitation, the Construction Schedule, Submittal Schedule, "look ahead" schedules, recovery schedules and any updates thereof.

3.9.8 **Condition of Payment.** Compliance by Contractor with the requirements of this Section 3.9 and the other provisions of the Contract Documents pertaining to preparing, submitting, revising and updating the Construction Schedule and Submittal Schedule is a condition to County's obligation to make payment to Contractor. Recognizing that scheduling is a continuing, cumulative and recurring obligation, failure by County or to assert a right to withhold payment under this Paragraph 3.9.8 due to a noncompliance by Contractor with its schedule obligations shall not waive or diminish the County's right to withhold or disapprove of future payments on account of such prior, or any other past or future, noncompliance of the same or similar nature.

3.9.9 **Scheduling by County.** Without limitation to County's other rights under the Contract Documents, if Contractor fails after written notice by County to perform any part of its obligations relating to scheduling, County shall have the right, but not the obligation, to retain one or more schedule consultants to perform, in whole or in part, the Contractor's obligations or supplement the scheduling services provided by Contractor and to reimburse County for the costs of such consultant services by withholding such costs from payments to Contractor.

### 3.10 DOCUMENTS AT SITE, REPORTING, MEETINGS

#### 3.10.1 Documents at Site

**.1 Contract Documents, Submittals.** Contractor shall at all times while performing Work at the Site maintain, in good order, at the Site: (1) one legible set of the permitted Contract Documents; (2) one legible copy of the current version of the other Contract Documents; (3) one legible and current version of approved Shop Drawings, Product Data, Samples and other Submittals; (4) one approved Storm Water Pollution Prevention Plan (SWPPP); and (5) one copy of all reports prepared pursuant to the Mitigation, Monitoring, and Reporting Program (MMRP) requirements of the California Environmental Quality Act.

**.2 Record Documents.** Contractor shall maintain Record Drawings and Specifications in a satisfactory record condition by posting, on a weekly basis (or, in the case of building or site mechanical, electrical, plumbing or fire sprinkler systems, as soon thereafter as is reasonable and practical), thoroughly and neatly, on the Drawings and Specifications all Changes to the Work and the location of the Work, including, without limitation, the location of portions of the Work shown diagrammatically, as occurs in the actual construction of the Work. The Record Drawings and Specifications and other Record Documents shall be prepared or converted, if requested by County, to electronic form (such as, AutoCAD, Adobe Acrobat or other software satisfactory to County). All Record Drawings and Specifications and other Record Documents shall be deemed the sole property of County and, at the earlier of Final Completion or termination of the Construction Contract, shall be turned over to County. At the time they are so turned over to County, they shall be manually signed by Contractor's superintendent certifying that, to the best of his/her knowledge, they are true and accurate and that the indications thereon represent the actual condition of the Work.

**.3 Availability for Review.** Copies or originals of all documents required to be maintained by Contractor at the Site or required to be submitted to County or the Architect shall be available at all times at the Site while Work is being performed for review by County, Inspector of Record, Architect and Governmental Authorities.

**.4 Condition of Payment.** Compliance by Contractor with the requirements of this Paragraph 3.10.1 shall be deemed a condition to Contractor's right to payment upon its Applications for Payment.

#### 3.10.2 Daily Reports.

**.1 Delivery.** At the end of each Day that Contractor performs the Work on the Site, Contractor shall submit a daily report to County (on the form provided or approved by County) together with applicable delivery tickets for all labor, materials and equipment furnished that Day. If requested by County, daily reports shall be delivered electronically.

**.2 Content.** Daily Reports shall include the following information:

(1) Labor - The names of the workers, and for each such worker his/her classification and hours worked.

(2) Material - A list of the different materials used and for each different material the quantity used.

(3) Equipment - The type of equipment, size, identification number, and hours of operation, including loading and transportation, if applicable.

(4) Inspection and Testing Activities – A list of inspections performed by name of inspector and testing company and the type of inspection, items of the Work involved and a description of the outcome of such inspection or test.

(5) Visitors, Guests, Dignitaries – A list of visitors and guests by name, title, company and purpose of visit.



(6) Areas of the Work – A statement of the areas of the Site on which the Work was performed and a detailed description of the stage, status and progress of the Work in each such area at the beginning and end of the Day.

(7) Accidents, Delays, Defective Work – A description in detail of any injuries to the workers, accidents or delays that occurred or Defective Work that was encountered.

(8) Other Services and Expenditures – A description of other services and expenditures in such detail as County may require.

.3 **Payment.** Timely and complete submission of daily reports by Contractor shall be a condition to Contractor's right to payment under the Construction Contract.

3.10.3 **Progress Meetings.** Contractor shall attend all progress meetings at the Site, at which meetings progress of the Work shall be reported in detail with reference to the then-current updated Construction Schedule approved by the County. Progress meetings shall be held weekly, or at such other time or frequency as County, in its sole and absolute discretion, deems necessary. A representative of each Subcontractor then actively performing Work, or immediately scheduled to become active, shall have a competent and knowledgeable representative present at such progress meeting to report on the condition of the Work of such Subcontractor and to receive relevant information. Meeting notes shall be taken by the County or Architect and distributed to all meeting attendees and all other affected parties.

3.10.4 **Notice Requirements.** Under no circumstances shall information contained in Contractor's daily job reports, monthly reports or job meeting minutes relieve Contractor of its obligations to comply with, serve as a substitute for, nor constitute a waiver by County of its right to insist upon, Contractor's compliance with the provisions of the Contract Documents relative to timely and complete notice to County of Changes, Delays, Claims or other matters for which written notice is required by the Contract Documents.

3.10.5 **Availability for Review.** Copies or originals of all Record Documents, daily reports, job meeting minutes and other documents required to be maintained or actually maintained by Contractor at the Site or required to be submitted to County or Architect shall be available at the Site for review by County, Architect, Inspectors of Record, County Consultants and Governmental Authorities.

### 3.11 **SUBMITTALS**

3.11.1 **Not Contract Documents.** Shop Drawings, Product Data, Samples and other Submittals are not Contract Documents. Their purpose is to demonstrate for those portions of the Work for which Submittals are required the way Contractor proposes to conform the Work to the designs and other information in the Contract Documents.

3.11.2 **Coordination with Others.** Contractor shall cooperate in the coordination of Contractor's Shop Drawings, Product Data, Samples and other Submittals with related documents submitted by the Separate Contractors.

#### 3.11.3 **Submission by Contractor.**

.1 **Submission.** All Shop Drawings, Product Data, Samples and other Submittals required by the Contract Documents shall be submitted to Architect for its review and approval, with a copy to County and to such of County's Consultants or Separate Contractors as County may direct in writing. Informational submittals (i.e., Submittals upon which no responsive action is expected) shall be limited to those Submittals so identified in the Contract Documents. Submittals made by Contractor which are not required by the Contract Documents may be returned without action.

.2 **Contractor Approval.** The Contractor shall review, stamp "approved" and submit Contractor's Shop Drawings, Product Data, Samples and other Submittals to the Architect, in accordance with the latest Submittal Schedule approved by the County. The Contractor's approval and submission of Submittals constitutes a representation that the Contractor has determined or verified materials and field measurements and conditions related thereto, and that it has checked and coordinated the information contained within such Submittals with the requirements of the Contract Documents and with the Submittals for related Work. Submittals without evidence thereon of the

Contractor's approval shall be returned, without further consideration, for resubmission in accordance with these requirements.

**.3 Transmittal.** All Submittals shall be accompanied by an accurately completed transmittal in the form required by County. With respect to Submittals of documents, the transmittal shall give a list of the numbers of the sheets submitted. All sheets shall be marked with the name of the Project and the name of Contractor shall be numbered consecutively and referenced to the sheets or paragraphs of the Drawings and Specifications affected. A separate transmittal form shall be used for each specific item or class of material or equipment for which a Submittal is required. Transmission of Submittals of various items using a single transmittal form will be permitted only when the items taken together constitute a manufacturer's "package" or are so functionally related that expediency dictates review of the group or package as a whole. Any Submittal not accompanied by such transmittal form, or where all applicable items on the form are not completed, may be returned for re-submittal without review.

**.4 Timing.** Submittals shall be provided within the time frame specified in the Contract Documents, in accordance with the Construction Schedule and Submittal Schedule and at a time sufficiently early to allow review of the same by the Architect without causing Delay to construction progress. Contractor will be responsible to pay, at Contractor's Own Expense, additional services fees and costs incurred by County to the Architect, Inspectors of Record and County Consultants in order to expedite review of Submittals which are not submitted in a timely fashion.

**.5 Content.** Submittals shall consist of the appropriate combination of catalog sheets, material lists, manufacturer's brochures, technical bulletins, specifications, diagrams and product samples, necessary to describe a system, product or item. Submittals shall show in detail the size, sections and dimensions of all members, the arrangement and construction of all connections, joints and other pertinent details, and all holes, straps and other fittings for attaching the Work. When required by the Architect or the Contract Documents, engineering computations shall be submitted.

**.6 Professional Certifications.** When professional certification of performance criteria of materials, systems or equipment is required by the Contract Documents, Architect shall be entitled to rely upon the accuracy and completeness of such calculations and certifications.

**.7 Multiple Submittals.** Except where the preparation of a Submittal is dependent upon the approval of a prior Submittal, all Submittals pertaining to the same class or portion of the Work shall be submitted simultaneously.

**.8 Notation of Revisions.** Contractor shall direct specific attention, in writing or on resubmitted Shop Drawings, Product Data, Samples or other Submittals, to revisions other than those requested and approved by Architect on previous Submittals.

**.9 Duplicates.** Contractor shall be responsible for delivering duplicates of Submittals to all other persons whose work or services are dependent thereon.

**3.11.4 Review of Submittals.** Review of Submittals by Architect, County or County Consultants is subject to the limitations of Paragraph 4.2.6, below. Contractor shall, notwithstanding any review or approval thereof by County, Architect or a County Consultant, be solely responsible for the content of all Submittals. Without limitation to the foregoing, deviations in Submittals from requirements of the Contract Documents shall remain the sole responsibility of Contractor unless Contractor has specifically informed Architect in writing of such deviation at the time of submission of the Submittal and Architect has given specific written approval thereof.

**3.11.5 Contract Adjustments.** Subject to Contractor's rights and obligations under Article 7, below, revisions indicated on Shop Drawings, Product Data, Samples or other Submittals shall not be considered as a basis for Contract Adjustments.

**3.11.6 Compliance with Contract.** Contractor shall perform no portion of the Work requiring submittal and review of Shop Drawings, Product Data, Samples or other Submittals until the respective Submittal has been returned by the Architect with an indication that it has been reviewed and that the Work addressed by the Submittal may proceed. Such Work shall be in accordance with such Submittals, unless such Submittal indicates that there are corrections to

be made. If corrections are indicated to be made then the Work shall be in accordance with the re-submitted and corrected Submittal that is reviewed and returned to the Contractor by the Architect.

### 3.12 USE OF SITE

3.12.1 **Staging Area.** Contractor will be assigned staging space on or adjacent to the Site, and all field offices, materials and equipment shall be kept within this area. Unless otherwise required by the Contract Documents, Contractor shall be responsible for restoring such areas and surrounding areas to the condition they were in prior to Contractor's commencement of the Work.

3.12.2 **Existing Improvements.** During the installation of the Work, Contractor shall ensure that Existing Improvements are adequately protected. Upon Final Completion of the Work, all Existing Improvements not required by the Contract Documents to be demolished as part of the Work that have been damaged by the actions or inactions of Contractor or its Subcontractors shall be restored to the condition they were in prior to Contractor's commencement of the Work.

3.12.3 **Operations at Site.** Contractor shall confine its activity, access and parking at the Site to areas permitted by Applicable Laws and County and shall not unreasonably encumber the Site with materials or equipment. Contractor acknowledges that it is experienced in performing construction within limited and confined areas and spaces such as those that are anticipated to exist on this Project and agrees to assume responsibility, without a Contract Adjustment, to take all special measures (including, without limitation, those related to protection, storage, staging and deliveries) as may be necessary to adapt its performance to the constraints of the Site.

3.12.4 **Coordination.** Contractor shall coordinate Contractor's operations with, and secure the approval of, County before using any portion of the Site.

3.12.5 **Unauthorized Use.** Personnel of Contractor and the Subcontractors shall not occupy, live upon or otherwise make use of the Site during any time that the Work is not being performed at the Site, except as otherwise approved by County.

3.12.6 **Site Security.** Contractor is responsible for the security of the Site and all of the Work, as well as the work of the Separate Contractors or County's own forces that occurs on the Site. Fences, barricades and other perimeter security shall be maintained in good condition and secured with locking devices. Damage to fences, barricades or other perimeter security, regardless of the cause, shall be repaired immediately at Contractor's Own Expense. Graffiti and unauthorized postings shall be removed or painted over so as to maintain a clean and neat appearance. Mobile equipment and operable machinery shall be kept locked or otherwise made inoperable whenever left unattended.

3.12.7 **Persons on Site.** Contractor shall not allow any person, other than the workers on the Project, authorized representatives of a union, or other individuals authorized by County, to come upon any portion of the Site where the Work is being performed. Only authorized personnel will be permitted on the Site. Contractor shall at all times maintain good discipline and order among its employees and the employees of the Subcontractors. Any person in the employ of Contractor or of any Subcontractors whom County may deem, in its sole and absolute discretion, incompetent, unfit, intemperate, troublesome or otherwise undesirable shall be excluded from the Site and shall not again be employed on the Site except with written approval of County and all Losses to Contractor or County associated therewith shall be borne by Contractor at Contractor's Own Expense.

3.12.8 **County Uses and Activities.** Contractor shall, prior to performing the Work at an operating or occupied County facility, become informed and take into specific account the uses by County and others of the Site and Existing Improvements, including, without limitation, business operations, public uses, employee uses, visitor uses, planned functions and ceremonies, and coordinate its planning, staging, scheduling, barricading and other performance of the Work so as to cause the minimum amount of interference or disturbance, whether before or after operating hours.

3.12.9 **Dust, Fumes, Noise.** Contractor shall take preventive measures to minimize, and eliminate wherever reasonably possible, generation of dust, fumes and noise.

**3.12.10 Confinement of Operations.** Contractor shall confine apparatus, the storage of materials and the operations of the workers to limits indicated by Contract Documents or as otherwise directed by County in writing.

**3.12.11 Prohibited Substances.** Contractor shall not permit (1) the possession or use of alcohol or controlled substances on the Site or (2) smoking in other than designated smoking areas approved by County.

**3.12.12 Survey Markers.** Contractor shall not disturb or cover any survey markers, monuments or other devices marking property boundaries or corners. If such markers are covered they shall be uncovered and if disturbed they shall be replaced by Contractor by means of the services of a licensed land surveyor. The costs of such uncovering and replacement shall be at Contractor's Own Expense.

**3.12.13 Drainage, Erosion.** Contractor is responsible for and shall make corrections to changes in patterns of surface water drainage resulting from, and related erosion control made necessary by, the performance of the Work.

**3.12.14 Trenches.** As required by California Labor Code §6705, if the Contract Price exceeds Twenty-Five Thousand Dollars (\$25,000) and involves the excavation of any trench or trenches five (5) feet or more in depth, Contractor shall, in advance of commencing excavation, submit to County a detailed plan showing the design of shoring, bracing, sloping or other provisions to be made for worker protection from the hazard of caving ground during the excavation of such trench or trenches. If such plan varies from the Shoring Systems Standards established by the Construction Safety Orders of the California Division of Industrial Safety, the plan shall be prepared by a registered civil or structural engineer, employed by Contractor at Contractor's Own Expense. Nothing in this Paragraph 3.12.14 shall be deemed to allow the use of a system less effective than that required by such Construction Safety Orders. No excavation of such trench or trenches shall be commenced until such plan has been approved by County and Architect. Nothing in this Paragraph 3.12.14 shall be construed to impose any liability, including, without limitation, any tort liability, upon the County or upon any of its officers, agents, representatives or employees.

### **3.13 CUTTING AND PATCHING**

Contractor shall be responsible for all cutting, fitting or patching required to complete the Work and to make its parts fit together properly both among themselves and with any Existing Improvements and the work of the Separate Contractors and of County's own forces. In all cases, cutting shall be performed under the supervision of competent mechanics skilled in the applicable trade and openings shall be cut as small as possible to prevent unnecessary damage. Contractor shall not damage or endanger a portion of the Work, Existing Improvements or fully or partially completed construction of County's own forces or of the Separate Contractors by cutting, patching, excavating or otherwise altering such construction. Contractor shall not cut or otherwise alter such Existing Improvements or construction by Separate Contractors or by County's own forces except with the written consent of such Separate Contractors or County, which consent shall not be unreasonably withheld, delayed or conditioned. When asked, Contractor shall not unreasonably withhold from the Separate Contractors or County the Contractor's consent to Separate Contractors' or County's own forces' cutting or other alteration of the Work as required to complete the work of the Separate Contractors or County's own forces.

### **3.14 UTILITIES AND SANITARY FACILITIES**

**3.14.1 Contractor Responsibility.** Except as otherwise required by California Government Code §4215, Contractor shall contact all relevant utility providers and arrange for obtaining all available information, concerning location of subsurface utility lines. Prior to commencement of any digging, Contractor shall make its own investigation, including exploratory excavations, to determine the locations and type of Work which could result in damage to such utilities. In accordance with California Government Code §§4216 et seq., except in an emergency, Contractor shall contact the appropriate regional notification center at least two (2) the working days, but not more than fourteen (14) Days, prior to commencing any excavation, if the excavation will be conducted in an area which is known, or reasonably should be known, to contain sub-service installations, and shall obtain an inquiry identification number from the regional notification center. Contractor shall not assume, unless actual observed surface conditions at the Site indicate otherwise, that utilities are located in the same location as indicated on the as-built records or other information obtained by Contractor. Contractor shall conduct potholing in advance of digging in any areas where there are not apparent surface conditions at the Site indicating the actual location of underground utilities and be at all times vigilant in watching for any conditions encountered, above or below the surface of the ground, that might indicate that underground utilities are at locations other than those indicated by the as-built records or other information obtained by Contractor.

Contractor shall perform its digging operations in a slow and meticulous manner so as to avoid wherever reasonably possible damaging existing underground utilities. Contractor shall, at Contractor's Own Expense, make good any Loss to County or others as a result of Contractor's failure to perform any of its obligations under this Paragraph 3.14.1. Nothing stated in this Paragraph 3.14.1 shall be interpreted as requiring Contractor to do subsurface exploration or potholing for the purpose of locating subsurface utilities at the Site prior to the Bid Closing Deadline or as precluding the Contractor from receiving a Contract Adjustment for unknown subsurface utilities constituting Differing Site Conditions that are encountered in the course of performing the Site investigation or potholing required by this Paragraph 3.14.1.

**3.14.2 County Responsibility.** If and to the extent required by California Government Code §4215, County assumes the responsibility for removal, relocation, and protection of those existing main or trunkline utility facilities located at the Site at the time of commencement of the Work that are not identified in the Contract Documents. Provided that Contractor has exercised the Standard of Care in performing the Work in accordance with the Contract Documents, Contractor shall be entitled to a Contract Adjustment for, relocating, repairing or removing any utility facilities not indicated in the Contract Documents with reasonable accuracy, including, without limitation, equipment on the Site necessarily idled thereby. Delays caused by County's or a utility owner's failure to provide for the removal or relocation of such utility facilities shall constitute a Compensable Delay. Nothing herein shall be deemed to require County to indicate the presence of existing service laterals or appurtenances whenever the presence of such utilities on the Site can be inferred from the presence of other visible facilities, such as buildings or meter junction boxes located on or adjacent to the Site.

**3.14.3 Temporary Utilities.** All utilities, including but not limited to electricity, water, gas and telephone, used in performance of the Work (including, without limitation, meters and temporary distribution systems from distribution points to points on Site where a utility is needed and "tap fees") shall be furnished and paid for by Contractor or, if furnished by County, shall be paid for by Contractor at Contractor's Own Expense. Upon Final Completion of the Work, Contractor shall remove all temporary distribution systems. If the Work involves an addition to an existing facility, Contractor may, with written permission of County, granted or withheld in County's sole and absolute discretion, use County's existing utilities by making prearranged payments to County for utilities used by Contractor. When it is necessary to interrupt any existing utility service to make connections, a minimum of two (2) working days' advance notice shall be given to County. Interruptions shall be of the shortest possible duration and shall be scheduled during a time of Day that minimizes its impact on the operations of the existing facility. Any Loss to County or Contractor associated with interruption of a utility service as a result of Contractor's breach of, or failure to fully comply with, its obligations under this Paragraph shall be paid for by Contractor at Contractor's Own Expense.

**3.14.4 Sanitary Facilities.** Contractor shall provide sanitary temporary toilet facilities, for the use of all the workers, in no fewer numbers than required by Applicable Laws, plus such additional facilities as may be directed by County. Such facilities shall be maintained in a sanitary condition at all times. Use of existing or permanent toilet facilities shall not be permitted except by written consent of County.

### 3.15 CLEANING UP

**3.15.1 Contractor Responsibility.** Contractor at all times shall keep the Site free from debris such as waste, rubbish and excess materials and equipment caused by the performance of the Work. At the end of each Day that Work is performed, Contractor shall not leave debris under, in or about the Site but shall promptly dispose of or remove same from the Site. Without limitation to the other clean up requirements of the Contract Documents, upon Final Completion, Contractor shall: (1) clean the interior and exterior of the buildings, including fixtures, equipment, walls, floors, ceilings, roofs, window sills and ledges, horizontal projections and any areas where debris has collected so surfaces are free from foreign material or discoloration; (2) clean and polish all glass, plumbing fixtures, finish hardware and similar finish surfaces and equipment; and (3) remove temporary fencing, barricades, planking, sanitary facilities and similar temporary facilities from the Site.

**3.15.2 Cleanup by County.** If Contractor fails upon 24 hours' notice by County to perform its obligation to clean up, County may arrange to do so, and the cost thereof shall be borne by Contractor at Contractor's Own Expense.

### 3.16 ACCESS TO THE WORK

3.16.1 **County.** County, Inspectors of Record, Architect and County Consultants, and their representatives, and such other persons as authorized by County, shall at all times have access to the Work, either in preparation or in progress. Contractor shall provide safe and proper facilities for such access so that they and their representatives may perform their functions safely.

3.16.2 **Separate Contractors.** County, using its own forces or those of Separate Contractors, may, at any time during the performance of the Work, enter the Site for the purpose of performing construction or for any other purpose. Contractor shall cooperate with County, County's own forces and Separate Contractors and not interfere with other work being done by them or on their behalf.

3.16.3 **Delivery Routes.** Contractor shall arrange for delivery of material over routes designated by County.

### 3.17 INTELLECTUAL PROPERTY RIGHTS

Contractor shall pay all royalties and license fees relating to use of Intellectual Property Rights pertaining to Work performed. Contractor shall defend suits or claims for infringement of Intellectual Property Rights and shall defend, indemnify and hold harmless the Indemnitees from Loss on account thereof in accordance with the terms of Section 3.18, below, unless the infringement is due to a particular design, process, product or product of a particular manufacturer that is required by the Contract Documents; provided, however, that if Contractor has information leading it to believe that the use of a particular design, process or product required by the Contract Documents would constitute an infringement of an Intellectual Property Right, then Contractor shall nonetheless be responsible to provide such defense, indemnification and hold harmless if such information is not promptly furnished in writing to County.

### 3.18 INDEMNIFICATION

3.18.1 **Contractor's Indemnity Obligation.** To the fullest extent permitted by Applicable Laws, Contractor agrees to indemnify, immediately defend at its own expense and hold harmless, County, Board of Supervisors, and each of their respective members, officers, employees, agents, insurers and volunteers ("Indemnitee(s)"), through legal counsel reasonably acceptable to County, from any and all Losses, whether real or alleged, regardless of whether caused in part by such Indemnitee or its agents, servants or independent contractors who are directly responsible to such Indemnitee, arising out of or relating to any of the following:

- .1 any act or omission of Contractor or a Subcontractor, of any Tier;
- .2 the activities of Contractor or a Subcontractor, of any Tier, on the Site or on other properties related to performance of the Work or the preparation for performance of the Work;
- .3 the payment or nonpayment of any Subcontractor, of any Tier, for the Work performed, except where such nonpayment is the result of a breach by County of its payment obligations under the Contract Documents;
- .4 the existence or dispersal of any Hazardous Substances or Mold on the Site as a result of the failure of Contractor or a Subcontractor, of any Tier, to comply with its obligations under the Contract Documents;
- .5 the violation by Contractor or a Subcontractor, of any Tier, of an obligation under Section 3.17, above, involving infringement of an Intellectual Property Right; or
- .6 the violation by Contractor or a Subcontractor, of any Tier, of any Applicable Law, including, without limitation, the violation of any requirement of the State of California General Permit for Storm Water Discharges Associated with Construction Activity and subsequent amendments or orders for construction activities as applicable thereto (including, without limitation, the requirements of a Storm Water Pollution Prevention Plan) or the violation of any applicable requirement of any local or regional Air Quality Management District (AQMD) (including, without limitation, a violation of any of the requirements set forth in the County MOU with AQMD dated January 6, 2004 Agenda Item 3.1 (for projects in the Coachella Valley) or AQMD Rule 403 (for projects west of the Coachella Valley));

PROVIDED, HOWEVER, that nothing contained herein shall be construed as obligating Contractor to indemnify an Indemnitee for Losses resulting from the sole negligence, active negligence or willful misconduct of such Indemnitee or its agents, servants or independent contractors who are directly responsible to such Indemnitee or from a defect in design furnished by such Indemnitee, where such sole negligence, active negligence, willful misconduct or design defect has been determined by agreement of Contractor and that Indemnitee or has been adjudged by the final and binding findings of a court or arbitrator of competent jurisdiction. In instances where the active negligence or willful misconduct of an Indemnitee or its agents, servants or independent contractors who are directly responsible to such Indemnitee or a defect in a design furnished by such an Indemnitee accounts for only a portion or percentage of the Loss involved, the obligation of Contractor will be for that portion or percentage of the Loss not due to such active negligence, willful misconduct or design defect.

**3.18.2 Indemnification of Adjacent Property Owners.** In the event Contractor enters into an agreement with the owners of any adjacent property to enter upon such property for the purpose of performing the Work or other activities incidental to the Work, Contractor shall fully indemnify, defend and hold harmless any person or entity which owns or has any interest in such adjacent property against any Loss resulting from the acts or omissions of the Contractor or its Subcontractors. The form and content of such indemnification agreement shall be approved by County prior to commencement of any Work on or around such property.

**3.18.3 Insurance and Employment Benefits.** The indemnification, defense and hold harmless obligations of Contractor under this Section 3.18, as well as any such obligations stated elsewhere in the Contract Documents: (1) shall not be limited by the amounts or types of insurance (or the deductibles or self-insured retention amounts of such insurance) which any Indemnitee, Contractor or any Subcontractor carries or is required to carry under the terms of the Contract Documents; (2) is independent of and in addition to the Indemnitees' rights under the insurance to be provided by an Indemnitee, Contractor or any Subcontractor; and (3) shall not be limited, in the event of a claim against an Indemnitee by an employee of Contractor, a Subcontractor, anyone directly or indirectly employed by them or anyone for whose acts they may be liable, by a limitation on amount or type of damages, compensation or benefits payable by or for Contractor or Subcontractor under any worker's compensation act, disability benefit act or other employee benefit program.

**3.18.4 Subcontractor Indemnity Agreements.** Contractor agrees to obtain or cause to be obtained executed defense and indemnity agreements with provisions identical to those set forth in this Section 3.18 from each and every Subcontractor, of every Tier.

**3.18.5 Implied Indemnity Rights.** Notwithstanding anything stated in this Section 3.18 or elsewhere in the Contract Documents to the contrary, an Indemnitee's right to seek equitable indemnity and contribution from Contractor is in no way diminished, limited or precluded by any agreement by Contractor to provide express contractual indemnity to such Indemnitee. Contractor's obligations under this Section 3.18 shall be deemed to completely eliminate and preclude any right by Contractor to seek contractual or equitable indemnity or contribution from any Indemnitee for any Loss covered by the Contractor's express indemnification obligations under this Section 3.18.

**3.18.6 Obligation to Defend.** The Contractor's obligation to defend under this Section 3.18 includes, without limitation, the obligation to immediately reimburse an Indemnitee for any attorney's fees, court costs (statutory and non-statutory), arbitration and mediation expenses, professional, expert and consultant fees, investigative costs, postage costs, document copying costs, telecopy costs and any and all other costs and expenses associated with defense of such Indemnitee as and when incurred by any Indemnitee in defense of a claim by any third person or entity as a result of Contractor's failure or refusal to comply with its immediate defense obligation to such Indemnitee. Nothing stated in this Section 3.18 or elsewhere in the Contract Documents shall be interpreted as providing or implying that the obligation of Contractor to defend an Indemnitee against an alleged Loss that is within the scope of the Contractor's indemnification obligation under this Section 3.18 or under any other provision of the Contract Documents is to any extent released, excused, limited or relieved by a finding, determination, award or judgment by a court or arbitrator that the alleged Loss was due to circumstances not within the scope of such indemnification obligation.

### **3.19 LABOR, WAGES, PAYROLL RECORDS**

**3.19.1 Public Work.** This Work is a "public work" as defined in Labor Code §1720 and must be performed in accordance with the requirements of Labor Code §§1720 to 1850 and Title 8 California Code of Regulations §§16000 to 17270, which govern the payment of prevailing wage rates on public works projects.

**3.19.2 Prevailing Wage Rates.** Pursuant to the provisions of Article 2 (commencing at §1770), Chapter 1, Part 7, Division 2 of the Labor Code of California, the Board of Supervisors has obtained the general prevailing rate of per diem wages and the general prevailing rate for holiday and overtime Work in the locality in which the Work is to be performed for each craft, classification or type of worker needed to execute the Work from the Director of the Department of Industrial Relations. These rates are on file with County and copies will be made available to any interested party on request. Contractor shall post a copy of such wage rates at the Site. The adoption of such wage rates is not a representation that labor can be obtained at these rates. It is the responsibility of Contractor to inform itself as to the local labor conditions. Holiday and overtime Work, when permitted by Applicable Laws, shall be paid for at a rate of at least one and one-half times the adopted rate of per diem wages, unless otherwise specified. Holidays shall be defined in the collective bargaining agreement applicable to each particular craft, classification or type of worker employed.

**3.19.3 Unclassified Workers.** Any worker employed to perform the Work not covered by any classification listed in the general prevailing wage rate of per diem wages determined by the Director of the Department of Industrial Relations shall be paid not less than the minimum rate of wages specified therein for the classification which most nearly corresponds to the Work to be performed by him/her, and such minimum wage rate shall be retroactive to time of initial employment of such person on the Project in such classification.

**3.19.4 Per Diem Wages.** Contractor shall pay or shall cause to be paid each worker engaged in the Work not less than the general prevailing rate of per diem wages determined by the Director of the Department of Industrial Relations, regardless of any contractual relationship which may be alleged to exist between Contractor or any of the Subcontractors and such workers. Pursuant to California Labor Code §1773.1, per diem wages are deemed to include employer payments for health and welfare, pension, vacation, travel time and subsistence pay.

**3.19.5 Applicable Laws.** Contractor represents and warrants that the Contractor's Bid and the Contract Price includes funds sufficient to allow Contractor to comply with all Applicable Laws governing the labor or services to be provided. Contractor shall defend and indemnify the Indemnitees in accordance with Section 3.18, above, for any violation of any Applicable Law, including but not limited to California Labor Code §2810, and agrees to pay all assessments, including wages and penalties, made against County in relation to such violations.

**3.19.6 Posting at Site.** Contractor shall post at appropriate conspicuous points on the Site the prevailing wage rates of the Department of Industrial Relations in accordance with 8 California Code of Regulations 16100(b).

**3.19.7 Worker Hours.** As provided in Article 3 (commencing at §1810), Chapter 1, Part 7, Division 2 of the California Labor Code, eight (8) hours of labor shall constitute a legal day's work. The standard work day of any worker employed at any time by Contractor or any of the Subcontractors performing the Work, or any part of the Work, shall, except as hereinafter provided, be limited and restricted by Contractor to eight (8) hours per day, between the hours of 6:00 A.M. and 6:00 P.M. (unless otherwise required by Applicable Laws), plus one-half hour unpaid lunch approximately midway through the shift, provided that Contractor or any of the Subcontractors may establish a four day/ten-hour schedule consistent with Applicable Laws pertaining to payment of prevailing wages and the provisions any applicable collective bargaining agreement. A regular-work week shall constitute forty (40) hours during any one week. Notwithstanding the provisions hereinabove set forth, the parties hereto may agree to changes in the work day or the work week as permitted by Applicable Laws, and Contractor and all Subcontractors must pay the appropriate prevailing wage rate for those hours and days worked.

**3.19.8 Overtime.** Overtime work performed by employees of Contractor or any of the Subcontractors shall be compensated according to the applicable general prevailing rate established by the Department of Industrial Relations for holiday and overtime work for each craft, classification or type of worker in the locality in which the Work is to be performed.

**3.19.9 Payroll Records.** It shall be the sole responsibility of Contractor to ensure compliance with the provisions of Applicable Laws and the Contract Documents relating to maintenance and submission of payroll records. Pursuant to the provisions of California Labor Code §1776, Contractor shall keep, and shall cause each Subcontractor performing any portion of the Work to keep, accurate certified payroll records, showing the name, address, social security number, worker classification and straight-time and overtime hours worked each Day and week, and the actual per diem wages paid to each journeyman, apprentice, worker or other employee employed by Contractor in connection with the Work. Certified payroll records must be in the payroll reporting format prescribed by the Division of Labor Standards Enforcement. If there is no work by Contractor or a Subcontractor in a given week, Contractor must keep



and submit a certified "Nonperformance" payroll record, indicating "no work" for that week. Contractor shall submit all certified payroll records to County in complete, unredacted form with an original signature on the Statement of Compliance, along with, and as a condition to, its Applications for Payment. Additionally, payroll records shall be available for inspection at all reasonable hours at the principal office of Contractor on the following basis:

.1 a certified copy of an employee's payroll record shall be made available for inspection or furnished to such employee or his or her authorized representative on request;

.2 a certified copy of all such payroll records shall be made available for inspection or furnished upon request to County, the Division of Labor Standards Enforcement and/or the Division of Apprenticeship Standards of the Department of Industrial Relations or such other person or entity as designated by County;

.3 a certified copy of all such payroll records shall be made available upon request by the public for inspection or the copying thereof, provided that (1) such request is made by the public through either County, the Division of Apprenticeship Standards or the Division of Labor Standards Enforcement of the Department of Industrial Relations, (2) such requested payroll records have not previously been provided pursuant to Subparagraph 3.19.9.2, above, then the requesting individual or entity shall, prior to being provided the records, reimburse the costs of preparation by Contractor, the Subcontractors and the entity through which the request was made, and (3) the public shall not be given access to records at the principal office of Contractor;

.4 Contractor and each Subcontractor shall within ten (10) Days after receipt of a written request file a certified copy of such payroll records with the person or entity that requested the records;

.5 Contractor shall provide, and shall cause each Subcontractor to provide, payroll records as defined in Title 8 California Code of Regulations §16000 to County within ten (10) Days after receipt of written request, at no cost to County;

.6 any copy of such payroll records made available for inspection by, and copies furnished to, the public shall be redacted in a manner so as to prevent disclosure of an individual's name, address, and social security number, except that any copy made available for inspection by, and copies furnished to, a joint labor-management committee established pursuant to the federal Labor Management Cooperation Act of 1978 (29 U.S.C. Section 175a) shall be marked or redacted only to prevent disclosure of an individual's name and social security number, and in either event, the name and address of Contractor or the Subcontractor performing the Work shall not be so obliterated; and

.7 any copy made available to an agency included in the Joint Enforcement Strike Force on the Underground Economy established pursuant to Section 329 of the Unemployment Insurance Code and other law enforcement agencies investigating violations of law shall, upon request, be provided nonr copies of certified payroll records;

.8 Contractor shall inform County concurrently with the submission of its initial Application for Payment, of the location of such payroll records, including the street address, city and county, and thereafter shall, within five (5) working days, provide a notice of any change of location and address of such payroll records.

**3.19.10 Apprentices.** Contractor acknowledges that, even if performance of the Work involves a dollar amount greater than or a number of working days greater than that specified in California Labor Code §1777.5, it shall be the sole responsibility of Contractor, for all apprentice occupations, to ensure compliance with California Labor Code §1777.5, including, without limitation, the following provisions:

.1 Apprentices of any crafts or trades may be employed and, when required by California Labor Code §1777.5, shall be employed provided they are properly registered in full compliance with the provisions of the California Labor Code.

.2 Every such apprentice shall be paid the prevailing rate of per diem wages for apprentices in the trade to which he or she is registered and shall be employed only at the work of the craft or trade to which he or she is registered.

.3 Only apprentices, as defined in California Labor Code §3077, who are in training under apprenticeship standards and written apprentice agreements under Chapter 4 (commencing at §3070), Division 3 of the California Labor Code, are eligible to be employed at the apprentice wage rate on Public Works. The employment and training of each apprentice shall be in accordance with either: (1) the apprenticeship standards and apprentice agreements under which he or she is training, or (2) the rules and regulations of the California Apprenticeship Council.

.4 Contractor and any of the Subcontractors employing workers in any apprenticeable craft or trade in performing any of the Work shall apply to the applicable joint apprenticeship committee for a certificate approving Contractor or the Subcontractor under the applicable apprenticeship standards and fixing the ratio of apprentices to journeymen employed in performing the Work.

.5 Prior to commencing the Work, Contractor shall submit contract award information to an applicable apprenticeship program that can supply apprentices to the Site of the Work. The information submitted shall include an estimate of journeyman hours to be performed under the Construction Contract, the number of apprentices proposed to be employed, and the approximate dates the apprentices would be employed. A copy of this information shall also be submitted to County if requested by County.

.6 The ratio of the Work performed by apprentices to journeymen employed in a particular craft or trade on the Work may be no higher than the ratio stipulated in the apprenticeship standards under which the apprenticeship program operates, where Contractor or the Subcontractor agrees to be bound by those standards, but, except as otherwise provided in this Paragraph, in no case shall the ratio be less than one (1) hour of apprentice work for every five (5) hours of journeyman work. Apprentices may comprise up to thirty percent (30%) of the work force of each particular craft, classification or type of worker employed, unless the applicable joint apprenticeship committee establishes a lower percentage. To the extent possible, fifty percent (50%) of the apprentice work force shall consist of first-year apprentices.

.7 The interpretation and enforcement of California Labor Code §1777.5 shall be in accordance with the rules and procedures of the California Apprenticeship Council.

.8 Contractor and all the Subcontractors shall comply with California Labor Code §1777.6, which forbids certain discriminatory practices in the employment of apprentices.

.9 Contractor shall become fully acquainted with the law regarding apprentices prior to commencement of the Work, paying special attention to California Labor Code §§1777.5, 1777.6, and 1777.7 and Title 8, California Code of Regulations, §§200 et seq. Questions may be directed to the State Division of Apprenticeship Standards, 455 Golden Gate Avenue, San Francisco, California.

**3.19.11 Pre-Construction Meetings, Interviews.** Contractor shall attend any pre-construction meetings held by County to discuss labor requirements. Contractor and the Subcontractors shall allow County, County Consultants and the Department of Industrial Relations, and designated representatives of each, to conduct, at their discretion, interviews of workers at the Site during working hours.

**3.19.12 Penalties for Violations.**

.1 **Prevailing Wage Violations.** Pursuant to California Labor Code §1775, Contractor and any of the Subcontractors shall, as a penalty, pay an amount not to exceed Two Hundred Dollars (\$200) for each Day, or portion thereof, for each worker paid less than the prevailing rates, determined by the Director of the Department of Industrial Relations, for the trade or craft in which such worker is employed by Contractor or, except as provided by said §1775, by any of the Subcontractors, of any Tier, for performance of the Work. The amount of this penalty shall be determined by the Labor Commissioner and shall be based on consideration of both: (1) whether the failure of Contractor or the Subcontractor to pay the correct rate of per diem wages was a good faith mistake and, if so, whether the error was promptly and voluntarily corrected upon being brought to the attention of Contractor or the Subcontractor; and (2) whether Contractor or the Subcontractor has a prior record of failing to meet its prevailing wage obligations. The difference between the amount owed to each worker pursuant to such prevailing wage rates, and the amount paid to each worker for each Day or portion thereof for which each worker was paid less than the prevailing wage rate, shall be paid to each worker by Contractor.

**.2 Working Hour Violations.** Pursuant to Labor Code §1813, Contractor shall pay a penalty of Twenty-Five Dollars (\$25) per worker employed in the performance of the Work by Contractor or by any of the Subcontractors for each Day during which such worker is required or permitted to work more than eight (8) hours in any Day and forty (40) hours in any one calendar week in violation of the provisions of Article 3 (commencing at §1810), Chapter 1, Part 7, Division 2 of the California Labor Code.

**.3 Payroll Record Violations.** Pursuant to California Labor Code §1776, Contractor shall in the event of a failure to comply within ten (10) Days with any written notice requesting the records enumerated in subdivision (a) of said §1776, pay a penalty of One Hundred Dollars (\$100) for each Day, or portion thereof, for each worker, until Contractor has strictly complied with such request. Upon the request of the Division of Apprenticeship Standards or the Division of Labor Standards Enforcement, these penalties shall be withheld from progress payments then due.

**.4 Apprenticeship Violations.** Pursuant to California Labor Code §1777.7, if Contractor or the Subcontractor is determined by the Chief of the Division of Apprenticeship Standards (the "Chief") to have knowingly committed a first-time violation of California Labor Code §1777.5, Contractor or the Subcontractor shall pay, as a civil penalty, an amount not exceeding One Hundred Dollars (\$100) for each full Day of noncompliance, provided that the amount of this penalty may be reduced by the Chief if the penalty would be disproportionate to the severity of the violation. In lieu of this penalty, the Chief may, for a first-time violation and with the concurrence of the joint apprenticeship committee, order Contractor or the Subcontractor to provide apprentice employment equivalent to the work hours that would have been provided for apprentices during the period of noncompliance. If such violation by Contractor or the Subcontractor is a second or subsequent violation committed within a three (3) year period from a previous violation of §1777.5, Contractor or the Subcontractor shall pay, as a civil penalty, to County the sum of not more than Three Hundred Dollars (\$300) for each full Day of noncompliance. County shall withhold the amount of the civil penalty from contract progress payments then due or to become due. In addition, if Contractor or the Subcontractor is determined to have knowingly committed a serious violation of any provision of §1777.5, the Chief may deny to Contractor or the Subcontractor, and to its responsible officers, the right to bid on or be awarded a contract to perform work as a subcontractor on any subsequent project for County for a period of up to one (1) year for the first violation and for a period of up to three (3) years for a second or subsequent violation.

**3.19.13 Subcontractor Provisions.** Contractor shall include, and shall require the Subcontractors to include, contractual provisions in all contracts they enter into for the performance of the Work requiring compliance with the provisions of this Section 3.19 at no additional cost.

**3.19.14 Condition of Payment.** Compliance by Contractor with the requirements of this Section 3.19 and each of its Paragraphs shall be a condition to Contractor's right to payment under its Applications for Payment. Without limitation to the foregoing, payments to Contractor shall not be made when payroll records are delinquent or inadequate.

## **3.20 LABOR CODE §2810**

**3.20.1 Application.** The provisions of this Section 3.20 apply only if the Contractor has not executed a collective bargaining agreement covering the workers who will be employed to perform the Work.

**3.20.2 Declaration by Contractor.** If a Declaration of Sufficiency of Funds has not been submitted by Contractor as a Post-Award Submittal, then it must be submitted prior to Award. In executing the Construction Contract, Contractor warrants and represents that all of the statements contained in its Declaration of Sufficiency of Funds remain true and correct as of the date of execution of the Construction Contract and may be relied upon by County in determining whether there appears to be sufficient funds in the Contractor's Bid to allow the Contractor to comply with all Applicable Laws governing the labor or services to be provided for the performance of the Work. The truth and accuracy of the statements contained in said Declaration and in this Paragraph 3.20.2 constitute a material part of the Contractor's consideration for, and a material inducement to the County's entering into, the Construction Contract.

**3.20.3 Continuing Duty.** To the extent that any of the information provided in the Declaration of Sufficiency of Funds submitted by Contractor relating to numbers of workers or independent contractors that will be employed or utilized for performance of the Work was or is based upon a best estimate, rather than actual figures or information, then the Contractor assumes the continuing duty to the County to ascertain the actual figures and information requested in the Declaration of Sufficiency of Funds and to provide such actual figures and information to the County in the form

of a revised and updated Declaration of Sufficiency of Funds once the actual figures and information become known.

### 3.21 URBAN RUNOFF AND STORM WATER COMPLIANCE

**3.21.1 Contractor's Responsibility.** If and to the extent storm water permitting, control, mitigation or discharge control is required by Applicable Laws, the Contractor shall: (1) prior to starting any Work at the Site, sign and implement the Storm Water Management Plans or Storm Water Pollution Prevention Plans as previously prepared by the County's Consultant for civil engineering or by others; (2) take all necessary steps to monitor, report, enforce and otherwise implement and comply with the requirements of the Storm Water Permit, Storm Water Management Plans and Storm Water Pollution Prevention Plans and all Applicable Laws pertaining to the elimination or mitigation of storm water pollutant discharge to separate storm sewer systems or other watercourses, including without limitation, applicable requirements of the State Water Resources Control Board, Santa Ana, San Diego, and/or Colorado Region Water Quality Control Boards and municipal storm water management programs; (3) adhere to and implement the Special Provisions for Urban Runoff and Water Pollution Control set forth in the Specifications; and (4) ensure that the Work is constructed in conformance with those post-construction best management practices (BMPs) identified within the project-specific Water Quality Management Plan (WQMP).

**3.21.2 Inspections, Reports.** Contractor shall immediately notify the person identified to Contractor as the County's "project manager" for the Project of all inspections by Government Authorities (including, but not limited to, any regional board staff) and, if practicable, arrange for participation by such Governmental Authorities in any other pertinent inspections conducted at the Site. Contractor shall provide to County copies of all reports and monitoring information related to the matters covered by this Section 3.21.

**3.21.3 Violations.** The Contractor recognizes and understands that failure to comply with the requirements of any applicable storm water-related permit issued by the State of California of the United States pursuant to the Clean Water Act (Title 33 U.S.C. §§ 1251 et seq) and/or the Porter Cologne Water Quality Control Act (California Water Code §§13000 et seq.) is a violation of Applicable Laws. Contractor shall be responsible for all Losses and for any liability (including, without limitation, fines, penalties and other administrative liabilities and costs) imposed by Applicable Laws as a result of the Contractor's failure to comply with Applicable Laws, including, without limitation, the requirements of this Section 3.21.

**3.21.4 Condition of Payment.** Compliance by the Contractor with the requirements of this Section 3.21 shall be a condition to the Contractor's right to payment under its Applications for Payment.

**3.21.5 Costs of Compliance.** The Contractor represents and warrants that it has included in its Bid all costs of compliance with the requirements of this Section 3.21.

### 3.22 SOLID WASTE MANAGEMENT

Contractor shall comply with all provisions of Applicable Laws (including, without limitation, the requirements of the California Public Resources Code, rules and regulations of the California Integrated Waste Management Board and provisions of any Site-specific plans adopted by County) that are applicable to the activities of contractors performing construction or related activities on the Site. Compliance by Contractor with the requirements of this Section 3.22 shall be a condition to Contractor's right to payment under its Applications for Payment.

### 3.23 CEQA COMPLIANCE

No Work that is subject to California Environmental Quality Act (CEQA) shall proceed by Contractor until Contract Documents satisfying the CEQA process are reviewed and approved by the County. Contractor shall comply with all applicable CEQA requirements. If there is a federal nexus (e.g. a source of federal funding) to the Project, compliance by Contractor with the National Environmental Policy Act (NEPA) will be required in addition to and in conjunction with compliance with requirements of CEQA. The Contractor shall comply with the conditions identified on the Plans and Specifications for compliance with the California Environmental Quality Act, including, without limitation, all requirements pertaining to Mitigation, Monitoring, and Reporting Program (MMRP).

### 3.24 AQMD COMPLIANCE

Contractor is responsible for full and complete compliance with, as applicable: (1) AQMD Rule 403.1, County Ordinance 742, the County MOU with AQMD dated January 6, 2004 Agenda Item 3.1 (for projects in the Coachella Valley); or (2) AQMD Rule 403 (for projects west of the Coachella Valley). Any fines imposed by AQMD on the County, as well as any other Loss to County, as a result of non-compliance by Contractor with the applicable provisions of the foregoing requirements are the responsibility of Contractor and upon request by County will be paid to County by Contractor or may be withheld by County from amounts due to Contractor under its Applications for Payment.

## ARTICLE 4 CONSTRUCTION ADMINISTRATION

### 4.1 ARCHITECT

**4.1.1 Scope of Authority.** The Architect shall have the authority to act on behalf of County only as expressly provided in the Contract Documents and subject to such limitations on authority as set forth in Paragraph 4.1.2, below. As clarification of the foregoing, if the Contract Documents provide that the Architect has the right to approve of, consent to or direct that Contractor take or forbear from taking an action, such authority shall be limited to issuing such approval, consent or direction and shall not include, or be interpreted to include, authority to bind County with respect to any of the matters set forth in Paragraph 4.1.2, below. If Contractor's compliance with such approval, consent or direction of the Architect would involve or require authorization by County within the scope of the matters set forth in Paragraph 4.1.2, below, Contractor has the obligation, in addition to complying with the Architect's approval, consent or direction, to take steps in accordance with the Contract Documents to obtain such authorization of County as may be required and failing to do so shall not have any right to recourse or recovery from County on account of Contractor's action taken or Work performed in response to such approval, consent or direction by Architect.

**4.1.2 Limitations on Authority.** Without limitation to the other limitations on the Architect's authority expressed or implied under Paragraph 4.1.1, above, and notwithstanding anything else set forth in the Contract Documents to the contrary, Architect does not have authority to: (1) obligate or commit County to any payment of money; (2) obligate County to any adjustment to the Contract Price or Contract Time; (3) relieve Contractor of any of its obligations under the Contract Documents; (4) approve or order any Work involving Delay or Extra Work; or (5) perform any act, make any decision or give any direction or approval that is described in these General Conditions as an act, decision, direction or approval that is to be performed, made or given by any person or entity other than Architect.

**4.1.3 Work Stoppage.** Architect's authority includes, without limitation, the authority to stop the Work whenever such stoppage may be necessary, in Architect's opinion, for the proper execution of the Work. Any Work that is stopped or disapproved by order of Architect shall be resumed if and when County so directs in writing, with or without the concurrence of the Architect.

**4.1.4 Replacement.** County may, in its sole discretion, substitute another person or entity, or add persons or entities, to perform the functions of Architect or to exercise some or all of the authority of Architect provided for in the Contract Documents.

**4.1.5 County Rights.** All rights and authority conferred upon Architect under the Contract Documents constitute rights that County may, in its sole and absolute discretion, exercise in writing on its own behalf, irrespective of whether the County has ordered the removal, replacement or a change in the authority of the Architect.

### 4.2 ADMINISTRATION OF THE CONSTRUCTION CONTRACT

**4.2.1 Observations of the Work.** Architect will visit the Site as appropriate to the stage of the Work to observe the Work in progress. Observations shall be for the purpose of ascertaining the progress of the Work and that the character, scope, quality and detail of construction (including workmanship and materials) comply with the Contract Documents, the Architect's directives, approved Submittals and clarifications issued by Architect. Observations shall be separate from any inspections which may be provided by others.

**4.2.2 Means, Methods.** Construction means, methods, techniques, sequences, procedures and safety precautions and programs in connection with the Work are solely the responsibility of Contractor. Neither County nor

Architect: (1) has control over or charge of, nor are they responsible for, Contractors or any Subcontractor's construction means, methods, techniques, sequences, procedures, safety precautions or programs in connection with the Work, all of which are, as between Contractor and County, solely Contractor's responsibility; (2) is responsible for Contractor's failure to carry out the Work in accordance with the Contract Documents; or (3) has control over, charge of, or responsibility for acts or omissions of Contractor, the Subcontractors or their agents or employees, or of any other persons performing portions of the Work.

**4.2.3 Communications by Contractor.** County shall be provided by Contractor with copies of all communications from Contractor or the Subcontractors to Separate Contractors or the Architect. Contractor shall not rely on oral or other non-written communications.

**4.2.4 Review of Applications for Payment.** If requested by County, Architect will review and certify all Applications for Payment by Contractor, including Applications for Payment requesting Progress Payments and Final Payment. In such cases, if the Architect and County do not concur in respect to the amount to be paid to Contractor, County's determination of the amount due will prevail.

**4.2.5 Rejection of the Work.** Architect will have authority to reject Work that does not conform to the Contract Documents and to require additional inspection or testing, in accordance with Article 10, below, whether or not such Work is fabricated, installed or completed. Whenever Architect considers it necessary or advisable for implementation of the intent of the Contract Documents, Architect will have authority to require additional inspection or testing of the Work in accordance with Article 10, below, whether or not such Work is fabricated, installed or completed. Neither Architect's authority to act under this Paragraph 4.2.5 nor a decision made in good faith either to exercise or not to exercise such authority, shall give rise to a duty or responsibility of Architect to Contractor, the Subcontractors, their agents or employees, or other persons performing any of the Work. County shall have the right, notwithstanding a recommendation by the Architect pursuant to this Paragraph 4.2.5 to reject a portion of the Work, to elect to accept the Work rejected by Architect and to direct in writing the manner in which the Work is to be performed and Contractor shall comply therewith.

**4.2.6 Review of Submittals.** Architect and such other County Consultants as Architect or County determines appropriate will review, approve or take other appropriate action upon the Contractor's Submittals. Such review, approval and other action taken in regard to a Submittal is for the limited purpose of checking for conformance with information given and the design concept expressed in the Contract Documents and is not conducted for the purpose of determining the technical accuracy and completeness of the Submittal, checking details such as dimensions and quantities, or for substantiating instructions for installation or performance of equipment or systems, all of which remain the sole responsibility of Contractor. Actions by Architect and County Consultants in connection with review of a Submittal by Contractor will be taken with such promptness as to cause no unreasonable Delay in the Work of Contractor or in the activities of the Separate Contractors or County, while allowing sufficient time in their judgments to permit adequate review. Whether or not County has identified a particular Submittal for review by Architect or a County Consultant, Contractor shall in all cases submit Submittals sufficiently in advance to allow time to permit adequate review by Architect and other County Consultants. Neither Architect's nor any County Consultant's review of a Submittal shall: (1) relieve Contractor of its obligations under Section 3.11, above; (2) constitute approval of safety precautions or, unless otherwise specifically stated in writing by the Architect or County Consultant at the time such Submittal is returned to Contractor; (3) be construed as an approval of any construction means, methods, techniques, sequences or procedures; and (4) if it involves review or approval of a specific item, be construed as indicating approval of an assembly of which such item is a component.

**4.2.7 Changes.** After consultation with the Architect, County will prepare the Change Orders, Unilateral Change Orders and Construction Change Directives for execution and take appropriate action thereon in accordance with Article 7, below.

#### **4.3 CLAIMS**

**4.3.1 Submission of Claims.** All Claims by Contractor shall be submitted in accordance with the procedures set forth in this Section 4.3.

##### **4.3.2 Arising of Claim.**

**.1 Changes.** A Claim by Contractor involving a Contract Adjustment due to a Compensable Change or Deleted Work arises upon issuance of a decision denying, in whole or in part, Contractor's Change Order Request. Such Claim shall be prepared and submitted in accordance with the requirements of this Section 4.3, including, without limitation, Paragraphs 4.3.3 through 4.3.5, below.

**.2 Other Claims.** Claims by Contractor other than those described in Subparagraph 4.3.2.1, above, arise at the time that County receives written notice by Contractor of Contractor's intent to file the Claim. Such notice of intent shall be given no later than five (5) Days after the Discovery Date relative to such circumstances (even if Contractor has not yet experienced a Loss or Delay due to such circumstances) and shall state the event or condition giving rise to the Claim and its probable effect, if any, upon the Contract Price and Contract Time. **FAILURE BY CONTRACTOR TO SUBMIT A NOTICE OF INTENT TO FILE CLAIM IN ACCORDANCE WITH THIS SUBPARAGRAPH 4.3.2.2 SHALL, IN ACCORDANCE WITH THE PROVISIONS OF SECTION 4.6 OF THE GENERAL CONDITIONS, CONSTITUTE A WAIVER BY CONTRACTOR OF THE RIGHT TO FURTHER RECOURSE OR RECOVERY UPON SUCH CLAIM.**

**4.3.3 Content of Claims.** A Claim must include the following:

**.1** a statement that it is a Claim and a request for a decision on the Claim;

**.2** a detailed description of the act, error, omission, unforeseen condition, event or other circumstance giving rise to the Claim;

**.3** supporting documentation as follows: (1) if the Claim involves a Contract Adjustment due to Compensable Change or Deleted Work, documentation demonstrating that a complete Notice of Change and Change Order Request were timely and properly submitted as required by Article 7, below; (2) if the Claim involves an adjustment to the Contract Time, documentation demonstrating that a complete Notice of Delay and Request for Extension were timely and properly submitted as required by Article 7 and Article 8, below; and (3) if the Claim does not involve a Contract Adjustment on the basis of Compensable Change or Deleted Work, documentation demonstrating that a notice of intent to file the Claim was timely and properly submitted as required by Subparagraph 4.3.2.2, above;

**.4** a detailed justification for any remedy or relief sought by the Claim, including, without limitation, all of the following: (1) a detailed cost breakdown in the form required for submittal of Change Order Requests, which complies with the prohibition on "total cost" calculations set forth in Paragraph 7.7.15, below; and (2) job cost records substantiating the actual costs that have been incurred; and

**.5** a written certification, signed by a responsible managing officer or principal of Contractor's organization who has the authority to sign contracts on behalf of Contractor and who has personally investigated the matters alleged in the Claim, in the following form:

"I hereby certify under penalty of perjury that I am a managing officer or principal of (Contractor) and that I have reviewed the Claim presented herewith on Contractor's behalf and/or on behalf of (Subcontractor(s)) and that the following statements are, to the best of my knowledge after diligent inquiry into the circumstances of such Claim, true and correct:

**(i)** the facts alleged in or that form the basis for the Claim are true and accurate;

**(ii)** I do not know of any facts or circumstances, not alleged in the Claim, that by reason of their not being alleged render any fact or statement alleged in the Claim materially misleading;

**(iii)** I have, with respect to any request for money or damages alleged in or that forms the basis for the Claim, reviewed the job cost records (including those maintained by Contractor and by any Subcontractor, of any Tier, that is asserting all or any portion of the Claim) and confirmed with reasonable certainty that the losses or damages alleged to have been

suffered by Contractor and/or such Subcontractor were in fact suffered in the amounts and for the reasons alleged in the Claim;

(iv) I have, with respect to any request for extension of time or claim of delay, disruption, hindrance or interference alleged in or that forms the basis for the Claim, reviewed the job schedules (including those maintained by Contractor and by any Subcontractor, of any Tier, that is asserting all or any portion of the Claim) and confirmed that the delays or disruption alleged to have been suffered by Contractor and/or such Subcontractor were in fact experienced for the durations, in the manner, and with the consequent effects on the time and/or sequence of performance of the Work, as alleged in the Claim; and,

(v) Contractor has not received payment from County for, nor has Contractor previously released County from, any portion of the Claim.

Signature: \_\_\_\_\_

Name: \_\_\_\_\_

Title: \_\_\_\_\_

Company: \_\_\_\_\_

Date: \_\_\_\_\_

4.3.4 **Noncompliance.** Failure by Contractor to comply with Paragraph 4.3.3, above, shall give County the right, without obligation, to deny the Claim or return the Claim without any response.

4.3.5 **Submission of Claims.**

.1 **Time for Filing.** All Claims and supporting documentation and certifications required to be submitted by Contractor must be submitted to the County within thirty (30) Days after the Claim arises (as "arises" is defined in Paragraph 4.3.2, above). No Claims by Contractor are permitted after Final Payment.

.2 **Manner of Filing.** A Claim shall be submitted by registered or certified mail, return receipt requested.

.3 **Condition Precedent.** Contractor's strict compliance with the requirements of this Section 4.3 as to a Claim shall be considered a condition precedent to Contractor's right to initiate or seek determination of its rights in any legal proceedings with respect to such Claim.

4.3.6 **Response to Claims by Contractor.**

.1 **Claims Response.** County shall provide a reasonable review and issue a written Good Faith Determination within forty-five (45) Days of receipt of the Claim, unless County and Contractor have by mutual agreement extended the time period. The written Good Faith Determination shall identify which portion of the Claim is disputed by County and which portion is undisputed.

.2 **Meeting with Board.** If County should need to submit and gain approval of the Board of Supervisors prior to providing the Contractor the written statement identifying the undisputed and disputed portions of the Claim, and the governing body does not meet within the forty-five (45) days or within the mutually agreed time extension, County shall have three (3) days following the next duly publicly noticed meeting of the Board of Supervisors after the forty-five (45) day period, or agreed extension, to provide Contractor a written statement identifying the disputed portion and undisputed portion of the Claim.



**.3 Payments on Undisputed Portion(s).** Any payment due on an undisputed portion of the Claim shall be processed and made within sixty (60) days after County issues its written statement. Amounts not paid in a timely manner shall bear interest at 7 percent per annum.

**.4 Failure of County to Respond.** If County should fail to respond to a Claim from Contractor within the time periods set forth in this 4.3.6 or otherwise meet the time requirements, the Claim shall be deemed rejected in its entirety. A Claim that is denied by reasons of County's failure to have responded to the Claim, or its failure to otherwise meet the requirements of Public Contract Code §9204, shall not constitute an adverse finding with regard to the merits of the Claim or the responsibility or qualifications of the Contractor.

**4.3.7 Meet and Confer.**

**.1 Dispute by Contractor.** If Contractor disputes County's Good Faith Determination and written response of a Claim by Contractor, or if County fails to respond within the prescribed time set forth herein, the Contractor may demand, in writing sent by registered or certified mail return receipt requested, an informal conference to meet and confer for settlement of the issues still in dispute. Upon receipt of such demand, County shall schedule a meet and confer conference within thirty (30) Days.

**.2 Conclusion of Meet and Confer.** Within ten (10) business days following conclusion of the meet and confer conference, if the Claim or any portion thereof remains in dispute, County shall provide the Contractor with a written statement identifying the portion of the Claim still in dispute and the portion that is undisputed. Any payment due on the undisputed portion shall be processed and made within sixty (60) days after such written statement is issued. Amounts not paid in a timely manner shall bear interest at 7 percent per annum.

**.3 Mediation.** Any disputed portion of the Claim as identified by the Contractor in writing, shall be submitted to non-binding mediation with the County and Contractor sharing the associated costs equally. The County and Contractor shall mutually agree to a mediator within ten (10) business days after the disputed portion of the Claim has been identified in writing. If the parties cannot agree upon a mediator, each party shall select a mediator and those mediators shall select a qualified neutral third party to mediate with regard to the disputed portion of the Claim. Each party shall bear the fees and costs charged by its respective mediator in connection with the selection of the neutral mediator. Mediation includes any non-binding process, including, but not limited to, neutral evaluation or a dispute review board, in which an independent third party or board assist the parties in dispute resolution through negotiation or by issuance of an evaluation. Any mediation utilized shall conform to the timeframes in this section.

**.4** If mediation is unsuccessful, the parts of the Claim remaining in dispute shall be subject to applicable procedures outside this section.

**4.3.8 Subcontractor Claims.**

**.1 Subcontractor Claim.** If a subcontractor or lower tier subcontractor has a claim against the County, the Contractor may present to the County a claim on behalf of a subcontractor or lower tier subcontractor. A subcontractor may request in writing, either on his or her own behalf or on behalf of a lower tier subcontractor, that the Contractor present a claim for work which was performed by the subcontractor or a lower tier subcontractor on behalf of the subcontractor. The subcontractor requesting that the claim be presented to the County shall furnish reasonable documentation to support the claim.

**.2 Contractor Response.** Within forty five (45) days of receipt of the written request by the subcontractor, the Contractor shall notify the subcontractor in writing as to whether the Contractor presented the claim to the County and, if the Contractor did not present the claim, provide the subcontractor with a statement of the reasons for not having done so.

**4.3.9 Claims Based on Differing Site Conditions.**

**.1 Contractor Responsibility.** Save and except as hereinafter provided in this Paragraph 4.3.9 for Contract Adjustments due to Differing Site Conditions, Contractor agrees at Contractor's Own Expense to assume the risk and costs of Extra Work and Delay due to concealed or unknown conditions, surface or subsurface, at the Site or in Existing Improvements.

**.2 Differing Site Conditions.** Differing Site Conditions are those conditions at the Site or in Existing Improvements and not otherwise reasonably ascertainable by Contractor in the performance of its obligations under the Contract Documents (including, without limitation, conditions not reasonably ascertainable by Contractor from documents or information described in Paragraph 3.2.1, above, that were provided or available to Contractor for its review prior to the Bid Closing Deadline) that constitute: (1) hazardous materials that constitute hazardous waste, as defined in California Health and Safety Code §25117, that is required to be removed to a Class I, Class II, or Class III disposal site in accordance with provisions of Applicable Laws; (2) subsurface or concealed conditions at the Site or concealed conditions in Existing Improvements which differ materially from those indicated by the Contract Documents or other information that was either reviewed by Contractor or that Contractor was given the opportunity to review prior to the Bid Closing Deadline; or (3) unknown physical conditions at the Site or concealed conditions in Existing Improvements of an unusual nature, differing materially from those ordinarily encountered and generally recognized as inherent in work of the character provided for in the Contract Documents.

**.3 Notice of Change.** If Contractor encounters conditions it believes constitute Differing Site Conditions, then Contractor shall, before such conditions are disturbed, give Notice of Change as required by Paragraph 7.6.1, below, stating, without limitation, a detailed description and precise location of the conditions encountered.

**.4 Investigation by County.** Upon receipt of notice from Contractor as required by Subparagraph 4.3.9.3, above, County shall promptly investigate Contractor's report of Differing Site Conditions.

**.5 Change Order Request.** If Contractor intends to seek a Contract Adjustment based upon Differing Site Conditions, it shall submit a complete and timely Change Order Request in accordance with Paragraph 7.6.2, below, setting forth its request for a Contract Adjustment.

**.6 Contract Adjustments.** If, following Contractor's compliance with its obligations under this Paragraph 4.3.9, County finds that Differing Site Conditions exist, then, unless the Contractor's right to Contract Adjustment has been waived as pursuant to Paragraph 3.2.3, above, a Contract Adjustment shall be made for the resulting Compensable Change and Compensable Delay, in such amount and duration as County determines by issuance of a Good Faith Determination are reasonable and permitted by these General Conditions.

**.7 WAIVER BY CONTRACTOR.**

**FAILURE BY CONTRACTOR TO STRICTLY COMPLY WITH THE REQUIREMENTS OF THIS PARAGRAPH 4.3.9 PERTAINING TO CONTRACT ADJUSTMENT BASED ON A CLAIM FOR DIFFERING SITE CONDITIONS SHALL, IN ACCORDANCE WITH THE PROVISIONS OF SECTION 4.6 OF THE GENERAL CONDITIONS, CONSTITUTE A WAIVER BY CONTRACTOR OF THE RIGHT TO FURTHER RECOURSE OR RECOVERY UPON SUCH CLAIM.**

**.8 Final Completion.** No claim by Contractor for additional compensation for Differing Site Conditions shall be allowed if asserted after Final Payment.

**4.3.10 Continuous Work.** Contractor shall, notwithstanding the existence of a Claim by Contractor that is disputed by County, maintain continuous performance, without interruption, suspension or slowing, of the Work and its other obligations (1) pending issuance by County of a Good Faith Determination of the Claim and (2) thereafter in compliance with the terms of such Good Faith Determination.

**4.4 NOTICE OF THIRD-PARTY CLAIMS**

County shall provide notification to Contractor within a reasonable time after receipt of any third-party claim relating to the Construction Contract. County shall be entitled to recover from Contractor its reasonable costs of providing such notification.

**4.5 WAIVERS OF RIGHTS BY CONTRACTOR**

**COUNTY AND CONTRACTOR ACKNOWLEDGE THAT IT IS IN THE INTERESTS OF BOTH PARTIES THAT CHANGES, DELAYS AND CLAIMS BE IDENTIFIED, QUANTIFIED, EVALUATED AND FINALLY RESOLVED PROMPTLY, CONTEMPORANEOUSLY WITH THE CIRCUMSTANCES FROM WHICH THEY ARISE, AND THAT THERE BE CERTAINTY WITH RESPECT TO THE FINALITY OF ANY RESOLUTION OF RELATED DISPUTES. ON**

THOSE PREMISES, AND IN FURTHER RECOGNITION OF THE FACT THAT IT WOULD BE EXREMELY DIFFICULT OR IMPOSSIBLE TO QUANTIFY, DEMONSTRATE OR PROVE THE HARM TO COUNTY IF ANY OF THE FOREGOING PREMISES IS NOT ACHIEVED DUE TO A FAILURE BY CONTRACTOR TO COMPLY WITH THE REQUIREMENTS OF THE CONTRACT DOCUMENTS CONCERNING TIMELY NOTICE OR SUBMISSIONS OF NOTICES AND CLAIMS RELATING TO CHANGES, DELAY AND CONTRACT ADJUSTMENTS, COUNTY AND CONTRACTOR AGREE THAT FAILURE BY CONTRACTOR TO CONFORM TO SUCH REQUIREMENTS OF THE CONTRACT DOCUMENTS SHALL IN AND OF ITSELF CONSTITUTE SUFFICIENT CAUSE AND GROUNDS, WITHOUT THE NECESSITY OF COUNTY DEMONSTRATING ANY ACTUAL HARM OR PREJUDICE, FOR IMPOSING UPON CONTRACTOR A FULL AND UNCONDITIONAL WAIVER BY CONTRACTOR OF ITS RIGHT TO A CONTRACT ADJUSTMENT AND OF ITS RIGHTS AND RECOURSE FOR RECOVERY OF ANY RELATED LOSS BY ANY LEGAL PROCESS OTHERWISE PROVIDED FOR UNDER APPLICABLE LAWS.

#### 4.6 GOOD FAITH DETERMINATIONS

Wherever in the Contract Documents it is provided that the County may or shall make a determination or decision in the exercise of good faith (including, without limitation, provisions for a Good Faith Determination by County), any such determination or decision that the person exercising such right on behalf of County believes in good faith to be a proper exercise of County's rights and to have a reasonable basis in fact, whether or not such determination is in fact proper, reasonable or correct or adjudged to be so, shall be complied with by Contractor without Delay to Contractor's performance of the Work. However, unless the Contract Documents expressly provides otherwise, neither such good faith determination or decision nor Contractor's compliance therewith shall be interpreted as precluding the Contractor from exercising its rights to seek adjudication of its rights in the manner permitted by these General Conditions or Applicable Laws.

#### 4.7 ESCROW BID DOCUMENTS

If the Bidding Documents obligate Contractor to submit Escrow Bid Documents, then submission by Contractor of its Escrow Bid Documents shall constitute a warranty and representation by Contractor that it has no other written documents or electronic files containing any information that Contractor was required to include, but failed to include, as part of its performing such obligation and Contractor agrees it shall have no right to submit for consideration by County, or offer into evidence in legal proceedings, in support of a request for Contract Adjustment or a Claim any such documentation or electronic files that Contractor so failed to include in its Escrow Bid Documents.

### ARTICLE 5 SUBCONTRACTORS

#### 5.1 SUBSTITUTION

**5.1.1 Substitutions Allowed.** There shall be no substitution of or addition to the Subcontractors except as permitted by Chapter 4 (commencing at §4100), Division 2, Part 1 of the California Public Contract Code (the "Act").

**5.1.2 Contractor's Own Expense.** Any increase in the cost or time of performance of the Work resulting from the replacement, substitution or addition of a Subcontractor shall be borne solely by Contractor at Contractor's Own Expense.

**5.1.3 Substantiation of Compliance.** At any time during performance of the Work it shall be the responsibility and burden of Contractor, if requested by County, to present clear and convincing evidence that Contractor is, and all times during the bidding and Award of the Construction Contract was, in full compliance with all of the applicable provisions of the Act. Failure by Contractor to present such evidence when requested shall be deemed a breach of this Section 5.1 and of the Act, thereby entitling County to exercise any or all of its rights and remedies under the Contract Document or Applicable Laws, including, without limitation, the right to cancel the Construction Contract or assess any penalties provided for by the Act.

**5.1.4 Splitting Prohibited.** Any attempt by Contractor to avoid compliance with the Act, such as, but not limited to, by splitting the work of subcontracts with Subcontractors into separate contracts or changes orders so as to not exceed the monetary threshold of the Act applicable to listing of Subcontractors, is strictly prohibited.

## 5.2 SUBCONTRACTUAL RELATIONS

**5.2.1 Written Agreements.** Contractor shall, by written agreement entered into between the Contractor and Subcontractors no later than twenty (20) Days after Award, require each Subcontractor, to the extent of the Work to be performed by the Subcontractor, to be bound to Contractor by terms of the Contract Documents and to assume toward Contractor all the obligations and responsibilities which Contractor, by the Contract Documents, assumes toward County and the Architect. Each subcontract agreement shall preserve and protect the rights of County and the Architect under the Contract Documents with respect to the Work to be performed by the Subcontractor so that subcontracting thereof will not prejudice such rights, and shall allow the Subcontractor, unless specifically provided otherwise in the subcontract agreement, the benefit of all rights, remedies and redress against Contractor that Contractor, by the Contract Documents, has against County. Contractor shall require each first-Tier Subcontractor to enter into similar agreements with their sub-subcontractors. Copies of applicable portions of the Contract Documents shall be made available by Contractor to the first-Tier Subcontractors and each Subcontractor shall similarly make copies of such Contract Documents available to each Subcontractor of a lower-Tier with which it contracts. Without limitation to the foregoing, each contract that is entered into by a Subcontractor, of any Tier, shall, without limitation, require the Subcontractor:

- .1 to perform the Work in accordance with the terms of the Contract Documents;
- .2 to assume toward Contractor all the obligations and responsibilities which Contractor assumes toward County by the Contract Documents;
- .3 to preserve and protect the rights of County under the Contract Documents with respect to the Work to be performed by the Subcontractor so that subcontracting thereof will not prejudice such rights;
- .4 to waive all rights (including, without limitation, rights of subrogation) that the Subcontractor or its insurers may have against County and others required by the Contract Documents to be named as additional insureds, for Losses covered by insurance carried by Contractor or County, except for such rights as the Subcontractor may have to the proceeds of such insurance held by County or such other additional insured;
- .5 to afford County and entities and agencies designated by County the same rights and remedies afforded to them under the Contract Documents with respect to access to, and the right to audit and copy at County's cost, all of the Subcontractor's books, records, contracts, correspondence, instructions, drawings, receipts, vouchers, purchase orders, memoranda and other records and documents relating to the Work and requiring the Subcontractor to preserve all such records and other items for a period of ten (10) years after Final Completion;
- .6 to recognize the rights of the County under Section 5.3, below, including, without limitation, the County's right to (1) accept assignment of the Subcontractor's agreement, (2) accept assignment of Contractor's rights as obligee under a performance bond furnished by a first-Tier Subcontractor, (3) to retain the Subcontractor pursuant to the terms of its agreement with Contractor to complete the unperformed obligations under its agreement, and, (4) if requested by the County, to require that the Subcontractor execute a written agreement on terms acceptable to the County confirming that the Subcontractor is bound to the County under the terms of its agreement with Contractor;
- .7 to submit applications for payment, requests for change orders and extensions of time and claims, and to comply with all other notice and submission requirements of the Contract Documents, sufficiently in advance to allow Contractor time to comply with its obligations under the Contract Documents;
- .8 to purchase and maintain insurance in accordance with the requirements of the Contract Documents;
- .9 to defend and indemnify the Indemnitees on the same terms as provided in Section 3.18, above;
- .10 to comply with the nondiscrimination (Article 16, below) and prevailing wage (Section 3.19, above) provisions of these General Conditions;

.11 limiting the Subcontractor's right to additional compensation or extension of time due to Differing Site Conditions and Design Discrepancies in accordance with the provisions of Section 3.2, above;

.12 to provide for a right of termination for convenience by Contractor that limits the Subcontractor's right to compensation to an allocable share of the subcontract price that corresponds to the percentage of the Work properly performed by the Subcontractor, with no additional sum payable for any other Losses, including, without limitation, prospective damages, lost profits or consequential damages, of any kind; and

.13 to provide that time is of the essence to each of the Subcontractor's obligations.

**5.2.2 Copies.** Contractor shall, upon request by County made at any time, furnish to County true, complete, and executed copies of all contracts with the Subcontractors and amendments, modifications and change orders thereto. Progress payments shall not be made for items of the Work for which County has not received such documents following request therefor by County.

**5.2.3 No Brokering.** Contractor shall not permit any portion of the Work to be contracted to a firm acting as a broker, factor or other entity not actually performing a substantial portion of the Work with its own forces; provided, however, that nothing herein shall be interpreted as precluding the right of a Subcontractor who has agreed to provide all of the materials and labor for a trade to subcontract the labor portion only to a sub-subcontractor.

**5.2.4 Third-Party Rights.** Contractor acknowledges that County is an intended third-party beneficiary to all contracts between Contractor and its first-Tier Subcontractors. Notwithstanding the foregoing or anything else to the contrary in the Contract Documents, there is no intent on the part of County or Contractor to create any rights (including, without limitation, third-party beneficiary rights) in favor of any Subcontractor, of any Tier, against County and nothing contained in the Contract Documents and no course of conduct, act or omission on the part of County shall be construed as creating a direct or indirect contractual right in favor of any Subcontractor, of any Tier, and against County.

**5.2.5 All Subcontractor Tiers.** It is the Contractor's obligation to see to it that all obligations of the Contractor are assumed by (or, "flow down") to the Subcontractors, of every Tier, by the inclusion of contractual provisions requiring each of the Subcontractors, of every Tier, to bind not only themselves but their lower-Tier Subcontractors to the obligations assumed by Contractor under the Contract Documents.

### 5.3 CONTINGENT ASSIGNMENT OF SUBCONTRACTS

**5.3.1 Contingent Assignment.** Contractor hereby contingently assigns to County, or to such person or entity as County, in its sole and absolute discretion, designates, all of its interest in subcontracts entered into by Contractor with its first-Tier Subcontractors. If a first-Tier Subcontractor has provided a performance bond, then Contractor's rights under such performance bond are likewise hereby deemed contingently assigned to County or its designee and provision shall be made in the performance bond for surety's consent to such contingent assignment.

**5.3.2 Acceptance by County.** The contingent assignments provided for by this Section 5.3 will be effective only as to those subcontracts and performance bonds which County or its designee accepts in writing. Said acceptance is the sole condition upon which the effectiveness of such assignments are contingent. County or its designee may accept any such assignment at any time during the course of the Work and prior to Final Completion. Such contingent assignments are part of the consideration to County for entering into the Construction Contract with Contractor and may not be withdrawn prior to Final Completion.

**5.3.3 County Obligation.** County's or its designee's sole obligation in the event it accepts a contingent assignment of a subcontract under this Section 5.3 shall be to pay in accordance with the terms of such subcontract for Work performed after written notice of acceptance of such assignment. In the event County directs that such assignment be made to County's designee, then such designee only, and not County, shall be solely liable under such assignment for Work performed after written notice of acceptance of such assignment.

### 5.4 COMMUNICATIONS BY COUNTY

County shall have the right to communicate, orally or in writing, with the Subcontractors with respect to matters that are related to Contractor's performance of its obligations under the Contract Documents. Nothing herein shall be interpreted

as extending to County the right as part of such communications to direct the manner in which any Subcontractor performs the Work. Except as otherwise provided in the Construction Contract or these General Conditions, Contractor shall be provided with a copy of all such communications that are in writing. Such communications shall not create, or be interpreted as creating, any contractual obligation of County to any Subcontractor.

#### 5.5 DOCUMENT AVAILABILITY

Contractor shall make available to each proposed Subcontractor with whom it enters into a contract for performance of any portion of the Work, prior to the execution of the subcontract agreement, copies of the Contract Documents to which the Subcontractor will be bound so as to ensure that all matters disclosed thereby are taken into consideration and included in the terms of such contracts and shall identify to such Subcontractor the terms and conditions of the proposed subcontract agreement which may be at variance with the Contract Documents. The Subcontractors shall similarly be required to make copies of applicable portions of such documents available to their respective proposed sub-subcontractors or sub-subconsultants.

#### 5.6 NO LIABILITY OF COUNTY

Nothing set forth in this Article 5, and no action taken by County with respect to review or approval of the Subcontractors or their contracts, shall impose any liability or responsibility upon County nor relieve Contractor of its responsibilities under the Contract Documents or Applicable Laws.

### ARTICLE 6 COUNTY'S OWN FORCES AND SEPARATE CONTRACTORS

#### 6.1 COUNTY'S RIGHT TO PERFORM CONSTRUCTION WITH OWN FORCES AND TO AWARD SEPARATE CONTRACTS

6.1.1 **Right of County.** County reserves the right to perform construction or operations related to the Project with County's own forces and to award other contracts to Separate Contractors in connection with other portions of the Project or other construction or operations on the Site.

6.1.2 **Separate Contractors.** Contractor shall ascertain to its own satisfaction the scope of the Project and the nature of any other contracts that have been or may be awarded by County to Separate Contractors in prosecution of the Project. Contractor shall look solely to such Separate Contractors, and County shall not be responsible, for any Losses for which Contractor is not provided a right or recovery by means of a right to Contract Adjustment for Compensable Change or Compensable Delay, that are suffered by Contractor or the Subcontractors, of any Tier, resulting directly or indirectly from the conduct of such work by the Separate Contractors.

6.1.3 **Coordination.** Nothing in the Contract Documents creates or will create any duty on the part of County to coordinate the Work of Contractor with the work of Separate Contractors. Contractor shall, when directed to do so by County, participate with the Separate Contractors and County in reviewing the Separate Contractors' construction schedules. Contractor and Separate Contractors will coordinate all work with the other so as to facilitate the general progress of the Project. Contractor agrees that any recovery of Losses for which Contractor is not provided a right or recovery by means of a right to Contract Adjustment for Compensable Change or Compensable Delay, that are suffered by Contractor due to a failure by a Separate Contractor to coordinate its work with the Work of Contractor will be sought directly against the Separate Contractors as set forth elsewhere in this Article 6.

6.1.4 **Disputes.** Contractor and County agree that Separate Contractors in direct contractual privity with County are third party beneficiaries of the Contract Documents, but only to the extent of claims and causes of action against Contractor arising out of or resulting from Contractor's performance or failure of performance under the Contract Documents or any act or omission of Contractor or the Subcontractors causing Loss to such Separate Contractors. Contractor consents to being sued by Separate Contractors for Losses caused by Contractor or any of the Subcontractors. Contractor hereby waives lack of privity of contract with such Separate Contractors as a defense to such actions.

6.1.5 **Remedy.** If Contractor as a result of the acts or omissions of one or more of the Separate Contractors suffers a Loss that is not compensated by means of a right given to Contractor under the Contract Documents to a

Contract Adjustment, then Contractor's sole remedy is to assert a claim or cause of action directly against the Separate Contractor(s) causing the Loss and Contractor hereby releases, acquits, holds harmless and forever discharges County of and from any and all liability for such Loss.

## 6.2 MUTUAL RESPONSIBILITY

6.2.1 **Use of Site.** Nothing contained in the Contract Documents shall be interpreted as granting Contractor exclusive use or occupancy of the Site. Contractor shall afford County's own forces and the Separate Contractors reasonable opportunity for introduction and storage of their materials and equipment and performance of their activities. Contractor shall not Delay the work of the Separate Contractors or County's own forces.

6.2.2 **Adjoining Work.** If part of Contractor's performance of the Work depends for proper execution or results upon construction or operations by County's own forces or Separate Contractors, Contractor shall, prior to proceeding with that portion of the Work, carefully inspect such construction and operations and promptly report in writing to the County apparent discrepancies or defects in such other construction that would render it unsuitable for such proper execution and results. Contractor will be responsible, at Contractor's Own Expense, for Losses to County resulting from any such discrepancies or defects not reported in accordance with this Paragraph 6.2.1 that were apparent or that should have been apparent to Contractor on careful inspection.

6.2.3 **Damage.** Contractor shall promptly remedy Loss caused by Contractor or its Subcontractors to completed construction or partially completed construction on the Site, or to property of County or the Separate Contractors.

6.2.4 **Disputes.** Contractor shall notify the County in writing within five (5) Days if it believes it has experienced or is experiencing any Delay or Loss due to the activities of County's own forces or the Separate Contractors or in the event of any dispute with County's own forces or a Separate Contractor.

6.2.5 **Settlement of Disputes.** If Contractor or any Subcontractor causes a Loss to a Separate Contractor, then Contractor will promptly settle the matter directly with the Separate Contractor and will defend, indemnify and hold County and the other Indemnitees harmless from any and all effects of such Loss in accordance with the terms of Section 3.18, above.

## 6.3 ALLOCATION OF CLEANUP COSTS

If a dispute arises among Contractor, the Separate Contractors and/or County as to the responsibility for maintaining the Site and surrounding area free from waste materials and rubbish, County may clean up such waste materials and rubbish and allocate the cost among those responsible as County determines in good faith to be just.

## ARTICLE 7 CHANGES IN THE WORK

### 7.1 CHANGES

7.1.1 **General.** County is authorized to make Changes in the Work in accordance with the provisions of this Article 7.

7.1.2 **Contract Adjustments.** Contract Adjustments shall only be permitted as follows: (1) the Contract Price shall only be adjusted by means of a Change Order or Unilateral Change Order for Compensable Change, Deleted Work or Compensable Delay; and (2) the Contract Time shall be adjusted by means of a Change Order or Unilateral Change Order for Excusable Delay, Compensable Delay or Deleted Work. All Contract Adjustments to the Contract Price shall conform, without limitation, to the requirements of this Article 7. All Contract Adjustments to the Contract Time shall conform, without limitation, to the applicable requirements of this Article 7 and Article 8, below.

7.1.3 **Exclusive Rights.** The rights expressly set forth in the Contract Documents for Contract Adjustments constitute Contractor's exclusive rights for additional compensation or extensions of time and are intended to be in lieu of and wholly replace any other such rights and remedies that Contractor has under Applicable Laws for recovery or

relief on account of Loss or Delay in connection with performance of the Work, it being the intent of the County and Contractor that if circumstances arise for which the Contract Documents do not provide to Contractor an express right to a Contract Adjustment, then such omission of an express right shall conclusively be deemed to mean that no right to a Contract Adjustment was intended; and, consistent with that intent, no right to a Contract Adjustment on account of such circumstances shall by any means, legal or equitable, of interpretation, construction, inference, implication or application be considered, found or adjudged to exist.

**7.1.4 Written Authorization.** Any Change performed by Contractor pursuant to any direction other than a duly authorized and executed Change Order, Unilateral Change Order or Construction Change Directive shall be at Contractor's Own Expense.

**7.1.5 Prompt Performance.** Subject to the procedures set forth in this Article 7 and elsewhere in the Contract Documents, all Changes shall be performed promptly and without Delay.

## **7.2 SIGNATURES AND AUTHORIZATIONS**

**7.2.1 Parties.** A Change Order shall be executed by County and Contractor. A Unilateral Change Order shall be executed by the County. Construction Change Directives shall be executed in accordance with Section 7.5, below.

**7.2.2 Form.** Change Orders, Unilateral Change Orders and Construction Change Directives shall be executed using forms furnished by County or, if requested by County, using forms furnished by Contractor that are approved by County.

### **7.2.3 Authorization.**

#### **.1 Compensable Changes.**

**(1) Director of Facilities Management.** A Compensable Change shall be performed by Contractor only if authorized by a Change Order, Unilateral Change Order or Construction Change Directive signed by the Director of Facilities Management in accordance with the requirements of this Article 7; provided, however, that the Director of Facilities Management's authority to bind the County to a Contract Adjustment shall be subject to the limitations of Public Contract Code §20142.

**(2) County's Project Manager.** The person identified by County as its "project manager" for the Project shall have the right to exercise the Director of Facilities Management's authority under this Paragraph 7.2.3, but only if and to the extent that such authority is expressly given to such project manager in a writing signed by the Director of Facilities Management (and not by a designee of the Director of Facilities Management).

**(3) Board of Supervisors.** Except as otherwise provided in Subparagraph 7.2.3.1 (4), below, if a Contract Adjustment increasing the Contract Price would exceed the limitations of Public Contract Code §20142, then in addition to written authorization by the Director of Facilities Management, such Compensable Change shall be performed only if approved by a vote of the Board of Supervisors in accordance with the requirements of Applicable Laws.

**(4) Disputed Changes.** If a dispute arises between County and Contractor over (a) whether a particular portion of the Work constitutes a Compensable Change or (b) the amount of the Contract Adjustment to which Contractor is entitled on account of a Compensable Change, then, notwithstanding such dispute, the Contractor shall, if ordered to do so in a Construction Change Directive signed by the Director of Facilities Management, perform the disputed Work without Delay. Such direction by County shall not be interpreted as an agreement or admission by County that the disputed Change constitutes Extra Work or a Compensable Change for which Contractor is entitled to a Contract Adjustment. Compliance by Contractor with such direction shall not be interpreted as a waiver of Contractor's right to a Contract Adjustment if and to the extent that Contractor is entitled to a Contract Adjustment or Claim under the terms of the Contract Documents, including, without limitation, the right of Contractor to recover upon a Claim for the amount of any excess in the event that it is adjudged that the amount of the Contract Adjustment to which Contractor is entitled exceeds the limits of Public Contract Code §20142.



.2 WRITING OF ESSENCE. IT IS OF THE ESSENCE TO THE CONSTRUCTION CONTRACT BETWEEN CONTRACTOR AND COUNTY THAT ALL CHANGES MUST BE AUTHORIZED IN ADVANCE, IN WRITING, AS REQUIRED BY THIS ARTICLE 7. ACCORDINGLY, NO VERBAL DIRECTIONS, COURSE OF CONDUCT BETWEEN THE PARTIES, EXPRESS OR IMPLIED ACCEPTANCE OF CHANGES OR OF THE WORK, OR CLAIM THAT THE COUNTY HAS BEEN UNJUSTLY ENRICHED (WHETHER OR NOT THERE HAS BEEN SUCH ENRICHMENT) SHALL BE THE BASIS FOR A CONTRACT ADJUSTMENT IF CONTRACTOR HAS NOT OBTAINED ADVANCE WRITTEN AUTHORIZATION IN THE MANNER REQUIRED BY THIS ARTICLE 7.

### 7.3 CHANGE ORDERS

7.3.1 **Purpose.** The purpose of a Change Order is to establish the terms of the County's and Contractor's mutual agreement to a Contract Adjustment.

7.3.2 **Content.** A Change Order is a written instrument, prepared by the County, stating:

- .1 a Compensable Change or Deleted Work;
- .2 a Compensable Delay or Excusable Delay;
- .3 the amount of the Contract Adjustment, if any, to the Contract Price; and/or
- .4 the extent of the Contract Adjustment, if any, to the Contract Time.

### 7.4 UNILATERAL CHANGE ORDERS

7.4.1 **Purpose.** The purpose of a Unilateral Change Order is to establish the County's estimate of a disputed Contract Adjustment.

7.4.2 **Good Faith Determination.** The County's determination in a Unilateral Change Order of a Contract Adjustment shall be based upon a Good Faith Determination by County of the Contract Adjustment that is appropriate under the circumstances and consistent with the terms of the Contract Documents.

7.4.3 **Claim by Contractor.** If Contractor disputes any portion of the County's Good Faith Determination of a Contract Adjustment that is set forth in a Unilateral Change Order, Contractor shall file, within thirty (30) Days after issuance of the Unilateral Change Order by County, a Claim pursuant to Section 4.3, above. The amount of the Contract Adjustment requested in the Claim shall not exceed the difference between the amount (either in terms of dollar amount or number of Days) of the Contract Adjustment requested by Contractor and the amount (either in terms of dollar amount or number of Days) of the Contract Adjustment granted in the Unilateral Change Order. Contractor shall have no reserved right, and hereby waives any such right that may exist under Applicable Laws, to seek in such Claim a Contract Adjustment or recovery that is based upon any amount (either in terms of dollar amount or number of Days) that is in excess of such difference.

#### 7.4.4 WAIVER BY CONTRACTOR.

**FAILURE BY CONTRACTOR TO SUBMIT A CLAIM PURSUANT TO SECTION 4.3, ABOVE, WITHIN THIRTY (30) DAYS AFTER ISSUANCE OF A UNILATERAL CHANGE ORDER BY COUNTY SHALL, IN ACCORDANCE WITH THE PROVISIONS OF SECTION 4.6 OF THE GENERAL CONDITIONS, CONSTITUTE A WAIVER BY CONTRACTOR OF THE RIGHT TO FURTHER RECOURSE OR RECOVERY BASED ON AN ASSERTION THAT THE AMOUNT OF THE CONTRACT ADJUSTMENT ON ACCOUNT OF THE CHANGE OR DELAY DESCRIBED IN SUCH UNILATERAL CHANGE ORDER SHOULD BE DIFFERENT THAN THE AMOUNT OF THE COUNTY'S GOOD FAITH DETERMINATION OF THE CONTRACT ADJUSTMENT AS SET FORTH IN SUCH UNILATERAL CHANGE ORDER.**

## 7.5 CONSTRUCTION CHANGE DIRECTIVES

7.5.1 **Purpose.** The purpose of a Construction Change Directive is to: (1) direct the performance of a Change that does not involve a Contract Adjustment; (2) establish a mutually agreed basis for compensation to Contractor for a Compensable Change under circumstances where performance of the Compensable Change needs to proceed in advance of the County performing a full evaluation of the Contractor's rights relative to a Contract Adjustment; or (3) direct performance of Work or a Change with respect to which there exists a dispute or question regarding the terms of a Contract Adjustment.

7.5.2 **No Contract Adjustment.** A Construction Change Directive that directs the performance of Work or a Change that does not involve a Contract Adjustment to the Contract Price or Contract Time may be authorized by either the Director of Facilities Management or the County's project manager and shall be promptly performed by Contractor so as to not cause Delay to any other portion of the Work. A Construction Change Directive directing performance of a Change that does not contain any statement indicating that a Contract Adjustment is requested or required shall be conclusively presumed to be a Change that is not a Compensable Change and no Contract Adjustment increasing the Contract Price or Contract Time will be made on account thereof.

7.5.3 **Agreed Contract Adjustment.** A Construction Change Directive that contains a complete or partial agreement by the County and Contractor with respect to the Contractor's right to, or the amount of, a Contract Adjustment shall be authorized in accordance with, conform to the requirements of and be binding upon County and Contractor as provided for in, this Paragraph 7.5.3.

**.1 Complete Agreement.** Each Construction Change Directive involving a Compensable Change or Deleted Work with respect to which there is complete agreement on the terms of the Contract Adjustment shall comply with the following:

(1) **Statement of Agreement.** A statement shall be included that the County and Contractor are in agreement on all of the terms of the Contract Adjustment related to performance of such Compensable Change and set forth a full description of the terms of the Contract Adjustment, including, without limitation, its effect on the Contract Price and Contract Time.

(2) **Legal Effect.**

(a) **Upon Contractor.**

**THE AGREED TERMS OF THE CONTRACT ADJUSTMENT WITH RESPECT TO WHICH THERE IS A STATEMENT OF FULL AGREEMENT ON THE TERMS OF THE CONTRACT ADJUSTMENT FOR A CHANGE IN THE WORK SHALL BE FINAL AND BINDING UPON CONTRACTOR. ANY RIGHT OR CLAIM BY CONTRACTOR FOR ANY ADDITIONAL COMPENSATION OR EXTENSION OF TIME RELATING DIRECTLY OR INDIRECTLY TO SUCH CHANGE SHALL BE CONCLUSIVELY DEEMED WAIVED BY CONTRACTOR, EVEN IF THE CIRCUMSTANCES GIVING RISE TO SUCH ADDITIONAL COMPENSATION OR EXTENSION OF TIME WERE NOT SUSPECTED BY OR KNOWN TO THE CONTRACTOR AT THE TIME OF EXECUTION OF THE CONSTRUCTION CHANGE DIRECTIVE AND IF SUSPECTED OR KNOWN WOULD HAVE BEEN CONSIDERED BY CONTRACTOR TO HAVE BEEN MATERIAL TO CONTRACTOR'S AGREEMENT TO THE CONTRACT ADJUSTMENT SET FORTH IN THE CONSTRUCTION CHANGE DIRECTIVE.**

(b) **Upon County.** In recognition of the fact that Construction Change Directives may be issued under circumstances in which the County may not have had the access to pertinent information required for the County to fully evaluate the circumstances giving rise to the Change, it is agreed that neither the issuance nor execution of, nor any statement contained in, nor any course of conduct in connection with, a Construction Change Directive (including, without limitation, a Construction Change Directive that constitutes a full agreement by County and Contractor on the terms of a Contract Adjustment) shall be interpreted as a waiver, release or settlement of any of County's rights relating to the subject matter of the Construction Change Directive, or as creating or implying any right of Contractor to a Contract Adjustment, if it is found by County upon further investigation that circumstances existed, not known to County at the time of executing the Construction Change Directive, demonstrating that the Contractor was not in fact entitled to a Contract Adjustment or was entitled to a Contract Adjustment on different terms than those agreed to in the Construction Change Directive.

**.2 Partial Agreement.** Each Construction Change Directive involving a Compensable Change or Deleted Work with respect to which there is only agreement on a portion of the terms of a Contract Adjustment shall comply with the following:

**(1) Agreed Terms.** The Construction Change Directive shall state those terms of the Contract Adjustment as to which there is agreement.

**(a) Legal Effect.** Except to the extent of any additional open (i.e., non-agreed) terms stated or reserved in the Construction Change Directive, such agreement shall have the same legal effect set forth in Subparagraph 7.5.3.1 (2), above.

**(b) Time and Materials.** In the event that County and Contractor agree in the Construction Change Directive to the “time and materials” method of calculation set forth in Subparagraph 7.7.1.1 (4), below, but do not agree upon a maximum price, then the total cost to County for the Work covered by the Construction Change Directive shall under no circumstances exceed a price that is reasonable, competitive and fair to County given the amount and type of Work involved and the circumstances under which the Compensable Change is performed.

**(2) Open Terms.** The Construction Change Directive shall state those terms of the Contract Adjustment that are “open” or “disputed”; meaning those terms as to which the County and Contractor did not reach agreement.

**(a) ROM Estimate.** If such open terms involve the amount of the Contract Adjustment to the Contract Price or Contract Time on account of a Compensable Change, then the Construction Change Directive shall also include a Reasonable Order of Magnitude Estimate prepared by Contractor, or prepared by County and acknowledged in writing as accepted by Contractor, of the probable amount of the Contract Adjustment to the Contract Price and Contract Time associated with performance of the Compensable Change.

**(b) Legal Effect.** A Reasonable Order of Magnitude Estimate constitutes neither (i) a guarantee by Contractor that the amount of the Contract Adjustment to the Contract Price or Contract Time that may be associated with the Compensable Change or Deleted Work covered by such Construction Change Directive may not exceed the Reasonable Order of Magnitude Estimate nor (ii) authorization or agreement by County to a Contract Adjustment based on the amounts set forth in such Reasonable Order of Magnitude Estimate.

**(c) Time and Materials.** If County and Contractor state in the Construction Change Directive an agreement that the Contractor is entitled to a Contract Adjustment to the Contract Price on account of a Compensable Change, but do not state therein an agreement upon the method of calculation to be used for the Contract Adjustment from among the optional methods of calculation set forth in Paragraph 7.7.1, below, and if the County nonetheless directs Contractor to perform the Compensable Change pending future agreement on the amount of the Contract Adjustment, then it shall be conclusively presumed that County and Contractor have agreed that such Compensable Change shall be performed and compensated based upon the “time and materials” method of calculation set forth in Subparagraph 7.7.1.1 (4), below, and that the total Contract Adjustment for performance thereof shall under no circumstances exceed a price that is reasonable, competitive and fair to County given the amount and type of Work involved and the circumstances under which the Compensable Change is performed.

**7.5.4 Disputed Contract Adjustment.** Each Construction Change Directive involving a Contract Adjustment with respect to which there is a dispute or partial agreement shall, if Contractor is ordered to do so in a Construction Change Directive signed by the Director of Facilities Management, be performed by Contractor without Delay. Except as otherwise provided elsewhere in this Section 7.5, with respect to any open terms as to which the County and Contractor have not reached agreement both County and Contractor shall be deemed to have reserved their respective rights and defenses.

**7.5.5 Other Notices.** With respect to any Contract Adjustment or portion of a Contract Adjustment that is not fully resolved in a Construction Change Directive, neither issuance nor execution of such Construction Change Directive shall be interpreted as relieving Contractor of its obligation to comply with the requirements of these General Conditions relative to timely submission of notices required by the Contract Documents, including, without limitation, Notice of Change, Change Order Request, Notice of Delay or Request for Extension.

## 7.6 PROCEDURES

### 7.6.1 Notice of Change.

**.1 Submission.** Contractor shall submit a written Notice of Change to County if any instruction, request, drawing, specification, action, condition, omission, default or other circumstance occurs that constitutes a Compensable Change, Deleted Work, Compensable Delay or other matter that may involve or require a Contract Adjustment (additive or deductive). Such notice shall be provided prior to commencement of performance of the Work affected and no later than three (3) working days after the Discovery Date of such circumstance.

**.2 Form.** Notices of Change shall be provided using forms furnished by County or, if requested by County, using forms furnished by Contractor that are approved by County. Failure by County to request or approve a particular form shall not relieve Contractor of its obligation to provide a Notice of Change in a written form that complies with the requirements specified in Subparagraph 7.6.1.3, below.

**.3 Content.** Each Notice of Change in order to be considered complete shall include:

**(1)** a general statement of the circumstances giving rise to the Notice of Change (including, without limitation, identification of any related Construction Change Directive);

**(2)** a Reasonable Order of Magnitude Estimate by Contractor of any related Contract Adjustments (additive and deductive) to the Contract Price; and,

**(3)** if such circumstances involve a right to adjustment of the Contract Time due to Compensable Delay or Excusable Delay that has not been waived pursuant to Subparagraph 8.2.2.4, below, or Subparagraph 8.2.3.4, below, Contractor shall include, if not previously provided, a complete and timely Notice of Delay.

### **.4 WAIVER BY CONTRACTOR.**

**FAILURE BY CONTRACTOR TO PROVIDE A COMPLETE AND TIMELY NOTICE OF CHANGE UNDER CIRCUMSTANCES WHERE A NOTICE OF CHANGE INVOLVING A CHANGE IS REQUIRED BY THIS PARAGRAPH 7.6.1 SHALL, IN ACCORDANCE WITH THE PROVISIONS OF SECTION 4.6 OF THE GENERAL CONDITIONS, CONSTITUTE A WAIVER BY CONTRACTOR OF THE RIGHT TO A CONTRACT ADJUSTMENT ON ACCOUNT OF SUCH CIRCUMSTANCES AND A WAIVER OF ANY RIGHT TO FURTHER RECOURSE OR RECOVERY BY REASON OF OR RELATED TO SUCH CHANGE.**

**.5 Deductive Adjustments.** Failure by Contractor to submit a timely or proper Notice of Change under circumstances in which a Notice of Change is required shall in no way affect County's right to any deductive Contract Adjustment on account of such circumstances.

### 7.6.2 Change Order Request.

**.1 Submission.** With respect to any matter that may involve or require a Contract Adjustment (additive or deductive) of the Contract Price, Contractor shall, within fourteen (14) Days after receipt by the County of a Notice of Change pursuant to Paragraph 7.6.1, above, submit to the County a written Change Order Request.

**.2 Form.** Change Order Requests shall be provided using forms furnished by County or, if requested by County, using forms furnished by Contractor that are approved by County. Failure by County to request or approve a particular form shall not relieve Contractor of its obligation to provide a Change Order Request in a written form that complies with the requirements stated in Subparagraph 7.6.2.3, below.

**.3 Content.** Each Change Order Request in order to be considered complete shall include:

**(1)** a detailed description of the circumstances for the Compensable Change, Deleted Work or Compensable Delay;

(2) a complete, itemized cost breakdown (additive and deductive) of the Allowable Costs that form the basis for the Contractor's request for Contract Adjustment, including: (a) if the pricing is based on time and materials charges, all of Contractor's and each Subcontractor's Allowable Costs (including, without limitation, quantities, hours, unit prices, and rates) and Allowable Markups and (b) if the pricing is in the form of a lump sum price a detailed breakdown of the lump sum price into its component and individual items of Allowable Costs and Allowable Markup; and

(3) if such circumstances involve a right to a Contract Adjustment of the Contract Time due to Compensable Delay or Excusable Delay that has not been waived pursuant to Subparagraph 8.2.2.4, below, or Subparagraph 8.2.3.4, below, Contractor shall include, if not previously provided, a complete and timely Request for Extension.

#### **.4 WAIVER BY CONTRACTOR.**

**FAILURE BY CONTRACTOR TO PROVIDE A COMPLETE AND TIMELY CHANGE ORDER REQUEST UNDER CIRCUMSTANCES WHERE A CHANGE ORDER REQUEST INVOLVING A CHANGE IS REQUIRED BY THIS PARAGRAPH 7.6.2 SHALL, IN ACCORDANCE WITH THE PROVISIONS OF SECTION 4.6 OF THE GENERAL CONDITIONS, CONSTITUTE A WAIVER BY CONTRACTOR OF THE RIGHT TO A CONTRACT ADJUSTMENT ON ACCOUNT OF SUCH CIRCUMSTANCES AND A WAIVER OF ANY RIGHT TO FURTHER RECOURSE OR RECOVERY BY REASON OF OR RELATED TO SUCH CHANGE.**

**.5 Deductive Adjustments.** Failure by Contractor to submit a timely or proper Change Order Request under circumstances in which a Change Order Request is required shall in no way affect County's right to any deductive Contract Adjustment on account of such circumstances.

**7.6.3 Formal Notice of Essence.** Contractor recognizes and acknowledges that timely submission of a formal Notice of Change and Change Order Request, whether or not the circumstances of the Change may be known to the County or available to County through other means, is not a mere formality but is of crucial importance to the ability of County to promptly identify, prioritize, evaluate and mitigate the potential effects of Changes. Any form of informal notice, whether verbal or written (including, without limitation, statements in Requests for Information, statements at regular job meetings or entries on monthly reports, daily logs or job meeting minutes), that does not strictly comply with the formal requirements of Paragraph 7.6.1, above, and Paragraph 7.6.2, above, shall therefore be insufficient.

#### **7.7 PRICING**

##### **7.7.1 Basis of Calculation.**

**.1 Changes Not Involving Time.** Contract Adjustments to the Contract Price on account of Compensable Changes or Deleted Work, other than Contract Adjustments to the Contract Price for Compensable Delay, shall be calculated according to one of the following methods:

(1) **Lump Sum.** By mutual acceptance of a lump sum proposal from Contractor based solely on Allowable Costs and Allowable Markups, that is properly itemized and supported by sufficient substantiating data to permit evaluation.

(2) **Unit Prices.** By the unit prices set forth in the Construction Contract or such other unit prices as are subsequently and mutually agreed to in writing between the County and Contractor, with no amount added thereto for Allowable Markups.

(3) **Estimating Guides.** For Compensable Changes with respect to which County elects to make a unilateral and final determination pursuant to Paragraph 7.7.11, below, by the sum of all the following:

(a) **Materials.** The reasonable value of materials and equipment documented as having been actually incorporated into the Work, which reasonable value may be less but shall never be more than Contractor's actual Allowable Costs therefor.

**(b) Labor.** An estimate of the reasonable costs of labor, installation and other services using the lower of the estimated prices for the locale of the Project (or if prices are not reported for the locale of the Project, the estimated prices that are reported for the region in which the Project is located) as reported in following recognized estimating guides: (i) R. S. Means Company, Inc. Building Construction Cost Data, Western Region - Latest Edition, P.O. Box 800 Kingston, MA 02364-800; or (ii) Lee Saylor, Inc. Current Construction Costs - Latest Edition, 9420 Topanga Canyon Boulevard, Woodland Hills, CA 91311.

**(c) Allowable Markup.** The amount that results when the applicable Allowable Markup is applied to the sum of the amounts derived from preceding Clauses (a) and (b) of this Subparagraph 7.7.1.1 (3).

**(4) Time and Materials.**

**(a) Compensable Changes.**

**(i) Contract Adjustment.** With respect to Compensable Changes, if none of the methods provided for in Subparagraphs 7.7.1.1 (1) through 7.7.1.1 (3), above, is applicable, then the additive amount increasing the Contract Price shall be calculated by taking (A) the total of the reasonable expenditures by Contractor and its Subcontractors, documented in the manner required by Paragraph 7.7.2, below, for Allowable Costs that are actually and directly incurred and paid in the performance of the Compensable Change, not to exceed for any Compensable Change a price that is reasonable, competitive and fair to County given the amount and type of Work involved and the circumstances under which the Compensable Change is performed, and (B) adding thereto the amount which results when the applicable Allowable Markups are applied to such total specified in preceding Clause (A) of this Subparagraph 7.7.1.1 (4) (a) (1).

**(ii) T & M/Guaranteed Maximums.** A Contract Adjustment that is calculated pursuant to this Subparagraph 7.7.1.1 (4) shall be subject to a not-to-exceed or guaranteed maximum price if such not-to-exceed or guaranteed maximum price has been mutually agreed upon between County and Contractor.

**(iii) Lump Sum Options.** If Contractor has reason to believe that a lump sum or unit price for a Subcontractor's performance of a portion of Extra Work authorized to be performed on a time and materials basis is available and Contractor has reason to believe such price is lower than the price that would be charged by the Subcontractor pursuant to the foregoing time and materials calculation, then Contractor has an obligation to inform County of that fact (along with the provision to the County of a complete itemized breakdown in accordance with Subparagraph 7.6.2.3(2), above) so as to afford County the opportunity, on a fully informed basis as to the component Allowable Costs and Allowable Markups that comprise such price, to avail itself of such favorable pricing.

**(b) Deleted Work.** With respect to Deleted Work (whether or not the Deleted Work involves a related Compensable Change as described in Paragraph 7.7.8, below), if none of the methods provided for in Subparagraphs 7.7.1.1 (1) through 7.7.1.1 (3), above, is applicable, then, in addition to the reduction, if any, that may be due to Owner pursuant to Subparagraph 8.2.6.2, below, (pertaining to Contract Adjustments shortening the Contract Time due to Deleted Work) and any additional reductions or credits to which County may be entitled under Paragraph 7.7.5, below, the Contract Price shall be reduced by the greater of either:

**(i)** the value assigned to the Deleted Work in the Schedule of Values attached to the Construction Contract, inclusive of all estimated markups by Contractor and any Subcontractor for overhead and profit set forth in the Schedule of Values (or, if insufficient detailed information on costs, overhead and profit for the Deleted Work is explicitly assigned in the Schedule of Values, as derived from the cost, bidding and/or estimating information that formed the basis for the establishment of the values set forth in such Schedule of Values); or

**(ii)** a reasonable estimate of the value of the Deleted Work (inclusive of all costs, overhead and profit) as of the date that the Construction Contract was executed by County and Contractor.

**.2 Changes Involving Time.** Contract Adjustments that are based on an extension of the Contract Time for Compensable Delay or a shortening of the Contract Time due to Deleted Work shall be calculated in the manner stated in the provisions of Section 3.3 of the Construction Contract and Article 8, below. Contract

Adjustments that are based on an acceleration in performance of the Work that is ordered by County in writing to overcome a Compensable Delay for which the Contractor is entitled to an extension of the Contract Time that has been properly requested and is not granted by County due to a County decision to accelerate rather than extend the Contract Time shall be calculated in the manner stated in the provisions of Article 8, below.

**7.7.2 Time and Materials Documentation.** Without limitation to any other provisions of the Contract Documents, Contractor's right to reimbursement of Allowable Costs incurred by Contractor or Subcontractors in the performance of a Compensable Change for which the Contract Adjustment is calculated pursuant to the time and materials method set forth in Subparagraph 7.7.1.1 (4), above, shall be conditioned on Contractor's compliance with the following conditions with respect to documentation of the Extra Work that is involved in the performance of the Compensable Change:

**.1 Labor.** At the close of each Day on which such Extra Work is performed, Contractor shall submit to County and, if requested, to the Inspector of Record, an Extra Work report, on forms provided by County, that sets forth with respect to each and all of the actual hours spent in performance of the Extra Work on the Day that the Extra Work was performed the following: the names of the workers, their classifications, hours worked and hourly rates. Such forms shall include a written certification by Contractor's project manager or superintendent at the time of submission that the information contained therein is complete and accurate.

**.2 Materials, Equipment.** At the close of each Day on which such Extra Work is performed, Contractor shall submit to County and, if requested, to the Inspector of Record, an Extra Work report, on forms provided by County, that sets forth with respect to each and all of the materials and equipment used or consumed in the performance of the Extra Work on the Day that the Extra Work was performed, the following: a list of the materials and equipment, prices or rates charged, in the case of equipment a description of the type of equipment, identification number, and hours of operation (including loading and transportation), and copies of delivery tickets, invoices or other documentation confirmatory of the foregoing.

**.3 Other Expenditures.** At the close of each Day on which such Extra Work is performed, Contractor shall submit to County and, if requested, to the Inspector of Record, an Extra Work report, on forms provided by County, that sets forth a list of other expenditures constituting Allowable Costs incurred in performance of the Extra Work on the Day that the Extra Work was performed, along with documentation verifying the amounts thereof in such detail as County may require.

**.4 Subsequent Documentation.** Documentation not available on any Day that a portion of the Extra Work is performed shall be submitted as soon as they are available but not later than twenty-one (21) Days after the earlier of the Day of delivery or incorporation of the particular item of Extra Work at the Site.

**.5 Subcontractor Costs.** Extra Work performed by Subcontractors on a time and materials basis shall documented in the same manner as required of Contractor under this Paragraph 7.7.2. If Owner approves of a lump sum price for a Subcontractor's performance of Extra Work, then Contractor shall submit in lieu of the documentation otherwise required by this Subparagraph 7.7.2.5, such documentation as may be requested by Owner confirming the Extra Work performed on any given Day.

**.6 Authentication.** In addition to the foregoing, County may require that Contractor comply with other reasonable requirements pertaining to observation and verification of time and materials work and authentication of time and materials tickets and invoices by persons designated by County for such purpose.

**.7 WAIVER BY CONTRACTOR.**

**THE FAILURE OF CONTRACTOR TO SUBMIT AUTHENTICATION OF COSTS IN THE MANNER REQUIRED BY THIS PARAGRAPH 7.7.2 SHALL, IF COUNTY ELECTS IN ITS REASONABLE DISCRETION TO TREAT IT AS SUCH, CONSTITUTE A WAIVER BY CONTRACTOR OF ANY RIGHT TO A CONTRACT ADJUSTMENT FOR THE ALLOWABLE COSTS INCURRED FOR PERFORMANCE OF THAT PORTION OF THE EXTRA WORK FOR WHICH CONTRACTOR HAS FAILED TO PROVIDE SUCH AUTHENTICATION.**

**7.7.3 Allowable Costs.** The term "Allowable Costs" (1) means the costs that are listed in this Paragraph 7.7.3 and (2) excludes costs that do not constitute Allowable Costs under Paragraph 7.7.4, below:

**.1 Labor.** Straight-time wages and, if specifically authorized by County in writing, overtime wages for employees employed at the Site, including wages for employees of Subcontractors performing engineering or fabrication detailing at locations other than at the Site. The use of a labor classification which would increase the Allowable Costs for Extra Work will not be permitted unless Contractor establishes the necessity for the use of such labor classification. Overtime wages and salaries shall only constitute an Allowable Cost to the extent permitted by the Contract Documents and only as specifically authorized by County in writing setting forth the amount of overtime anticipated, which amount shall be deemed the maximum amount of overtime reimbursable as an Allowable Cost. As part of the Allowable Costs permitted by this Subparagraph 7.7.3.1, Contractor shall be entitled to be reimbursed wages paid to a "time and materials clerk" employed by Contractor to track and document Compensable Changes that are authorized or permitted to be performed on a time and materials basis pursuant to Subparagraph 7.7.1.1 (4), above, provided that the time expended by such employee is verified by contemporaneously maintained time sheets maintained by such clerk showing the actual time spent tracking and documenting the performance of Compensable Changes separately from other tasks or functions performed by such clerk.

**.2 Benefits.** To the extent based on wages reimbursable under Subparagraph 7.7.3.1, above, net actual employer costs of payroll taxes (FICA, Medicare, SUTA, FUTA), insurance (as adjusted for experience modifiers, premium discounts, dividends, rebates, expense constants, assigned risk pool costs, net cost reductions due to policies with deductibles for self-insured losses, assigned risk rebates, or the like), health and welfare, pension, vacation, apprenticeship funds and benefits required by lawful collective bargaining agreements.

**.3 Materials.** Costs of materials used or consumed in the Work. Such costs for Extra Work shall be at a price that is competitive to the price charged for similar materials delivered within the general vicinity of the Site by other subcontractors, suppliers, manufacturers and distributors. The cost for any such item that is not new shall mean "fair market value" based on the estimated price a reasonable purchaser would pay to purchase the used material at the time it was used or consumed for the Work, which fair market value must be declared by Contractor and approved by County prior to such use or consumption.

**.4 Taxes.** Sales taxes on the costs of the materials described in Subparagraph 7.7.3.3, above.

**.5 Equipment Rental.** Rental charges for necessary machinery and equipment, exclusive of hand tools, whether rented from Contractor or others. No charge shall be allowed or credit required for items which have a replacement value of One Hundred Dollars (\$100) or less. The allowable rental rates shall include the cost of fuel, oil, lubrication, supplies, small tools, necessary attachments, loading, transportation, repairs and maintenance of any kind, depreciation, storage, insurance and all incidentals. If equipment used for Extra Work is used intermittently and, when not in use, could be returned to its rental source at less expense to County than holding it at the Site, it shall be returned, unless Contractor elects to keep it at the Site at no expense to County. Under no circumstances shall the aggregate rentals chargeable for any item of equipment exceed the following percentages of the fair market value of the item at the time of its first use for the Work, which fair market value must be declared by Contractor and approved by County prior to the first use of such item in or for the Work: (1) if the item is owned by the Contractor or any company affiliated with Contractor, the aggregate rentals shall not exceed 75% of such fair market value; and (2) if the item is not owned by the Contractor or any company affiliated with Contractor, the aggregate rentals shall not exceed 100% of such fair market value. All equipment shall be acceptable to County, in good working condition, and suitable for the purpose for which it is to be used. Manufacturer's ratings and manufacturer's approved modifications shall be used to classify equipment, and it shall be powered by a unit of at least the minimum rating recommended by the manufacturer. The cost of major repairs or overhauls of rented equipment or machinery shall be deemed a cost of business of the lessor of such equipment or machinery and shall not be reimbursable as an Allowable Cost.

**.6 Subcontractors.** Payments made by Contractor to Subcontractors; provided, however, that: (1) such payments are not otherwise precluded from reimbursement by the terms of the Contract Documents; (2) such payments are for Work performed in accordance with the requirements of the Contract Documents; (3) such payments are for amounts properly due and owing by Contractor under the terms of the governing contract between Contractor and such Subcontractor; and (4) in the case of payments for extra work performed by a Subcontractor pursuant to a change order executed between Contractor and a Subcontractor the change order was executed under circumstances in which the Subcontractor was entitled under the terms of its contract with Contractor to receive the amount of additional compensation agreed to in the change order.

**.7 Royalties, Permits.** Costs of royalties and permits.



**.8 Bonds.** Costs of bonds required to be furnished by Contractor (not Subcontractors) under the terms of the Contract Documents; provided, however, that such additional costs chargeable for Extra Work or credited for Deleted Work shall not exceed two percent (2%) of the costs described in Subparagraphs 7.7.3.1 through 7.7.3.7, above.

**7.7.4 Costs Not Allowed.** Allowable Costs shall not include any of the costs associated with any of the following (whether incurred by Contractor or a Subcontractor):

- .1** superintendent(s);
- .2** assistant superintendent(s);
- .3** project engineer(s);
- .4** project manager(s);
- .5** scheduler(s);
- .6** estimator(s);
- .7** drafting or detailing (except as otherwise permitted by Paragraph 7.7.3.1, above)
- .8** vehicles not dedicated solely to the performance of the Work;
- .9** small tools with a replacement value not exceeding One Hundred Dollars (\$100);
- .10** office expenses, including staff, materials and supplies;
- .11** on-Site and off-Site trailer and storage rental and expenses;
- .12** Site fencing not added solely due to the performance of Extra Work;
- .13** utilities, including gas, electric, sewer, water, telephone, telefax and copier equipment;
- .14** computer and data-processing personnel, equipment and software;
- .15** federal, state or local business, income and franchise taxes;
- .16** insurance (including, without limitation, general liability, automobile and worker's compensation);
- .17** without limitation to Contractor's right to liquidated damages under Section 3.3 of the Construction Contract, Losses, of any kind, incurred by Contractor or a Subcontractor, of any Tier, that arise from or relate to Delay (including Excusable Delay, Compensable Delay or Unexcused Delay) or acceleration to overcome the effects of such Delay; and
- .18** costs and expenses of any kind or item not specifically and expressly included in Paragraph 7.7.3, above.

**7.7.5 Allowable Markups.** Allowable Markups consist of the percentages set forth provided for by this Paragraph 7.7.5. Allowable Markups are deemed to cover, without limitation, the following: (1) direct and indirect overhead (including, without limitation, consumables, small tools and cleanup) and profit of the Contractor; (2) direct and indirect overhead (including, without limitation, consumables, small tools and cleanup) and profit of the Subcontractors, of every Tier; and (3) all costs that are not reimbursable to Contractor under Paragraph 7.7.4, above. Subject to the exclusions and limitations set forth in Paragraph 7.7.7, below, or elsewhere in the Contract Documents, Allowable Markups include and are limited to the following:

**.1 Self-Performed Work**

(1) **Compensable Change.** With respect to all or that portion of a Compensable Change involving Self-Performed Work, the Allowable Markup to Contractor shall be not more than five percent (5%), which percentage shall for purposes of calculating the Contract Adjustment be multiplied times the Allowable Costs incurred by Contractor in the performance thereof, including, without limitation, Allowable Costs for materials or equipment purchased by Contractor from a first-Tier Subcontractor that is not an Installation Subcontractor.

(2) **Deleted Work.** With respect to all or that portion of Deleted Work involving Self-Performed Work, County shall be entitled to a credit equal to five percent (5%) of the amount of the credit for the savings to Contractor for the Self-Performed Work as calculated pursuant to Subparagraph 7.7.1.1 (4), (b), above.

**.2 Installation Subcontractors (First-Tier)**

(1) **Compensable Change.** With respect to all or that portion of a Compensable Change that is performed by a first-Tier Installation Subcontractor, the Allowable Markups to the first-Tier Installation Subcontractor and the Contractor shall be as follows:

(a) The Allowable Markup to the first-Tier Installation Subcontractor shall be not more than fifteen percent (15%), which percentage shall for purposes of calculating the Contract Adjustment be multiplied times the Allowable Costs incurred by such first-Tier Installation Subcontractor in the performance of such Compensable Change.

(b) The Allowable Markup to Contractor shall be five percent (5%), which percentage shall for purposes of calculating the Contract Adjustment be multiplied times the sum of (i) the Allowable Costs incurred by such first-Tier Subcontractor in the performance of such Compensable Change and (ii) the amount which results when the Allowable Markups thereon that are permitted pursuant to preceding Clause (a) of this Subparagraph 7.7.5.2 (1) are multiplied times such Allowable Costs.

(2) **Deleted Work.** With respect to all or that portion of Deleted Work that was to have been performed by a first-Tier Installation Subcontractor, the Contract Price shall be reduced as provided in Subparagraph 7.7.1.1 (4), (b), above. In addition, a credit shall be due from Contractor of five percent (5%) of the amount of the total credit due pursuant to Subparagraph 7.7.1.1 (4), (b), above.

**.3 Installation Subcontractors (Second-Tier)**

(1) **Compensable Change.** With respect to all or that portion of a Compensable Change that is performed by a second-Tier Installation Subcontractor, the Allowable Markups to such second-Tier Installation Subcontractor, to the first-Tier Installation Subcontractor that is above and in the same vertical contractual line of Tiers with such second-Tier Installation Subcontractor and to the Contractor, shall be as follows:

(a) The Allowable Markup to the second-Tier Installation Subcontractor shall be not more than five percent (5%), which percentage shall for purposes of calculating the Contract Adjustment be multiplied times the Allowable Costs incurred by such second-Tier Installation Subcontractor in the performance of such Compensable Change.

(b) The Allowable Markup to the first-Tier Installation Subcontractor that is above and in the same vertical contractual line of Tiers with such second-Tier Installation Subcontractor shall be not more than fifteen percent (15%), which percentage shall for purposes of calculating the Contract Adjustment be multiplied times the sum of (i) the Allowable Costs incurred by such second-Tier Installation Subcontractor in the performance of such Compensable Change and (ii) the amount which results when the Allowable Markups thereon pursuant to preceding Clause (a) of this Subparagraph 7.7.5.3 (1) are multiplied times such Allowable Costs.

(c) The Allowable Markup to Contractor shall be five percent (5%), which percentage shall for purposes of calculating the Contract Adjustment be multiplied times the sum of (i) the Allowable Costs incurred by the second-Tier Installation Subcontractor in the performance of such Compensable Change and (ii)

the amounts which result when the Allowable Markups thereon that are permitted pursuant to Clauses (a) and (b) of this Subparagraph 7.7.5.3 (1) are multiplied times such Allowable Costs.

**(2) Deleted Work.** With respect to all or that portion of Deleted Work that was to have been performed by a second-Tier Installation Subcontractor, the Contract Price shall be reduced as provided in Subparagraph 7.7.1.1 (4), (b), above. In addition, a credit shall be due from Contractor of five percent (5%) of the amount of the total credit due pursuant to Subparagraph 7.7.1.1 (4), (b), above.

**.4 Other Subcontractors.**

**(1) Compensable Changes:** With respect to any other Subcontractor, of any Tier, performing all or a portion of a Compensable Change who is not an Installation Subcontractor or who is an Installation Subcontractor below the second-Tier, the following shall apply:

**(a)** No markup shall be allowed to such other Subcontractor.

**(b)** The Subcontractor that is positioned in the Tier immediately above such other Subcontractor shall be entitled to an Allowable Markup of not more than five percent (5%) upon the Allowable Costs incurred by such other Subcontractor in the performance thereof.

**(c)** No other Allowable Markup by any Subcontractor of any Tier above such other Subcontractor shall be permitted.

**(d)** Contractor shall be entitled to an Allowable Markup of five percent (5%) of the sum of (i) the Allowable Costs of such other Subcontractor incurred in the performance of such Compensable Change and (ii) the amount which results when the Allowable Markup permitted by Clause (b) of this Subparagraph 7.7.5.4 (1) is multiplied times such Allowable Costs.

**(2) Deleted Work.** With respect to all or that portion of Deleted Work that was to have been performed by such other Subcontractor who is not an Installation Subcontractor or who is an Installation Subcontractor below the second-Tier, the Contract Price shall be reduced as provided in Subparagraph 7.7.1.1 (4), (b), above. In addition, a credit shall be due from Contractor of five percent (5%) of the amount of the total credit due pursuant to Subparagraph 7.7.1.1 (4), (b), above.

**7.7.6 Review of Markups.** It is Contractor's responsibility to review information submitted by Subcontractors to ensure that all markups comply with the requirements of the Contract Documents. Payment by the County of markups that exceed Allowable Markups shall not be considered as a waiver by County of the right to require repayment by Contractor of any markup charged that is in excess of Allowable Markups and such excess amounts shall be promptly paid by Contractor to County.

**7.7.7 Exclusions and Limitations.** Allowable Markups are not permitted:

**.1** on agreed unit prices;

**.2** on materials, products or equipment furnished by County;

**.3** on liquidated damages payable to Contractor pursuant to Section 3.3 of the Construction Contract for Compensable Delay;

**.4** to a Subcontractor who contracts to perform a Compensable Change that is in fact wholly performed by another Subcontractor (for purposes of this Paragraph 7.7.7, "wholly performed" means that all of the Compensable Change, other than supervision or minor labor or materials, are furnished by such other Subcontractor); or

**.5** on any cost or compensation with respect to which the Contract Documents state that there shall be "no Allowable Markup", "no markup for overhead and profit" or words of similar meaning.

**7.7.8 Net Calculations.** If any one Change or collection of Changes in the same or related portions of the Work, or in multiple portions of Work covered by a single bulletin or instruction by County, involve both Compensable Change and Deleted Work, and if the added Allowable Costs resulting from the Compensable Change exceed the reduction calculated in accordance with Subparagraph 7.7.1.1 (4), (b), above, (excluding any Allowable Markup to the Contractor) then the calculation of Allowable Markups to Contractor shall be based on and limited to the resulting net increase in the Allowable Costs.

**7.7.9 Unit Prices.** Unless otherwise stated in the Contract Documents, unit prices stated in the Contract Documents or subsequently agreed upon by County and Contractor shall be deemed to include and encompass all costs of performance, overhead and profit, including, without limitation, all Allowable Costs and Allowable Markups. If the unit price stated in the Contract Documents is based on an estimated quantity established by County in the Construction Contract and the actual quantity of such unit-priced item varies by more than 25% above or below the estimated quantity, an equitable adjustment in the Contract Price shall be made upon demand of either County or Contractor. Such equitable adjustment shall be based solely upon any increase or decrease in Allowable Costs (without any Allowable Markups), due solely to the variation above 125% or below 75% of the estimated quantity.

**7.7.10 Discounts.** For purposes of determining Allowable Costs of a Compensable Change, all trade discounts, rebates, refunds, and returns from the sale of surplus materials and equipment shall accrue and be credited to County, and Contractor shall take all necessary steps to ensure that such discounts, rebates, refunds, and returns are secured.

**7.7.11 Prompt Pricing.** It is fundamental to the County's objective of controlling costs that performance of Compensable Changes on a time and materials basis of compensation and without a not-to-exceed price be curtailed. Contractor recognizes that prompt pricing by Contractor is critical to this objective. Accordingly, in addition to and without limitation on any of the County's other rights or remedies, including, without limitation, its right to enforce a waiver under Subparagraph 7.6.2.4, above, it is agreed that if Contractor fails to timely submit a complete Change Order Request in accordance with Paragraph 7.6.2, above, with respect to any circumstance, event or occurrence constituting a Compensable Change then: (1) any Delay to the performance of the Work associated with the performance, delayed performance or nonperformance of such Compensable Change shall be conclusively deemed to be an Unexcused Delay; and (2) the County shall have the option, exercised in its sole discretion, to unilaterally fix and determine the amount of the Contract Adjustment to the Contract Price for such Compensable Change based on the "estimating guide" method set forth in Subparagraph 7.7.1.1 (3), above, which determination shall be conclusively final and binding upon Contractor.

**7.7.12 Final Payment.** No Claim by Contractor for a Contract Adjustment shall be allowed if asserted after Final Payment.

**7.7.13 Full Resolution.** Except as otherwise stated in Paragraph 7.7.14, below, the signing of a Change Order by Contractor and the County shall be conclusively deemed to be a full resolution, settlement and accord and satisfaction with respect to any and all Loss and Delay, whether known or unknown at the time of execution of the Change Order, related to the subject matter of the Change Order, including, without limitation, all rights to recovery of costs, expenses or damages for delay, disruption, hindrance, interference, extended or extraordinary (direct and indirect) overhead, multiplicity of changes, loss of productivity, labor, wage or material cost escalations, inefficiency, legal expenses, consultant costs, interest, lost profits or revenue, bond and insurance costs, changes in taxes and other similar and related Losses. The foregoing provisions of this Paragraph 7.7.13 shall, whether or not they are expressly stated or referenced on the face of a Change Order, be deemed to be part of the terms of the Change Order and shall be deemed to supersede and govern over any other provision contained in any proposal, estimate or other documents attached to or referenced in such Change Order that conflicts with the provisions of this Paragraph 7.7.13. **ANY RIGHT OR CLAIM BY CONTRACTOR FOR ANY ADDITIONAL COMPENSATION OR EXTENSION OF TIME RELATING DIRECTLY OR INDIRECTLY TO A COMPENSABLE CHANGE DESCRIBED IN A FULLY EXECUTED CHANGE ORDER SHALL BE CONCLUSIVELY DEEMED WAIVED BY CONTRACTOR, EVEN IF THE CIRCUMSTANCES GIVING RISE TO SUCH ADDITIONAL COMPENSATION OR EXTENSION OF TIME WERE NOT SUSPECTED BY OR KNOWN TO THE CONTRACTOR AT THE TIME OF EXECUTION OF THE CONSTRUCTION CHANGE DIRECTIVE AND IF SUSPECTED OR KNOWN WOULD HAVE BEEN CONSIDERED BY CONTRACTOR TO HAVE BEEN MATERIAL TO CONTRACTOR'S AGREEMENT TO THE CONTRACT ADJUSTMENT SET FORTH IN THE CHANGE ORDER.**

**7.7.14 Reserved Rights.** Change Orders shall be executed by Contractor without any express reservation of rights by Contractor to reserve for the future the assertion of any right of recovery from the County for Loss or Delay arising out of or relating to the subject matter of the Change Order. Execution of a Change Order, Unilateral Change Order or Construction Change Directive shall not be interpreted as a waiver, release or settlement of any rights or claims that the County may have for any of the following: (1) Defective Work; (2) liquidated damages or actual Losses for Delay; or (3) recoupment by County (by way of withholding of funds, set off or recovery from Contractor) of amounts paid by County for costs or markups on costs that the County discovers, following payment of such amounts to Contractor, do not constitute proper charges to County, or that constitute charges that are not properly substantiated, under the terms of the Contract Documents.

**7.7.15 No "Total Cost" Calculations.** Contractor represents and warrants that it has the ability to generate and maintain complete and accurate cost accounting records that, if required, will reflect the actual costs of the Work incurred or avoided for multiple Compensable Changes and, on an event-by-event basis, the effect of multiple and concurrently occurring or caused Compensable Delays on the progress of the Work. Accordingly, Contractor agrees that all Change Order Requests and Claims shall be itemized in a manner that, with reasonable mathematical certainty and without reliance upon probabilities or inferences, segregates on a discrete, event-by-event basis the direct, actual Allowable Costs associated with each individual Compensable Change or Compensable Delay. Unless otherwise agreed to by County in writing in the exercise of its sole discretion, Change Order Requests and Claims shall not be based, in whole or in part, upon any methodology (such as "total cost" or "modified total cost" methodologies) that purports to establish Contractor's entitlement to additional compensation inferentially based, solely or principally, on the difference between Contractor's total costs for the Work or a portion of the Work and its original Bid.

**7.7.16 Multiple Changes.** The County reserves the absolute right to make whatever Changes, including, without limitation, Compensable Changes or Deleted Work, that it determines, in its sole discretion, are necessary or otherwise desirable. Under no circumstances shall the individual or cumulative number, value or scope of such Changes, or their individual and cumulative impact on the Work, become a basis for Contractor to assert any claim for breach of contract, abandonment, rescission, termination, cardinal change or reformation of the Construction Contract, nor shall such circumstances be the basis for Contractor, or any of the Subcontractors, of any Tier, to assert a right of recovery of any Loss if such right is not permitted by, or is in excess of that allowed under, the Contract Documents.

**7.7.17 Continuous Performance.** Subject to Contractor's rights under Section 15.4, below, no dispute or disagreement with respect to any Changes or Delay, including, without limitation, disputes over Contractor's right to or the terms of a Contract Adjustment, shall relieve or excuse Contractor from the obligation to proceed with and maintain continuous, expeditious and uninterrupted performance of the Work, including performance of any disputed Changes.

## **ARTICLE 8 CONTRACT TIME**

### **8.1 COMMENCEMENT AND COMPLETION**

**8.1.1 Date of Commencement.** The Date of Commencement shall not be postponed by the failure of Contractor or of persons or entities for whom Contractor is responsible to perform an obligation. Contractor shall not knowingly, except by agreement or instruction of the County in writing, commence operations on the Site or elsewhere prior to receipt of a Notice to Proceed. Contractor shall not commence any Work at the Site prior to its obtaining the insurance required by Article 11, below, and the Performance Bond and Payment Bond required by Article 12, below, and the Date of Commencement of the Work shall not be changed by the effective date of such insurance or bonds.

**8.1.2 Substantial, Final Completion.** Contractor shall proceed expeditiously with adequate forces and shall achieve Substantial Completion and Final Completion within the Contract Time, as adjusted for extensions of time duly permitted, authorized and noticed pursuant to Section 8.2, below.

**8.1.3 Adjustments to Contract Time.** Subject to the limitations set forth in this Article 8 and elsewhere in the Contract Documents, the Contract Time shall be extended for Compensable Delays and Excusable Delays and shall, where appropriate, be shortened for Deleted Work.

**8.1.4 Early Completion.** Nothing stated in these General Conditions or elsewhere in the Contract Documents shall be interpreted as creating any contractual right, express or implied, on the part of Contractor to finish

the Work earlier than the Contract Time. Contractor has included in its Contract Price the costs of all Contractor's and its Subcontractors' direct and indirect overhead, including but not limited to all staff, temporary facilities, temporary utilities and home office overhead for the entire duration of the Contract Time. These costs have been included in the Contract Price notwithstanding Contractor's anticipation of possibly completing the Work in fewer Days than established by the Contract Time. Under no circumstances (including, without limitation, circumstances in which the County has approved in writing of Contractor completing early) shall the County be liable to Contractor for any Losses, of any kind, due to the inability of Contractor to complete the Work earlier than the Contract Time, regardless of the cause, including, without limitation, Delays due to acts or omissions (intentional or negligent) of the County, Inspectors of Record, County Consultants, Separate Contractors or others. If the Contractor anticipates completing early, it must obtain in advance County's approval in writing of such early completion. Approval by County of such early completion may be granted or withheld in the County's sole and absolute discretion.

## 8.2 DELAYS AND EXTENSIONS OF TIME

### 8.2.1 Adjustments to Contract Time

**.1 Extensions.** Provided that Contractor has complied with the provisions of this Section 8.2 (including, without limitation, the requirements pertaining to timely delivery of a Notice of Delay and Request for Extension), if, as a result of Excusable Delay or Compensable Delay to the actual, as-built critical path of activities leading to achievement of Substantial Completion, Contractor is unable to achieve Substantial Completion within the Contract Time for Substantial Completion, then the Contract Time for Substantial Completion and Final Completion shall be extended, either by Change Order or Unilateral Change Order, for the length of the proven, resulting Delay to Contractor's ability to so complete the Work. The Contract Time shall not be adjusted for Unexcused Delays.

**.2 Shortening.** Contractor shall within ten (10) Days after receiving notice of Deleted Work prepare and deliver to County a Time Impact Analysis of the impact of the Deleted Work upon the critical path to determine if the Contract Time should be shortened thereby and if so the duration of the shortening. If the County and Contractor are unable to agree upon the duration of the shortening, then County shall make a Good Faith Determination of the reasonable amount of time that the Contract Time shall be shortened on account of such Deleted Work.

### **.3 Prescribed Calculations.**

**(1) Work Day Lost Calculations.** Contractor may claim an Excusable Delay or a Compensable Delay for a full Day only if all Work on a critical path activity is stopped for more than six (6) hours of a normal eight (8) hour Work Day and for a half-Day only if all Work on a critical path activity is stopped for three (3) to six (6) hours of such a normal Work Day. No Excusable Delay or Compensable Delay may be claimed if all Work on a critical path activity is stopped for less than three (3) hours of such a normal work Day. Similarly, where Deleted Work results in the projected avoidance of the need to perform more than six (6), or between three (3) and six (6) hours of all Work on a critical path activity on such a normal work day, the Contract Time shall be contracted by a full Day or half Day, respectively.

**(2) Dry Out Time Calculations.** Contract Adjustments to the Contract Time that are based upon unusual precipitation that is an Act of God as defined in Paragraph 1.1.2, above, shall include, in addition to the number of Days of Excusable Delay to which Contractor is entitled due to a cessation of Work that occurs at the Site while the unusual precipitation is occurring, an additional extension for the Delay to the critical path of activities affecting Substantial Completion that is the result of Contractor being unable, after cessation of the unusual precipitation at the Site, to proceed with performance of Work due to wet or muddy conditions at the Site (hereinafter referred to as "dry out" time); provided, however, that the amount of dry out time for which Contractor is entitled to an extension of time in any given calendar month shall not exceed the number of Days that is the product derived by multiplying (a) the number of Days of Excusable Delay to which Contractor is entitled due to a cessation of Work that occurs at the Site while such unusual precipitation is occurring, by (b) a fraction, the (i) numerator of which is the number of Days of Excusable Delay due to measurable unusual precipitation occurring at the Site during such calendar month that constitutes an Act of God as defined in Paragraph 1.1.2, above, and (ii) the denominator of which is the total number of Days of measurable precipitation occurring at the Site during said calendar month (including both the number of Days comprising the normal, 10-year monthly average of measurable precipitation recorded by NOAA and the excess, or unusual precipitation that constitutes an Act of God as defined in Paragraph 1.1.2, above).

### 8.2.2 Notice of Delay.

**.1 Submission.** Contractor shall submit written Notice of Delay to County if any instruction, request, drawing, specification, action, condition, omission, default or other circumstance occurs that constitutes an Excusable Delay or Compensable Delay or other matter that may involve or require a Contract Adjustment extending the Contract Time. Such notice shall be provided prior to performance of the Work affected or involved and no later than seven (7) Days after the Discovery Date of such circumstance.

**.2 Form.** Notices of Delay shall be provided using forms furnished by County or, if requested by County, using forms furnished by Contractor that are approved by County. Failure by County to request or approve a particular form shall not relieve Contractor of its obligation to provide Notice of Delay in a written form that complies with the requirements of this Paragraph 8.2.2.

**.3 Content.** Each Notice of Delay in order to be considered complete shall include:

**(1)** a general statement of the circumstances giving rise to the Notice of Delay (including, without limitation, identification of any related Construction Change Directive);

**(2)** a Reasonable Order of Magnitude Estimate by Contractor of any related Contract Adjustments extending the Contract Time; and

**(3)** if such circumstances involve a right to a Contract Adjustment to the Contract Price for Compensable Change that has not been waived by Contractor, Contractor shall include, if not previously provided, a complete and timely Notice of Change.

### **.4 WAIVER BY CONTRACTOR.**

**FAILURE BY CONTRACTOR TO PROVIDE A COMPLETE AND TIMELY NOTICE OF DELAY UNDER CIRCUMSTANCES WHERE A NOTICE OF DELAY INVOLVING A DELAY IS REQUIRED BY THIS PARAGRAPH 8.2.2 SHALL, IN ACCORDANCE WITH THE PROVISIONS OF SECTION 4.6 OF THE GENERAL CONDITIONS, CONSTITUTE A WAIVER BY CONTRACTOR OF THE RIGHT TO A CONTRACT ADJUSTMENT ON ACCOUNT OF SUCH CIRCUMSTANCES AND A WAIVER OF ANY RIGHT TO FURTHER RECOURSE OR RECOVERY BY REASON OF OR RELATED TO SUCH DELAY.**

**.5 No County Notice.** Failure by Contractor to submit a timely or proper Notice of Delay under circumstances in which a Notice of Delay is required shall in no way affect County's right to a Contract Adjustment shortening the Contract Time on account of such circumstances.

### 8.2.3 Request for Extension.

**.1 Submission.** With respect to any matter that may involve or require an adjustment extending the Contract Time, Contractor shall, within fourteen (14) Days after receipt by County of a Notice of Delay pursuant to Paragraph 8.2.2, above, submit to County a written Request for Extension.

**.2 Form.** Requests for Extension shall be provided using forms furnished by County or, if requested by County, using forms furnished by Contractor that are approved by County. Failure by County to request or approve a particular form shall not relieve Contractor of its obligation to provide Requests for Extension in a written form that complies with the requirements of this Paragraph 8.2.3.

**.3 Content.** Each Request for Extension in order to be considered complete shall include:

**(1)** a detailed description of the circumstances giving rise to the request for Contract Adjustment to the Contract Time and a Time Impact Analysis (a Request for Extension that seeks an extension for more than one Delay shall be supported by a separate Time Impact Analysis for each separate Delay); and

(2) if such circumstances involve a right to a Contract Adjustment of the Contract Price on account of Compensable Change that has not been waived by Contractor, Contractor shall include, if not previously provided, a complete and timely Change Order Request.

#### **.4 WAIVER BY CONTRACTOR.**

**FAILURE BY CONTRACTOR TO PROVIDE A COMPLETE AND TIMELY REQUEST FOR EXTENSION UNDER CIRCUMSTANCES WHERE A REQUEST FOR EXTENSION INVOLVING A DELAY IS REQUIRED BY THIS PARAGRAPH 8.2.3 SHALL, IN ACCORDANCE WITH THE PROVISIONS OF SECTION 4.6 OF THE GENERAL CONDITIONS, CONSTITUTE A WAIVER BY CONTRACTOR OF THE RIGHT TO A CONTRACT ADJUSTMENT ON ACCOUNT OF SUCH CIRCUMSTANCES AND A WAIVER OF ANY RIGHT TO FURTHER RECOURSE OR RECOVERY BY REASON OF OR RELATED TO SUCH DELAY.**

**.5 Adjustments Shortening Time.** Failure by Contractor to submit a timely or proper Request for Extension under circumstances in which a Request for Extension is required shall in no way affect County's right to a Contract Adjustment shortening the Contract Time on account of such circumstances.

**8.2.4 Response by County.** After receipt of a timely and complete Request for Extension, County shall investigate the facts concerning the cause and extent of such Delay and, depending on whether the Request for Extension is justified, will notify Contractor of its approval or disapproval of all or a portion of Contractor's request. Extensions of time approved by County shall apply only to that portion of the Work affected by the Delay, and shall not apply to other portions of Work not so affected.

**8.2.5 Formal Notice of Essence.** Contractor recognizes and acknowledges that timely submission of a formal Notice of Delay and a formal Request for Extension, whether or not the circumstances of a Delay may be known to County or available to County through other means, are not mere formalities but are of crucial importance to the ability of County to promptly identify, prioritize, evaluate and mitigate the potential effects of Delay. Any forms of informal notice, whether verbal or written (including, without limitation, statements at regular job meetings or entries in monthly reports, daily logs, job meeting minutes, updated Construction Schedules or look-ahead schedules), that do not strictly comply with the formal requirements of Paragraph 8.2.2, above, and Paragraph 8.2.3, above, shall accordingly be deemed insufficient to satisfy the notice requirements of this Article 8.

#### **8.2.6 Compensation for Delay.**

**.1 Compensable Delay.** Contract Adjustments to the Contract Price for a Compensable Delay that involve an extension of the Contract Time shall be based, without duplication to any other Contract Adjustments to the Contract Price, on the terms of Section 3.3 of the Construction Contract. Contractor agrees to accept such right of Contract Adjustment in lieu of any other right that may exist under Applicable Laws for recovery of Losses due to Compensable Delay, whether incurred by Contractor or its Subcontractors, of any Tier.

**.2 Deleted Work.** The Contract Time and Contract Price shall be reduced by Contract Adjustment for Deleted Work (including, without limitation, Deleted Work associated with a termination by County of a portion of the Construction Contract or a deletion of portion of Work for the convenience of the County or due to an Event of Contractor Default) that results in a shortening of the Contract Time.

**(1) Contract Time.** The Contract Adjustment shortening the Contract Time for Substantial Completion shall be the number of Days that Contractor at the time of contracting would have reasonably expected to expend in performance of the Deleted Work and that, based on the Contractor's original Construction Schedule prepared on or about the time of contracting, were reasonably expected by Contractor to be critical to Substantial Completion of the Work within the Contract Time for Substantial Completion.

**(2) Contract Price.** The Contract Adjustment reducing the Contract Price shall be the product of (1) the number of Days that the Contract Time for Substantial Completion is shortened pursuant to preceding Clause (1) of this Subparagraph 8.2.6.2 multiplied times (2) the amount of liquidated damages set forth in Paragraph 3.3.2 of the Construction Contract, without any additional credit to County for Allowable Markups.

#### **8.2.7 Acceleration of the Work.**



**.1 Due to Unexcused Delay.** If County makes a Good Faith Determination based on County's observations of progress in performance of the Work by Contractor that Contractor will not achieve Substantial Completion of the Work within the Contract Time as adjusted pursuant to Paragraph 8.2.1, above, then Contractor shall, following receipt of a written request by County to accelerate, immediately respond in writing setting forth a detailed plan for accelerating the Work. All measures necessary, including working overtime, additional shifts, Saturdays, Sundays and holidays, to accelerate performance to ensure that the Work is performed within the Contract Time shall be taken by Contractor and the cost thereof shall be paid for by Contractor at Contractor's Own Expense. County may also take all other necessary measures to ensure no further Delays affect achievement of Substantial Completion and Final Completion of the Work within the Contract Time and the Contractor shall reimburse County, or County may withhold from payment due to Contractor, for Losses incurred by County in taking such measures.

**.2 Due to Excusable Delay.** Contractor shall have the right, exercised in its sole discretion, to accelerate performance of the Work to overcome time lost due to Excusable Delay. Such acceleration, if performed other than at the written direction of County, shall be deemed a voluntary acceleration and the cost of such accelerated performance shall be paid for by Contractor at Contractor's Own Expense. If County directs in writing that the Work be accelerated to overcome an Excusable Delay that is not concurrent with an Unexcused Delay, then Contractor shall be entitled to a Contract Adjustment to the Contract Price for such acceleration on and subject to the same terms as provided for in Subparagraph 8.2.7.3, below, in the case of an acceleration to overcome a Compensable Delay.

**.3 Due to Compensable Delay.** County shall have the right, exercised in its sole and absolute discretion, in lieu of granting a Contract Adjustment to the Contract Time for Compensable Delay, to direct in writing the acceleration of the Work by Contractor in order to recapture time lost due to such Compensable Delay. County and Contractor shall endeavor prior to commencement of such acceleration to mutually agree upon the amount of compensation to be paid therefor. County shall have the right, in the absence of such an agreement, to direct in writing that Contractor accelerate. Contractor shall comply with such directive. Contractor's right to a Contract Adjustment to the Contract Price on account of such acceleration shall be limited to (1) the premium time portion of any overtime paid for labor provided by Contractor or any Subcontractor, plus (2) additional supervision costs for additional shifts of supervision provided at the Site by Contractor only (not by Subcontractors), plus (3) Allowable Markup thereon as provided in Paragraph 7.7.5, above. Except as directed by County in the manner stated in this Subparagraph 8.2.7.3, no statements, conduct or actions by County will be construed as creating an obligation on the part of County to agree to a Contract Adjustment to the Contract Price on account of any cost of overtime or other costs associated with an acceleration of the Work to recapture time lost due to Compensable Delay.

**8.2.8 Concurrent Delays.** For purposes of the calculations provided for in this Paragraph 8.2.8, the words "concurrent delay", "concurrently delay" or "occur concurrently" mean the portion of two or more Delays affecting the critical path to Substantial Completion that are overlapping or co-existent. Contractor's right to a Contract Adjustment of the Contract Time (pursuant to Subparagraphs 8.2.8.1, 8.2.8.2 and 8.2.8.3, below) and Contract Price (pursuant to Subparagraphs 8.2.8.4, 8.2.8.5 and 8.2.8.6, below) shall, in the case of concurrent delays, be calculated in accordance with the following:

**.1** If an Excusable Delay and a Compensable Delay occur concurrently, the maximum extension of the Contract Time shall be the number of Days from the commencement of the first Delay to the cessation of the Delay which ends last.

**.2** If an Unexcused Delay occurs concurrently with either an Excusable Delay or a Compensable Delay, the maximum extension of the Contract Time shall be the number of Days, if any, by which such Excusable Delay or Compensable Delay exceeds the number of Days of such Unexcused Delay.

**.3** If an Unexcused Delay occurs concurrently with both an Excusable Delay and a Compensable Delay, the maximum extension of the Contract Time shall be the number of Days, if any, by which such Excusable Delay and Compensable Delay, as determined pursuant to Subparagraph 8.2.8.1, above, exceeds the number of Days of such Unexcused Delay.

**.4** If an Unexcused Delay occurs concurrently with a Compensable Delay, the maximum period of time for which Contractor shall be entitled to a Contract Adjustment to the Contract Price in accordance with Section 3.3 of the Construction Contract shall be the number of Days, if any, by which such Compensable Delay exceeds the number of Days of such Unexcused Delay.

.5 If a Compensable Delay occurs concurrently with an Excusable Delay, the maximum period of time for which Contractor shall be entitled to a Contract Adjustment to the Contract Price in accordance with Section 3.3 of the Construction Contract shall be the number of Days, if any, by which such Compensable Delay exceeds the number of Days of such Excusable Delay.

.6 If an Unexcused Delay occurs concurrently with both an Excusable Delay and a Compensable Delay, the maximum period of time for which Contractor shall be entitled to a Contract Adjustment to the Contract Price in accordance with Section 3.3 of the Construction Contract shall be the number of Days, if any, by which such Compensable Delay exceeds the number of Days of such Unexcused Delay.

8.2.9 **Delay Claims.** Claims by Contractor relating to disputed Contract Adjustments due to Delay shall be made in accordance with applicable provisions of Section 4.3, above.

8.2.10 **Exercise of County Rights.** Notwithstanding any other provision of the Contract Documents to the contrary, County's exercise in accordance with the Contract Documents of any of its rights or remedies permitted by Applicable Laws or the Contract Documents in response to a failure by Contractor or any Subcontractor to comply with the Contract Documents shall not, under any circumstances, entitle Contractor to a Contract Adjustment.

## ARTICLE 9 PAYMENTS AND COMPLETION

### 9.1 PAYMENT BY COUNTY

9.1.1 **Time for Payment.** County shall make payment of undisputed sums due to the Contractor upon Applications for Payment requesting Progress Payment not later than thirty (30) Days after receipt of an Application for Payment requesting Progress Payment that has been properly and timely prepared and submitted by Contractor, and approved by County, in accordance with the requirements of the Contract Documents.

9.1.2 **Not Acceptance.** No approval, inspection or use of, or payment for, the Work by County or by any person or entity acting on County's behalf shall constitute acceptance of Work that is not in accordance with the Contract Documents or a waiver of any of County's rights under the Contract Documents.

9.1.3 **Interest.** If County fails to make payment of an undisputed sum due as a Progress Payment to the Contractor as required by this Article 9, County shall pay interest to the Contractor equivalent to the legal rate set forth in subdivision (a) of California Code of Civil Procedure §685.010. The number of Days available to the County to make payment without incurring such interest shall be reduced by the number of Days by which the County exceeds the seven (7) Day response time applicable to the County set forth in Section 9.5, below. The foregoing is the County's sole obligation with respect to payment of interest earned or accrued on an amount claimed due prior to the commencement by Contractor of legal proceedings for recovery of such amount.

9.1.4 **Disputed Payments.** Subject to Contractor's rights under Section 9.8, below, no good faith dispute or disagreement between County and Contractor with respect to the amount of any payment claimed due by Contractor shall relieve or excuse Contractor from the obligation to proceed with and maintain continuous, expeditious and uninterrupted performance of the Work.

### 9.2 APPLICATIONS FOR PAYMENTS

9.2.1 **Submission by Contractor.** Applications for Payment requesting Progress Payment shall be properly prepared and submitted by Contractor to County once a month on the twenty-fifth (25<sup>th</sup>) Day of the month. If the twenty-fifth (25<sup>th</sup>) Day of the month is a weekend or Holiday, the Application for Payment shall be submitted on the next working day.

9.2.2 **Period of Application.** The period covered by each such Application for Payment requesting Progress Payment shall be not more than thirty (30) Days ending on the twenty-fifth (25<sup>th</sup>) Day of the month in which such Application for Payment is submitted.

9.2.3 **Schedule of Values.** Each Application for Payment shall be accompanied by a Schedule of Values prepared and submitted in accordance with the requirements of the Contract Documents, including, without limitation, the provisions of Section 9.3, below.

9.2.4 **Changes in Work.** Applications for Payment may include requests for payment on account of Compensable Changes in the Work which have been properly authorized by Change Order or Unilateral Change Order.

9.2.5 **Progress Payments.** Applications for Payment requesting Progress Payments shall be based on amounts calculated in accordance with the provisions of Section 9.4, below.

9.2.6 **Percentage Completion.** Applications for Payment requesting Progress Payments shall indicate the Contractor's estimate of the percentage of completion of each line item listed in the Schedule of Values as of the end of the period covered by the Application for Payment.

9.2.7 **Projected Work.** Unless approved by County in writing in advance of an Application for Payment being submitted, which approval may be granted or denied in the sole and absolute discretion of County, Applications for Payment shall only include amounts for Work performed to the twenty-fifth (25<sup>th</sup>) Day of the month in which the Application for Payment was submitted and shall not include request for payment of amounts for Work projected to be performed, stored or delivered beyond that date.

9.2.8 **Disagreements.** In the event of a disagreement between County and Contractor over the accuracy or reasonableness of the Contractor's statement of percentage of progress achieved that is contained in the Application for Payment, the County shall make a Good Faith Determination of the percentage, which percentage shall then be inserted by Contractor in the Application for Payment and the Application for Payment submitted, or resubmitted, incorporating such revision.

9.2.9 **Substantial Completion.** For the sole purpose of the percentage calculation set forth in Paragraph 9.2.6, above, and for no other purpose, the Work shall be deemed one hundred percent complete upon Substantial Completion and the amount released to Contractor shall, subject to County's right to withhold pursuant to Section 9.6, below, be a sum sufficient to increase the total of Progress Payments to Contractor to ninety-five percent (95%) of the Contract Price.

9.2.10 **Certification by Contractor.** Each Application for Payment that is submitted by Contractor shall be signed by Contractor with a certification by Contractor to County that: (1) the data comprising the Application for Payment is accurate and the Work has progressed to the point indicated; (2) to the best of Contractor's knowledge, information and belief, the Work is in accordance with the Contract Documents; (3) Contractor is entitled to payment in the amount certified; and (4) all sums previously applied for by Contractor on account of the Work performed by the Subcontractors and that have been paid by County have been paid to the Subcontractors performing such Work, without any retention, withholding or back charge by Contractor.

9.2.11 **Stored Materials.** County may, in the exercise of its sole and absolute discretion, approve or disapprove for inclusion in Contractor's Application for Payment the cost of materials to be incorporated, but not yet incorporated, in the Work and delivered and suitably stored either at the Site or at some other appropriate location acceptable to the County. As part of any request for such approval, Contractor shall furnish evidence satisfactory to County: (1) of the cost of such materials; (2) that such materials are under the exclusive control of Contractor, or if not, that title to the materials is in the County, free of any lien or encumbrance; and (3) with respect to materials stored off-Site, that the materials are safely and suitably stored in a bonded warehouse with appropriate insurance coverage satisfactory to County. No payment or approval by County pursuant to this Paragraph 9.2.11 shall (a) be construed as an inspection or acceptance of the materials; (b) relieve Contractor of its continuing and sole responsibility for the care and protection of, and sole responsibility for any Loss to, such materials, from any cause whatsoever; or (c) operate as a waiver of rights by County.

9.2.12 **Title.** Contractor warrants that title to all the Work covered by an Application for Payment will pass to County no later than the time of payment. Contractor further warrants that upon submittal of an Application for Payment all Work for which approval for payment has been previously issued by County shall, to the best of Contractor's knowledge, information and belief, be free and clear of liens, claims, security interests or encumbrances in favor of

Contractor, the Subcontractors, material suppliers, or other persons or entities making a claim by reason of having provided labor, materials or equipment for the Work.

### 9.3 SCHEDULE OF VALUES

9.3.1 **Initial Submission.** Within twenty-one (21) Days after issuance by County of the Notice of Intent to Award, Contractor shall submit to County a Schedule of Values, prepared in a form and incorporating a level of detail satisfactory to County, that allocates the Contract Price to various portions of the Work, including, without limitation, each portion of the Work to be performed by a Subcontractor, self-performed Work, discrete categories of direct (i.e., on-Site) overhead costs (sometimes referred to as “general conditions costs”), Contractor home office and indirect overhead and profit and amounts reserved for contingencies.

9.3.2 **Balanced Allocation.** The Schedule of Values shall be balanced, reflecting in each line item Contractor's estimated or actual cost commitments for the category of Work included in the line item and a proportionate share of Contractor's overhead and profit. Techniques, such as “front-end loading”, designed to create an imbalanced cash flow are strictly prohibited.

9.3.3 **Line Estimates.** Line item values stated in the Schedule of Values that are based on Contractor's estimates, rather than actual subcontract prices, shall be identified as such and replaced with actual subcontract prices when they become available as the subcontracting process progresses.

9.3.4 **Updating.** The Schedule of Values shall be updated by Contractor each month as necessary to reflect the Contractor's actual progress in subcontracting the Work. An updated Schedule of Values shall be attached to each Application for Payment.

9.3.5 **Substantiation.** Contractor shall provide such data as County may reasonably require to substantiate that the Schedule of Values has been prepared in conformance with the requirements of the Contract Documents. Failure to provide such substantiation shall result in the Schedule of Values being deemed incomplete and unapproved by County for use by Contractor in submitting its Applications for Payment.

9.3.6 **Corrections.** If corrections are required in order to make the Schedule of Values comply with the requirements of the Contract Documents, such corrections shall be made as a condition of the Contractor's Application for Payment being considered properly prepared, submitted and complete.

9.3.7 **Changes to Work.** Costs involved in the performance of Work covered by Change Orders, Unilateral Change Orders or Construction Change Directives shall be, at the option of County, either separately scheduled or incorporated as adjustments to the respective trade lines of Work to which they apply. Except as otherwise expressly required by Article 7, above, the Schedule of Values shall not be utilized by Contractor as a basis for calculating Contract Adjustments.

9.3.8 **Applications for Payment.** The Schedule of Values prepared by Contractor in accordance with the requirements of the Contract Documents shall be used as a basis for County's review and approval or disapproval of Applications for Payment.

### 9.4 PROGRESS PAYMENT CONDITIONS

9.4.1 **Progress Payment Amount.** Subject to the other provisions of the Contract Documents, the amount of each Progress Payment requested in an Application for Payment shall be computed as follows:

.1 take that portion of the Contract Price properly allocable to Work (other than materials, products or equipment furnished by County) permanently incorporated at the Site as part of the Work, based on the product derived by multiplying (1) the percentage completion of each such portion of the Work times (2) the portion of the total Contract Price allocated to that portion of the Work in the Schedule of Values, less a retention of five percent (5%) thereof;

.2 add that portion of the Contract Price that is allocable to materials and equipment (other than materials, products or equipment furnished by County) approved by County pursuant to Paragraph 9.2.11, above, and suitably stored at the Site or at a location off-Site, less a retention of five percent (5%) thereof;

.3 subtract the aggregate of previous payments made by the County; and

.4 subtract amounts, if any, that County has determined will be withheld pursuant to an exercise of the County's right to withhold pursuant to Section 9.6, below.

**9.4.2 Other Conditions and Documentation.** Contractor shall submit its Applications for Payment requesting Progress Payments to County using such forms as required by County. Without limitation to any other conditions to payment set forth elsewhere in the Contract Documents, the following shall be conditions precedent to a proper submission, and to County's approval, of each Application for Payment:

.1 submission of a Schedule of Values that complies with Section 9.3, above;

.2 submission of Contractor's certification required by Paragraph 9.2.10, above;

.3 submission of: (1) forms of conditional releases of stop payment notice and bond rights upon progress payment, complying with California Civil Code §8132, for all Work performed during the time period covered by the current Application for Payment, signed by Contractor and the Subcontractors, of every Tier; and (2) forms of unconditional releases of stop payment notice and bond rights upon progress payment, complying with California Civil Code §8134, for all Work performed during the time period covered by the previous Application for Payment, signed by Contractor and the Subcontractors, of every Tier;

.4 compliance by Contractor with its obligation for daily maintenance of Record Drawings and Specifications as required by Paragraph 3.10.1, above;

.5 compliance by Contractor with its obligation for submission of daily reports as required by Paragraph 3.10.2, above;

.6 compliance by Contractor with its obligations for submission of scheduling information and updating of the Construction Schedule as required by Section 3.9, above, and other provisions of the Contract Documents pertaining to preparation or updating of schedules and scheduling information;

.7 proper payment of prevailing wages as defined in California Labor Code §1720, et seq.;

.8 timely submission of adequate and complete certified payroll records for any time period that Work was performed and for which payment is being requested;

.9 submission of certifications by Contractor and the Subcontractors as required by Applicable Laws certifying that all employee benefit contributions due and owing have been paid in full;

.10 submission of sales tax information as required by Paragraph 3.6.3, above; and

.11 compliance by Contractor with all of its other obligations for submission of documentation or performance of conditions which, by the terms of the Contract Documents, constitute conditions to Contractor's right to receive payment for Work performed.

## 9.5 COUNTY APPROVAL/REJECTION OF APPLICATIONS FOR PAYMENT

**9.5.1 Review by County.** Subject to County's rights under Paragraph 9.5.4, below, County shall promptly review Applications for Payment submitted by Contractor and provide its approval or disapproval, in whole or part, within (1) seven (7) Days after receipt of an Application for Payment requesting Progress Payment, and (2) within fourteen (14) Days after receipt of an Application for Payment requesting Final Payment.

9.5.2 **Disapproval by County.** Disapproval by County disapproving of an Application for Payment shall be accompanied by an explanation of the reasons for such disapproval. Failure by County to specify in its disapproval a particular grounds for disapproval of an Application for Payment shall not waive the County's right to assert such grounds as a basis for any future disapproval, or nullification of its prior approval, of that or any other Application for Payment.

9.5.3 **Re-submittal by Contractor.** An Application for Payment that is disapproved by County shall be corrected and re-submitted by Contractor after receipt by Contractor of the notice of disapproval. A re-submitted Application for Payment shall be reviewed and responded to by County in the same manner as provided in Paragraphs 9.5.1 and 9.5.2, above. If re-submitted, the re-submitted Application for Payment shall be reviewed and responded to by County in the same manner as provided in Paragraph 9.5.1 and Paragraph 9.5.2, above. If not re-submitted, only the amount, if any, that is approved for payment shall be paid until such time as a proper Application for Payment that includes the disapproved amount has been submitted in another Application for Payment and, upon such re-submittal, approved for payment.

9.5.4 **Approval Nullification.** County reserves the right to nullify any prior approval of an Application for Payment that is later found to not be in compliance with the requirements of the Contract Documents, whether or not such noncompliance was previously actually observed or apparent on the face of the Application for Payment, and based on such nullification County may take either of the following actions, as applicable: (1) if the Application for Payment has not yet been paid by County, disapprove of that portion of the Application for Payment that is not in compliance and withhold payment of that sum until the noncompliance is fully rectified; or (2) if the Application for Payment has been paid by County, nullify the County's prior approval and withhold payment of such disputed amounts in response to future Applications for Payment; provided, however, that in either case the amount of the County's nullification shall be limited to that portion of the amount requested in the Application for Payment that is in dispute and the amount of its withholding from the current or any future Application for Payment shall be limited to the amount nullified plus any additional withholding permitted under Section 9.6, below.

9.5.5 **No Waiver by County.** Neither approval by County or Architect of, failure by County to exercise its right of nullification with respect to, nor payment by County upon, an Application for Payment or any portion thereof shall be interpreted as or constitute a waiver or release of any of County's rights to require Contractor's full compliance with the Contract Documents.

9.5.6 **No Representation.** Neither approval by County or Architect of, failure by County to exercise its right of nullification with respect to, nor payment by County upon, an Application for Payment or any portion thereof shall be interpreted as a representation that County or Architect has: (1) made exhaustive or continuous on-Site inspections to check the quality or quantity of the Work, (2) reviewed Contractor's construction means, methods, techniques, sequences or procedures, (3) reviewed copies of requisitions received from the Subcontractors and other data requested by County or Architect to substantiate Contractor's right to payment, or (4) made examination to ascertain how or for what purpose Contractor has used money previously paid on account of the Contract Price.

## 9.6 WITHHOLDING OF PAYMENT

9.6.1 **Grounds for Withholding.** County may decline to approve an Application for Payment and withhold payment requested under any unpaid Application for Payment, in whole or in part, to such extent that County makes a Good Faith Determination that withholding is necessary, in the sole discretion of County, because of any of the following circumstances:

**.1 Third-Party Claims.** Third-party claims or stop payment notices filed or reasonable evidence (including, without limitation, failure by Contractor to submit conditional releases of stop payment notice and bond rights required by the Contract Documents) indicating the possible filing of such claims or stop payment notices.

**.2 Defective Work.** Defective Work not remedied.

**.3 Nonpayment.** Failure of Contractor to make proper payments to a Subcontractor for services, labor, materials or equipment or other Work.

**.4 Inability to Complete.** Reasonable doubt that the Work can be completed for the then unpaid balance of the Contract Price or within the Contract Time.

**.5 Violation of Applicable Laws.** Failure of Contractor or a Subcontractor to comply with Applicable Laws.

**.6 Penalty.** Any penalty asserted against County by virtue of Contractor's failure to comply with Applicable Laws.

**.7 Lack of Progress.** Failure by Contractor to maintain progress in accordance with the Construction Schedule.

**.8 Setoff.** Any reason specified elsewhere in the Contract Documents as grounds for a withholding, offset or setoff or that would legally entitle County to a setoff or recoupment.

**.9 Consultant Services.** Additional professional, consultant or inspection services required due to Contractor's failure to comply with the Contract Documents.

**.10 Liquidated Damages.** Liquidated damages payable to County pursuant to Section 3.2 of the Construction Contract or that there is a reasonable basis to believe will be payable to County based upon the Contractor's project date for Substantial Completion based on its update Construction Schedule or based upon other evidence available to County of the probable date that the Work will be Substantially Completed.

**.11 Damage.** Loss caused to County, a Separate Contractor or any other person or entity under contract to County, by Contractor or a Subcontractor.

**.12 Cleanup.** Cleanup performed by County and chargeable to Contractor pursuant to the terms of the Contract Documents.

**.13 Employee Benefits.** Failure of Contractor to pay contributions due and owing to employee benefits funds pursuant to any applicable collective bargaining agreement or trust agreement.

**.14 Required Documents.** Failure of Contractor to submit on a timely basis, proper and complete documentation required by the Contract Documents, including, without limitation, schedule updates, 'look ahead' schedules, pricing information, certifications and other required reports or documentation.

**.15 Labor Compliance.** Failure of Contractor or any Subcontractor to properly pay prevailing wages as defined in California Labor Code §§1720 et seq.

**.16 Nullification.** Nullification by County pursuant to Paragraph 9.5.4, above, of its prior approval of an Application for Payment.

**.17 Releases.** Failure by Contractor to submit any conditional release of stop payment notice and bond rights that is required pursuant to Subparagraph 9.4.2.3, above or Subparagraph 9.10.4.4, below.

**.18 Other Breach.** A breach by Contractor of any obligation or provision of the Contract Documents.

**9.6.2 Application of Withholding.** Sums properly withheld pursuant to Paragraph 9.6.1, above, may be used by County without a prior judicial determination of County's actual rights with respect to the grounds on which such withholding is based. Contractor agrees and hereby designates County as its agent for such purposes, and agrees that such payments shall be considered as payments made under the Construction Contract by County to Contractor. County shall submit to Contractor an accounting of such funds disbursed on behalf of Contractor. As an alternative to such payment, County may, in its sole and absolute discretion, elect to exercise its right to adjust the Contract Price as provided in Section 13.4, below.

9.6.3 **Final Payment.** In accordance with California Public Contract Code §7107, the amount to be withheld from Contractor's Final Payment pursuant to a withholding asserted pursuant to Paragraph 9.6.1, above, shall be limited to one hundred fifty percent (150%) of the disputed amount.

9.6.4 **Release of Withholding.** When the reasons for withholding of payment as set forth in Paragraph 9.6.1, above, are removed, approval by County will be promptly issued to Contractor for amounts previously withheld and payment of amounts withheld will be made by County within thirty (30) Days thereafter.

9.6.5 **Additional Rights.** The County's right of withholding set forth in this Section 9.6 is in addition to, and not a limitation upon, any other rights of withhold that County may have under the Contract Documents or Applicable Laws.

## 9.7 PAYMENTS BY CONTRACTOR

9.7.1 **Payments to Subcontractors.** Contractor shall not include in its Applications for Payment sums on account of any Subcontractor's portion of the Work that it does not intend to pay to such Subcontractor. Upon receipt of payment from County, Contractor shall pay the Subcontractors performing the Work, out of the amount paid to Contractor on account of such Subcontractors' portions of the Work, the amount to which said Subcontractors are entitled in accordance with the terms of their contracts with Contractor and Applicable Laws, including, without limitation, California Public Contract Code §7107. Contractor shall remain responsible, notwithstanding a withholding by County pursuant to the terms of these General Conditions, to promptly satisfy from its own funds sums due to all the Subcontractors who have performed the Work that is included in Contractor's Application for Payment. Contractor shall, by appropriate agreement, require each Subcontractor to make payments to its sub-subcontractors and suppliers in similar manner. County shall have no obligation to pay or be responsible in any way for payment to the Subcontractors, of any Tier.

9.7.2 **Payments in Trust.** Any funds that Contractor receives in payment for services or Work performed by a Subcontractor shall constitute assets of a trust, which trust funds shall be used for the exclusive benefit of the Subcontractor for the purpose of discharging Contractor's financial obligations on account of labor, services, materials or equipment furnished to the Project by the Subcontractor, provided that such labor, services, materials or equipment were performed in accordance with the Contract Documents, were included in an Application for Payment to County, and were paid by the County to Contractor. Contractor shall be the trustee of the trust and shall be required to deal with the trust assets for the benefit of the Subcontractor. Contractor shall not be a beneficiary of the trust. Nothing herein shall be construed as an intent to require that Contractor maintain trust funds in separate bank accounts, specifically designate any third party as a beneficiary of the trust created herein, or otherwise give rise to any cause of action against the County by any third party beneficiary of the trust created herein.

9.7.3 **Payment Information.** County will, on request, furnish to any of the Subcontractors, if practicable, information for such Subcontractor's review regarding percentages of completion or amounts applied for by Contractor and action taken thereon by County on account of portions of the Work done by such Subcontractor.

9.7.4 **Joint Payment.** County shall have the right, if deemed necessary in its sole discretion, to issue joint checks made payable to Contractor and any of the Subcontractors, of any Tier. The joint check payees shall be solely responsible for the allocation and disbursement of funds included as part of any such joint payment. Endorsement on such check by a payee shall be conclusively presumed to constitute receipt of payment by such payee. In no event shall any joint check payment be construed to create: (1) any contract between County and any of the Subcontractors, of any Tier; (2) any obligation from County to any of the Subcontractors; or (3) any third-party rights against County or Architect.

9.7.5 **Direct Negotiation of Stop Payment Notices.** County shall have the right to directly discuss, negotiate, settle or pay, without notice to or participation by Contractor, any stop payment notice claims asserted by the Subcontractors, of any Tier, and to deduct such sums paid from sums due to Contractor.

9.7.6 **Release of Stop Payment Notices.** With the exception of that portion, and only that portion, of a stop payment notice or other claim that arises as a result of a failure by the County to make payment to Contractor under circumstances constituting a breach of the Construction Contract by County, if any stop payment notice or other claim, whether invalid or valid, is filed with, served upon or made or asserted against the County or the Site by any



Subcontractor, of any Tier, or their agent or employee, for money claimed due, then Contractor shall within five (5) Days after written notice by the County procure, furnish and record appropriate releases or other instruments which under Applicable Laws will fully release, extinguish and remove such stop payment notice or claim, as well as any notices of pending action or other notices recorded against the Site in connection with the enforcement thereof. All costs of such actions by Contractor shall be paid for by Contractor at Contractor's Own Expense. Unless and until fully released as aforesaid, the County shall have the right to retain from any payment then due, or thereafter to become due, to Contractor an amount equal to one hundred and fifty percent (150%) of the amount necessary to satisfy, discharge and defend against any such stop payment notice or claim and any action or proceeding thereon, including, without limitation, an amount for anticipated attorney's fees and costs. If the amount to be paid, or the amount retained, is insufficient to satisfy, discharge and defend against any such stop payment notice or claim and any action or proceeding thereon, then Contractor shall be liable for the difference and upon demand shall immediately deposit the same with the County. The provisions of this Paragraph 9.7.6 are in addition to such other rights as the County may have against Contractor under the Contract Documents or Applicable Laws.

**9.7.7 No County Obligation.** Neither County nor Architect shall have any obligation to pay or to see to the payment of money to any of the Subcontractors except as may otherwise be required by Applicable Laws.

## **9.8 FAILURE OF PAYMENT**

If, through no fault of Contractor or failure by Contractor to comply with its obligations under the Contract Documents either: (1) approval or disapproval by County of an Application for Payment properly prepared and submitted by Contractor and requesting payment that is otherwise undisputed by County is not issued within the time period required therefor by the terms of this Article 9; or (2) the County does not (a) upon an Application for Payment properly prepared and submitted by Contractor pay to Contractor, within the time period required for payment by County, an undisputed amount approved by County as earned, which approval has not been, and is not thereafter, nullified by County, or (b) pay to Contractor an amount that has been awarded by arbitration or judgment of a court of competent jurisdiction, then Contractor may, following delivery to County of a written "10-day stop work order", stop the Work until, as applicable, an approval or disapproval by County, or payment by County, is received by Contractor. Promptly upon receipt of such approval or disapproval, or payment, as applicable, Contractor shall resume the Work. Any resulting Delay associated with the shut down and start up of the Work as a result of Contractor's proper exercise of its right to stop work under this Section 9.8 shall constitute a Compensable Delay.

## **9.9 SUBSTITUTION OF SECURITIES FOR RETENTION**

**9.9.1 Public Contract Code.** Pursuant to the requirements of California Public Contract Code §22300, upon the Contractor's request, the County will make payment to the Contractor of any funds withheld from payments to ensure performance under the Contract Documents if the Contractor deposits with the County, or in escrow with a California or federally chartered bank in California acceptable to the County ("Escrow Agent"), securities eligible for the investment of State Funds under Government Code §16430, or bank or savings and loan certificates of deposit, interest-bearing demand deposit accounts, standby letters of credit, or any other security mutually agreed to by the Contractor and the County, upon the following conditions:

**.1** The Contractor shall be the beneficial owner of any securities substituted for monies withheld for the purpose of receiving any interest on such securities.

**.2** All expenses relating to the substitution of securities under said §22300 and under this Section 9.9, including, but not limited to the County's overhead and administrative expenses and expenses of Escrow Agent, shall be the responsibility of the Contractor.

**.3** Securities or certificates of deposit substituted for monies withheld shall be of a value of at least equivalent to the amounts of the retention to be paid to the Contractor pursuant to the Contract Documents.

**.4** If the Contractor shall choose to deposit securities in lieu of monies withheld with an Escrow Agent, the Contractor, the County and Escrow Agent shall, as a prerequisite to such deposit, enter into an escrow agreement. Such escrow agreement shall be substantially in the form "Escrow Agreement for Security Deposits in Lieu of Retention" set forth in California Public Contract Code §22300(f).

.5 The Contractor shall obtain the written consent of Surety to such agreement.

.6 Securities, if any, shall be returned to the Contractor only upon satisfactory Final Completion of the Work.

9.9.2 **Substitute Security.** To minimize the expense caused by such substitution of securities, the Contractor shall, prior to or at the time the Contractor requests to substitute security, deposit sufficient security to cover the entire amount to be withheld. Should the current market value of such substituted security at any time fall below the amount for which it was substituted, or any other amount which the County withholds pursuant to the Contract Documents, the Contractor shall immediately and at the Contractor's Own Expense deposit additional security qualifying under said §22300 until the current market value of the total security deposited is no less than the amount subject to withholding under the Contract Documents. Securities shall be valued as often as conditions of the securities market warrant, but in no case less frequently than once per month.

9.9.3 **Deposit of Retentions.** Alternatively, subject to the conditions set forth in Paragraph 9.9.1, above, upon request of the Contractor, the County shall make payment of retentions directly to Escrow Agent at the expense of the Contractor, provided that the Contractor, the County and Escrow Agent shall, as a prerequisite to such payment, enter into an escrow agreement in the same form as prescribed in Subparagraph 9.9.1.4, above. At the Contractor's Own Expense, the Contractor may direct the investment of the payments into securities and interest bearing accounts and the Contractor shall receive the interest earned on the investments. Escrow Agent shall hold such direct payments by the County under the same terms provided herein for securities deposited by the Contractor. Upon satisfactory Final Completion of the Work, the Contractor shall receive from Escrow Agent all securities, interest and payments received by Escrow Agent from the County, less escrow fees and charges of the Escrow Account, according to the terms of said §22300 and the Contract Documents.

## 9.10 FINAL PAYMENT

9.10.1 **Payment by County.** Subject to the County's right of withholding as set forth in Section 9.6, above, or elsewhere in the Contract Documents, Final Payment shall be made by County not more than sixty (60) Days after completion of the Work as defined in Clauses (1), (2), (3) or (4) of California Public Contract Code § 7107(c), whichever definition is earliest satisfied.

9.10.2 **Application for Final Payment.** Upon issuance by County of the Notice of Final Completion pursuant to Paragraph 9.13.5, below, Contractor shall submit to County its Application for Payment requesting Final Payment.

9.10.3 **Review by County.** County will review and approve or disapprove of the Application for Payment requesting Final Payment as provided in Section 9.5, above.

9.10.4 **Conditions to Final Payment.** Without limitation to any other conditions to payment set forth elsewhere in the Contract Documents, the following shall be conditions to a proper submission, and to County's approval, of Contractor's Application for Payment requesting Final Payment:

.1 submission of Contractor certification as required by Paragraph 9.2.10, above;

.2 submission of consent of Surety, if any, to Final Payment;

.3 submission of a certificate evidencing that the insurance required by the Contract Documents is in force;

.4 submission of conditional releases and waivers of stop payment notice and bond rights upon final payment in the form required by California Civil Code §8136 executed by Contractor and by all the Subcontractors, of every Tier;

.5 submission of all Close-Out Documents (including, without limitation, complete, accurate Record Drawings and Specifications certified by Contractor as required by Paragraph 3.10.1, above);

.6 timely submission of adequate and complete certified payroll records for any time period that Work was performed, which have not been submitted by Contractor in connection with its previous Applications for Payment;

.7 proper payment of prevailing wages as defined in California Labor Code §§1720, et seq.;

.8 submission of certifications by Contractor and each Subcontractor, as required by any applicable collective bargaining agreement or trust agreement or Applicable Laws, certifying that all employee benefit contributions due and owing have been paid in full; and

.9 submission of any other documents or information required by the Contract Documents as a condition of Final Payment or Final Completion.

9.10.5 **Disputed Amounts.** Pursuant to California Public Contract Code § 7107, County may deduct and withhold from Final Payment an amount of up to one hundred fifty percent (150%) of any disputed amounts, including, without limitation, amounts to protect County against any Loss caused or threatened as a result of Contractor's failing to fully satisfy the conditions of Final Completion and Final Payment.

9.10.6 **No Waiver by County.** The making of Final Payment by County shall not constitute a waiver by County of any rights or claims, including, without limitation, any right or claim for reimbursement of Allowable Costs or Allowable Markup paid to Contractor that is determined by County, either before or after Final Payment, to have been not due to Contractor.

#### 9.10.7 **WAIVER BY CONTRACTOR.**

**ACCEPTANCE OF FINAL PAYMENT BY CONTRACTOR OR A SUBCONTRACTOR SHALL CONSTITUTE A WAIVER OF ALL RIGHTS BY THAT PAYEE AGAINST COUNTY FOR RECOVERY OF ANY LOSS, EXCEPTING ONLY THOSE CLAIMS THAT HAVE BEEN SUBMITTED BY CONTRACTOR IN THE MANNER REQUIRED BY SECTION 4.3, ABOVE, PRIOR TO, OR AT THE TIME OF CONTRACTOR'S SUBMISSION TO COUNTY OF, ITS APPLICATION FOR PAYMENT REQUESTING FINAL PAYMENT.**

#### 9.11 **SUBSTANTIAL COMPLETION**

9.11.1 **Contract Time.** Contractor shall achieve Substantial Completion of the Work, or such portion of the Work as may be designated at any time by County for separate delivery, in accordance with the requirements of the Contract Time and other provisions of the Contract Documents.

9.11.2 **Request for Inspection.** Contractor shall notify the County when Contractor believes that the Work, or portion thereof designated by the County in the Contract Documents or otherwise for separate delivery, is Substantially Complete.

9.11.3 **Substantial Completion Inspection.** When Contractor gives notice to County that it has achieved Substantial Completion of the Work, or a County designated portion thereof, unless the County determines that the Work or County designated portion thereof is not sufficiently complete to warrant an inspection to determine Substantial Completion, County, Inspector of Record, Architect and such others as may be designated by County will inspect the Work, or such County designated portion thereof.

9.11.4 **Substantial Completion Punch List.** At the conclusion of such inspection, County shall prepare and give to Contractor (or, Owner may request that Contractor prepare and provide to County) a Substantial Completion Punch List of items, if any, to be completed or corrected for Substantial Completion. If Contractor disputes any of the items included, it shall so note its objection on the Substantial Completion Punch List. Contractor shall proceed within forty-eight (48) hours after preparation of the Substantial Completion Punch List to commence correction or completion of the items on the Substantial Completion Punch List, including, without limitation, any disputed items, and all such items of Work shall be completed promptly by Contractor before the Work will be considered as Substantially Complete. Failure by County, Architect, Inspector of Record or Contractor to include an item on the Substantial Completion Punch List does not alter the responsibility of Contractor to perform the Work in accordance with the Contract Documents. Items of Work necessary for Substantial Completion that, for any reason, have been omitted from the Substantial

Completion Punch List shall be added to the Substantial Completion Punch List and Contractor shall, at the request of County, Architect or Inspector of Record made at any time prior to Final Payment commence correction or completion of such items within forty-eight (48) hours and all such items of Work shall be completed by Contractor promptly and before the Work will be considered as Substantially Complete.

**9.11.5 Re-Inspection.** Contractor shall notify County when the items of Work shown on the Substantial Completion Punch List are completed. County, Inspector of Record, Architect and such others as County deems necessary or appropriate will then make a further inspection to determine whether such Work is Substantially Complete. If such inspection, or any subsequent re-inspection required pursuant hereto, discloses any item, whether or not included on the Substantial Completion Punch List, which must be completed or corrected before Substantial Completion, Contractor shall, as a condition of Substantial Completion, complete or correct such item, which shall then be re-inspected to confirm that such Work is Substantially Complete. Contractor shall reimburse County, or County may at its option withhold from Contractor's payments, amounts incurred by County to the Inspector of Record, Architect, County Consultants or others whose services, for reasons within the control or responsibility of Contractor or the Subcontractors, are necessary for more than two (2) such re-inspections to determine Substantial Completion.

**9.11.6 Notice of Substantial Completion.** When County determines that the Work, or such designated portion thereof, is Substantially Complete, County will prepare a Notice of Substantial Completion on the County's form, which shall state the date of Substantial Completion. If the Notice of Substantial Completion is for the entire Work, then the County will attach to it the Final Completion Punch List prepared in accordance with Paragraph 9.13.2, below. Regardless of the date the Notice of Substantial Completion is issued, Substantial Completion shall be deemed to have occurred on the date stated in the Notice of Substantial Completion.

## **9.12 PARTIAL OCCUPANCY OR USE**

County reserves the right to beneficially occupy all or any portion of the Work at any time before Substantial Completion of the entire Work. Beneficial occupancy means that County has assumed physical occupancy and use of all or such portion of the Work. Commencement of improvements or other work by Separate Contractors in order to ready the Work for use or occupancy by County shall be unconditionally permitted in all cases prior to Substantial Completion and shall not constitute a taking of beneficial occupancy by County. Exercise by County in accordance with the provisions of this Section 9.12 of its right to take beneficial occupancy shall not constitute grounds for a Contract Adjustment. The County's right of beneficial occupancy of all or a portion of the Work prior to Substantial Completion shall be subject to the following conditions:

**9.12.1** County and such others as County deems necessary will make an inspection of the portion of the Work to be beneficially occupied and prepare a list of items to be completed or corrected in the same manner as required by and subject to the same conditions as set forth in Section 9.11, above.

**9.12.2** Beneficial occupancy by County shall not be construed as Acceptance of that portion of the Work which is to be occupied.

**9.12.3** Except as otherwise provided in this Section 9.12, beneficial occupancy by County shall not constitute a waiver of rights of the County against Contractor. Notwithstanding anything stated in this Section 9.12 or elsewhere in the Contract Documents to the contrary, beneficial occupancy by County shall not constitute a waiver of rights of County relating to Defective Work in the area beneficially occupied or in any other portion of the Work.

**9.12.4** Prior to the County's taking beneficial occupancy, Contractor shall submit to County an itemized list of each piece of equipment located in or serving the area to be occupied stating the date operation of such piece of equipment commenced, together with operating instructions, manuals and other information required by the Contract Documents. Contractor shall provide, in the areas beneficially occupied, on a continual basis, utility services, elevator service, and heating and cooling systems in operable condition commencing at the time of beneficial occupancy and until Final Completion of the entire Work. County shall be responsible, from and after taking occupancy, for utility consumption, regular operation and regular maintenance of such systems or equipment.

**9.12.5** County shall pay all normal operating and maintenance costs resulting from its use of equipment in areas beneficially occupied.

9.12.6 County shall pay all utility costs that arise out of its beneficial occupancy.

9.12.7 Contractor shall not be responsible for providing security in areas beneficially occupied.

9.12.8 County shall use its best efforts to prevent its beneficial occupancy from interfering with the conduct of Contractor's remaining Work.

9.12.9 Contractor shall not be required to repair damage caused solely by County's beneficial occupancy.

9.12.10 Contractor shall continue to maintain all insurance required by the Contract Documents in full force and effect.

### 9.13 FINAL COMPLETION

9.13.1 **Contract Time.** Contractor shall expeditiously and diligently perform the Work after Substantial Completion, including, without limitation, all items of Work on the Final Completion Punch List that accompanies the Notice of Substantial Completion, so as to achieve Final Completion within the requirements of the Contract Time for Final Completion.

9.13.2 **Final Completion Punch List.** Contractor shall prepare and submit to County at the time that Contractor requests inspection for Substantial Completion of the entire Work pursuant to Paragraph 9.11.2, above, a draft proposed Final Completion Punch List of items of Work that will be required to be completed or corrected for Final Completion. Items identified in the course of any inspection for Substantial Completion that are required to Finally Complete the Work following Substantial Completion shall be added to the proposed Final Completion Punch List and the revised Final Completion Punch List attached to the Notice of Substantial Completion. If Contractor disputes any of the items included, it shall so note its objection on the Final Completion Punch List. When Contractor considers the Final Completion Punch List to be complete, it shall promptly sign and deliver the Final Completion Punch List to the County. Failure by County, Architect, Inspector of Record or Contractor to include an item on the Final Completion Punch List does not alter the responsibility of Contractor to perform the Work in accordance with the Contract Documents. Items of Work necessary for Final Completion that, for any reason, have been omitted from the Final Completion Punch List shall be added to the Final Completion Punch List upon request by the County made at any time prior to Final Payment and completion of such items shall be made promptly and before the Work will be considered Finally Complete.

9.13.3 **Performance of Punch List.** Contractor shall proceed promptly and in accordance with the Contract Time to correct and complete the items on the Final Completion Punch List, including, without limitation, any disputed items, and all such items of Work shall be completed by Contractor before the Work will be considered as Finally Complete.

9.13.4 **Request for Final Inspection.** Contractor shall notify County when Contractor believes that the Work is Finally Complete. County, Inspector of Record, Architect and such others as County deems necessary or appropriate will then make a further inspection to determine whether such Work is Finally Complete. If such inspection, or any subsequent re-inspection required pursuant hereto, discloses any item, whether or not included on the Final Completion Punch List, which must be completed or corrected before Final Completion, Contractor shall, as a condition of Final Completion, complete or correct such item, which shall then be re-inspected to confirm that such Work is Finally Completed. Contractor shall reimburse County, or County may at its option withhold from Contractor's payments, amounts incurred by County to the Inspector of Record, Architect, County Consultants or others whose services, for reasons within the control or responsibility of Contractor or the Subcontractors, are necessary for more than two (2) inspections to determine Final Completion.

9.13.5 **Notice of Final Completion.** When County determines that the Work is Finally Complete, County will prepare a Notice of Final Completion on the County's form, which shall state the date of Final Completion. Regardless of the date the Notice of Final Completion is issued, Final Completion shall be deemed to have occurred on the date stated in the Notice of Final Completion.

9.13.6 **Acceptance by County.** Acceptance may be exercised by County, in its sole and absolute discretion, either after Final Completion or, without waiving or releasing Contractor from any of its obligations under the Contract Documents, at any time after Substantial Completion and prior to Final Completion.

9.13.7 **Notice of Completion.** In addition to issuance of the Notice of Substantial Completion and Notice of Final Completion, County shall have the right, exercised in its sole and absolute discretion, to record a Notice of Completion pursuant to California Civil Code §9204.

9.13.8 **No Waiver by County.** No inspections conducted pursuant to this Article 9 nor any approvals or certificates issued by County, Architect or Inspector of Record shall be deemed to be a waiver or limitation on County's right to insist on Final Completion and full performance of all other conditions to Final Payment under the Contract Documents prior to issuance of Final Payment to Contractor.

## **ARTICLE 10 INSPECTIONS, SAFETY AND HAZARDOUS SUBSTANCES**

### **10.1 INSPECTIONS**

10.1.1 **General.** One or more Inspectors of Record, including special inspectors as required, may be employed by County and assigned to the Work. The fees of Inspectors of Record shall be directly paid for by County. IF INSPECTORS OR RECORD ARE ASSIGNED TO THE WORK, THEN NO WORK SHALL BE CARRIED ON EXCEPT UNDER THE INSPECTION, AND WITH THE KNOWLEDGE, OF THE APPROPRIATE INSPECTOR(S) OF RECORD, and Contractor shall be responsible, at Contractor's Own Expense, to remove and replace any Work performed without such inspection by the appropriate Inspector of Record.

10.1.2 **Coordination.** Contractor shall schedule, arrange, and coordinate its activities with the activities of the County, Inspectors of Record, Architect, County Consultants and others designated by County to inspect or observe the Work. When, in order to comply with the intent of the Contract Documents, inspection or observation must be made at the plant or mill of the manufacturer or fabricator of material or equipment, Contractor shall notify the County, as well as any other persons identified by County as assigned by it to inspect or observe the Work, a sufficient length of time in advance to allow for arrangements to be made for such inspection or observation.

10.1.3 **Uncovering of Work.** County or an Inspector of Record shall have the right to request that any portion of the Work be uncovered by Contractor for inspection. Except as otherwise provided in Paragraph 10.1.1, above, if such Work is found to be in accordance with the Contract Documents, then all of the additional costs incurred in uncovering, replacing and re-covering the Work shall constitute grounds for Contractor, upon proper notice and request pursuant to Article 7, above, to receive a Contract Adjustment for Compensable Change and if such uncovering, replacing and re-covering of the Work causes a Delay, such Delay shall constitute grounds for Contractor, upon proper and timely notice and request pursuant to Article 8, above, to receive a Contract Adjustment for Compensable Delay. If such Work is not in accordance with the Contract Documents, then such costs of uncovering, replacing and re-covering shall be paid for by Contractor at Contractor's Own Expense and any resulting Delay shall be consider an Unexcused Delay.

10.1.4 **Off-Hours Inspections.** Contractor shall request approval by County before arranging any inspections either: (1) before 7:00 am or after 3:00 pm on Monday through Friday, or (2) on any Saturday, Sunday, holiday or any other time when Work is not usually in progress. Such request shall be delivered to County at least two (2) working days in advance of the inspection being performed. Approval or disapproval of such request is in the sole and absolute discretion of County. Except where such off-hours inspections are due to a breach by County of an obligation under the Contract Documents, the additional cost (over and above that which would be required for inspections during regular business hours) to County of the inspection shall be paid for by Contractor at Contractor's Own Expense.

10.1.5 **Access to the Work.** Contractor shall make available for use by County, Inspectors of Record, Architect, County Consultants and others assigned to inspect or observe the Work, any equipment (wheelbarrow, shovel, ladder, man-lift, etc.) that is available or in use on Site, and is required to assist in such inspections or observations.

10.1.6 **Right to Stop Work.** County shall have the right, but not the obligation, to order Contractor to stop performance of Work. Inspectors of Record shall, only if and to the extent permitted by Applicable Laws or if they are given written authority to do so by County, have the authority, but not the obligation, to stop the Work whenever provisions of Contract Documents are not being complied with, or the conduct of the Work poses a probable risk of harm to persons or property.

10.1.7 **No County Duty.** No authority of the County, Inspectors of Record, Architect, County Consultants or others designated by County to inspect the Work that is conferred by the Contract Documents nor any decision made by any of them in good faith either to exercise or not exercise such authority, nor any recommendation by any of them, shall give rise to a duty or responsibility on the part of any of them to Contractor or to the Subcontractors, of any Tier.

10.1.8 **Contractor Responsibility.** Inspections or observations by the County, Inspectors of Record, County Consultants or others shall not in any way relieve Contractor from its sole responsibility for full compliance with all of the terms and conditions of the Contract Documents, nor be construed to lessen, to any degree, Contractor's responsibility for providing efficient and capable superintendence as required herein or for incorporating into the Work only those items of the Work that conform to the Contract Documents.

10.1.9 **Reimbursement to County.** Without limitation to any other provisions of the Contract Documents, Contractor shall reimburse the County at Contractor's Own Expense, or County shall have the right, at its option, to withhold from payments due to Contractor, costs of inspections, observations or testing and other Losses that are incurred for any of the following reasons: (1) Contractor has failed to execute the Work in accordance with the Contract Documents; (2) materials or equipment have been substituted by Contractor, without prior approval by the County and Architect; (3) Defective Work; or (4) to conduct load testing of certain portions of the structure that have not fully met the requirements of the Contract Documents.

## 10.2 SAFETY PRECAUTIONS AND PROGRAMS

10.2.1 **General Safety Obligation.** Contractor shall, notwithstanding the activities of others (such as, but not limited to, the County, Architect, Inspectors of Record, County Consultants or others designated by County to prepare safety recommendations or inspect or observe the Work), be solely responsible, on a twenty-four (24) hours a Day, seven (7) Days a week basis, for initiating, maintaining and supervising all safety precautions and programs on the Site in connection with the preparation, performance, observation or inspection of the Work, including all necessary precautions to protect and safeguard all persons and property from loss, injury, death or damage resulting, directly or indirectly, from the activities of Contractor or the Subcontractors, including, without limitation, all of the following:

- .1 persons in and around the Site, as well as their personal property and vehicles;
- .2 the Work, materials and equipment to be incorporated therein under care, custody or control of Contractor or the Subcontractors, of any Tier, whether in storage on or off the Site, including, without limitation, the provision of temperature control, covering and enclosures necessary to prevent Loss due to adverse weather conditions;
- .3 other property at the Site or adjacent thereto, such as trees, shrubs, lawns, walks, pavements, curbs, roadways, structures (including, without limitation, protection from settlement or loss of lateral support) and utilities not designated for removal, relocation or replacement in the course of construction; and
- .4 construction and operations by the County, Architect and Inspectors of Record.

10.2.2 **Contractor's Safety Program.** Prior to starting the Work, Contractor shall prepare and submit to County a Safety Program, which shall comply with the requirements of the Contract Documents and shall include, at a minimum, guidelines, requirements and procedures for the following: safety management policy; emergency response plan; illness and injury prevention procedures; safety meetings; accident investigation; basic accident causes; safety inspection checklist; fire prevention and control; report forms; and employee safety manual and procedures for achieving compliance with safety requirements of insurers. A copy of the Safety Program shall be maintained on Site at all times and provided to the County upon request. Contractor is solely responsible for monitoring activities at the Site for compliance with the Safety Program and for the enforcement thereof.

10.2.3 **Safety Orders.** Contractor shall comply with all Applicable Laws, including, without limitation, all safety laws, standards, orders, rules, regulations and building codes, to prevent accidents or injury to persons on, about or adjacent to the Site and to provide a safe and healthful place of employment. Contractor shall, at Contractor's Own Expense, correct any violations of Applicable Laws occurring or threatened by conditions on the Site.

10.2.4 **Safety Representative.** Contractor shall designate a responsible member of its organization on the Site, who meets the qualification and competency requirements of Applicable Laws and whose sole duty shall be giving safety instructions, prevention of accidents and overall job site safety (including, without limitation, posting of information and other notices regarding safety that are required under occupational safety and health laws and compliance with reporting and other occupational safety requirements pertaining to the protection of the life, safety and health of the workers). The name of the person so designated shall be reported to the County by Contractor prior to the commencement of any Work on the Site.

10.2.5 **Protection.** Contractor shall take reasonable precautions to protect the Work and all building materials, equipment, temporary field offices, storage sheds, and other public and private real and personal property that might be affected, directly or indirectly, by Contractor's activities associated with performance of the Work, and shall make good, at Contractor's Own Expense, all Loss due to failure to provide such reasonable precautions.

10.2.6 **Safeguards, Disabled Access.** Contractor shall erect and maintain, as required by existing conditions and performance of the Work, all necessary safeguards for safety and protection, including, without limitation, safety devices, belts, nets, barriers, safety rails, canopies, danger signs, fire protection, no smoking prohibitions, warnings against hazards, safety regulations postings and notifications to owners and users of adjacent sites and utilities, and shall, as required by Applicable Laws, make provision for access for, and provide assistive devices to, persons with disabilities, including, without limitation, providing safe pathways of travel around areas where construction is being performed so that occupants, visitors, the public and others on the Site with disabilities are afforded reasonably direct and barrier-free access to areas of the Site and Existing Improvements.

10.2.7 **Fire, Explosives, Hazardous Substances.** Contractor shall take all necessary precautions to guard against and eliminate possible fire hazards. Explosives may be used or stored only when authorized in writing by the County. Explosives shall be handled, used and stored in accordance with Applicable Laws. When use or storage of explosives or other Hazardous Substances or methods of construction involving use of dangerous materials or equipment are necessary for execution of the Work, Contractor shall exercise utmost care and carry on such activities under supervision of properly qualified personnel.

10.2.8 **First Aid.** Contractor shall maintain emergency first aid treatment for all workers and other persons on the Project which complies with the Federal Occupational Safety and Health Act of 1970 (29 U.S.C.A. §§651 et seq.) and all other Applicable Laws.

10.2.9 **Unsafe Conditions.** Contractor shall immediately correct any condition that exists on the Site, or that County, in its reasonable judgment, determines to exist on the Site, that is unsafe or potentially unsafe to persons or property.

10.2.10 **Responsibility for Loss.** Contractor shall promptly remedy Loss to any property or person caused in whole or in part by the failure of Contractor, the Subcontractors, of any Tier, or anyone directly or indirectly employed by any of them, or by anyone for whose acts they may be liable to fully comply with the requirements of this [Article 10](#), except Loss attributable solely to the negligent acts or omissions of the County, Inspectors of Record, Architect, County Consultants or anyone directly or indirectly employed by any of them, or by anyone for whose acts any of them may be liable, and not attributable, in whole or in part, to the negligence, willful misconduct or violation of Applicable Laws by Contractor or a Subcontractor, of any Tier, or the failure by Contractor to comply with the Contract Documents. The foregoing obligations of Contractor are in addition to and not a limitation upon Contractor's indemnity obligations under [Section 3.18](#), above.

10.2.11 **Loading, Storage.** Contractor shall be responsible for coordinating the storage and staging of materials and equipment on-Site and off-Site and shall not load or store or permit any part of the Work or the Site to be loaded or stored so as to endanger the safety of persons or risk loss or damage to property.

10.2.12 **Emergency.**



**.1 Contractor Responsibility.** In an emergency involving safety or protection of persons or property, Contractor shall act immediately, either at County's direction or as otherwise necessary under the circumstances, to prevent any Loss. In such cases, Contractor shall immediately notify County, which notice may be oral, followed within twenty-four (24) hours after occurrence of the incident by written confirmation of the occurrence of such emergency and Contractor's action in response thereto.

**.2 County Action.** If, in the sole discretion of County, the condition is immediately threatening life or property, County may, with or without notice to Contractor, take whatever immediate action is necessary to correct the life-threatening condition, and the costs thereof, including, without limitation, any fees or costs of Architect, Inspectors of Record, County Consultants or others to whom County may be liable, shall be borne by Contractor at the Contractor's Own Expense.

**10.2.13 No County Responsibility.** Nothing set forth in this Section 10.2 or elsewhere in the Contract Documents shall be interpreted as an assumption of any responsibility on the part of County or other persons or entities other than the Contractor and the Subcontractors, to report such conditions to Contractor nor as relieving Contractor of any of its responsibilities under the Contract Documents.

**10.2.14 Separate Contractors.** With respect to work of a Separate Contractor being performed within an area of the Site that is under the responsibility or control of the Contractor, Contractor shall: (1) provide copies of the Safety Program to the Separate Contractors and advise the Separate Contractors of the areas of the Site to which the Safety Program applies and where compliance with the Safety Program is expected; (2) protect the Separate Contractors' work and workers from Loss due to the actions or inactions of Contractor and the Subcontractors; and (3) notify the Separate Contractor and County of any observed violation by the Separate Contractor of the Safety Program or of any violations by the Separate Contractor of Applicable Laws governing safety on the Site. Nothing herein shall be interpreted as relieving the Separate Contractors from their obligations to comply with the Contractor's Safety Program, as excusing any failure by a Separate Contractor from performing its obligations under its contracts with County or Applicable Laws or as obligating Contractor to directly supervise or enforce the obligations of the Separate Contractors to comply with the requirements of the Safety Program or Applicable Laws relating to safety.

### 10.3 HAZARDOUS SUBSTANCES, MOLD

#### 10.3.1 Hazardous Substances.

##### **.1 On Site Conditions.**

**(1) Existing Conditions.** In the event Contractor or its Subcontractors encounter materials existing or otherwise present at the Site that are reasonably believed to be Hazardous Substances that have not been rendered harmless, Contractor and Subcontractors shall, except in cases where the removal, encapsulation or abatement of such Hazardous Substances is indicated by the Contract Documents to be part of the Work to be performed by Contractor, immediately stop Work in the area affected and report the condition to County in writing. Contractor and Subcontractors shall continue Work in unaffected areas reasonably believed safe. County shall then promptly arrange for the sampling, testing and profiling of such suspected Hazardous Substances to confirm the nature, quantity or concentration thereof. In the event that such suspected Hazardous Substances are determined not to be Hazardous Substances or to be Hazardous Substances but not of sufficient nature, quantity or concentration to trigger handling and manifesting of the same as a hazardous waste upon disturbance and removal, then Contractor and its Subcontractors shall, without any Contract Adjustment, be obligated to resume the portion of the Work that was suspended and shall proceed to handle and dispose of such materials pursuant to the Contract Documents, taking all reasonable precautions that are applicable under the circumstances. If, alternatively, the suspected Hazardous Substances are determined to be Hazardous Substances of sufficient nature, quantity or concentration to trigger handling and manifesting of the same as hazardous waste upon disturbance and removal, the parties shall determine what, if any, action to take with respect to such Hazardous Substances, whether to resume Work with respect to such Hazardous Substances, taking all reasonable precautions that are applicable under the circumstances, and what, if any, Contract Adjustment is appropriate and mutually agreed in order to account for any increased cost of, or Delay in connection with, handling or disposal of Hazardous Substances not already contemplated and provided for in the Contract Documents.

**(2) Contractor Release.** Contractor and its Subcontractors shall not cause the discharge, release, emission, spill, storage, treatment or disposal of any Hazardous Substance on or adjacent to the Site, except as required and permitted by the Contract Documents and Applicable Laws in connection with Contractor's performance of an obligation to remove Hazardous Substances as part of the Work agreed to be performed under the Contract Documents or as otherwise required under the provisions of this Subparagraph 10.3.1.1. Should Contractor or its Subcontractors discharge, release, emit, spill, treat, store or dispose of any Hazardous Substance on the Site in violation of the foregoing obligation or otherwise in violation of Applicable Laws, Contractor shall at Contractor's Own Expense and without limitation to County's other rights or remedies for default immediately (a) inform County in writing of such event, (b) advise County with respect to any release reporting or notification requirement that may apply as a result of such event, (c) assist County in complying with any such reporting or notification requirement as determined by County, and (d) perform any investigation, remediation, removal or other response that is necessary or desirable in order to abate or clean up the condition resulting from such event to the full satisfaction of County and any applicable Governmental Authority. Such Hazardous Substances shall be removed and properly disposed of as soon as they can be accepted at an appropriate disposal facility, and in no event later than sixty (60) Days after such waste is generated, unless a longer time is approved by County.

## **.2 Remediation by Contractor.**

**(1) Application.** The provisions of this Paragraph 10.3.1.2 shall apply only if the Work to be performed by Contractor includes within its scope the removal, abatement, moving, handling, containment, disposal or transport of Hazardous Substances

**(2) Advance Submissions to County.** Before Contractor or any of its Subcontractors moves, removes, or transports Hazardous Substances to a facility for the receipt, treatment, storage or disposal of the Hazardous Substances ("Hazardous Substances Facility"), Contractor shall cause the person or entity who will be moving, removing or transporting the Hazardous Substances to provide to County the following: (a) verification of the Hazardous Substance Facility's or other transporter's licensed status to haul such materials; (b) verification of the Hazardous Substance Facility's licensed status, including a current permit to receive the specific materials to be transported there; (c) certification that the Hazardous Substance Facility is not under enforcement action by the U.S. Environmental Protection Agency ("EPA") or applicable State Governmental Authority or listed on any applicable EPA or applicable State Government Authority list of violating facilities; (d) verification of the Hazardous Substances Facility's EPA Identification Number (if applicable); and (e) original executed letter(s) of indemnity from the Hazardous Substances Facility bearing the Hazardous Substance Facility's letterhead. Contractor further warrants that the selected Hazardous Substance Facility is appropriately licensed and permitted to store, treat and dispose of Hazardous Substances waste in connection with the Work.

**(3) Contractor Responsibility.** Contractor warrants that it is aware of and understands the hazards which are presented to persons, property and the environment in performance of the transportation, storage and disposal of the Hazardous Substances described in the Contract Documents. Contractor and its Subcontractors and agents shall be responsible for the following: (a) processing the application for, and receiving on behalf of the County or appropriate entity, an EPA or state-equivalent generator identification number (if required); (b) preparing manifests and other shipping documents; (c) making all necessary arrangements (after consultation with County) for any off-Site transportation, treatment, storage and disposal of such Hazardous Substances in accordance with Applicable Laws; (d) ensuring the proper and lawful transportation and disposal of such Hazardous Substances, even if such services are performed by other entities under contract with Contractor or its Subcontractors; and (e) taking any necessary actions to ensure such proper transport and disposal in the event of any contingency, such as the rejection of the Hazardous Substances as nonconforming by any waste disposal facility. Contractor shall promptly provide to County copies of all manifests and other shipping documents confirming the receipt and proper disposal of all Hazardous Substances at the Hazardous Substances Facility, even if such services are performed by other entities under contract with Contractor or its Subcontractors.

**(4) Reporting Requirements.** Contractor shall comply with any Hazardous Substances release reporting requirements to Governmental Authorities directly applicable to Contractor. Notice of such reporting must be provided in advance to County or concurrently in the event of an emergency.

**(5) Samples.** Contractor and its Subcontractors shall retain all media samples for the longer of (a) the longest holding period specified in any federal, state or local laboratory analytical procedures or

guidance for the analyses performed; or (b) three months for soil samples and thirty (30) Days for water samples. Further storage or transfer of samples will be made at County's expense upon County's written request of Contractor. Contractor shall require by contract that each and every Subcontractor and agent of Contractor or a Subcontractor who performs testing of samples in connection with the Work properly disposes of such samples in accordance with Applicable Laws after completion of testing and notice to County. Regarding any such samples which may remain on-Site, provided County has approved of such on-Site storage in advance, County agrees to pay all costs associated with the storage, transport, and disposal of such samples.

**(6) Verification.** Upon Final Completion of the Work, Contractor shall confirm to County in writing that: (a) all Hazardous Substances specified for removal in the Contract Documents have been removed; and (b) all Hazardous Substances wastes removed from the Site as part of the Work have been disposed of in accordance with this Subparagraph 10.3.1.2 and Applicable Laws in a Hazardous Substances Facility.

**10.3.2 Mold.** Contractor is responsible to immediately notify County in writing if any conditions in the construction materials incorporated or to be incorporated into the Work or present in Existing Improvements are encountered at the Site that Contractor or any Subcontractor knows or, in the exercise of due care of a Contractor and not that of a consultant with special or technical expertise in the subject of Mold, should know indicate the presence of Mold or if untreated are likely to result in the growth of Mold. Contractor shall thereafter take such precautions as are reasonably required to prevent the exposure of persons to such conditions until they have been evaluated. Except as otherwise authorized by the Contract Documents or as are usual and customary according to prevailing standards of the construction industry in the vicinity of the Project, Contractor shall not allow water or moisture to come into contact with materials in Existing Improvements or with materials located at the Site that are incorporated or to be incorporated into the Work and if such contact occurs, the areas affected shall be inspected by Contractor, using appropriate consultants experienced in testing and evaluating Mold, for the presence of Mold and evaluated for the potential of future growth of Mold. All portions thereof that are found to indicate the presence of Mold, or that are found to be in a condition that has the potential for becoming a source of Mold, shall be removed and replaced. Costs incurred by Contractor due to its failure to perform its obligation under this Paragraph 10.3.2 shall be borne by Contractor at Contractor's Own Expense.

**10.3.3 Release of County.** Contractor assumes the risk that its employees or the employees of its Subcontractors, and other persons that they cause or permit to be present on the Site, may be exposed to known or unknown Hazardous Substances or Mold. Under no circumstances shall County be liable for, and Contractor hereby fully and unconditionally releases County and the other Indemnitees from, and agrees to defend and indemnify County and the other Indemnitees on the terms set forth in Section 3.18, above, against, any and all known and unknown Losses resulting from or relating to the exposure of any employee of Contractor or its Subcontractors, or other person that they cause or permit to be present on the Site, to: (1) Hazardous Substances or Mold encountered in connection with or as a result of the performance of the Work, or (2) Hazardous Substances or Mold not necessarily encountered in connection with the performance of the Work, but to which any of them may nevertheless be exposed as a result of their being present on the Site.

**10.3.4 Communications with Governmental Authorities.** Contractor shall provide to County copies of all written communications with Governmental Authorities or others relating to Hazardous Substances or Mold (other than privileged communications); provided, however, that non-disclosure of privileged communications shall not limit Contractor's obligation to otherwise comply with the terms of the Contract Documents, including, without limitation, this Section 10.3.

**10.3.5 Subcontractors.** Contractor shall include provisions in all contracts it enters into with Subcontractors for the Work requiring them to assume toward Contractor and County the same obligations that Contractor assumes toward County under this Section 10.3. Contractor shall require the Subcontractors to ensure that such provisions are included in all contracts they enter into with all lower-Tier Subcontractors.

## ARTICLE 11 INSURANCE

### 11.1 INSURANCE

11.1.1 **Contractor's Insurance Requirements.** Without limiting or diminishing any of the Contractor's obligations to defend, indemnify or hold the County harmless as set forth elsewhere in the Contract Documents, Contractor shall procure and maintain or cause to be maintained throughout the performance of the Work and for the duration of any guarantee or warranty provided under the Contract Documents, at Contractor's Own Expense, the following insurance coverages:

**.1 Workers' Compensation.** If the Contractor has "employees", as defined by the State of California, the Contractor shall provide a policy of statutory Workers' Compensation Insurance (Coverage A) as prescribed by the laws of the State of California. Such policy shall include Employers' Liability (Coverage B) including Occupational Disease with limits not less than \$1,000,000 per person per accident. Such policy shall be endorsed to waive subrogation in favor of the County and, if applicable, to provide a Borrowed Servant/Alternate Employer Endorsement. Pursuant to §3700 of the California Labor Code, Contractor shall file with the County before commencing the Work the following signed certification:

*"I am aware of the provisions of Section 3700 of the Labor Code, which requires every employer to be insured against liability for workers' compensation or to undertake self-insurance in accordance with the provisions of that Code, and I shall comply with such provisions before commencing the performance of the Work of this Construction Contract."*

**.2 Commercial General Liability.** Contractor shall provide a policy of Commercial General Liability insurance coverage, including but not limited to, premises liability, contractual liability, products and completed operations liability, personal and advertising injury, and cross liability coverage, covering claims which may arise from or out of Contractor's performance of its obligations hereunder. Such policy shall name the County, its agencies, districts, special districts and departments, and their respective directors, officers, elected or appointed officials, agents, employees and representatives, including, without limitation, the members of the Board of Supervisors, and all other Indemnitees, as "additional insureds" and contain a waiver of subrogation in favor of the County and all other such additional insureds. Such policy's limit of liability shall not be less than \$1,000,000 per occurrence combined single limit. If such policy contains a general aggregate limit, it shall apply separately to the Construction Contract or be no less than two (2) times the occurrence limit.

**.3 Vehicle Liability.** If vehicles or mobile equipment are used in the performance of the Work or other obligations under the Contract Documents, then Contractor shall provide a policy of liability insurance coverage for all owned, non-owned or hired vehicles so used in an amount not less than \$1,000,000 per occurrence combined single limit. If such policy contains a general aggregate limit, it shall apply separately to the Construction Contract or be no less than two (2) times the occurrence limit. Such policy shall name the County, its agencies, districts, special districts and departments, and their respective directors, officers, elected or appointed officials, agents, employees and representatives, including, without limitation, the members of the Board of Supervisors, and all other Indemnitees, as "additional insureds" and contain a waiver of subrogation in favor of the County and all other such additional insureds.

**.4 Property (Physical Damage).** Contractor shall provide a policy of all-risk property insurance coverage for the full replacement value of all Contractor's equipment, improvements/alterations, temporary structures, and systems, including without limitation, items owned by others in the Contractor's care, custody or control, used on the Site or other County-owned property, or used in any way connected with the performance of the Work.

**.5 Builder's All Risk (Course of Construction) Insurance.** The Bid Form utilized by Contractor to prepare its Bid states whether the Contractor shall include Builder's All Risk (Course of Construction) Insurance for the Project. If the Bid Form states that such insurance shall be included by the Bidder in its Bid, then Contractor shall provide a policy of Builder's All Risk (Course of Construction) insurance coverage including (if the Work is located in an earthquake or flood zone or if required on financed or bond financing arrangements) coverage for earthquake and flood, covering the County, Contractor and every Subcontractor, of every Tier, for the entire Project, including property to be used in the construction of the Work while such property is at off-Site storage locations or while in transit or temporary

off-Site storage. Such policy shall include, but not be limited to, coverage for fire, collapse, faulty workmanship, debris removal, expediting expense, fire department service charges, valuable papers and records, trees, grass, shrubbery and plants. If scaffolding, falsework and temporary buildings are insured separately by the Contractor or others, evidence of such separate coverage shall be provided to County prior to the start of the Work. Such policy shall be written on a completed value form. Such policy shall also provide coverage for temporary structures (on-Site offices, etc.), fixtures, machinery and equipment being installed as part of the Work. Contractor shall be responsible for any and all deductibles under such policy. Upon request by County, Contractor shall declare all terms, conditions, coverages and limits of such policy. NOTWITHSTANDING THE FOREGOING, COUNTY RETAINS THE RIGHT EXERCISED AT ANY TIME PRIOR TO AWARD TO ELECT TO USE ITS OWN BUILDER'S ALL RISK (COURSE OF CONSTRUCTION) INSURANCE and in the event County so elects to deduct the price for such insurance that is stated in Contractor's Bid, or if not so stated the amount included by Contractor for such insurance in the preparation of the Contractor's Bid, from the Contract Price by means of a Contract Adjustment pursuant to Change Order or Unilateral Change Order. If the County so provides the All Risk (Course of Construction) insurance for the Project, then Contractor shall assume the cost of any and all applicable policy deductibles (currently, \$50,000 per occurrence) and shall insure its own machinery, equipment, tools, etc. from any loss of any nature whatsoever.

**11.1.2 Other Mandatory Insurance Requirements.** The Contractor shall comply with the following requirements, which shall be deemed applicable to all carriers and insurance policies provided pursuant to Paragraph 11.1.1, above:

**.1 Insurer Rating.** Any and all insurance carrier(s) providing insurance coverage under any and all policy(ies) of insurance provided by Contractor pursuant to Paragraph 11.1.1, above, shall be admitted to the State of California and have an A M BEST rating of not less than A: VIII (A:8) (unless such requirements are waived in writing by the County Risk Manager, and if the County's Risk Manager waives such requirement for a particular insurer such waiver is only valid for that specific insurer and only for one policy term);

**.2 Self Insured Retentions.** Contractor shall advise County in writing the dollar amount of any "self insured retention" maintained by the Contractor that exceeds \$500,000 per occurrence. Each such self insured retention must have the prior written consent of the County Risk Manager before the commencement of any Work or operations or activities relating to the Work. If Contractor is notified that a self insured retention is unacceptable to the County, then at the election of the County, exercised in the County's sole and absolute discretion, by means of the written approval of the County's Risk Manager, the insurance carriers affected shall either: (1) reduce or eliminate such self-insured retention as respects the Construction Contract; or (2) procure a bond, satisfactory to County and approved by County in writing, which guarantees payment of losses and related investigations, claims administration, and defense costs and expenses.

**.3 Evidence of Insurance.** Contractor shall cause Contractor's insurance carrier(s) to furnish to the County either: (1) properly executed original certificate(s) of insurance and certified original copy(ies) of endorsement(s) effecting the coverage(s) required by this Section 11.1, or (2) if requested to do so orally or in writing by the County Risk Manager, provide original, certified copy(ies) of policy(ies) including all endorsement(s) and all attachment(s) thereto, showing such insurance is in full force and effect. Such certificate(s) and all policies of insurance provided by Contractor pursuant to this Section 11.1 shall contain the covenant of the insurance carrier(s) that thirty (30) Days' written notice shall be given to the County prior to any material modification, cancellation, expiration or reduction in coverage of such insurance. Each certificate of insurance and endorsement shall be signed by an individual expressly authorized by the insurance carrier to do so on the carrier's behalf. Contractor shall, if requested, provide written proof of such authorization. ***Contractor shall not commence any Work or any activities or operations related to the performance of the Work unless and until Contractor has complied with all of the requirements of this Section 11.1.***

**.4 Modification, Cancellation, Changes in Limits.** A material modification, cancellation, expiration, or reduction in coverage, shall constitute an Event of Contractor Default for which County shall have right, without limitation to its other rights or remedies provided for in the Contract Documents or under Applicable Laws, to terminate this Construction Contract. Such Event of Contractor Default may only be deemed cured if the County receives, prior to the effective date of such material modification, cancellation, expiration or reduction in coverage, properly executed original certificate(s) of insurance and original, certified copy(ies) of policy(ies) and endorsement(s), including all attachment(s) thereto, evidencing that the coverage(s) required by this Section 11.1 is(are) and will

continue, without any gap in coverage, in full force and effect in accordance with all of the requirements of this Section 11.1

**.5 Primary Coverage.** It is understood and agreed to by County and Contractor that the Contractor's insurance coverage(s) provided under this Section 11.1 shall be construed as primary insurance, and the County's insurance and/or deductibles and/or self-insured retentions or self-insured programs shall not be construed as contributory.

**.6 Additional Coverages.** County reserves the right to modify, adjust, add to and/or increase the types, amounts and terms of any insurance required under this Section 11.1 if the County Risk Manager determines, in the exercise of his/her sole and absolute discretion, that the type, amount or terms of the insurance required by this Section 11.1 has(have) become inadequate or that additional risk or exposure exists (such as, without limitation, the use of aircraft, watercraft, cranes, etc.) due to: (1) a Change in the Work; (2) the period of time of Contractor's actual performance of the Work continuing for longer than five (5) years from the Date of Commencement, whether due to Contract Adjustment or for any for any other reason; or (3) other circumstances not reasonably foreseeable to County.

**.7 Subcontractors.** Contractor shall include provisions in its subcontracts requiring each Subcontractor to assume an obligation toward Contractor to furnish insurance that complies with all of the requirements of this Section 11.1 as apply to Contractor's insurance provided to Owner and requiring such Subcontractors to furthermore include provisions in their contracts with lower-Tier Subcontractors likewise requiring such lower Tier Subcontractors assume the same obligations for providing such insurance and for passing through all such obligations to all lower Tier Subcontractors.

**.8 Self-Insurance.** If approved by County, in the exercise of its sole and absolute discretion, the insurance requirements contained in this Section 11.1 may be met with a program(s) of self-insurance provided that such program has been submitted to County and approved in writing by County prior to commencement of the Work or of any activity or operation related to the performance of the Work.

**.9 Notice of Claim.** Contractor agrees to notify County of any claim by a third party or any incident or event that may give rise to a claim arising from the performance of the Work.

## **ARTICLE 12 BONDS**

### **12.1 PERFORMANCE BOND AND PAYMENT BOND**

**12.1.1 Performance and Payment Bonds.** Within ten (10) Days after the issuance of the Notice of Intent to Award and prior to commencing Work, Contractor shall deliver to County a good and sufficient labor and materials payment bond ("Payment Bond") and a good and sufficient performance bond ("Performance Bond"), each in the amount of one hundred percent (100%) of the Contract Price.

**12.1.2 Changes.** The penal amounts of the Performance Bond and Payment Bond shall be increased on account of Change Orders and Unilateral Change Orders increasing the Contract Price. If requested by County, Contractor shall deliver to County evidence of such increases.

**12.1.3 Replacement.** Should any bond required hereunder or any Surety on such bond become or be determined by County to be insufficient, it shall be replaced within ten (10) Days by a bond that fully complies with the requirements of this Section 12.1.

**12.1.4 Duration.** The Payment Bond shall remain in effect until Acceptance of the Work and all Claims of Contractor and the Subcontractors, of any Tier, have been fully and finally resolved. The Performance Bond shall remain in effect and assure faithful performance of all Contractor's obligations under the Contract Documents, including, without limitation, all warranty obligations.

**12.1.5 Condition of Payment.** No payments to Contractor for Work performed shall be made or due until there has been full compliance with the requirements of this Section 12.1.

12.1.6 **Surety Rating.** Any Surety company issuing the Payment Bond or Performance Bond shall be, at all times while such bond is in effect, an Admitted Surety. The Surety company issuing the Performance Bond shall additionally have at all such times a current A.M. Best rating of A VIII (A:8) or better.

12.1.7 **Premiums.** The premiums for the Performance Bond and Payment Bond are included in the Contract Price and shall be paid by Contractor at Contractor's Own Expense.

12.1.8 **Obligee.** The Performance Bond shall name County as obligee. All performance bonds, if any, purchased by Subcontractors shall name County as a dual obligee with Contractor.

12.1.9 **No Exoneration.** The Performance Bond and Payment Bond shall contain provisions to the effect that Changes, Change Orders, Unilateral Change Orders, Construction Change Directives, Modifications, Changes and Contract Adjustments shall in no way release or exonerate Contractor or its Surety from their obligations and that notice thereof is waived by the Surety.

12.1.10 **Communications.** County shall have the right to communicate with Surety with respect to matters that are related to performance of the Work. Contractor shall be provided with a copy of all such communications that are in writing. Such communications shall not create or be interpreted as creating any contractual obligation of County to Surety.

12.1.11 **No Limitation.** The requirements of this Section 12.1 pertaining to the Performance Bond and the Payment Bond shall be without limitation to any other obligations Contractor may have under Applicable Laws to provide bonding for the benefit of, and to assure payment to the Subcontractors performing the Work for, the Project.

12.1.12 **Subcontractor Bonds.** Each performance bond, if any, furnished by a first-Tier Subcontractor shall include a provision whereby the Surety consents to the contingent assignment of Contractor's rights under such bond to County as provided in Section 5.3, above.

12.1.13 **Claims.** By incorporation of the Construction Contract into the Performance Bond issued by Surety, Surety shall be deemed, subject to the other terms of the Performance Bond, to be bound by all of the obligations assumed by Contractor under the Contract Documents, including, without limitation, bound by any determination, resolution, award or judgment entered or made upon any Claim by or against Contractor.

## **ARTICLE 13 UNCOVERING AND CORRECTION OF THE WORK**

### **13.1 UNCOVERING OF THE WORK**

If a portion of the Work is covered contrary to the request or direction of County, Inspector of Record or Architect, or contrary to the requirements of the Contract Documents, it must, if required by the any of them, be uncovered for observation and be re-covered by Contractor at Contractor's Own Expense.

### **13.2 CORRECTION OF THE WORK**

Contractor shall promptly correct Defective Work, whether discovered before or after Substantial Completion and whether or not fabricated, installed or completed. All such Defective Work shall be either: (1) replaced and all the Work disturbed thereby made good by Contractor at Contractor's Own Expense; or (2) County may exercise its option pursuant to Section 13.4, below, to accept such Work and adjust the Contract Price.

### **13.3 GUARANTEE TO REPAIR PERIOD**

13.3.1 **Guarantee To Repair Period.** Besides guarantees and warranties required elsewhere in the Contract Documents, Contractor guarantees the Work as provided hereinbelow. The period of this guarantee, termed the "Guarantee To Repair Period," is for one (1) year commencing as follows:

.1 for any portion of the Work that, upon Substantial Completion of the overall Work, is fully and finally complete and usable in all respects independent of other portions of the Work that are not fully and finally complete, on the date of Substantial Completion of such portion of the Work;

.2 for space beneficially occupied or for separate systems fully utilized prior to Substantial Completion, from the first date of such beneficial occupancy or full utilization, as established by an appropriate written notice by County of intent to take beneficial occupancy; or

.3 for all Work other than that described in Subparagraph 13.3.1.1, above or Subparagraph 13.3.1.2, above, from the date of Final Completion of the Work.

**13.3.2 Repair by Contractor.** Subject to the provisions of Paragraph 13.3.3, below, Contractor shall do the following: (1) correct, repair, replace, remove and restore, to the County's satisfaction, any Defective Work that becomes apparent during the progress of the Work or during the Guarantee To Repair Period; (2) correct, repair, replace, remove and restore, to the County's satisfaction, any other parts of the Work and any other real or personal property which is damaged or destroyed as a result of Defective Work or the correction of Defective Work; and (3) remove from the Site all the Work identified by the County as Defective Work, whether incorporated or not and whether discovered before or after Substantial or Final Completion. Ordinary wear and tear, abuse, or neglect by County or by County employees, its staff, visitors, public or others (except for those under the control or responsibility of Contractor or its Subcontractors) who are authorized or admitted by County to enter, use or occupy the Work, or who enter, use or occupy the Work after Final Completion, are excepted from the foregoing guarantee. All Losses resulting from Defective Work, including, without limitation, all costs of such correction, repair, replacement, removal and restoration, additional testing, inspection and additional service fees and costs of the Inspector of Record, Architect, County Consultants or others whose services may be made necessary thereby as well as any Loss to any other parts of the Work and any other real or personal property which is damaged or destroyed as a result of Defective Work or the correction, repair, replacement, removal or restoration of Defective Work, shall be paid for by Contractor at Contractor's Own Expense. Contractor shall correct, repair, replace, remove and restore Defective Work at such times as are acceptable to the County and in such a manner as to avoid, to the greatest extent practicable, disruption to the activities of the County, its staff, visitors, the public or others. Contractor shall notify the County in writing upon the completion of such correction, repair, replacement, removal and restoration.

**13.3.3 Notice by County.** Except as otherwise provided in this Paragraph 13.3.3 where immediate corrections are needed due to dangerous conditions or risk of imminent Loss or interruption of County operations, the County will give notice to Contractor of Defective Work observed prior to Final Completion in accordance with the provision of Section 15.1, below, governing the occurrence of an Event of Contractor Default and the Contractor shall proceed to cure such Event of Contractor Default in accordance with the requirements of Section 15.1, below, and Paragraph 13.3.2, above. With respect to Defective Work observed after Final Completion, the County will give notice to Contractor with reasonable promptness and Contractor shall commence the correction, repair, replacement, removal and restoration as required by Paragraph 13.3.2, above, no later than ten (10) Days after mailing of such notice to Contractor and Contractor shall thereupon diligently and continuously prosecute such correction, replacement, repair, or restoration to completion. Notwithstanding the foregoing, if in the County's opinion the presence of Defective Work, whether observed prior to Final Completion or after Final Completion and during the Guarantee To Repair Period, poses a risk or threat: (1) to life, safety or the protection of property; (2) of imminent Loss to the County or to any other person or entity; or (3) of causing an interruption in the operations of the County, then County will have the right, in the exercise of its sole and absolute discretion, to proceed with correction or replacement of the Defective Work without prior notice to Contractor, but in such cases will attempt to notify Contractor as soon as possible of the conditions encountered and the action taken by County. Such action by County without prior notice to Contractor shall not relieve Contractor of its responsibility for the costs of such County action or for any Loss occasioned by the Defective Work or necessitated by the County's action, whether such Loss occurs before or after such County action is implemented or completed.

**13.3.4 Correction by County.** If Contractor fails to perform any of its obligations under Paragraph 13.3.2, above, to correct, repair, replace, remove or restore then County, or Separate Contractors under the County's direction, may, notwithstanding any other provisions of this Article 13, proceed to do so and all costs associated therewith (including, without limitation, the cost to store any materials removed) shall be the responsibility of and paid by Contractor at Contractor's Own Expense. Such action by County will not relieve Contractor of the guarantees provided in this Article 13 or elsewhere in the Contract Documents. In addition to Contractor's other obligations under Paragraph 13.3.2, above, Contractor shall correct, repair, replace, remove and restore, to the County's satisfaction and at



Contractor's Own Expense any other parts of the Work and any other real or personal property that are damaged or destroyed as a result of such actions by County or the Separate Contractors.

**13.3.5 Sale.** If Contractor does not pay the costs of, or any of the Losses associated with, the correction, repair, replacement, removal or restoration required by the provisions of Paragraph 13.3.2 through Paragraph 13.3.4, above, then within five (5) Days after notice by the County, County may sell any materials or other items of Work removed at auction or at private sale or otherwise dispose of such materials or items and shall account for the net proceeds thereof, after deducting all such costs and Losses, and all costs of sale. If such net proceeds of sale do not cover the Losses for which Contractor is liable to the County, the County may at its option reduce the Contract Price or any payments due to Contractor by such deficiency or recover such deficiency from Contractor.

**13.3.6 No Limitation.** Contractor's obligations under this Article 13 are in addition to, and not in limitation of, its warranty obligations under Section 3.5, above, and any other obligation, guaranty or warranty of Contractor or any other third party under the Contract Documents. Nothing contained in this Article 13 shall be construed to shorten any periods of limitation with respect to other obligations of Contractor under the Contract Documents that are for longer specified periods. Establishment of the Guarantee To Repair Period in no way limits either Contractor's liability for Defective Work or the time within which proceedings may be commenced to enforce Contractor's obligations under the Contract Documents.

#### **13.4 ACCEPTANCE OF NONCONFORMING WORK**

Notwithstanding any other provisions of the Contract Documents to the contrary, the County shall have the option, exercised in its sole and absolute discretion after notice to Contractor, in lieu of requiring that Defective Work be remedied or corrected, to reduce the Contract Price to reflect the reduced value of the performance received by County. Such option shall be exercised solely by written notice to Contractor and shall not be implied from any act or omission by County. If there are no remaining payments of the Contract Price to be made to Contractor, or if the remaining payments and retention are insufficient to cover the amount of the reduction of the Contract Price, Contractor shall promptly pay to County the amount of any such deficiency.

### **ARTICLE 14 MISCELLANEOUS PROVISIONS**

#### **14.1 GOVERNING LAW**

The interpretation and enforcement of the Construction Contract and other Contract Documents and of the performance by the parties thereunder shall, notwithstanding application of the principles of conflicts of laws, be governed by the laws of the State of California. The Superior Court for the County of Riverside shall have exclusive jurisdiction and venue over any legal proceedings arising out of or involving the interpretation or enforcement of, or other matters relating to, the Construction Contract, the other Contract Documents or the performance of the parties thereunder.

#### **14.2 TIME OF ESSENCE**

All time limits stated in the Contract Documents relative to Contractor's performance of its obligations under the Contract Documents are of the essence.

#### **14.3 SUCCESSORS AND ASSIGNS**

The Construction Contract and other Contract Documents shall be binding on successors, assigns and legal representatives of County and Contractor, respectively. Contractor shall not assign, sublet or transfer an interest in or claim under this Construction Contract without advance written approval of County, which approval may be granted or withheld by County in its sole and absolute discretion, and any assignment, subletting or transfer without written approval by County shall be deemed void from its inception. Any assignment, subletting or transfer, whether or not approved by County, will not release Contractor from any of its obligations under the Contract Documents to County. County shall have the right to assign, sublet or transfer its interest in or any claim under the Construction Contract upon written notice to Contractor.

#### 14.4 WRITTEN NOTICE

Any notice from one party to the other or otherwise under the Contract Documents shall be in writing and shall be dated and signed by the party giving such notice or by a duly authorized representative of such party. Any such notice shall be deemed to have been duly served if served in the following manner, and in accordance with Civil Code §8100 et seq.:

**14.4.1 Notice to County.** If notice is given to County: (1) by personal delivery thereof to County; or (2) by depositing same in United States mail, enclosed in a sealed envelope addressed to County at Facilities Management, 3133 Mission Inn Avenue, Riverside CA 92507, and to such other address as set forth in the Bidding Documents as the location for submission of Bids and sent by registered or certified mail with postage prepaid, or express mail or overnight delivery by an express mail carrier; or (3) by leaving the notice and mailing a copy in the manner provided in Code of Civil Procedure §415.20.

**14.4.2 Notice to Contractor.** If notice is given to Contractor: (1) by personal delivery thereof to Contractor; or (2) by depositing same in United States mails, enclosed in a sealed envelope addressed to Contractor at its address stated in the Construction Contract, or if none is so stated at the address on the records of the Contractor's State License Board and sent by registered or certified mail with postage prepaid or express mail or overnight delivery by an express mail carrier; or (3) by leaving the notice and mailing a copy in the manner provided in Code of Civil Procedure §415.20.

**14.4.3 Notice to Claimant.** If notice is given to a claimant as defined in Civil Code §8004: (1) by personal delivery thereof to claimant; or (2) by depositing same in United States mail, enclosed in a sealed envelope addressed to claimant at its address stated in: a preliminary notice, stop payment notice, or claim against a payment bond; or on the records of the Contractor's State License Board; and sent by registered or certified mail with postage prepaid or express mail or overnight delivery by an express mail carrier; or (3) by leaving the notice and mailing a copy in the manner provided in code of Civil Procedure §415.20.

**14.4.4 Notice to Surety.** If notice is given to the Surety: (1) by personal delivery to the Surety; or (2) by depositing same in United States mail, enclosed in a sealed envelope, addressed to the Surety at the address of the Surety shown in the applicable Performance Bond or Payment Bond, or if none is shown, the address on the records of the Department of Insurance, and sent by registered or certified mail with postage prepaid or express mail or overnight delivery by an express mail carrier; or (3) by leaving the notice and mailing a copy in the manner provided in Code of Civil Procedure §415.20.

#### 14.5 RIGHTS AND REMEDIES

**14.5.1 County Rights.** Rights and remedies available to the County under the Contract Documents are in addition to and not a limitation of County's rights and remedies otherwise available under other provisions of the Contract Documents or Applicable Laws.

**14.5.2 Writing Required.** Provisions of the Contract Documents may be waived by County only in writing signed by the Director stating expressly that it is intended as a waiver of specified provisions of the Contract Documents.

**14.5.3 Subsequent Breach.** A waiver by either party of any breach of any term, covenant, or condition contained in the Contract Documents shall not be deemed to be a waiver of any subsequent breach of the same or any other term, covenant, or condition contained therein whether of the same or a different character.

#### 14.6 NO NUISANCE

Contractor shall not maintain, commit or permit the maintenance or commission of any nuisance in connection with the performance of Work.

#### **14.7 EXTENT OF AGREEMENT**

The Contract Documents represent the full and complete understanding of every kind or nature between the parties and all preliminary negotiations and prior representations, proposals and contracts, of whatever kind or nature, are merged herein and superseded hereby. No verbal agreement or implied covenant shall be held to vary the provisions of the Contract Documents. Any modification of this Construction Contract or the other Contract Documents will be effective only by written instrument signed by both County and Contractor and shall, if required by Applicable Laws, be formally approved or ratified by the Board of Supervisors.

#### **14.8 NO THIRD-PARTY RIGHTS**

Nothing contained in the Construction Contract or the other Contract Documents is intended to make any person or entity who is not a signatory to this Construction Contract a third-party beneficiary of any right of Contractor (including, without limitation, any right of Contractor to a benefit derived from, or to the enforcement of, an obligation assumed by County) that is expressly or impliedly created by the terms of the Contract Documents or by operation of Applicable Laws.

#### **14.9 SEVERABILITY**

Should any part, term, portion or provision of the Construction Contract or the other Contract Documents, or the application thereof to any party or circumstance, be held to be illegal, invalid or in conflict with Applicable Laws, or otherwise be rendered unenforceable or ineffectual, the validity of the remaining parts, terms, portions or provisions, or the application thereof to any other party or circumstances, shall be deemed severable and the same shall remain enforceable and valid to the fullest extent permitted by Applicable Laws.

#### **14.10 PROVISIONS REQUIRED BY APPLICABLE LAWS**

Each and every provision of law and clause required by Applicable Laws to be inserted in the Construction Contract or other Contract Documents shall be deemed to be inserted in the Contract Documents shall be read and enforced as though it were included herein, and if through mistake or otherwise any such provision is not inserted or if inserted and requires correction, then upon request of either party these General Conditions shall forthwith be amended by the parties to the Construction Contract to make such insertion or correction.

#### **14.11 SURVIVAL**

All provisions of the Contract Documents that either expressly, or by their nature, require performance or assumption by Contractor of an obligation that extends beyond termination of the Construction Contract or Final Completion of the Work, including, without limitation, Contractor's obligations of, or relating to, indemnification, insurance, ownership of documents, retention and audit of books and records, warranties and guaranties and resolution of Claims shall be deemed to survive either termination of the Construction Contract or Final Completion of the Work.

#### **14.12 FEDERAL GRANTS**

In the event of a federal grant or other federal financing participation in the funding of the Project, Contractor shall, as required in connection with, or as a condition to, such federal grant or other federal financing participation, permit access to and grant the right to examine its books covering its services performed and expenses incurred under the Construction Contract or other Contract Documents by the federal agency and comply with all applicable federal agency requirements including, without limitation, those pertaining to work hours, overtime compensation, non-discrimination, and contingent fees.

#### **14.13 PROHIBITED INTERESTS**

Contractor agrees not to accept any employment or representation which will, or is likely to, make Contractor "financially interested" (as provided in California Government Code §§1090 and 87100, hereinafter "financially interested") in any decision made by County on any matter in connection with which Contractor has been retained in connection with the Project. Without limitation to the foregoing, transactions and interests prohibited by this Section 14.13 include the

following: (1) no official or employee of County who is authorized in such capacity and on behalf of County to negotiate, make, accept, or approve, or to take part in negotiating, making, accepting or approving any architectural, engineering, inspection, construction or material supply contract or any subcontract in connection with construction of the Project, shall become directly or indirectly financially interested in the performance of the Construction Contract or in any part thereof; (2) no officer, employee, architect, attorney, engineer or inspector of or for County who is authorized in such capacity and on behalf of County to exercise any executive, supervisory or other similar functions in connection with Construction Contract or in any part thereof; and (3) Contractor shall receive no compensation hereunder, and shall repay County for any compensation received by Contractor hereunder, should Contractor or any of the Subcontractors aid, abet or knowingly participate in violation of this Section 14.13.

#### 14.14 **ASSIGNMENT OF ANTI-TRUST ACTIONS**

California Public Contract Code §7103.5(b), which is hereby incorporated by this reference, provides:

"In entering into a public works contract or a subcontract to supply goods, services, or materials pursuant to a public works contract, contractor or the subcontractor offers and agrees to assign to the awarding body all rights, title, and interest in and to all causes of action it may have under Section 4 of the Clayton Act, (15 U.S.C. Sec. 15) or under the Cartwright Act (Chapter 2 (commencing with Section 16700) of Part 2 of Division 7 of the Business and Professions Code), arising from purchases of goods, services, or materials pursuant to the public works contract or the subcontract. This assignment shall be made and become effective at the time the awarding body tenders final payment to Contractor, without further acknowledgement by the parties."

Contractor for itself and all the Subcontractors agrees to assign to County all rights, title and interest in and to all such causes of action Contractor and all the Subcontractors may have in connection with purchases related to or under the Contract Documents. This assignment shall become effective at the time County tenders Final Payment to Contractor, and Contractor shall require assignments from all the Subcontractors to comply herewith.

#### 14.15 **NO WAIVER**

County's approval, acceptance, use or payment for any or part of Contractor's performance of the Work shall not in any way alter Contractor's obligations, or waive any of County's rights, under Contract Documents.

#### 14.16 **CONSENT TO PHOTOGRAPHING**

Contractor is advised that County intends, from time to time, to take photographs, videotapes and/or motion pictures of the Work, and workers located on the Site and proximate settings. Contractor consents to the use of Contractor's name and likeness in instructional or training uses, news releases, advertising and/or publicity throughout the world in perpetuity, in all media now known or hereafter invented. Contractor shall include in its contracts with its Subcontractors a consent by the Subcontractor to the use of Subcontractor's name and the likenesses of its employees on the same terms as provided for herein applicable to such consent by Contractor.

### **ARTICLE 15 DEFAULT, TERMINATION AND SUSPENSION**

#### 15.1 **COUNTY REMEDIES FOR DEFAULT**

15.1.1 **Event of Default.** Each and any of the following shall be considered an Event of Contractor Default:

- .1 Contractor files a petition, or has filed against it a petition, for bankruptcy or is adjudged bankrupt;
- .2 Contractor makes a general assignment for the benefit of its creditors;
- .3 a receiver is appointed on account of Contractor's insolvency;

**.4** Contractor defaults, by failing or refusing to perform any obligation set forth in the Construction Contract, General Conditions or elsewhere in the Contract Documents (including, without limitation, the performance or installation of Defective Work) and thereafter: (1) fails to commence to cure such default within two (2) working days after receipt of written notice of default; (2) if the default can be cured within three (3) Days, Contractor fails or refuses after commencing to cure in accordance with Clause (1) hereof to fully cure such default within three (3) Days after receipt of written notice of default; or (3) if the default cannot be fully cured within three (3) Days, Contractor fails after commencing to cure in accordance with Clause (1) hereof to diligently and continuously prosecute and fully cure such default within ten (10) Days after receipt of such written notice;

**.5** Contractor fails or refuses to perform an obligation set forth in the Construction Contract, General Conditions or other Contract Documents that either (1) cannot be cured, or (2) cannot be cured within the 10-Day cure period set forth in Subparagraph 15.1.1.4, above;

**.6** a breach of any other agreement between County and Contractor as provided in Paragraph 15.1.9, below; or

**.7** if Contractor was previously prequalified as a condition for its bidding the Project pursuant to a Prequalification conducted by County, Contractor's prequalification status has been revoked or cancelled due to any of the following: (1) receipt by County of new information indicating that a statement made in Contractor's Prequalification Submittal (as defined in the Prequalification Documents) was false or misleading; (2) ownership of 50% or more of the stock or assets Contractor has changed; (3) if Contractor is a Project Joint Venture, its Principal Managing Partner (as those terms are defined in the Prequalification Documents) has ceased to function, or fully function, in the capacity of a Principal Managing Partner; or (4) Contractor has failed to comply with the requirements of the Prequalification Documents pertaining to minimum safety Prequalification requirements for Subcontractors.

**15.1.2 County's Remedies.** Without limitation to the County's other rights or remedies under the Contract Documents or Applicable Laws, if there is an Event of Contractor Default, County shall have the right to exercise any one or more of the following remedies:

**.1 Take Over Work.** County may, without terminating the Construction Contract and without incurring any additional liability or responsibility to Contractor (including, without limitation, any obligation to agree to a Contract Adjustment for any portion of the taken-over or non-taken-over Work), take over and perform, or engage others to perform, all or a portion of the Work.

**.2 Suspend Work.** County may, without terminating the Construction Contract and without incurring any additional liability or responsibility to Contractor (including, without limitation, any obligation to agree to a Contract Adjustment for any portion of the suspended or non-suspended Work), suspend Contractor's performance of all or a portion of the Work for as long a period of time as the County determines, in its sole discretion, is appropriate.

**.3 Termination.** County may, without incurring any additional liability or responsibility to Contractor, terminate the Construction Contract, the Work or any portion thereof.

**.4 Surety.** If there is an Event of Contractor Default pursuant to any of Subparagraphs 15.1.1.1 through 15.1.1.5, above, County may, with or without terminating the Construction Contract and without incurring any additional liability or responsibility to Contractor or Surety (including, without limitation, any obligation to agree to a Contract Adjustment), exercise its rights under the Performance Bond furnished by Contractor by giving Surety ten (10) Days' written notice of demand to perform; provided, however, that if the Surety fails, within seven (7) Days after receipt by Surety of written demand, to deliver to the County written notice of its unconditional intention to perform or does not commence performance of the Work within ten (10) Days from receipt of such notice of demand, the County may, at Contractor's Own Expense and/or the expense of the Surety, and with or without terminating the Construction Contract, proceed to complete the Work by any other means County deems expedient. By executing its Performance Bond incorporating the terms of the Construction Contract, Surety shall be deemed to have agreed, without limitation, to the provisions of this Paragraph 15.1.2 as constituting a binding obligation of Surety under its Performance Bond that shall control over any conflicting provisions set forth in the Performance Bond. Neither delivery by Surety of such written notice of unconditional intention to perform nor its timely performance of the Work in accordance with the terms of the Contract Documents and Performance Bond shall constitute waiver by Surety of any rights it may have under the Performance Bond and Applicable Laws to limit its liability to the penal amount of the Performance Bond.

**15.1.3 Contractor Tools, Equipment.** Upon County's exercise of one or more of its remedies following an Event of Contractor Default, County shall have the right, but not the obligation, to perform or complete all or any portion of the Work using any means that County may deem expedient, including, without limitation, taking possession and utilization of any or all of the materials, equipment, appliances, tools, plant and other property not owned by Contractor that are on the Site for County's use in performing the Work.

**15.1.4 Contractor Obligations.** Upon exercise by County of its remedies following an Event of Contractor Default, Contractor shall, unless County directs in writing otherwise, do the following:

.1 immediately discontinue performance of the Work to the extent specified in writing by County;

.2 remove no materials, equipment or tools (other than those owned by Contractor and not necessary for performance of a portion of the Work not terminated or discontinued) from the Site unless directed to do so by County and take all actions necessary or appropriate, or that the County may direct in writing, for the protection and preservation of the Work, any materials, equipment or tools at the Site and any materials or equipment in transit to the Site;

.3 place no further orders or subcontracts for materials, equipment, services or facilities, except as may be necessary for Contractor to continue performance of such portion, if any, of the Work that is not discontinued or terminated by County in its written notice;

.4 provide to the County, in writing, no later than two (2) Days after request by County, a statement listing or providing: (1) all subcontract agreements, purchase orders and contracts that are outstanding, as well as any change orders, amendments and modifications thereto; (2) the status of invoicing, payments and balance owing under each such subcontract agreement, purchase order and contract; (3) the status of performance and any claims asserted under each such subcontract agreement, purchase order and contract; and (4) providing such other information as the County may determine to be necessary in order to decide whether to accept assignment of any such subcontract agreement, purchase order or contract;

.5 promptly following and in accordance with County's written direction: (1) assign to the County or its designee those subcontract agreements, purchase orders or contracts, or portions thereof, that the County elects in writing to accept by assignment; (2) cancel, on the most favorable terms reasonably possible, any subcontract agreement, purchase order or contract, or portion thereof, that the County does not elect to accept by assignment; and (3) if requested by County, settle, with the prior written approval of County of the terms of settlement, outstanding liabilities to Subcontractors with respect to the Work terminated or discontinued;

6. not terminate any insurance required by the Contract Documents;

7. thereafter continue only such performance as may be directed by County;

8. deliver to the County the documents required to delivered pursuant to Paragraph 1.3.6, above;

and

9. at the written request and option of County, exercised in its sole discretion, deliver to the County, and transfer title to the County of, any completed items, materials, products, equipment or other unincorporated parts of the Work that have not been previously delivered to the Site.

#### **15.1.5 Accounting and Payment**

##### **.1 Full Termination or Discontinuance.**

**(1) Further Payment.** In the event an exercise by County of any of its remedies following an Event of Contractor Default results in a termination or discontinuance of the entire Work, then no further payment shall be due to Contractor for the Work until an accounting has been conducted in accordance with this Paragraph 15.1.5.

**(2) Time for Accounting.** Within forty-five (45) Days after Final Completion of the Work by Contractor, Surety, County or others at request of County, an accounting shall be made pursuant to this Paragraph 15.1.5 of the amount due to Contractor or County.

**(3) Payment Amount.** If, based on the accounting conducted pursuant to this Paragraph 15.1.5, the Contractor Amount exceeds the County Amount, then the difference shall be paid by County to Contractor within fifteen (15) Days after demand by Contractor following completion of such accounting. If the County Amount exceeds the Contractor Amount, then the difference shall be paid by Contractor to County within fifteen (15) Days after demand by County following completion of such accounting. Payment by Contractor of the amount due to County pursuant to such accounting shall not be construed as a release of Contractor's obligation to County for, or County's right to recover from Contractor, any Losses, of any kind whatsoever, not part of the calculation of the County Amount (including, without limitation, additional Losses related to circumstances that formed the basis for calculation of the County Amount) that may be then or thereafter owing to or recoverable by County under Applicable Laws or the Contract Documents.

**(4) Contractor Amount.** The Contractor Amount used as the basis for payment pursuant to the accounting under this Paragraph 15.1.5 shall be calculated as follows:

**(a)** take a portion of the Contract Price determined by multiplying (i) the Contract Price, by (ii) the County's Good Faith Determination of the percentage of the Work properly performed by Contractor and (A) in permanent place, (B) previously fabricated and delivered to the Site or (C) fabricated and en route for delivery to the Site and delivered to the Site within a reasonable time after Contractor's receipt of such written notice; and

**(b)** subtract therefrom all amounts previously paid by County to Contractor or to Subcontractors.

**(5) County Amount.** The County Amount used as the basis for payment pursuant to the accounting under this Paragraph 15.1.5 shall be calculated based on the sum of all past, present and future Losses to County resulting or reasonably certain to result, directly or indirectly, from any or all of the following: (a) any negligence, willful misconduct, or Defective Work on the part of Contractor or any Subcontractor; (b) any Event of Contractor Default, whether or not constituting the basis of the County's termination or discontinuance; (c) the County's exercise of its rights and remedies under and in accordance with the Contract Documents or Applicable Laws following the occurrence of an Event of Contractor Default; and (d) the payment by County of amounts to Contractor or any Subcontractor that were not owing to Contractor or that were in excess of the amount to which Contractor was entitled under the Contract Documents.

**.2 Partial Termination or Discontinuance.** In the event an exercise by County of its remedies for an Event of Contractor Default results in a discontinuance or termination of only a portion of the Work, then the Contract Price and Contract Time shall be adjusted under the provisions of Article 7 and Article 8, above, applicable to Deleted Work. Contractor shall thereafter continue to be paid for its performance of the other portions of the Work in accordance with the terms of the Contract Documents, less any amounts that County is entitled to withhold under the terms of the Contract Documents.

**.3 Exclusive Compensation.** Contractor agrees to accept such amounts, if any, as allowed under this Paragraph 15.1.5 as its sole and exclusive compensation in the event of an exercise by County of its remedies permitted by the Contract Documents or Applicable Laws following an Event of Contractor Default.

**15.1.6 Surety.** Without limitation to any of the County's other rights or remedies under a Performance Bond furnished by Contractor, Contract Documents or Applicable Laws, the County has the right to suspend, take over or terminate the performance of the Work by Surety in the event of any of the following: (1) failure of Surety or its contractors to begin the Work within a reasonable time in such manner as to ensure full compliance with the Contract Documents within the Contract Time; (2) abandonment of the Work by Surety or its contractors; (3) if at any time the County makes a Good Faith Determination that the Work is unnecessarily or unreasonably delayed by Surety or its contractors; (4) violation by Surety or its contractors of any terms of the Contract Documents, Performance Bond or Applicable Laws; or (5) failure by Surety or its contractors to follow instructions of the County for performance of the Work or for performance of the Work within the Contract Time. By executing its Performance Bond incorporating the terms of the Construction Contract, Surety shall be deemed to have agreed, without limitation, to the provisions of this

Paragraph 15.1.6 as constituting a binding obligation of Surety under its Performance Bond that shall control over any conflicting provisions set forth in the Performance Bond.

**15.1.7 Conversion.** In the event a termination for cause by the County is adjudged by a court or by binding arbitration conducted in accordance with the Contract Documents to have been wrongful, such termination shall be deemed converted to a termination for convenience pursuant to Section 15.3, below, in which case Contractor agrees to accept such amount, if any, as permitted by Paragraph 15.3.3, below, as its sole and exclusive compensation and agrees to waive any right to recovery of any other compensation or Loss, including, but not limited to, loss of anticipated profits, loss of revenue, lost opportunity or other consequential, direct, indirect or incidental damages, of any kind.

**15.1.8 Substantial Performance Waived.** The legal doctrine that a contractor may recover for substantial performance of a building contract is to have no application to the Construction Contract. Any Event of Contractor Default, whether occurring before or after the Work is Substantially Completed, shall be deemed material and shall give rise to the right of County to exercise its remedies permitted under the Contract Documents or Applicable Laws.

**15.1.9 Cross Default.** Contractor agrees that a breach of any other agreement between Contractor and County, whether related or unrelated to the Project, that is not cured in accordance with the terms of such other agreement constitutes an Event of Contractor Default under the Construction Contract, thereby entitling County to assert all its rights and remedies hereunder including, but not limited to, a specific right of off set by County against any amounts otherwise payable to Contractor under the Construction Contract or any other agreement between Contractor and County.

**15.1.10 Rights Cumulative.** All of County's rights and remedies under the Contract Documents are cumulative, and shall be in addition to and not a limitation upon those rights and remedies available under Applicable Laws.

**15.1.11 Materiality.** Designation in the Contract Documents of certain defaults as "material" shall not be construed as implying that other defaults not so designated are not material nor as limiting County's right to terminate or exercise its other rights or remedies for default to only material defaults.

**15.1.12 County Action.** No termination or action taken by County after termination shall prejudice any rights or remedies of County provided by Applicable Laws or by the Contract Documents, including, without limitation, the right of County to proceed against Contractor to recover all Losses suffered by reason of Contractor's default.

## **15.2 SUSPENSION BY COUNTY FOR CONVENIENCE**

**15.2.1 Suspension Order.** Without limitation to the County's rights under Section 15.1, above, County may, at any time, for its convenience and without the occurrence of any Event of Contractor Default, order Contractor, in writing, to suspend, delay or interrupt performance of the Work, in whole or in part. Upon receipt of such an order, Contractor shall comply with its terms and take all reasonable steps to minimize additional costs that are incurred applicable to the portion of the Work suspended, delayed or interrupted by County.

**15.2.2 Resumption.** If an order issued by the County pursuant to this Section 15.2 is canceled or expires, Contractor shall resume and continue with the previously affected portion of the Work. In such event, Contractor shall be entitled to a Contract Adjustment for additional Allowable Costs necessarily caused by such order and compensation allowed under Section 3.3 of the Construction Contract for Compensable Delay; provided, however, that no such Contract Adjustment shall be made: (1) to the extent that performance either is, was or would have been so suspended, delayed or interrupted by another cause for which Contractor or any of the Subcontractors is responsible or for which Contractor would not be entitled to a Contract Adjustment; (2) to the extent that a Contract Adjustment on account thereof is made or denied under another provision of the Contract Documents; or (3) for any general or specific escalation in prices of the Work.

**15.2.3 Limitation.** The provisions of this Section 15.2 shall not apply unless a written order is issued by County pursuant to this Section 15.2.



### 15.3 TERMINATION BY COUNTY FOR CONVENIENCE

**15.3.1 Right to Terminate for Convenience.** Without limitation upon any of County's other rights or remedies under the Contract Documents or Applicable Laws, County shall have the option, at its sole discretion and without the occurrence of any Event of Contractor Default or any other cause, to terminate the Construction Contract or Work, in whole or in part, for its convenience by giving five (5) Days written notice to Contractor.

**15.3.2 Contractor Obligations.** Upon receipt of notice of termination for convenience pursuant to this Section 15.3, Contractor shall, unless such notice directs otherwise, comply with all of the provisions of Paragraph 15.1.4, above.

**15.3.3 Contractor Compensation.** Following a termination for convenience pursuant to this Section 15.3 and within sixty (60) Days after receipt of a complete and timely Application for Payment from Contractor, an accounting shall be conducted in accordance with the process set forth in Paragraph 15.1.5, above. In such event, the amount due to Contractor shall be the Contractor Amount as calculated in the same manner provided for in Paragraph 15.1.5, above, except that there shall be added to the calculation of the Contractor Amount an amount for: (1) the reasonable, actual and direct Allowable Costs incurred and paid by Contractor (and not by Subcontractors) for (a) demobilizing Contractor's facilities from the Site, and (b) Contractor's administering the close out of its participation in the Project for a period of no longer than fifteen (15) Days; plus (2) a markup to Contractor on the Contractor's Allowable Costs incurred under Clause (1) of this Paragraph 15.3.4 that is based on the percentage for Allowable Markup that Contractor is permitted to charge pursuant to Article 7, above, for Compensable Changes involving Extra Work that is Self-Performed Work.

**15.3.4 Exclusive Compensation.** Contractor agrees to accept the compensation allowed under Paragraph 15.3.3, above, as its sole and exclusive compensation in the event of a termination by County for convenience and waives any claim for Loss related to County's termination for convenience, including, but not limited to, loss of anticipated profits, loss of revenue, lost opportunity, or other consequential, direct, indirect, or incidental damages, of any kind.

**15.3.5 Subcontractors.** Contractor shall include provisions in all of its subcontracts, purchase orders and other contracts with the Subcontractors permitting termination for convenience by Contractor on terms that are consistent with, and that afford no greater rights of recovery against Contractor for termination than are afforded to Contractor under, this Section 15.3.

### 15.4 TERMINATION BY CONTRACTOR

**15.4.1 Contractor's Remedies.** Subject to the provisions of Paragraph 15.4.2, below and Paragraph 15.4.3, below, Contractor's sole right to terminate the Construction Contract shall be its right to terminate, for cause only, upon the occurrence of either of the following:

**.1** the entire Work is stopped for one hundred sixty (160) consecutive Days, through no act or fault of Contractor or any of the Subcontractors, of any Tier, or any employee or agent of any of them, due to issuance of an order of a court or other Governmental Authority or due to a declaration of a national emergency making material unavailable; or

**.2** the entire Work is suspended by Contractor, in accordance with a proper exercise by Contractor of its rights under Section 9.8, above, for a continuous period of thirty (30) Days.

**15.4.2 Notice of Intention to Terminate.** If one of the reasons to terminate as described in Paragraph 15.4.1, above, exists, Contractor may, upon thirty (30) Days written notice to County, terminate the Construction Contract and recover from County as its sole and exclusive compensation such sums as are permitted under Paragraph 15.3.3, above.

**15.4.3 Continuous Performance.** Provided that Contractor is paid undisputed sums due in accordance with the requirements of the Construction Contract, Contractor shall not stop, delay or interrupt continuous performance of the Work by reason of any dispute or disagreement with County, including, without limitation, any disputes or disagreements over payments of money claimed due under the Contract Documents.

## 15.5 WARRANTIES

All obligations of Contractor and the Subcontractors under the Contract Documents with respect to warranties and guarantees of the Work will continue in force and shall apply, notwithstanding a termination or other discontinuance of the Work by County or Contractor pursuant to an exercise of rights by either under this Article 15, to any portion of the Work that at the time of such termination or discontinuance has been completed or partially completed by Contractor to the point that it is substantially ready (exclusive of any incidental work that may be needed to connect such portion to other Work to other Work or Existing Improvements or to energize such portion of the Work for operation) for use or occupancy by County.

## ARTICLE 16 NON-DISCRIMINATION

### 16.1 NON-DISCRIMINATION IN SERVICES

**16.1.1** Contractor must, in accordance with Applicable Laws, not discriminate in the provision of services hereunder because of race, color, religion, national origin, ancestry, sex, age, sexual orientation, marital status, AIDS or disability. For the purpose of this Section 16.1, discrimination in the provision of services may include, but is not limited to the following:

- .1 denying any person any service or benefit or the availability of a facility;
- .2 providing any service or benefit to any person which is not equivalent to, or is in a non-equivalent manner or at a non-equivalent time from, that provided to others;
- .3 subjecting any person to segregation or separate treatment in any manner related to the receipt of any service;
- .4 restricting any person in any way in the enjoyment of any advantage or privilege enjoyed by others receiving any service or benefit; or
- .5 treating any person differently from others in determining admission, enrollment, eligibility, membership, or any other requirement or condition which persons must meet in order to be provided any service or benefit.

**16.1.2** Contractor shall ensure that services are provided without regard to race, color, religion, national origin, ancestry, sex, age, sexual orientation, marital status, AIDS or disability.

**16.1.3** Contractor shall establish and maintain written procedures under which any person applying for, performing or receiving services hereunder, may seek resolution from Contractor of a complaint with respect to any alleged discrimination. Such persons shall be advised by Contractor of these procedures. A copy of such procedures shall be posted by Contractor in a conspicuous place, available and open to the public, in each of Contractor's facilities where services are provided hereunder.

### 16.2 NON-DISCRIMINATION IN EMPLOYMENT

Contractor must, in accordance with Applicable Laws, not discriminate against any employee or applicant for employment because of race, color, religion, national origin, ancestry, sex, age, sexual orientation, marital status, AIDS or disability. Without limitation to any other provisions of this Section 16.2, in the performance of the obligations under the Contract Documents, Contractor and the Subcontractors shall comply with all applicable provisions of the California Fair Employment Practices Act (California Government Code §§12940-48) and the applicable equal employment provisions of the Civil Rights Act of 1964 (42 U.S.C. §§200e - 217), whichever is more restrictive. Contractor and the Subcontractors shall ensure that qualified applicants are employed and that employees are treated during employment without regard to race, color, religion, national origin, ancestry, sex, age, sexual orientation, marital status, AIDS or disability, in accordance with requirements of Applicable Laws. Such shall include, but not be limited to, the following:

.1 employment, promotion, demotion, transfer, recruitment or recruitment advertising, layoff or termination, rates of pay or other forms of compensation; or

.2 selection for training, including apprenticeship.

**16.2.1** Contractor agrees to post in conspicuous places in each of Contractor's facilities providing services hereunder, available and open to employees and applicants for employment, notices setting forth the provisions of this Section 16.2.

**16.2.2** Contractor shall, in all solicitations or advertisements for employees placed by or on behalf of Contractor, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, national origin, ancestry, sex, age, sexual orientation, marital status, AIDS or disability, in accordance with requirements of Applicable Laws.

**16.2.3** Contractor shall send to each labor union, or workers' representative with which it has a collective bargaining agreement or other contract or understanding, a notice advising the labor union or the workers' representative of Contractor's commitments under this Section 16.2.

**16.2.4** Contractor certifies and agrees that it will deal with the Subcontractors, bidders and vendors without regard to race, color, religion, national origin, ancestry, sex, age, sexual orientation, marital status, AIDS or disability, in accordance with the requirements of Applicable Laws.

**16.2.5** In accordance with Applicable Laws, Contractor shall allow duly authorized representatives of the County, State, and Federal government access to its employment records during regular business hours in order to verify compliance with the provisions of this Section 16.2. Contractor shall provide such other information and records as such representatives may require in order to verify compliance with the provisions of this Section 16.2.

**16.2.6** If County finds that any of the provisions of this Section 16.2 have been violated by Contractor or any of the Subcontractors, such violation shall constitute a material breach of the Construction Contract for which County may cancel, terminate or suspend the Construction Contract. While County reserves the right to determine independently that the anti-discrimination provisions of the Construction Contract have been violated, a determination by the California Fair Employment and Housing Commission or the Federal Equal Employment Opportunity Commission that Contractor or the Subcontractor has violated State or Federal anti-discrimination laws shall constitute a finding by County that Contractor or the Subcontractor has violated the provisions of this Section 16.2.

**16.2.7** Contractor hereby agrees that it will comply with §504 of the Rehabilitation Act of 1973, as amended (29 U.S.C. §794) and similar Applicable Laws relating to employment of or access to persons with disabilities, all requirements imposed by applicable Federal Regulations, and all guidelines and interpretations issued pursuant thereto, to the end that no qualified disabled person shall, on the basis of disability, be excluded from participation in, be denied the benefits of, or otherwise be subjected to discrimination under any program or activity of Contractor receiving Federal Financial Assistance.

**END OF GENERAL CONDITIONS**

SPECIFICATIONS AND CONTRACT DOCUMENTS  
FOR

|FM08200012205|

|WESTERN EMERGENCY OPERATION CENTER PARKING EXPANSION  
PROJECT|



PREPARED BY  
COUNTY OF RIVERSIDE  
FACILITIES MANAGEMENT

FORM APPROVED COUNTY COUNSEL

BY: Lisa Sanchez 1/25/2024  
LISA SANCHEZ DATE

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## **NOTICE INVITING BIDS**

**NOTICE IS HEREBY GIVEN** that the County of Riverside ("County") invites sealed Bids for the construction of the following project ("Work"):

WESTERN EMERGENCY OPERATION CENTER PARKING EXPANSION PROJECT (FM08200012205)

Bids shall be prepared in conformance with the Instructions to Bidders and other Bidding Documents. Bids must be received, by hand delivery or mail, by the Clerk of the Board located on the 1<sup>st</sup> floor of the County Administrative Center, 4080 Lemon Street, Riverside, CA 92501, no later than the Bid Closing Deadline of **2:00 p.m.** on **03/06/24**, to be thereafter on said date and at said location publicly opened and read aloud. The Bidder assumes sole responsibility for timely receipt of its Bid.

On and after 02/08/24, and up to seventy two hours (72) hours prior to the Bid Closing Deadline, copies of Bidding Documents will be available by contacting Mission Reprographics at (951) 686-8828. Project documents and plan holders list may be downloaded on-line by going to Mission Reprographics Online Plan Room website at <https://www.missionreproplanroom.com/jobs/public> . The cost to of bid documents is nonrefundable.

Pursuant to Labor Code section 1771.1, any contractor bidding, or subcontractor to be listed on a bid proposal subject to Public Contract Code section 4104, shall not be qualified to bid after March 1, 2015, unless currently registered and qualified to perform public works pursuant to Labor Code section 1725.5. No Contractor or subcontractor may enter into a contract (after April 1, 2015) without proof of current registration to perform public works.

A mandatory Pre-Bid Conference will be conducted on 02/19/24, commencing promptly at 10:00 a.m., at 450 E Alessandro Blvd., Riverside, CA, 92507. **Attendance at the mandatory Pre-Bid Conference is required as a condition of bidding.** Sign language services are available for the Pre-Bid Conference upon written request received by email at jharrigan@rivco.org at least three (3) business days prior to the Pre-Bid Conference.

The Bidder receiving the Award by the County is required:

(1) to furnish a Performance Bond and Payment Bond as provided in the Instructions to Bidders and other Bidding Documents;

(2) both at the time Bidder submits its Bid and other Bid Submittals and at the time of Award, to: (a) hold a contracting license, active and in good standing, issued by the Contractors State License Board for the State of California for the following license classification(s): Class A or B license classification(s); and (b) hold, or designate a Subcontractor that holds, the certification(s) required by Applicable Laws to perform the following work: storm drain, irrigation, electrical, low voltage, paving, new site lighting, new landscape, new hardscape, extend existing roof top low voltage infrastructure; and

(3) to comply with the provisions of the California Labor Code, including, without limitation, Sections 1771.4, 1773.1, 1774, 1775 and 1776 of the California Labor Code and including, without limitation, the obligations to pay the general prevailing rates of wages in the locality in which the Work is to be performed and comply with Section 1777.5 of the California Labor Code governing employment of apprentices. Copies of the prevailing rates of per diem wages are on file at California State Department of Industrial Relations, 464 West Fourth St., Suite 348, San Bernardino, CA 92401, and are available to any interested party on request.

THIS IS A PUBLIC WORKS PROJECT AND SUBJECT TO COMPLIANCE MONITORING AND ENFORCEMENT BY THE DEPARTMENT OF INDUSTRIAL RELATIONS. The awarded prime contractor shall post job site notices as prescribed by regulation starting January 1, 2015. Contractor or subcontractor shall furnish records specified in Labor Code section 1776 to the Labor Commissioner.

Substitution of securities for any moneys withheld by County shall be permitted as provided for by Section 22300 of the California Public Contract Code.

Capitalized terms used herein shall have the meanings assigned to them in the Bidding Documents. For information contact: Facilities Management, 3450 14<sup>th</sup> Street, 2nd Floor, Riverside, CA 92501.

# **INSTRUCTIONS TO BIDDERS**

## **ARTICLE 1 GENERAL PROVISIONS**

### **1.1 DEFINITIONS**

Capitalized terms used on the Bidding Documents shall have the meanings assigned to them in the forms of Construction Contract and General Conditions that are included in the Bidding Documents. Capitalized terms not so defined shall have the meanings assigned to them in, or if none is assigned as reasonably interpreted according to the context of, the portion of the Bidding Documents where such terms are used.

### **1.2 SUMMARY OF PROJECT**

**1.2.1 Project Description.** The Project to be constructed generally consists of the following: demolition, grading, re-routing of existing utilities including but not limited to storm drain, irrigation, electrical, low voltage, paving, new site lighting, new landscape, new hardscape, extend existing roof top low voltage infrastructure. The identifying name of the Project is Western Emergency Operation Center Parking Expansion (FM08200012205)

**1.2.2 Contract Time.** Substantial Completion of the Work must be achieved within Ninety (90) Days from the Date of Commencement. Final Completion must be achieved within thirty (30) Days after the occurrence of Substantial Completion.

**1.2.3 Liquidated Damages.** The Construction Contract includes provisions: (1) permitting the County to assess liquidated damages to the Contractor of \$750 per Day for each Day after the expiration of the Contract Time for Substantial Completion that the Work is not Substantially Completed by Contractor; and (2) for payment by County to Contractor of liquidated damages to Contractor of \$500 per Day for each Day of Compensable Delay for which Contractor is entitled to a Contract Adjustment of the Contract Time and Contract Price.

**1.2.4 County Furnished Materials.** County reserves the right to elect to furnish the following County Furnished Materials for incorporation by Contractor as part of the Work pursuant to an assignment of one or more County Materials Contract(s) in accordance with Section 2.5 of the General Conditions: not applicable. Said County Materials Contract(s) are available for review by Bidders at not applicable. Bidder is solely responsible to familiarize itself prior to submission of its Bid with the terms and conditions of such County Materials Contract(s). County shall notify the successful Bidder prior to Award if the County elects to assign any of such County Materials Contracts to Contractor for incorporation Contractor of the County Furnished Materials as part of the Work.

**1.2.5 Licensing.** The Bidder to whom the Construction Contract for the Work is Awarded by the County is required, both at the time of the Bid Closing Deadline and at the time of Award, to: (1) hold a contracting license, active and in good standing, issued by the Contractors State License Board for the State of California for the following license classification(s): Class A or B license(s); and (2) hold, or designate in the Designation of Subcontractors a Subcontractor that holds, the certification(s) required by Applicable Laws to perform the following work: demolition, grading, re-routing of existing utilities including but not limited to storm drain, irrigation, electrical, low voltage, paving, new site lighting, new landscape, new hardscape, extend existing roof top low voltage infrastructure.

**1.2.6 No Warranty by County.** Bidders are solely responsible to satisfy themselves as to the suitability of any estimates, projections, budgets, criteria, surveys, reports, test data, recommendations, opinions, and other information provided by County relating to the Site, Work or Project (including, without limitation, all information contained in any Reference Documents) and nothing stated in the Bidding Documents, Contract Documents or in any other information provided by the County shall be construed as implying the creation



or existence of any warranty, express or implied, on the part of the County with respect to the completeness, accuracy or sufficiency thereof.

## **ARTICLE 2 BIDDER'S REPRESENTATIONS**

### **2.1 THE BIDDER BY SUBMITTING ITS BID REPRESENTS THAT:**

**2.1.1 Bidding Documents.** The Bidder has, in its capacity as contractor and not a design professional, carefully and thoroughly examined, compared and understood the Bidding Documents (including, without limitation, the Drawings, Specifications and Reference Documents identified in the Bidding Documents), and acting in that capacity has satisfied itself that the Bidding Documents are free of any errors, conflicts, ambiguities, lack of coordination and violations of Applicable Laws that might affect the Bidder's ability to complete the Work for the amount of its Bid and within the time period(s) for construction required by the Bidding Documents.

**2.1.2 Site Information.** In order to fully acquaint itself with all conditions, restrictions, obstructions, difficulties and other matters which might affect the Bidder's ability to complete the Work for the amount of its Bid and within the time period(s) for construction required by the Bidding Documents, the Bidder has carefully and thoroughly inspected: (1) the Site and its surroundings; (2) all Existing Improvements on the Site and their existing uses by the County, its invitees and the public; (3) routes of ingress and egress to and from the Site; (4) local conditions in the vicinity of the Site (including, without limitation, sources and availability of labor, materials and equipment); (5) the status of construction, if any, that is in-progress at the Site; and (6) all reports, data, as-built drawings and other information (including, without limitation, the Reference Documents identified in the Bidding Documents) concerning visible and concealed conditions (including, without limitation, locations and capacities of utility sources and lines) above and below the surface of the ground and in Existing Improvements that have been made available by the County to Bidders or that are disclosed by public records of the County of Riverside or the City in which the Project is located, and has correlated its observations with the requirements of the Bidding Documents.

**2.1.3 Bid Compliance.** The Bid and other Bid Submittals are in compliance with the Bidding Documents.

**2.1.4 No Exceptions.** The Bid is based upon the materials, equipment, systems and other work required by the Bidding Documents, without any exception, exclusion or qualification.

**2.1.5 Legal Status.** If the Bidder is a corporation, or if one or more of the partners or joint venturers of the Bidder (where the Bidder is a partnership or joint venture) is a corporation, such corporation(s) is(are) duly incorporated, authorized to do business and in good standing under the laws of the State of California.

**2.1.6 Licensing.** Bidder currently holds and, if and when an Award is made to Bidder, Bidder will hold at the time of Award, a license, active and in good standing, issued by the Contractors State License Board for the State of California authorizing the Bidder to contract to perform work in the requisite license classification(s) stated in the Notice Inviting Bids and/or in these Instructions to Bidders.

**2.1.7 Due Authorization.** The person or persons signing the Bid and other Bid Submittals on behalf of the Bidder are authorized to do so on behalf of the Bidder.

**2.1.8 Balanced Bid.** Cost breakdowns of the Bid that are provided by the Bidder are balanced, reflecting in each line item category of Work a reasonable estimate of the Bidder's cost commitments to perform that category of Work and a proportionate share of overhead and profit.

**2.1.9 Labor Compliance.** The Bid includes sufficient funds to enable Bidder to comply with, and Bidder will comply with, all of the applicable provisions of the California Labor Code, including, without

limitation, payment of prevailing wages, maintenance and submission of weekly certified payrolls and hiring of apprentices.

## **2.2 MISREPRESENTATION BY BIDDER**

The County may determine as unresponsive any Bid in which any statement or representation made or incorporated by reference in the Bid, including any Bid Submittal comprising the Bid, is false, incorrect or materially incomplete and misleading.

## **ARTICLE 3 BIDDING DOCUMENTS**

### **3.1 COPIES**

**3.1.1 Availability.** Copies of Bidding Documents will be available, On and after 02/08/24, and up to seventy two hours (72) hours prior to the Bid Closing Deadline, copies of Bidding Documents will be available by contacting Mission Reprographics at (951) 686-8828. Project documents and plan holders list may be downloaded on-line by going to Mission Reprographics Online Plan Room website at <https://www.missionreproplanroom.com/jobs/public> . The cost to of bid documents is nonrefundable.

**3.1.2 Sub-Bidders.** Unless otherwise stated in the Notice Inviting Bids, the County assumes no obligation to distribute Bidding Documents directly to Sub-Bidders.

**3.1.3 Complete Sets.** The Bidder shall use complete sets of Bidding Documents in preparing its Bid. The County assumes no responsibility for errors or misinterpretations resulting from the use of incomplete sets of Bidding Documents.

**3.1.4 No License.** No license to Bidder is intended or conferred by the County's issuance to Bidders of copies of the Bidding Documents.

### **3.2 INTERPRETATION OR CORRECTION OF BIDDING DOCUMENTS**

**3.2.1 Examination by Bidder.** The Bidder shall, with reasonable care and diligence in its capacity as a contractor and not a design professional, carefully and thoroughly examine the Bidding Documents and prior to the Bid Closing Deadline report to the County in writing by means of a request for clarification provided in accordance with Paragraph 3.2.3, below, any information contained in the Bidding Documents constituting an error, conflict, ambiguity, lack of coordination or violation of Applicable Laws that might affect the Bidder's ability to complete the Work for the amount of its Bid and within the time period(s) for construction required by the Bidding Documents. Failure by the Bidder to do so shall not relieve the Bidder from its representations set forth in these Instructions to Bidders nor serve as the basis for any claim by the Bidder that it was mistaken or misled in connection with the preparation of its Bid or its planning for construction of the Work.

**3.2.2 Pre-Bid Conference.** A mandatory Pre-Bid Conference will be conducted on 02/19/24, commencing promptly at 10:00 a.m., at 450 E Alessandro Blvd., Riverside, CA, 92507. Attendance at the mandatory Pre-Bid Conference is required as a condition of bidding. Sign language services are available for the Pre-Bid Conference upon written request received by email at [jharrigan@rivco.org](mailto:jharrigan@rivco.org) at least three (3) business days prior to the day of the Pre-Bid Conference. Regardless of whether the Pre-Bid Conference is described in the Bidding Documents as mandatory or optional, Bidder shall be deemed charged with knowledge of all facts, circumstances and other information that were apparent, available or provided to Bidders at the Pre-Bid Conference, including, without limitation, any and all of the physical conditions of the land and Existing Improvements at the Site that were visible or available for inspection or review by the Bidders attending the Pre-Bid Conference.

**3.2.3 Requests for Clarification.** If the Bidder requires clarification or interpretation of the Bidding Documents, it shall make a written request to County by a request for clarification. All requests for clarification of the Bidding Documents must be submitted, in writing, between the hours of 07:00 a.m. and 05:00 p.m. on any Day, Monday through Thursday (except Holidays) up to, including and no later than the Seven (7) Day(s) prior to Bid Closing Deadline, by hand delivery, mail, fax or e-mail to the following: Ruhnau Clarke Architects via email [rerbe@ruhnauclarke.com](mailto:rerbe@ruhnauclarke.com). No response will be made to requests for clarification received after that time.

**3.2.4 Addenda.** Interpretations, corrections and changes of the Bidding Documents will be made by Addenda. Interpretations, corrections and changes of the Bidding Documents made in any other manner will not be binding and the Bidder shall not rely upon them.

**3.2.5 Communications.** The Bidder shall not, at any time during the bidding process following advertisement of the Notice Inviting Bids and prior to issuance of the Notice of Intent to Award, communicate with the County, Architect, County Consultants or any employee or representative of any of them, concerning the Project except by means of a written requests for clarification submitted by Bidder in accordance with Paragraph 3.2.3, above.

### 3.3 SUBSTITUTIONS

**3.3.1 Requests for Substitutions.** The Bidder shall make requests for Substitutions on the County's Request for Substitution form included in the Bidding Documents. Such requests shall comply with the requirements of the Bidding Documents, including without limitation, the Plans and Specifications. Without limitation to the other requirements of the Request for Substitution form, requests for Substitutions shall include: (1) a description of the material, equipment or other work that is to be replaced or eliminated by the Substitution; (2) a description of any other changes to the Work, Existing Improvements, the Site or the work of Separate Contractors that would be necessary if the proposed Substitution were incorporated as part of the Work; (3) a statement that the Bidder accepts responsibility for the inclusion in its Bid of all of the costs of implementing the Substitution, including, without limitation, the costs of any related changes to the Work, Existing Improvements, the Site or the work of Separate Contractors; (4) all drawings, performance and test data and other information necessary for an evaluation of the Substitution by the County, Architect and County Consultants; and (5) a statement that the Bidder understands and agrees that if the Substitution is not approved and the Bidder submits a Bid, Bidder will provide the Work as specified in the Bidding Documents without such Substitution. The burden of proof of the merit of a proposed Substitution is entirely upon the Bidder requesting the Substitution.

**3.3.2 Deadline for Submission.** Any completed Request for Substitution form that Bidders wishes to have considered by County must be submitted, between the hours of 07:00 a.m. and 05:00 p.m. on any Day, Monday through Thursday (except Holidays) up to, including and no later than the fourteenth (14th) Day prior to the Bid Closing Deadline, in writing, by hand delivery, mail, or fax or e-mail to the following: Ruhnau Clarke Architects via email [rerbe@ruhnauclarke.com](mailto:rerbe@ruhnauclarke.com). No response will be made to any Requests for Substitution form received after that time.

**3.3.3 Review by County.** To the maximum extent permitted by Applicable Laws, approval or disapproval of a Substitution proposed by a Bidder is in the sole and absolute discretion of the County. The County's decision to approve or disapprove of a proposed Substitution shall be final and binding. An Addendum shall be issued to all Bidders describing any Substitution properly and timely requested prior to the Bid Closing Deadline that is approved by the County. Failure by County to respond to a properly and timely submitted Request for Substitution prior to 11:00 a.m. of the second (2nd) working day before the Bid Closing Deadline shall be automatically deemed to be a disapproval by County thereof.

**3.3.4 Standards.** In evaluating a Request for Substitution form submitted by a Bidder, the materials, products and equipment described in the Bidding Documents are generally viewed by the County as establishing the standards for function, dimension, appearance and quality to be met by the requested Substitution.

**3.3.5 Performance by Bidder.** In the event the Bidder has submitted a Request for Substitution form and the request for Substitution is denied, or deemed denied, by the County and the Bidder thereafter submits a Bid and receives the Award, then the Bidder shall execute the Construction Contract and provide the Work as specified, without such Substitution and at no additional cost or expense to the County.

**3.3.6 No Postponement.** Delays associated with the review, processing or approval of a Request for Substitution form submitted by Bidder shall not entitle Bidder to a postponement of the deadlines set forth in the Bidding Documents.

**3.3.7 No Bid Adjustment.** Neither approval nor disapproval of a Request for Substitution form shall be grounds for adjustment of a Bid.

### **3.4 ADDENDA**

**3.4.1 Transmittal.** Addenda will be transmitted by County to all prospective Bidders who (1) attended and signed in at the Pre-Bid Conference (if any) or (2) have submitted a written request to County for notice of Addenda at Facilities Management – Project Management Office, 3450 14<sup>th</sup> Street, 2<sup>nd</sup> Floor, Riverside, CA 92501, [jharrigan@rivco.org](mailto:jharrigan@rivco.org), including in such request the Bidder's name and address for mailing.

**3.4.2 Inspection.** Copies of Addenda will also be made available for in-person inspection wherever Bidding Documents are on file for that purpose.

**3.4.3 Issuance.** Without limitation to the County's right to withdraw its request for Bids, Addenda may be issued up to, but not later than, seventy-two (72) hours prior to the Bid Closing Deadline; provided, however, that an Addendum withdrawing the request for Bids or one which postpones the Bid Closing Deadline may be issued at any time prior to the Bid Closing Deadline.

**3.4.4 Receipt by Bidder.** Failure of the Bidder to receive any Addendum shall not relieve the Bidder from any of its obligations under its Bid Submittal. The costs of performance by Bidder of all items of Work and other obligations contained in all Addenda issued by County shall be deemed included in the amount of the Bidder's Bid. The Bidder shall identify and list in its Bid all Addenda received and included in its Bid. The Bidder's failure to so acknowledge the receipt of all Addenda in its Bid may be asserted by the County as a basis for determining its Bid non-responsive.

## **ARTICLE 4 BIDDING PROCEDURES**

### **4.1 PREPARATION OF BIDS**

**4.1.1 Bid Form.** Bidder shall state its Bid price using the Bid Form included in the Bidding Documents. A Bid presented on other forms shall be disregarded.

**4.1.2 Blanks.** All blanks on the Bid Form shall be legibly executed in a nonerasable medium.

**4.1.3 Figures.** Sums shall be expressed in a Bid in both words and figures. In case of discrepancy, the amount written in words shall govern.

**4.1.4 Alterations.** Interlineations, alterations and erasures in a Bid must be initialed by each and all of the signer(s) of the Bid.

**4.1.5 Alternative Bids.** Alternative Bids will not be accepted unless specifically requested in the Bidding Documents.

**4.1.6 Multiple Bids.** Where two or more Bids for designated portions of the Work have been requested, the Bidder may, without forfeiture of the Bid Security, state in its Bid the Bidder's refusal to

accept the Award of less than the combination of Bids stipulated by the Bidder. The Bidder shall make no additional stipulations on or conditions to its Bid Form nor qualify its Bid in any other manner.

**4.1.7 Name of Bidder.** Each copy of the Bid shall state the legal name of the Bidder and its legal form of business (i.e., sole proprietor, partnership, joint venture or corporation). Bids shall be submitted in the name of Bidder that appears in the Bidder's license issued by the State of California Contractors State License Board for the license classification(s) that the Bidder is required to hold pursuant to the Notice Inviting Bids. Each Bid shall bear the longhand signature and printed name and title of the person or persons legally authorized to bind the Bidder to a contract. A Bid by a corporation shall further give the state of incorporation and have the corporate seal affixed. A Bid submitted by an agent shall have a current power of attorney attached certifying the agent's authority to bind the Bidder.

**4.1.8 Bid Submittals.** Each Bid shall include the following Bid Submittals executed in the manner required by the Bidding Documents:

- .1 Bid Form, in the form specified in the Bidding Documents;
  - .2 Bid Security, consisting of either (a) a Bid Bond, in the form specified in the Bidding Documents, or (b) such other form of Bid Security as is permitted by these Instructions to Bidders;
  - .3 Bid Security Receipt, in the form specified in the Bidding Documents;
  - .4 Designation of Subcontractors, in the form specified in the Bidding Documents;
- and
- .5 Non-Collusion Declaration, in the form specified in the Bidding Documents.
  - .6 Iran Contracting Act Certification
  - .7 Economic Sanctions in Response to Russia's Actions in Ukraine

**4.1.9 Modifications by Bidder.** Changes or additions to the Bid Form, recapitulations of the Work bid upon, conditions or limitations on the Work to be done, alternative proposals or any other modification of the Bid Form not specifically called for by the Bidding Documents may result in the County's rejection of the Bid as being non-responsive. No oral, telephonic, electronic, facsimile or telegraphic modification of any Bid submitted will be considered.

**4.1.10 Designation of Subcontractors.** The Bidder shall submit, on the Designation of Subcontractors form specified in the Bidding Documents, a list of the proposed Subcontractors and the portion of Work to be done by each Subcontractor as required by the Subletting and Subcontracting Fair Practices Act (Public Contract Code Sections 4100 et seq). Unless the Notice Inviting Bids expressly states otherwise, any information requested in the Designation of Subcontractors other than a Subcontractor's name and location of business must be submitted as part of the Bid and may not be submitted after the Bid Closing Deadline. If additional sheets are needed to provide the information requested in the Designation of Subcontractors, they shall be included by Bidder as part of its Bid and shall accompany the Designation of Subcontractors. If bidding of Alternates is called for by the Bidding Documents and the Bidder intends to use different or additional Subcontractors or if acceptance of the Alternate by County would cause the value of the Work to be performed by a Subcontractor not identified in the Designation of Subcontractors accompanying the Base Bid to exceed the threshold dollar amount required by Applicable Law for listing of Subcontractors, then a separate Designation of Subcontractors form must be submitted for each such Alternate. If the Bidding Documents require the performance of Work for which the Bidder or a Subcontractor must hold a certification required by Applicable Laws to perform the work, and if the Bidder intends to use a Subcontractor holding such certification to satisfy said requirement and to perform such Work, then Bidder shall, without limitation to any other information that may be required by Applicable Laws, include in the Designation of Subcontractors the name of such Subcontractor and a description of the Work requiring such certification that the Subcontractor will be performing.

**4.1.11 Builder's All Risk (Course of Construction) Insurance.** The Bid Form states whether the Bidder shall include Builder's All Risk (Course of Construction) Insurance for the Project. If the Bid Form states that such insurance shall be included by the Bidder in its Bid, then Contractor shall provide a policy of Builder's All Risk (Course of Construction) insurance coverage that conforms to the requirements set forth in Subparagraph 11.1.1.5 and the other applicable provisions of Article 11 of the General Conditions. NOTWITHSTANDING THE FOREGOING, COUNTY RETAINS THE RIGHT exercised at any time prior to award TO ELECT TO USE ITS OWN BUILDER'S ALL RISK (COURSE OF CONSTRUCTION) INSURANCE and in the event County so elects to deduct the price for such insurance that is stated in Contractor's Bid, or if not so stated the amount included by Contractor for such insurance in the preparation of the Contractor's Bid, from the Contract Price by means of a Contract Adjustment pursuant to Change Order or Unilateral Change Order. If the County so provides the All Risk (Course of Construction) insurance for the Project, then Contractor shall assume the cost of any and all applicable policy deductibles (currently, \$50,000 per occurrence) and shall insure its own machinery, equipment, tools, etc. from any loss of any nature whatsoever.

**4.1.12 Interested Bidder.** No person, partnership, joint venture, corporation or other association of persons or entities submitting a Bid shall be allowed to submit more than one Bid or be interested in a Bid submitted by any other Bidder. A person, partnership, joint venture, corporation or other association of persons or entities that, in the capacity as a Subcontractor to a Bidder, has quoted a bid price to a Bidder is not disqualified from submitting a proposal or quoting prices to other Bidders or making a Bid as a general contractor for the entirety of the Work. For the purpose of this Paragraph, "interested in" means having a managerial or financial interest in another Bidder.

**4.1.13 Prequalification.** If the County has stated in the Notice Inviting Bids that bidding is limited only to bidders that were prequalified pursuant to a Prequalification conducted by County, and if Bidder was previously prequalified pursuant to that process to submit a Bid for the Project, then in addition to the requirements of the Bidding Documents the Bidder must comply with any additional requirements for bidding that are set forth in the Prequalification Documents, including, without limitation, compliance by Bidder with any continuing responsibilities for disclosure of any changes in ownership, management or financial condition. If the Bidder has been prequalified to submit a Bid for the Project it shall, if requested by County, submit prior to or with its Bid any certification(s) that the County is authorized to request by the terms of the Prequalification Documents governing the Bidder's prequalification.

**4.1.14 Applicable Laws.** All Bids must be submitted, filed, made and executed in accordance with Applicable Laws relating to bids for contracts of the nature provided for by the Bidding Documents, whether such Applicable Laws are expressly referred to herein or not.

**4.1.15 Non-Transferable.** A Bid is non-transferable.

**4.1.16 Registration with Department of Industrial Relations.** Pursuant to Labor Code section 1771.1, any contractor bidding, or subcontractor to be listed on a bid proposal subject to Public Contract Code section 4104, shall not be qualified to bid after March 1, 2015, unless currently registered and qualified to perform public works pursuant to Labor Code section 1725.5. No contractor or subcontractor may enter into a contract after April 1, 2015, without proof of current registration to perform public works.

## **4.2 BID SECURITY**

**4.2.1 Forms of Bid Security.** Each Bid shall be accompanied by a Bid Security in the form of (1) cash, (2) a certified or cashier's check made payable to the County or (3) a Bid Bond (using the form of Bid Bond included in the Bidding Documents) issued by an Admitted Surety, in an amount equal to at least ten percent (10%) of the Bid Amount, as a guarantee that the Bidder, if awarded the Construction Contract, will enter into a Construction Contract with the County and furnish the Performance Bond, Payment Bond and other Post-Award Submittals required by the Bidding Documents. Should the Bidder refuse to enter into the Construction Contract or fail to furnish the Performance Bond, Payment Bond or any other Post-Award Submittal, then the Bid Security shall be forfeited to the County in an amount equal to the difference

between the amount of Bidder's Bid Amount and the amount for which the County may procure the work from another Bidder plus the costs to the County of redrafting, redrawing and republishing the Bidding Documents.

**4.2.2 Retention by County.** The County will have the right to retain the Bid Security of any Bidder to whom an Award is being considered until either (1) the Construction Contract has been executed and the Performance Bond, Payment Bonds and other Post-Award Submittals have been furnished, or (2) all Bids have been rejected.

**4.2.3 Return by County.** Bid Security of an unsuccessful Bidder will be returned no later than sixty (60) Days after the Award by the County. Bid Security of the successful Bidder will be returned upon signing of a Construction Contract by the Bidder and County and submission by Bidder to the County of the Performance Bond, Payment Bond and other Post-Award Submittals in accordance with the requirements of the Bidding Documents.

### **4.3 SUBMISSION OF BIDS**

**4.3.1 Sealed Envelope.** All copies of the Bidder's Bid, Bid Security and other Bid Submittals shall be enclosed by the Bidder in a sealed opaque envelope. Said envelope, as well as any other, outer envelope or packaging in which said envelope may have been placed by Bidder or the carrier for delivery, shall be addressed and delivered as provided in the Notice Inviting Bids and shall be clearly and conspicuously labeled with the Project name, the Bidder's name and address and the identifying name of the Project as set forth in Paragraph 1.2.1, above.

**4.3.2 Deposit.** Bids shall be hand delivered to, or received by mail at, the Clerk of the Board located on the 1st floor of the County Administrative Center, 4080 Lemon Street, Riverside, CA 92501, at any time Monday through Thursday (excepting Holidays) between the hours of 8:00 a.m. to 5:00 p.m. up to the Bid Closing Deadline of 2:00 p.m. on 03/06/24. Bids must be received at the designated location prior to the Bid Closing Deadline. Bids, or any Bid Submittal comprising a Bid, that is received after the Bid Closing Deadline will be returned unopened.

**4.3.3 Postponement.** The County reserves the right to postpone the Bid Closing Deadline by issuance of an Addendum to the Bidding Documents at any time prior to the Bid Closing Deadline.

**4.3.4 Timely Receipt.** The Bidder assumes full and sole responsibility for timely receipt of its Bid, including its Bid Security and all other Bid Submittals, at the location designated in the Bidding Documents for receipt of Bid.

**4.3.5 Delivery Methods.** Deposit of Bids shall be by hand delivery or mail, only. Oral, telephonic, telegraphic, facsimile or other electronic transmission is not permitted.

### **4.4 WITHDRAWAL OR RESUBMISSION OF BID**

**4.4.1 Before Bid Closing Deadline.** Prior to the Bid Closing Deadline, a Bid may be withdrawn by notice to the County at the place designated for receipt of Bids stated in the Notice Inviting Bids. Such notice shall be in writing and signed by the Bidder. Partial withdrawal of a Bid or any Bid Submittal is not permitted.

**4.4.2 After Bid Closing Deadline.** Except as otherwise permitted by these Instructions to Bidders, each Bid shall constitute an offer that shall remain open for a period of sixty (60) Days after the Bid Closing Deadline and during that period of time shall not, without the written consent of the County, be modified, withdrawn or canceled by the Bidder.

**4.4.3 Resubmission.** Withdrawn Bids may be resubmitted up to the Bid Closing Deadline.

**4.4.4 Bid Security.** If a Bid is withdrawn and re-submitted, the amount of Bid Security shall be based on the Bid Amount based on the Bid as resubmitted.

**4.5 BID ALTERNATES**

**4.5.1 Alternates.** The Bidding Documents  do  do not include Alternates.

**4.5.2 Bid Form.** If Alternates are included in the Bidding Documents, then a Bid amount for each and every such Alternate shall be included in the spaces provided in the Bid Form for that purpose. If the Bidder determines that the Alternate does not affect the amount of its Base Bid, then the Bidder shall enter "No Change" in the Bid Form.

**4.5.3 Basis for Award.** Where the Bidding Documents include Alternates, the method checked in the box provided below will be used to determine the lowest Bid price (only wording following a checked box applies):

**Award Method #1:** The lowest Bid price shall be the lowest Base Bid price without consideration of the Bidder's prices on the Alternates.

**Award Method #2:** The lowest Bid price shall be the lowest total of the Base Bid price and the following Alternates that will be used for the purpose of determining the lowest Bid price:

- 1. \_\_\_\_\_
- 2. \_\_\_\_\_
- 3. \_\_\_\_\_
- 4. \_\_\_\_\_
- 5. \_\_\_\_\_

**Award Method #3:** The lowest Bid price shall be the lowest total of the Base Bid price and the following Alternates taken in the order as shown below which, when the Bidder's amount for the Alternate is added to or deducted from such Base Bid price, are less than, or equal to, the funding amount publicly disclosed by the County before the first Bid is opened:

- 1. \_\_\_\_\_
- 2. \_\_\_\_\_
- 3. \_\_\_\_\_
- 4. \_\_\_\_\_
- 5. \_\_\_\_\_

**Award Method #4:** The lowest Bid price shall be determined in a manner that will prevent any information that would identify any of the Bidders or any of their Subcontractors from being revealed to the County before the ranking of Bidders from lowest to highest has been determined.

**4.5.4 Bid Escrow Provisions.** The following provisions apply only if Subparagraph 4.5.4.1, below, provides that a Bid Escrow will be used for the Project.



.1 **Bid Escrow.** A Bid Escrow  will  will not be used for the Project.

.2 **Escrow Bid Documents.** Escrow Bid Documents, as that term is defined in the General Conditions, shall: (1) be in English; (2) be legible; (3) be detailed and comprehensive, showing a complete breakdown of quantities, prices, productivity calculations, crew sizes, direct and repair labor, plant and equipment usage, general conditions (i.e., direct overhead) costs, indirect overhead and profit and contingencies, and all other numerical factors used to compute the Bid (provided, however, with respect to Bid items having an estimated cost under \$10,000, estimated unit costs are acceptable without detailed cost estimates provided that the indirect costs, contingencies and markups are shown and allocated); (4) if estimates are based, in whole or in part, on a Geological Baseline Report (GBR) or other report on surface or subsurface conditions at the Site, clearly reference any statements, data, opinions or recommendations used or relied upon from the GBR or such other report; and (5) if the Bidder's Bid is based on a price from a Sub-Bidder that exceeds five percent (5%) of the Bid Amount, provide documentation and electronic files from such Sub-Bidder relating to its bid submitted to Bidder that comply with all of the requirements herein for Escrow Bid Documents, in which case such documents and electronic files from such Sub-Bidder shall be considered and submitted by Bidder as part of the Escrow Bid Documents that are required to be submitted pursuant to this Paragraph 4.5.4.

.3 **Deposit with County.** Each of the Bidders submitting the apparent three (3) lowest Bid prices shall place its Escrow Bid Documents in a sealed container, marked on the outside with (1) the words "Escrow Bid Documents", (2) the name of the Project, (3) Bidder's name and (4) the date of submission. The sealed container with the Escrow Bid Documents shall be delivered by such Bidders to the County, at the place for submission of Bids, within twenty-four (24) hours after the Bid Closing Deadline.

.4 **Review by County.** County will review the Escrow Bid Documents of the apparent successful Bidder to ensure that the Escrow Bid Documents comply with the requirements of this Paragraph 4.5.4, and any other requirements of the Bidding Documents relating to use of a bid escrow. Such review shall not constitute approval or acceptance by County of the proposed means, methods, techniques or procedures of the Bidder, confirmation by County that the Escrow Bid Documents comply with the Bidding Documents, nor shall such review or alter any term or condition of the Contract Documents.

.5 **Noncompliance by Bidder.** Failure by Bidder to comply with any of the requirements of this Paragraph 4.5.4 or any other requirements of the Bidding Documents relating to use of a bid escrow shall be grounds for County to determine that the Bidder's Bid is non-responsive. Without limitation to the foregoing, County shall have the right, in the exercise of its sole and absolute discretion, if it finds that the Escrow Bid Documents submitted by a Bidder do not so comply to: (1) direct that the Bidder submit the required documentation and electronic files within twenty-four (24) hours of written request by County; and/or (2) discuss with the Bidder any questions that may exist concerning the Escrow Bid Documents in an effort to clarify and reconcile the information contained in the Escrow Bid Documents.

.6 **Escrow Procedure.** The Escrow Bid Documents of the successful Bidder receiving the Award shall be placed and held in storage at a safe and secure location, at the expense of County, for the duration of the performance of the Work and until the later of (1) ninety (90) Days after Final Completion is achieved or (2) final resolution by settlement or final judgment in legal proceedings of all disputes relating to the Construction Contract or Work (the "Escrow Bid Documents Storage Period"). Escrow Bid Documents of the unsuccessful Bidders will be returned to them within sixty (60) Days following Award. Upon expiration of the Escrow Bid Documents Storage Period, County shall destroy or return to Bidder, and shall not retain, copies of that Bidder's Escrow Bid Documents. County will take reasonable steps to protect and preserve the Escrow Bid Documents from damage; however, County shall not be liable for damage or loss occasioned by circumstances beyond the reasonable control of County, such as, without limitation, fire or Acts of God.

.7 **Bidder's Warranty and Representation.** Submission by a Bidder of its Escrow Bid Documents shall constitute a warranty and representation by such Bidder that it has no other written documents or electronic files containing information used in computing its Bid that are within the definition

of Escrow Bid Documents as defined in the Bidding Documents and that Bidder agrees, in the event it receives Award of the Construction Contract, that it shall have no right to submit or offer into evidence in any legal proceedings in support of any request for Contract Adjustment, Claim or other request for any legal remedy or relief, any documentation or electronic files constituting Escrow Bid Documents that were not included in the Escrow Bid Documents submitted by Bidder.

**.8 Not Contract Documents.** The contents of the Escrow Bid Documents shall not be considered part of the Contract Documents.

**.9 Property Rights, Confidentiality.** The Escrow Bid Documents are, and shall always remain, the property and confidential information of the Bidder, subject to rights of review by the County and Bidder and other Permitted Uses as further described below. To the maximum extent permitted by Applicable Laws, County shall safeguard the Escrow Bid Documents, and all information contained therein, against disclosure and in so doing shall not disclose the Escrow Bid Documents to anyone who is not an employee, attorney or consultant of the County having a reason and need to review the Escrow Bid Documents in connection with one or more of the Permitted Uses.

**.10 Permitted Uses.** The Escrow Bid Documents may be opened, examined and used at any time by County or Bidder (including, without limitation, admission into evidence in any legal proceedings) for the purposes of aiding in an evaluation by County or Bidder, or a resolution by negotiation, settlement or legal proceedings, of a dispute between County and Bidder involving: (1) the submission or content of the Escrow Bid Documents submitted by Bidder; (2) a request by Bidder for relief from its Bid or for relief from any other obligation of Bidder in connection with the bidding process; (3) questions or disputes over the Bidder's right to, or the terms of, a Contract Adjustment; or (4) a Claim or other demand by County or Bidder for a legal remedy or recovery of money ("Permitted Uses"). Escrow Bid Documents shall not be used for any other purpose.

**.11 Examination.** Examination of the Escrow Bid Documents shall be in the presence of a representative of both County and Contractor unless a party fails, after reasonable notice from the party seeking to examine the Escrow Bid Documents, to arrange for a representative to be present, in which case the examination may take place by the requesting party alone. Copies of any portion of the Escrow Bid Documents may be made by either County or Bidder at the time of examination.

## **ARTICLE 5 CONSIDERATION OF BIDS**

### **5.1 OPENING OF BIDS**

All Bids shall be publicly opened and read aloud at the location for receipt of Bids on the Day of the Bid Closing Deadline. Without limitation to the County's right to reject all Bids, if two or more responsive Bids from responsible Bidders are the same and lowest, then the successful Bidder may be chosen by the County.

### **5.2 REJECTION OF BIDS**

**5.2.1 Rejection of Bid.** Any Bid that is in any way incomplete or irregular is subject to rejection by County.

**5.2.2 Rejection of All Bids.** The County has the right to reject all Bids, with or without extending the opportunity to any Bidder to re-bid.

### 5.3 WAIVER OF IRREGULARITIES

The County has the right to waive informalities and irregularities in a Bid received or in the bidding process.

### 5.4 AWARD

**5.4.1 Basis of Award.** It is the intent of the County to Award the Construction Contract to the responsible Bidder submitting a Bid in accordance with the requirements of the Bidding Documents for the lowest Bid Amount.

**5.4.2 Notice of Award.** Within fourteen (14) Days following public opening and reading of Bids, the County will issue a Notice of Intent to Award identifying the name of the Bidder to whom the County intends to Award the Construction Contract. Such notice will be mailed to all Bidders submitting a Bid. The County may, in its sole and absolute discretion, elect to extend the time for its issuance of its Notice of Intent to Award.

**5.4.3 Bid Protests.** Any Bidder submitting a Bid to the County may file a protest of the County's proposed Award of the Construction Contract provided that each and all of the following are complied with:

.1 The bid protest is in writing.

.2 The bid protest is both: (1) filed with and received by the Clerk of the Board at the following address, 4080 Lemon St. 1st Floor Riverside, CA 92501, not more than five (5) Days following the date of issuance of the Notice of Intent to Award. Failure to timely file and serve the bid protest as aforesated shall constitute grounds for the County's denial of the bid protest without consideration of the grounds stated therein.

.3 The written bid protest sets forth, in detail, all grounds for the bid protest, including without limitation all facts, supporting documentation, legal authorities and argument in support of the grounds for the bid protest. Any grounds not set forth in the bid protest shall be deemed waived. All factual contentions must be supported by competent, admissible and credible evidence. Any bid protest not conforming to the foregoing shall be rejected as invalid.

.4 Provided that a bid protest is filed in conformity with the foregoing, the Director of Facilities Management, such individual(s) as may be designated by the Director of Facilities Management in his/her discretion, shall review and evaluate the basis of the bid protest, and shall provide a written decision to the Bidder submitting the bid protest, either concurring with or denying the bid protest. The written decision of the Director of Facilities Management or his/her designee shall be final, unless overturned by the Board of Supervisors.

## ARTICLE 6 POST- AWARD

### 6.1 POST- AWARD SUBMITTALS

**6.1.1 Construction Contract.** The Bidder identified in the Notice of Intent to Award as the successful Bidder to receive Award by the County shall execute the Construction Contract and return it to the County within [fourteen] (14) Days after issuance by County to Bidder of the Construction Contract from the County and prior to execution of the Construction Contract by County.

**6.1.2 Other Post-Award Submittals.** Within the time periods set forth below, the Bidder identified in the Notice of Intent to Award as the successful Bidder shall submit the following additional Post-Award Submittals, completed and signed in the manner required by the Bidding Documents, to the County

at Facilities Management – Project Management Office, 3450 14<sup>th</sup> Street, 2<sup>nd</sup> Floor, Riverside, CA. 92501  
Attn: John Harrigan;

.1 within fourteen (14) Days after issuance by County to Bidder of the Notice of Intent to Award and prior to commencement of the Work, such Bidder shall submit to County the following:

- (1) Performance Bond and Payment Bond (issued by Surety);
- (2) Evidence of Insurance, in the form specified in the Bidding Documents;
- (3) Workers' Compensation Certificate, in the form specified in the Bidding Documents;
- (4) Declaration of Sufficiency of Funds (required only if the Bidder has not entered into a collective bargaining agreement covering the workers to be employed for performance of the Work), in the form specified in the Bidding Documents;

.2 within twenty-one (21) Days after issuance by County to Bidder of the Notice of Intent to Award, such Bidder shall submit to the County the following:

- (1) Construction Schedule, prepared by Bidder in the manner required by Section 3.9 of the General Conditions; and
- (2) Schedule of Values, prepared by Bidder in the manner required by Section 9.3 of the General Conditions and Section 01 20 00 PRICE AND PAYMENT PROCEDURES of the Specifications.

**6.1.3 Failure to Submit.** Failure of the successful Bidder to submit any the Post-Award Submittals specified in Paragraphs 6.1.1 and 6.1.2, above, within the time periods specified therein shall be deemed to be a failure or refusal to execute the Construction Contract and shall be cause for forfeiture of such Bidder's Bid Security.

## **6.2 BIDDER RESPONSIBILITY**

County reserves the right to request that any Bidder submit, as a condition of Award, information demonstrating that the Bidder and/or any of the Subcontractors listed in the Designation of Subcontractors submitted by Bidder, is financially and in all other respects possessed of the attributes of trustworthiness, as well as quality, fitness, capacity and experience, to satisfactorily perform under the terms and conditions of the Bidding Documents, Contract Documents and its Bid. Bidder shall comply with such request by submitting the information requested within five (5) Days of receipt of County's request. Failure to do so may be treated by County as a grounds to reject Bidder's Bid. Failure by the County to make such a request shall not constitute a waiver of its right to determine that Bidder or any such Subcontractor is not responsible to perform the Work.

## **ARTICLE 7 PERFORMANCE BOND AND PAYMENT BOND**

### **7.1 BOND REQUIREMENTS**

**7.1.1 Performance and Payment Bonds.** The successful Bidder will be required to furnish: (1) a Performance Bond in the form included in the Bidding Documents guaranteeing faithful performance of all obligations under the Construction Contract; and (2) a Payment Bond that complies with the requirements of Civil Code Section 9554 in the form included in the Bidding Documents. The penal sums of the Performance Bond and Payment Bond shall each be initially in the amount of one hundred percent (100%) of the Contract Price. The penal sum shall be increased for Contract Adjustments increasing the Contract Price that are authorized by Change Order or Unilateral Change Orders.

**7.1.2 Cost of Bonds.** The cost of Performance Bonds and Payment Bonds shall be deemed included in the amount of a Bidder's Bid.

**7.1.3 Surety.** Both the Performance Bond and Payment Bond shall be issued by an Admitted Surety. The Surety on the Performance Bond shall have an A.M. Best's Insurance Rating of A:VIII (A:8) or better.

## **7.2 TIME OF DELIVERY AND FORM OF BONDS**

**7.2.1 Submission by Bidder.** Within the time period set forth in Subparagraph 6.1.2.1, above, the successful Bidder shall deliver the required Performance Bond and Payment Bond to the County fully executed and issued by the Bidder's Surety(ies).

**7.2.2 Execution of Bonds.** Notary acknowledgements of the signatures of the Bidder and Surety(ies) is required. The attorney-in-fact who executes the required Performance Bond or Payment Bond on behalf of a Surety shall affix thereto a certified and current copy of the power of attorney authorizing such attorney-in-fact to execute same on behalf of such Surety.

## **ARTICLE 8 CONSTRUCTION CONTRACT**

### **8.1 EXECUTION OF CONTRACT**

The successful Bidder shall execute the Construction Contract in the form included in the Bidding Documents.

### **8.2 BOARD APPROVAL**

The Construction Contract shall not be binding upon the County until it has been awarded by the Director of Facilities Management or Board of Supervisors, and executed by the Board Chair, or designee.

## BID FORM

**TO THE GOVERNING BOARD OF THE COUNTY OF RIVERSIDE:**

Date: \_\_\_\_\_

Bidder: \_\_\_\_\_

The undersigned Bidder, having carefully examined the Bidding Documents for the following Project:

WESTERN EMERGENCY OPERATION CENTER PARKING EXPANSION PROJECT,

including, without limitation, the Plans and Specifications made part thereof, and taking into consideration all matters disclosed thereby, all matters of which Bidder is charged with knowledge by the terms thereof and all matters that are reasonably ascertainable by Bidder in the exercise of its duties of inquiry or investigation created by the terms set forth in the Bidding Documents (including, without limitation, the terms of Section 3.2 of the General Conditions, proposes, agrees to furnish in strict accordance with the Contract Documents all of the following:

- labor, materials, equipment, services, transportation;
- permits, licenses and taxes,
- **Builder's Risk (Course of Construction) Insurance coverage in accordance with the terms of Subparagraph 11.1.1.5 of the General Conditions;** and
- all other work, services and other things necessary for the undersigned to perform its obligations under the Contract Documents, excepting only those that are expressly stated in the Bidding Documents to be the responsibility of County,

for the total Base Bid price of (state in figures) \$ \_\_\_\_\_ (state in words) \_\_\_\_\_ dollars  
and \_\_\_\_\_ cents.

The foregoing Base Bid is submitted based upon and taking into consideration all of modifications and additions to the Bid Documents and other information set forth in each Addendum listed below, receipt and review of which is hereby acknowledged by Bidder (state below each and every Addendum number and date):

Addendum No.		Date:	
Addendum No.		Date:	
Addendum No.		Date:	
Addendum No.		Date:	
Addendum No.		Date:	
Addendum No.		Date:	
Addendum No.		Date:	

Subject to County's acceptance of such Alternate(s) in the manner set forth in the Instructions to Bidders, the foregoing Base Bid shall be adjusted as hereinafter stated for the following Alternates set forth in the Bidding Documents and/or the above-listed Addenda:

State Amount (in words and figures)	State if Amount is an "Add" or "Deduct" to Base Bid or, if Base Bid is Not Affected, Enter "No Change"
<b>Alternate 1:</b> N/A	
Figures: \$ _____	<input type="checkbox"/> Add <input checked="" type="checkbox"/> Deduct <input type="checkbox"/> No Change
Words: _____	
Dollars _____ Cents _____	
<b>Alternate 2:</b> N/A	
Figures: \$ _____	<input type="checkbox"/> Add <input type="checkbox"/> Deduct <input type="checkbox"/> No Change
Words: _____	
Dollars _____ Cents _____	
<b>Alternate 3:</b> N/A	
Figures: \$ _____	<input type="checkbox"/> Add <input type="checkbox"/> Deduct <input type="checkbox"/> No Change
Words: _____	
Dollars _____ Cents _____	
<b>Alternate 4:</b> N/A	
Figures: \$ _____	<input type="checkbox"/> Add <input type="checkbox"/> Deduct <input type="checkbox"/> No Change
Words: _____	
Dollars _____ Cents _____	
<b>Alternate 5:</b> N/A	
Figures: \$ _____	<input type="checkbox"/> Add <input type="checkbox"/> Deduct <input type="checkbox"/> No Change
Words: _____	
Dollars _____ Cents _____	

**THE UNDERSIGNED BIDDER HEREBY MAKES THE FOLLOWING REPRESENTATIONS AND COVENANTS:**

1. Except as otherwise permitted by the Instructions to Bidders, this Bid shall remain open for a period of sixty (60) Days after the Bid Closing Deadline (as defined in the Bidding Documents) and during that period of time shall not, without the written consent of County, be modified, withdrawn or canceled by the Bidder.

2. Bidder adopts and incorporates into this Bid all of the representations set forth in the Instructions to Bidders and hereby warrants that all such representations are true and correct.

3. The Bid Security submitted by Bidder is given as a guarantee that if Award of the Construction Contract that is the subject of this Bid is made to Bidder that Bidder will execute the Construction Contract and furnish the Performance Bond, Payment Bonds, evidence of insurance and other documents that Bidder is required to submit under the terms of the Bidding Documents, and in the event that the Bidder fails or refuses to execute and deliver same, such Bid Security shall be charged with the all losses and damages suffered by County as a result thereof and permitted by Applicable Law, including, without limitation, the difference between the amount of the Bid and amount for which the County may legally contract with another party to perform the Project (if such latter amount be greater than the Bid), costs of publication, and all other Losses suffered by County (including, without limitation, those associated with Delay to the Project).

4. Capitalized terms used in this Bid Form shall have the meanings assigned to them in the Bidding Documents.



**Individual Bidder**

Name of Bidder: \_\_\_\_\_

By: \_\_\_\_\_  
(Signature)

Print Name: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

Business Address:  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Business Telephone: \_\_\_\_\_

Business Fax: \_\_\_\_\_

Business E-mail: \_\_\_\_\_

Contractor's License: \_\_\_\_\_  
Dept. of Industrial Relations  
Registration No: \_\_\_\_\_

**Corporation Bidder**

Corporate Name  
of Bidder: \_\_\_\_\_

State of Incorporation: \_\_\_\_\_

By: \_\_\_\_\_  
(Signature)

Print Name: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

Business Address:  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Business Telephone: \_\_\_\_\_

Business Fax: \_\_\_\_\_

Business E-mail: \_\_\_\_\_

Contractor's License: \_\_\_\_\_  
Dept. of Industrial Relations  
Registration No: \_\_\_\_\_

Space for Corporate Seal and Attestation

**Partnership Bidder**

Name of Bidder: \_\_\_\_\_

By: \_\_\_\_\_  
(Signature)

Print Name: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

Business Address: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Business Telephone: \_\_\_\_\_

Business Fax: \_\_\_\_\_

Business E-mail: \_\_\_\_\_

Contractor's License: \_\_\_\_\_

Dept. of Industrial Relations

Registration No: \_\_\_\_\_

If additional partners are signing, attach additional sheets setting forth the above signature information for each signing partner.

If the partner or partners signing on behalf of the Bidder is/are a corporation, then for each such corporate partner complete the following (attach additional sheets, if necessary):

Corporate Name  
of Partner: \_\_\_\_\_

State of Incorporation: \_\_\_\_\_

By: \_\_\_\_\_  
(Signature)

Print Name: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

Business Address: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Business Telephone: \_\_\_\_\_

Business Fax: \_\_\_\_\_

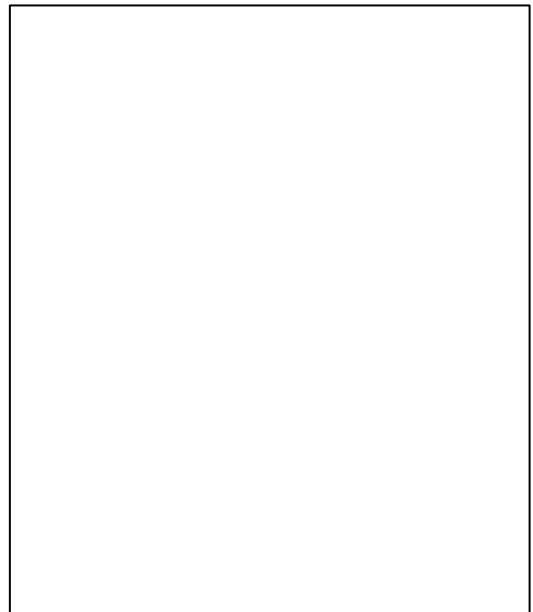
Business E-mail: \_\_\_\_\_

Contractor's License: \_\_\_\_\_

Dept. of Industrial Relations

Registration No: \_\_\_\_\_

Space for Corporate Seal and Attestation



**Joint Venture Bidder**

Name of Bidder: \_\_\_\_\_

By: \_\_\_\_\_  
(Signature)

Print Name: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

Business Address:  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Business Telephone: \_\_\_\_\_

Business Fax: \_\_\_\_\_

Business E-mail: \_\_\_\_\_

Contractor's License: \_\_\_\_\_  
Dept. of Industrial Relations  
Registration No: \_\_\_\_\_

If additional joint venture partners are signing, attach additional sheets setting forth the above signature information for each signing joint venture partner.

If the joint venture partner or partners signing on behalf of the Bidder is/are a corporation, then for each such corporate joint venture partner complete the following (attach additional sheets, if necessary):

Corporate Name  
of Partner: \_\_\_\_\_

State of Incorporation: \_\_\_\_\_

By: \_\_\_\_\_  
(Signature)

Print Name: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

Business Address:  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

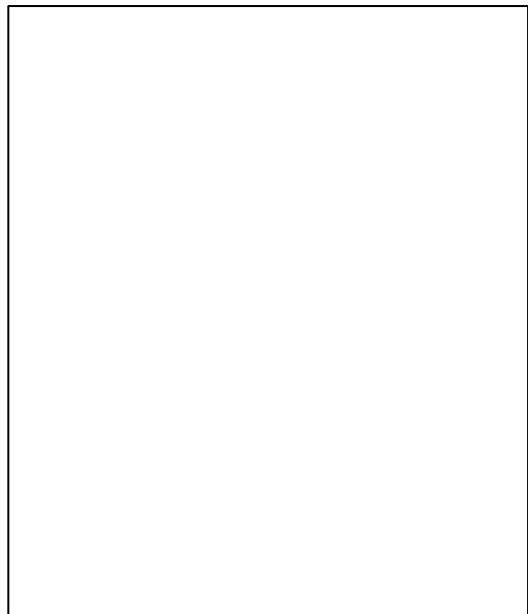
Business Telephone: \_\_\_\_\_

Business Fax: \_\_\_\_\_

Business E-mail: \_\_\_\_\_

Contractor's License: \_\_\_\_\_  
Dept. of Industrial Relations  
Registration No: \_\_\_\_\_

Space for Corporate Seal and Attestation



Project No. FM08200012205

Bond No. \_\_\_\_\_

## **BID BOND**

(Public Work – Public Contract Code Section 20129 (a))

KNOW ALL MEN BY THESE PRESENTS THAT:

WHEREAS, The undersigned \_\_\_\_\_ (“Principal”) is herewith submitting to the County of Riverside (“County”) a Bid dated \_\_\_\_\_ 20\_\_, in the amount of \_\_\_\_\_ (\$ \_\_\_\_\_) [Enter amount of Principal’s Bid Amount, as defined in the Instructions to Bidders] (“Bid Amount”) for the award by County to Principal of a contract (“Contract”) for the following: WESTERN EMERGENCY OPERATION CENTER PARKING EXPANSION (“Project”);

AND, WHEREAS, Principal is obligated as a condition of said Bid to submit security pursuant to Public Contract Code Section 20129 (a) in the amount of ten percent (10%) of the Bid Amount, which security may be in the form of a Bid Bond issued by an admitted surety insurer pursuant to Code of Civil Procedure Section 995.120 (“Admitted Surety”);

NOW THEREFORE, the Principal and \_\_\_\_\_ (“Surety”), an Admitted Surety, are held and firmly bound unto the County in the penal sum of \_\_\_\_\_ (\$ \_\_\_\_\_) for the payment of which sum in lawful money of the United States, well and truly to be made, we, Principal and Surety, bind ourselves, our executors, administrators, successors, heirs and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THE ABOVE OBLIGATION IS SUCH, that if Principal is awarded the Contract upon such Bid and thereafter within the period of time specified in County’s bidding documents governing the bidding process applicable to such Bid (“Bidding Documents”) enters into the Contract with County on the terms and conditions required by the Bidding Documents and furnishes the performance and payment bonds, evidence of insurance and other documents that Principal is required to submit under the terms of the Bidding Documents, then this obligation shall be null and void; otherwise, it shall remain in full force and effect and the sum guaranteed by this bond shall, at the option of County, be forfeited to County to pay all losses and damages suffered by County as a result thereof and permitted by applicable law, including, without limitation, the difference between the Bid Amount and amount for which the County may legally contract with another party to perform the Work (if such latter amount be greater than the Bid Amount), costs of publication, and all other losses and damages suffered by County (including, without limitation, those associated with delay to the Project); provided, however, that Surety’s liability shall not exceed the penal amount of this bond.

Surety, for value received, hereby agrees that no change, extension of time, alteration or addition to the terms of the Contract or the Bidding Documents, or to the work to be performed thereunder, nor any withdrawal of the Bid in a manner not permitted by the requirements of the Bidding Documents shall in any way

impair or affect Surety's obligation under this bond, and Surety does hereby waive notice of any such changes, extensions of time, alterations or additions.

IN WITNESS WHEREOF the undersigned parties have executed this instrument under their several seals this day of \_\_\_\_\_, 20\_\_, the name and corporate seal of each corporate party being hereto affixed and these presents duly signed by its undersigned representative, pursuant to authority of its governing body.

**Affix Seal if Corporation**

\_\_\_\_\_  
**(Firm Name – Principal)**

\_\_\_\_\_  
\_\_\_\_\_

\_\_\_\_\_  
**(Business Address)**

**By** \_\_\_\_\_  
**(Original Signature)**

\_\_\_\_\_  
**(Title)**

\_\_\_\_\_  
**(Corporation Name – Surety)**

**Affix Corporate Seal**

\_\_\_\_\_  
\_\_\_\_\_

\_\_\_\_\_  
**(Business Address)**

**By** \_\_\_\_\_  
**(Original Signature)**  
**ATTORNEY-IN-FACT**

\_\_\_\_\_

**Note: Notary acknowledgment for Surety's signature and Surety's Power of Attorney must be included or attached**

## **BID SECURITY RECEIPT**

The undersigned Bidder has submitted as Bid Security for its Bid in the form of (check appropriate box):

- Bid Bond executed by an Admitted Surety, made payable to the County of Riverside,
- cash,
- cashier's check payable to the order of the County of Riverside, or
- certified check payable to the order of the County of Riverside,

in the amount of \_\_\_\_\_  
dollars/\_\_\_\_\_ cents (\$\_\_\_\_\_), which amount is equal to ten percent (10%) of  
the Bidder's Bid Amount, as defined in the Instructions to Bidders.

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Print Name of Bidder

\_\_\_\_\_  
Print Name of Signer

## DESIGNATION OF SUBCONTRACTORS

In compliance with the Subletting and Subcontracting Fair Practices Act (Chapter 4, commencing at Section 4100, Division 2, Part 1 of the Public Contract Code of the State of California) and any amendments thereto ("Act"), Bidder sets forth below the information required by the Act for those Subcontractors who are required to be listed by Bidder pursuant to the provisions of the Act [Insert information requested. Attach additional sheets, if needed.]:

<u>Portion of Work</u>	<u>Subcontractor Name</u>	<u>License No.</u>	<u>DIR No.</u>	<u>Location</u>

Date: \_\_\_\_\_

\_\_\_\_\_ (Name of Bidder)

By: \_\_\_\_\_  
(Signature of Bidder)

Address: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Phone: \_\_\_\_\_

**NON-COLLUSION DECLARATION TO BE EXECUTED BY BIDDER AND  
SUBMITTED WITH BID**

(Public Contract Code Section 7106)

The undersigned declares:

I am the \_\_\_\_\_ of \_\_\_\_\_, the party making the foregoing bid.

The bid is not made in the interest of, or on behalf of, any undisclosed person, partnership, company, association, organization, or corporation. The bid is genuine and not collusive or sham. The bidder has not directly or indirectly induced or solicited any other bidder to put in a false or sham bid. The bidder has not directly or indirectly colluded, conspired, connived, or agreed with any bidder or anyone else to put in a sham bid, or that anyone shall refrain from bidding. The bidder has not in any manner, directly or indirectly, sought by agreement, communication, or conference with anyone to fix the bid price of the bidder or any other bidder, or to fix any overhead, profit, or cost element of the bid price, or of that of any other bidder.

All statements contained in the bid are true. The bidder has not, directly or indirectly, submitted his or her bid price of any breakdown thereof, or the contents thereof, or divulged information or data relative thereto, to any corporation, partnership, company, association, organization, bid depository, or to any member or agent thereof to effectuate a collusive or sham bid, and has not paid, and will not pay, any person or entity for such purpose.

Any person executing this declaration on behalf of a bidder that is a corporation, partnership, joint venture, limited liability company, limited liability partnership, or any other entity, hereby represents that he or she has full power to execute, and does execute, this declaration on behalf of the bidder.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct and that this declaration is executed on \_\_\_\_\_ [date], at \_\_\_\_\_ [city], \_\_\_\_\_ [state].

\_\_\_\_\_  
[Signature of Declarant]

\_\_\_\_\_  
[Printed Name of Person Signing]

\_\_\_\_\_  
[Name of Bidder]

\_\_\_\_\_  
[Office or Title]



## Iran Contracting Act

(Public Contract Code sections 2200-2208)

In accordance with Public Contract Code Section 2204(a), prior to bidding on, submitting a proposal or executing a contract or renewal for a County of Riverside contract for goods or services of \$1,000,000 or more, a Contractor must either:

- a) Certify it is not on the current list of persons engaged in investment activities in Iran created by the California Department of General Services (“DGS”) pursuant to Public Contract Code section 2203(b) and is not a financial institution extending twenty million dollars (\$20,000,000) or more in credit to another person, for 45 days or more, if that other person will use the credit to provide goods or services in the energy sector in Iran and is identified on the current list of persons engaged in investment activities in Iran created by DGS; or
- b) Demonstrate it has been exempted from the certification requirement for that solicitation or contract pursuant to Public Contract Code section 2203(c) or (d).

To comply with this requirement, please insert your Contractor or financial institution name and Federal ID Number (if available) and complete one of the options below. Please note: California law establishes penalties for providing false certifications, including civil penalties equal to the greater of \$250,000 or twice the amount of the contract for which the false certification was made; contract termination; and three-year ineligibility to bid on contracts. (Public Contract Code section 2205.)

### **Option #1 – Certification**

I, the official named below, certify I am duly authorized to execute this certification on behalf of the Contractor/financial institution identified below, and the Contractor/financial institution identified below is **not** on the current list of persons engaged in investment activities in Iran created by DGS and is not a financial institution extending twenty million dollars (\$20,000,000) or more in credit to another person/vendor, for 45 days or more, if that other person/vendor will use the credit to provide goods or services in the energy sector in Iran and is identified on the current list of persons engaged in investment activities in Iran created by DGS.

<i>Contractor Name/Financial Institution (Printed)</i>	<i>Federal ID Number (or n/a)</i>
<i>By (Authorized Signature)</i>	
<i>Printed Name and Title of Person Signing</i>	
<i>Date Executed</i>	<i>Executed in</i>

**Option #2 – Exemption**

Pursuant to Public Contract Code sections 2203(c) and (d), a public entity may permit a Contractor/financial institution engaged in investment activities in Iran, on a case-by-case basis, to be eligible for, or to bid on, submit a proposal for, or enters into or renews, a contract for goods and services.

If you have obtained an exemption from the certification requirement under the Iran Contracting Act, please fill out the information below, and attach documentation demonstrating the exemption approval.

<i>Contractor Name/Financial Institution (Printed)</i>		<i>Federal ID Number (or n/a)</i>
<i>By (Authorized Signature)</i>		
<i>Printed Name and Title of Person Signing</i>		
<i>Date Executed</i>	<i>Executed in</i>	

## ECONOMIC SANCTIONS IN RESPONSE TO RUSSIA'S ACTIONS IN UKRAINE

The Contractor must certify that it is not a target of economic sanctions imposed in response to Russia's actions in Ukraine imposed by the United States government or the State of California. The Contractor is required to comply with the economic sanctions imposed in response to Russia's actions in Ukraine, including with respect to, but not limited to, the federal executive orders identified in California Executive Order N-6-22, located at <https://www.gov.ca.gov/wp-content/uploads/2022/03/3.4.22-Russia-Ukraine-Executive-Order.pdf> and the sanctions identified on the United States Department of the Treasury website at (<https://home.treasury.gov/policy-issues/financial-sanctions/sanctions-programs-and-country-information/ukraine-russia-related-sanctions>).

The Contractor is required to comply with all applicable reporting requirements regarding compliance with the economic sanctions, including, but not limited to, those reporting requirements set forth in California Executive Order N-6-22 for all parties with one or more agreements with the State of California, the County of Riverside, or any other local agency, with a value of Five Million Dollars (\$5,000,000) or more. Notwithstanding any other provision in these documents, failure to comply with the economic sanctions and all applicable reporting requirements may result in disqualification or termination of the Construction Agreement, if awarded. For contractors with an agreement value of Five Million Dollars (\$5,000,000) or more with the State of California, the County of Riverside, or any other local agency, reporting requirements include, but are not limited to, information related to steps taken in response to Russia's actions in Ukraine, including but not limited to:

1. Desisting from making any new investments or engaging in financial transactions with Russian institutions or companies that are headquartered or have their principal place of business in Russia;
2. Not transferring technology to Russia or companies that are headquartered or have their principal place of business in Russia; and
3. Direct support to the government and people of Ukraine.  
To comply with this requirement, please insert your Contractor name and Federal ID Number (if available) on the Certification Form on Page XXI, execute by a duly authorized representative for the contractor and return with the bid proposal.

**COMPLIANCE WITH ECONOMIC SANCTIONS IN RESPONSE TO RUSSIA'S ACTIONS IN UKRAINE  
(Bidders)**

Prior to bidding on, submitting a proposal, or executing a contract, a contractor must certify: 1) it is not a target of economic sanctions and 2) in compliance with economic sanctions imposed by the U.S. government in response to Russia's actions in Ukraine, as well as any requirements related to the Russian sanctions imposed by the California Governor's Executive Order N-6-22 issued on March 4, 2022 and under state law, if any.

To comply with this requirement, please insert the contractor name and Federal ID Number (if available), complete the information described below and execute by an authorized representative of the contractor.

**CERTIFICATION**

I, the authorized representative for contractor named below, certify I am duly authorized to execute this certification on behalf of the contractor below, and the contractor identified below has conducted a good faith review of existing contracts. I attest that the contractor is not a target of economic sanctions, and that contractor is in compliance with the economic sanctions imposed by the U.S. government in response to Russia's actions in Ukraine, as well as any requirements related to the Russian sanctions imposed by the California Governor's Executive Order N-6-22 issued on March 4, 2022 and under state law, if any.

<i>Contractor Name (Printed)</i>		<i>Federal ID Number (or n/a)</i>
<i>By (Authorized Signature)</i>		
<i>Printed Name and Title of Person Signing</i>		
<i>Date</i>		

Project No. FM08200012205

Bond No. \_\_\_\_\_

## **PAYMENT BOND**

(Public Work - Civil Code Sections 9550 et seq.)

KNOW ALL PERSONS BY THESE PRESENTS:

THAT WHEREAS, the County of Riverside ("County") by action of the Board of Supervisors has awarded Construction Contract Number \_\_\_\_\_ ("Contract") to the undersigned \_\_\_\_\_ as Principal ("Principal") to perform the work ("Work") for the following project WESTERN EMERGENCY OPERATION CENTER PARKING EXPANSION;

AND, WHEREAS, said Principal is required by the Contract and/or by Division 3, Part IV, Title XV, Chapter 7 (commencing at Section 9550) of the California Civil Code to furnish a payment bond in connection with the Contract;

NOW THEREFORE, we, the Principal and \_\_\_\_\_ ("Surety"), an admitted surety insurer pursuant to Code of Civil Procedure, Section 995.120, are held and firmly bound unto County in the penal sum of \_\_\_\_\_ Dollars (\$ \_\_\_\_\_), this amount being not less than one hundred percent (100%) of the total sum payable by County under the Contract at the time the Contract is awarded by County to the Principal, lawful money of the United States of America, for the payment of which sum well and truly to be made, we, Principal and Surety, bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH that if Principal, its heirs, executors, administrators, successors, or assigns approved by County, or its subcontractors, of any contracting tier, shall fail to pay any person or persons named in California Civil Code, Section 9554, then Surety will pay for the same, in or to an amount not exceeding the penal amount hereinabove set forth.

Surety, for value received, agrees that no change, extension of time, alteration or addition to the terms of the Contract, or to the Work to be performed thereunder, nor any rescission or attempted rescission of the Contract or this bond, nor any conditions precedent or subsequent in the bond or Contract attempting to limit the right of recovery of any claimant otherwise entitled to recover under the Contract or this bond shall in any way impair or affect Surety's obligation under this bond, and Surety does hereby waive notice of any such changes, extensions of time, alterations or additions.

Surety is not released from liability to those for whose benefit this bond has been given, by reason of any breach of the Contract by County or Principal.

Surety's obligations hereunder are independent of the obligations of any other surety for the

performance of the Contract, and suit may be brought against Surety and such other sureties, joint and severally, or against any one or more of them or against less than all of them, without impairing County's rights against the others.

**Affix Seal if Corporation**

\_\_\_\_\_  
**(Firm Name – Principal)**

\_\_\_\_\_  
\_\_\_\_\_

\_\_\_\_\_  
**(Business Address)**

**By** \_\_\_\_\_  
**(Original Signature)**

\_\_\_\_\_  
**(Title)**

\_\_\_\_\_  
**(Corporation Name – Surety)**

**Affix Corporate Seal**

\_\_\_\_\_  
\_\_\_\_\_

\_\_\_\_\_  
**(Business Address)**

**By** \_\_\_\_\_  
**(Signature – Attached Notary's Acknowledgment)**

\_\_\_\_\_  
**ATTORNEY-IN-FACT**  
**(Title-Attach Power of Attorney)**

**Note: Notary acknowledgment of signatures of Bidder and Surety, and Surety's Power of Attorney, must be included or attached**

Project  
No. FM08200012205

Bond No. \_\_\_\_\_

## **PERFORMANCE BOND**

(Public Work – Public Contract Code Section 20129 (b))

KNOW ALL PERSONS BY THESE PRESENTS:

THAT WHEREAS, the County of Riverside ("County") by action of the Board of Supervisors has awarded Construction Contract Number \_\_\_\_\_ ("Contract") to the undersigned \_\_\_\_\_ as Principal ("Principal") to perform the work ("Work") for the following project: WESTERN EMERGENCY OPERATION CENTER PARKING EXPANSION, which Contract is by this reference hereby incorporated herein and made a part hereof;

AND, WHEREAS, said Principal is required by the Contract and/or by California Public Contract Code, Section 20129 (b) to furnish a performance bond for the faithful performance of the Contract;

NOW THEREFORE, we, the Principal and \_\_\_\_\_ ("Surety"), an admitted surety insurer pursuant to Code of Civil Procedure, Section 995.120, are held and firmly bound unto County in the penal sum of \_\_\_\_\_ Dollars (\$\_\_\_\_\_), this amount being not less than one hundred percent (100%) of the total sum payable by County under the Contract at the time the Contract is awarded by County to the Principal, lawful money of the United States of America, for the payment of which sum well and truly to be made, we, Principal and Surety, bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH that if Principal, its heirs, executors, administrators, successors or assigns approved by County, shall in all things stand to and abide by and well and truly keep and perform all the undertakings, terms, covenants, conditions and agreements in the Contract, including, without limitation, all obligations during the original term and any extensions thereof as may be granted by County, with or without notice to Surety thereof (including, without limitation, the obligation for Principal to pay liquidated damages), all obligations during the period of any warranties and guarantees required under the Contract and all other obligations otherwise arising under the terms of the Contract (such as, but not limited to, obligations of indemnification), all within the time and in the manner therein designated in all respects according to their true intent and meaning, then this obligation shall become null and void; otherwise, it shall be and remain in full force and effect.

Whenever Principal shall be, and is declared by County to be, in default under the Contract, the Surety shall promptly either remedy the default, or, if the Contract is terminated by County or the Principal's performance of the Work is discontinued, Surety shall promptly complete the Contract through its agents or independent contractors, subject to acceptance of such agents or independent contractors by County as

hereinafter set forth, in accordance with its terms and conditions and to pay and perform all obligations of Principal under the Contract (including, without limitation, all obligations with respect to payment of liquidated damages) less the "Balance of the Contract Price" (as hereinafter defined); subject to the penal amount of this bond as set forth above. The term "Balance of the Contract Price," as used in this paragraph, shall mean the total amount payable to Principal by County under the Contract and any modifications thereto, less the amount previously paid by County to the Principal and less amounts that County is authorized to withhold under the terms of the Contract.

If County determines that completion of the Contract by Surety or its agents or independent contractors must be performed by a lowest responsible bidder selected pursuant to a competitive bidding process, then Surety shall comply with such processes in accordance with the requirements of County and applicable laws. Unless otherwise approved by District, in the exercise of its sole and absolute discretion, Surety shall not utilize Principal in completing performance of the Work.

No right of action shall accrue on this bond to or for the use of any person or entity other than County or its successors or assigns.

Correspondence or claims relating to this bond shall be sent to Surety at the address set forth below.

Surety, for value received, agrees that no change, extension of time, alteration or addition to the terms of the Contract, or to the work to be performed thereunder, shall in any way impair or affect Surety's obligation under this bond, and Surety does hereby waive notice of any such changes, extensions of time, alterations or additions.

Surety's obligations hereunder are independent of the obligations of any other surety for the performance of the Contract, and suit may be brought against Surety and such other sureties, joint and severally, or against any one or more of them or against less than all of them, without impairing County's rights against the others.



**Affix Seal if Corporation**

\_\_\_\_\_  
**(Firm Name – Principal)**

\_\_\_\_\_  
\_\_\_\_\_

\_\_\_\_\_  
**(Business Address)**

**By** \_\_\_\_\_  
**(Original Signature)**

\_\_\_\_\_  
**(Title)**

\_\_\_\_\_  
**(Corporation Name – Surety)**

**Affix Corporate Seal**

\_\_\_\_\_  
\_\_\_\_\_

\_\_\_\_\_  
**(Business Address)**

**By** \_\_\_\_\_  
**(Signature – Attached Notary’s Acknowledgment)**

\_\_\_\_\_  
**ATTORNEY-IN-FACT**  
**(Title-Attach Power of Attorney)**

**Note:** Notary acknowledgment of signatures of Bidder and Surety, and Surety’s Power of Attorney, must be included or attached

**CONTRACTOR'S CERTIFICATE REGARDING WORKERS'  
COMPENSATION**

Labor Code Section 3700 states:

"Every employer except the state shall secure the payment of compensation in one or more of the following ways:

(a) By being insured against liability to pay compensation by one or more insurers duly authorized to write compensation insurance in this state.

(b) By securing from the Director of Industrial Relations a certificate of consent to self-insure either as an individual employer, or as one employer in a group of employers, which may be given upon furnishing proof satisfactory to the Director of Industrial Relations of ability to self-insure and to pay any compensation that may become due to his or her employee.

(c) For any county, city, city and county, municipal corporation, public district, public agency, or any political subdivision of the state, including each member of a pooling arrangement under a joint exercise of powers agreement (but not the state itself), by securing from the Director of Industrial Relations a certificate of consent to self-insure against workers' compensation claims, which certificate may be given upon furnishing proof satisfactory to the director of ability to administer workers' compensation claims properly, and to pay workers' compensation claims that may become due to its employees. On or before March 31, 1979, a political subdivision of the state which, on December 31, 1978, was uninsured for its liability to pay compensation, shall file a properly completed and executed application for a certificate of consent to self-insure against workers' compensation claims. The certificate shall be issued and be subject to the provisions of Section 3702.

For purposes of this section, 'state' shall include the superior courts of California."

I am aware of the provisions of Section 3700 of the California Labor Code which require every employer to be insured against liability for workers' compensation or to undertake self-insurance in accordance with the provisions of that code, and I will comply with such provisions before commencing the performance of the work of this contract.

\_\_\_\_\_  
(Name of Contractor)

\_\_\_\_\_  
By:

\_\_\_\_\_  
(Name of Signer)

\_\_\_\_\_  
(Signature)

(In accordance with Article 5 (commencing at Section 1860), Chapter 1, Part 7, Division 2 of the Labor Code, the above certificate must be signed and filed with the awarding body prior to performing any work under this contract.)

## DECLARATION OF SUFFICIENCY OF FUNDS

(California Labor Code Section 2810)

I, the undersigned, an authorized representative of \_\_\_\_\_ (“Bidder”) with authority to make the statements contained in this Declaration on behalf of Bidder, hereby declare the following:

1. The Bidder’s employer identification number for state tax purposes is \_\_\_\_\_.
2. The Bidder’s workers’ compensation insurance policy number is \_\_\_\_\_ and the name, address, and telephone number of the insurance carrier providing said insurance is: \_\_\_\_\_  
\_\_\_\_\_.

3. The following information is provided concerning any and all vehicles that are owned by the Bidder and that will be used for transportation in connection with any service provided for the performance of the Work that is the subject of the Bidder’s Bid [Insert information requested. Attach additional sheets, if needed.]:

<b>Vehicle</b>	<b>Vehicle ID #</b>	<b>Vehicle. Liability Insurance Policy Number (of policy covering vehicle)</b>	<b>Name, Address and Telephone Number of Vehicle Liability Insurance Carrier (issuing policy covering vehicle)</b>

4. The following is the address of any real property that will be used to house workers in connection with the performance of the Work that is the subject of the Bidder’s Bid [If no such housing will be provided, enter “none”]: \_\_\_\_\_  
\_\_\_\_\_

5. The actual or estimated number of workers that will be employed to perform the Work that is the subject of the Bidder’s Bid, the total amount of wages to be paid to said workers, and the dates on which said wages will be paid are as follows [Attach additional sheets, if needed.]:

<b>Total Number of Workers</b>	<b>Total Amount of Wages</b>	<b>Date(s) for Payment of Wages</b>

6. Check only one of the following boxes, as applicable:

The statement of number of workers declared in Paragraph 5, above, is a statement of the actual number of workers that will be employed.

The actual number of workers requested in Paragraph 5, above, is unknown and therefore the statement of number of workers declared therein is based on the Bidder's best estimate available at the time of submitting its Bid, rather than the actual number of workers that will be employed and if and when the actual number of workers and the other information requested above is available, it will be reported to the County of Riverside by Bidder in writing.

7. The actual or estimated total number of persons who will be utilized as independent contractors to perform the Work of the Project that is the subject of the Bidder's Bid (together with their known, current local, state, and federal contractor license identification numbers that each is required to have under local, state or federal laws or regulations) are as follows [Attach additional sheets, if needed.]:

<b>List of Independent Contractors</b>	<b>Current, local, state and federal contractor license identification number</b>

8. Check only one of the following boxes, as applicable:

The statement of number of independent contractors declared in Paragraph 7, above, is a statement of the actual number of independent contractors that will be utilized.

The actual number of independent contractors requested in Paragraph 7, above, is unknown and therefore the statement of number of independent contractors declared therein is based on the Bidder's best estimate available at the time of submitting its Bid, rather than the actual number of independent contractors that will be utilized, and if and when the actual number of independent contractors

and the other information requested above is available, it will be reported to the County of Riverside by Bidder in writing.

I, the undersigned, declare under penalty of perjury that the foregoing statements are within my personal knowledge and are true and correct. Executed on this \_\_\_\_\_ day of \_\_\_\_\_, in the year 20\_\_ at \_\_\_\_\_, California.

\_\_\_\_\_  
(signature)

\_\_\_\_\_  
Type Name of Signer:

\_\_\_\_\_  
Type Name of Bidder:

## **SUBSTITUTION REQUEST FORM**

ONLY ONE (1) REQUEST FOR SUBSTITUTION FOR EACH PRODUCT WILL BE CONSIDERED. USE A SEPARATE SUBSTITUTION REQUEST FORM FOR EACH PROPOSED SUBSTITUTION.

**TO:** COUNTY OF RIVERSIDE  
**PROJECT:** WESTERN EMERGENCY OPERATION CENTER PARKING EXPANSION  
**PROJECT NO.:** FM08200012205

Bidder requests Substitution of the following material, product, thing or service:

<b>Specification Section</b>	<b>Article No.</b>
<b>Specified Item</b>	<b>Address</b>
<b>Manufacturer's Name</b>	<b>Model or Catalog Number</b>
<b>Trade Name of Product</b>	<b>Specified Fabricators and Suppliers</b>

For each proposed Substitution, list below where in the Specifications the item to be replaced is currently specified, the item specified in the Specifications and that is proposed to be replaced by the Substitution and a brief description of the proposed Substitution:

Specification Reference	Specified Item	Proposed Substitution

**Respond to each of the following questions, attaching additional sheets if required:**

In the case of a manufactured material, product or thing, does the manufacturer certify that the proposed Substitution is appropriate for use as an "equal" to the material, product, or thing specified?

**Yes**       **No**

If so, attach such certification.

Are maintenance services available?  **Yes**  **No**

If so, describe scope and terms, including any limitations on maintenance services: \_\_\_\_\_

Are replacements materials, products or things, and all parts thereof, available?  **Yes**  **No**

Contractor agrees to provide specified item in the event this Substitution Request is denied?  **Yes**  **No**

Does the Substitution affect dimensions shown On Drawings?  **Yes**  **No**

If so, clearly describe changes: \_\_\_\_\_

Will you pay for changes to the building design, including architectural, engineering and detailing costs caused by the acceptance of the requested Substitution?  **Yes**  **No**

Would the Substitution, if used, affect any other trades?  **Yes**  **No**

If so, describe each affect: \_\_\_\_\_

Would the Substitution, if used, affect your ability to meet The time periods for construction required by the Bidding Documents?  **Yes**  **No**

If so, describe each affect: \_\_\_\_\_

Are there any differences between Substitution and specified item?  **Yes**  **No**

If so, describe each difference: \_\_\_\_\_

Are the manufacturer's guarantees and warranties of the Substitution and the specified item the same?  **Yes**  **No**

If so, describe each difference or attach copy of all written guarantees and warranties provided for the Substitution : \_\_\_\_\_

Attach complete product data, including but not limited to laboratory tests, approval numbers, research report numbers, listings, and approved assembly descriptions as specified in Section \_\_\_\_\_ of the Specifications or as required by Governmental Authorities under Applicable Laws.

\_\_\_\_\_  
**Contractor**

\_\_\_\_\_  
**County**

\_\_\_\_\_  
By

\_\_\_\_\_  
Reviewed by:

\_\_\_\_\_  
Date

\_\_\_\_\_  
Date

\_\_\_\_\_  
Remarks

\_\_\_\_\_  
**Design Consultant**

\_\_\_\_\_  
Reviewed by:

**SPACE RESERVED FOR COUNTY USE ONLY:**

Decision on Substitution Request:

**Grant**

**Deny**



**SUBMITTAL TO THE BOARD OF SUPERVISORS  
COUNTY OF RIVERSIDE, STATE OF CALIFORNIA**



**ITEM: 3.9**  
(ID # 21360)

**MEETING DATE:**  
Tuesday, May 09, 2023

**FROM :** FACILITIES MANAGEMENT AND EMERGENCY MANAGEMENT DEPARTMENT :

**SUBJECT:** FACILITIES MANAGEMENT (FM) AND EMERGENCY MANAGEMENT DEPARTMENT: Riverside County Western Emergency Operations Center Parking Lot Expansion Project - California Environmental Quality Act Exempt, Approval of In-Principle, Preliminary Design Budget, and Professional Services Agreement with Ruhnau Clarke Architects; District 1. [\$344,794 – 100% Federal Funds - American Rescue Plan Act (ARPA) Coronavirus Relief Fund 21735]

**RECOMMENDED MOTION:** That the Board of Supervisors:

1. Approve the Emergency Management Department Riverside County Western Emergency Operations Center Parking Lot Expansion (Western EOC Parking Lot Expansion) Project for inclusion in the Capital Improvement Program (CIP);
2. Find that the Project is exempt from the California Environmental Quality Act (CEQA) pursuant to State CEQA Guidelines Sections 15301, Class 1 - Existing Facilities Exemption, Section 15303 New Construction or Conversion of Small Structures Exemption, Section 15311 Accessory Structures Exemption, and Section 15061 (b)(3), "Common Sense" Exemption;

Continued on Page 2

**ACTION:Policy, CIP**

  
Bruce Barton, EMD Director 4/25/2023

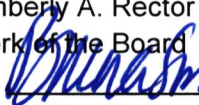
  
Rose Saigado, Director of Facilities Management 4/25/2023

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**MINUTES OF THE BOARD OF SUPERVISORS**

On motion of Supervisor Gutierrez, seconded by Supervisor Perez and duly carried by unanimous vote, IT WAS ORDERED that the above matter is approved as recommended.

Ayes: Jeffries, Spiegel, Washington, Perez, and Gutierrez  
Nays: None  
Absent: None  
Date: May 9, 2023  
xc: FM, E.M.D.

Kimberly A. Rector  
Clerk of the Board  
By:   
Deputy

**SUBMITTAL TO THE BOARD OF SUPERVISORS COUNTY OF RIVERSIDE,  
STATE OF CALIFORNIA**

**RECOMMENDED MOTION:** That the Board of Supervisors:

3. Approve in-principle the Western EOC Parking Lot Expansion Project located at 450 E. Alessandro Blvd., Riverside, California, 92508; for the expansion of the existing parking lot to allow for additional personnel capacity to include other Operational Area (OA) partners in the event of an emergency;
4. Approve a preliminary design budget in the not to exceed amount of \$344,794 for the Project;
5. Authorize the use of Federal Funds - American Rescue Plan Act (ARPA) Coronavirus Relief Fund 21735 in the amount not to exceed \$344,794, including reimbursement to Facilities Management (FM) for incurred project related expenses;
6. Approve the attached Professional Services Agreement for Architectural Services between the County of Riverside (County) and Ruhnau Clarke Architects (Ruhnau) of Riverside, California, in the amount not to exceed \$163,500, and authorize the Chairman of the Board (Chairman) to execute the agreement on behalf of the County;
7. Authorize the Director of Facilities Management, or her designee, to administer the Professional Services Agreement with Ruhnau in accordance with applicable Board policies;
8. Delegate project management authority for the Project to the Director of Facilities Management, or her designee, in accordance with applicable Board policies, including the authority to utilize consultants on the approved pre-qualified list for services in connection with the Project, and are within the approved budget; and
9. Authorize the Purchasing Agent to execute pre-qualified consultant service agreements not to exceed \$100,000, per pre-qualified consultant, per fiscal year, in accordance with applicable Board policies for this project, and the sum of all contracts shall not exceed \$344,794.

<b>FINANCIAL DATA</b>	<b>Current Fiscal Year:</b>	<b>Next Fiscal Year:</b>	<b>Total Cost:</b>	<b>Ongoing Cost</b>
<b>COST</b>	\$ 44,794	\$ 300,000	\$ 344,794	\$ 0
<b>NET COUNTY COST</b>	\$ 0	\$ 0	\$ 0	\$ 0
<b>SOURCE OF FUNDS:</b> Federal Funds - American Rescue Plan Act (ARPA) Coronavirus Relief Fund 21735 – 100%			<b>Budget Adjustment:</b> No	
			<b>For Fiscal Year:</b> 22/23–23/24	

**C.E.O. RECOMMENDATION:** Approve

**SUBMITTAL TO THE BOARD OF SUPERVISORS COUNTY OF RIVERSIDE,  
STATE OF CALIFORNIA**

**BACKGROUND:**

**Summary**

In 2020, the Emergency Management Department (EMD), in conjunction with Facilities Management (FM), completed a tenant improvement project for the new Western Emergency Operations Center (EOC), a 16,826 square foot office building formerly the administrative offices of the Western Municipal Water District. The primary purpose of the EOC is to maintain continuity of government, coordinate resources, and distribute information to local, State, and Federal partner agencies in the event of an emergency.

The EOC Parking Lot Expansion Project will allow for added parking for additional personnel capacity to include other Operational Area partners. The expanded parking area will include a designated trailer parking lot that will allow various trailers to set up staging at the EOC including the Radio Amateur Civil Emergency Service (RACES) trailer that is equipped with radio systems implemented to continue communications with other EOC's and agencies as backup to the current Public Safety Enterprise Communications system.

On June 29, 2021, Item 3.16, the Board of Supervisors (Board) approved a pre-qualified list of architectural and engineering firms to be retained on an as-needed basis. Due to their experience, FM selected Ruhnau Clarke Architects from the pre-qualified list to provide architectural design services to the project. The scope of the project includes but is not limited to: design for 32 new parking stalls at the northern existing parking lot, a new trailer parking area, and a turn-around at the southeast corner of the property.

Facilities Management (FM) recommends the Board of Supervisors (Board) approve the Western EOC Parking Lot Expansion Project, the preliminary design budget in the not to exceed amount of \$344,794 and the Professional Services Agreement with Ruhnau in the amount of \$163,500 to meet project schedule commitments.

(Continued)

**SUBMITTAL TO THE BOARD OF SUPERVISORS COUNTY OF RIVERSIDE,  
STATE OF CALIFORNIA**

**BACKGROUND:**

**Summary (Continued)**

FM will return to the Board for approval of a project budget and will procure the most cost-effective project delivery method and award a construction contract in accordance with applicable Board policies to expedite delivery of the Project.

With certainty, there is no possibility that the Western EOC Parking Lot Expansion Project may have a significant effect on the environment. The Project is limited to the expansion of an existing parking lot to include an additional 32 spaces for trailer parking. The new area is within the existing facility footprint, has already been graded or landscaped and would be appurtenant to the existing facility. Therefore, the Western EOC Parking Lot Expansion Project is exempt as the Project meets the scope and intent of the Class 1 Existing Facilities Categorical Exemption identified in Section 15301, Class 3 New Construction or Conversion of Small Structures Exemption identified in Section 15303, Class 11 Accessory Structures Exemption identified in Section 15311, and "Common Sense" Exemption identified in Section 15061 (b)(3). A Notice of Exemption will be filed by FM staff with the County Clerk within five days of Board approval.

**Impact on Residents and Businesses**

The Western EOC Parking Lot Expansion Project will provide increased personnel capacity for EMD and its partners for staging during emergencies to better serve the western region of Riverside County and increase the ability to coordinate and distribute information and services during an emergency, specifically COVID-19.

**Additional Fiscal Information**

The approximate allocation of the preliminary design budget is as follows:

<b>BUDGET LINE ITEMS</b>	<b>PRELIMINARY DESIGN BUDGET</b>
DESIGN PROFESSIONAL OF RECORD AGREEMENT	163,500
OTHER DESIGN SERVICES	28,415
SPECIALTY CONSULTANTS	50,000
REGULATORY PERMITTING	50,500
CONSTRUCTION	0
COUNTY ADMINISTRATION	21,034
REAL ESTATE	0
PROJECT CONTINGENCY	31,345
<b>PRELIMINARY DESIGN BUDGET</b>	<b>\$ 344,794</b>

(Continued)

**SUBMITTAL TO THE BOARD OF SUPERVISORS COUNTY OF RIVERSIDE,  
STATE OF CALIFORNIA**

**Additional Fiscal Information (Continued)**

All costs associated with this Board action are 100% funded through Federal Funds - American Rescue Plan Act (ARPA) Coronavirus Relief Fund 21735. Expenditures for FY 22/23 are estimated at \$44,794; and expenditures for FY 23/24 are estimated at \$300,000.

Attachment:

- Professional Services Agreement with Ruhnau Clarke Architects

RS:VB:RM:JA:SC:tv

FM08200012205

MT# 21360

G:\Project Management Office\FORM 11'S\FORM 11's\_In Process\21360\_D3 - 012205 - Western EOC Parking Lot Exp Proj-In-Princ, Prelim Design Budget, Arch Agr-Ruhnau\_050923.doc

*Meghan Hahn*  
Meghan Hahn, Deputy Director of Procurement

4/17/2023

*Veronica Santillan*  
Veronica Santillan, Principal Management Analyst

5/1/2023

*Kristine Bell-Valdez*  
Kristine Bell-Valdez, Supervising Deputy County Counsel

4/25/2023

FM STAFF TO  
file

**Riverside County**  
**Facilities Management**  
3450 14<sup>th</sup> Street, 2<sup>nd</sup> Floor, Riverside, CA 92501

## NOTICE OF EXEMPTION

March 29, 2023

**Project Name:** Western Emergency Operations Center (EOC) Parking Lot Expansion Project

**Project Number:** FM08200012205

**Project Location:** 450 East Alessandro Boulevard Avenue, east of Mission Grove Parkway, Riverside, California; Assessor's Parcel Number (APN): 272-060-003

**Description of Project:** On January 8, 2019, Item 3.12, the Board of Supervisors (Board) approved tenant improvements for the Emergency Management Department (EMD) Western EOC, a 16,826 square foot office building formerly the administrative offices of the Western Municipal Water District. The primary purpose of the EOC is to maintain continuity of government, coordinate resources, and distribute information to local, State, and Federal partner agencies in the event of an emergency.

The EOC parking lot expansion will allow for additional personnel capacity to include other OA partners. The expanded parking area will include a designated trailer parking lot that will allow various trailers to set up staging at the EOC including the RACES trailer that is equipped with radio systems implemented to continue communications with other EOC's and agencies as backup to the current Public Safety Enterprise Communications system. The scope of work for the project includes, but is not limited to, 32 new parking stalls at the northern existing parking lot, a new trailer parking area, and a turn-around at the southeast corner of the property. The expansion of the parking lot at the Western EOC is identified as the project under the California Environmental Quality Act (CEQA). No direct or indirect physical environmental impacts are anticipated from the parking lot and driveways improvements.

**Name of Public Agency Approving Project:** Riverside County

**Name of Person or Agency Carrying Out Project:** Riverside County Facilities Management

**Exempt Status:** State California Environmental Quality Act (CEQA) Guidelines, Section 15301 Existing Facilities Exemption; Section 15303 New Construction or Conversion of Small Structures Exemption, Section 15311 Accessory Structures Exemption, and 15061(b) (3), General Rule or "Common Sense" Exemption, Codified under Title 14, Articles 5 and 19, Sections 15061, 15301, 15303, and 15311.

MAY 9 2023 3.9

**Reasons Why Project is Exempt:** The proposed project is categorically exempt from the provisions of CEQA specifically by the State CEQA Guidelines as identified below. The project will not result in any specific or general exceptions to the use of the categorical exemption as detailed under State CEQA Guidelines Section 15300.2. The project will not cause an impact to an environmental resource of hazardous or critical concern nor would the project include unusual circumstances which could have the possibility of having a significant effect on the environment. The project would not result in impacts to scenic highways, hazardous waste sites, historic resources, or other sensitive natural environments, or have a cumulative effect to the environment. No significant environmental impacts are anticipated to occur with the additional parking spaces for trailer parking and reconfiguration of the existing lot to accommodate internal circulation.

- **Section 15301 (b)–Existing Facilities:** This Class 1 categorical exemption includes the operation, repair, maintenance, leasing, or minor alteration of existing public or private structures or facilities, provided the exemption only involves negligible or no expansion of the previous site’s use. The project, as proposed, is limited to the expansion of the parking lot at the Wester EOC to accommodate an additional 32 spaces which will be designated for trailer parking and the reconfiguration of the existing parking lot to facilitate internal circulation. The improvements would result in the continued provision of public services and would not result in a significant increase in capacity or intensity of use. Therefore, the project is exempt as it meets the scope and intent of the Categorical Exemption identified in Section 15301, Article 19, Categorical Exemptions of the CEQA Guidelines.
- **Section 15303 (c) –New Construction or Conversion of Small Structures:** This Class 3 exemption includes the construction and location of limited numbers of new, small facilities or structures; installation of small new equipment and facilities in small structures; and the conversion of existing small structures from one use to another where only minor modifications are made to the exterior of the structure. The project would result in the installation of 32 new parking spaces adjacent to the existing parking lot. The expanding lot would occur in two small areas of the existing facility which have been previously graded and landscaped. The operation of the new parking area would contain trailer parking and would not result in the use of a significant amount of hazardous substances and would provide public services at the facility. The location of the parking spaces would be located on the eastern side of the property that has existing utilities and does not contain environmentally sensitive areas. The facility is bounded by a municipal waste water treatment plant on the north and east, and the new parking spaces would not result in land use inconsistencies or other environmental effects. Therefore, the project is exempt as the project meets the scope and intent of the Categorical Exemption identified in Section 15303, Article 19, Categorical Exemptions of the CEQA Guidelines.
- **Section 15311 – Class 11 Accessory Structure Exemption:** This Class 11 categorical exemption includes the construction, or placement of minor structures accessory to (appurtenant to) existing commercial, industrial, or institutional facilities. The project, as proposed, includes the construction of 32 additional parking spaces to increase the existing parking lot. The spaces would be located at an existing facility and would connect with the existing parking lot. The site will continue to be dedicated for public use and can adequately be served by all utilities and public services. This facility would be appurtenant to the existing parking lot, would not substantially increase the size or intensity of use, and is a minor accessory to the existing County facility. Therefore, the project is exempt as the project meets the scope and intent of the Class 11 Exemption identified in Section 15311, Article 19, Categorical Exemptions of the CEQA Guidelines.

- **Section 15061 (b) (3) – “Common Sense” Exemption:** In accordance with CEQA, the use of the Common Sense Exemption is based on the “general rule that CEQA applies only to projects which have the potential for causing a significant effect on the environment.” State CEQA Guidelines, Section 15061(b) (3). The use of this exemption is appropriate if “it can be seen with certainty that there is no possibility that the activity in question may have a significant effect on the environment.” *Ibid*. This determination is an issue of fact and if sufficient evidence exists in the record that the activity cannot have a significant effect on the environment, then the exemption applies and no further evaluation under CEQA is required. See *No Oil, Inc. v. City of Los Angeles* (1974) 13 Cal. 3d 68. The ruling in this case stated that if a project falls within a category exempt by administrative regulation or 'it can be seen with certainty that the activity in question will not have a significant effect on the environment', no further agency evaluation is required. With certainty, there is no possibility that the project may have a significant effect on the environment. The proposed improvements will not result in any direct or indirect physical environmental effects. The parking lot expansion would fit within the existing footprint of the facility and is being completed to increase the operational efficiency of the Western EOC and would not substantially increase the capacity of the site. The use of the facility would remain unchanged. Therefore, in no way, would the project as proposed have the potential to cause a significant environmental impact and the project is exempt from further CEQA analysis.

Based upon the identified exemptions above, the County of Riverside, Facilities Management hereby concludes that no physical environmental impacts are anticipated to occur and the project as proposed is exempt under CEQA. No further environmental analysis is warranted.

Signed:  Date: 3-29-2023

Mike Sullivan, Senior Environmental Planner  
County of Riverside, Facilities Management



PROFESSIONAL SERVICES AGREEMENT

For

EMERGENCY MANAGEMENT DEPARTMENT WESTERN EMERGENCY OPERATIONS

CENTER PARKING LOT EXPANSION PROJECT

FM08200012205

This Agreement is made and entered as of the date of the last signature on the signature page of this contract by and between RUHNAU CLARKE ARCHITECTS, a California Corporation (herein referred to as "CONSULTANT"), , and the COUNTY OF RIVERSIDE, a political subdivision of the State of California, (herein referred to as "COUNTY").

WHEREAS, Government Code Section 31000 et seq. authorizes the COUNTY to contract for services with a person who is specially trained and experienced, and who is competent to perform the special services required; and

WHEREAS, CONSULTANT has the expertise, special skills, knowledge and experience to perform the duties set out herein.

NOW THEREFORE, in consideration of the mutual covenants contained herein, the parties hereto agree as follows:

1. SCOPE OF SERVICES: CONSULTANT shall perform all services and other activities necessary to architectural design consulting services as described in further detail in Exhibit "A" for the Project entitled: **EMERGENCY MANAGEMENT DEPARTMENT WESTERN EMERGENCY OPERATIONS CENTER PARKING LOT EXPANSION PROJECT**. CONSULTANT shall provide all services in accordance with this Agreement and as outlined and specified in Exhibit "A", consisting of Two (2) page(s), attached hereto and by this reference incorporated herein.

1.1 CONSULTANT represents and maintains that it is skilled in the professional calling necessary to perform all services, duties and obligations required by this Agreement to fully and adequately complete the project. CONSULTANT shall perform the services and duties in conformance to and consistent with the standards generally recognized as being employed by professionals in the same discipline in the State of California. CONSULTANT further represents and warrants to the COUNTY that it has all licenses, permits, qualifications and approvals of

whatever nature are legally required to practice its profession. CONSULTANT further represents that it shall keep all such licenses and approvals in effect during the term of this Agreement.

2. PERIOD OF PERFORMANCE: CONSULTANT shall commence performance of services within one (1) calendar day after execution of this Agreement, and shall diligently perform the services to full completion of the Project as required and in accordance with the scheduled Project completion date of **January 31, 2024**, unless sooner terminated as specified in Paragraph 8, or extended as provided in Paragraph 13. All applicable indemnification provisions in this Agreement shall remain in effect following the termination of this Agreement.

3. COMPENSATION: The COUNTY shall pay the CONSULTANT for services performed and expenses incurred as follows:

3.1 COUNTY shall pay to CONSULTANT for services performed in accordance with the Scope of Services set forth in Exhibit "A". The total amount of compensation paid to CONSULTANT under this Agreement shall not exceed the maximum of **ONE HUNDRED SIXTY THREE THOUSAND, FIVE HUNDRED DOLLARS (\$163,500)**, including reimbursable expenses, per Exhibit A, unless a written amendment to the Agreement is executed by both parties prior to performance of additional services.

3.2 Reimbursable expenses, if applicable, are defined in Exhibit "A".

3.3 Said compensation shall be paid in accordance with an invoice submitted to COUNTY by CONSULTANT within fifteen (15) days from the last day of each calendar month, and COUNTY shall pay the invoice within thirty (30) working days from the date of receipt of the invoice.

3.4 Unless otherwise stated in Exhibit "A", the basis for the monthly invoice and payment thereon shall be on a percentage completion basis to be billed monthly.

3.5 Labor Code and Prevailing Wages Rates

3.5.1 Certain Classifications of Labor under this contract are subject to prevailing wage requirements. It is anticipated that survey and/or soils testing work will or may be performed which classifications are subject to payment of prevailing wage when performed as pre-construction or construction activities on a public works

project.

3.5.2 Reference is made to Chapter 1, Part 7, Division 2 of the California Labor Code (commencing with Section 1720). By this reference said Chapter 1 is incorporated herein with like effect as if it were here set forth in full. The parties recognize that said Chapter 1 deals, among other things with discrimination, penalties and forfeitures, their disposition and enforcement, wages, working hours, and securing worker's compensation insurance and directly affect the method of prosecution of the work by CONSULTANT and subject it under certain conditions to penalties and forfeitures. Execution of the Agreement by the parties constitutes their agreement to abide by said Chapter 1, their stipulation as to all matters which they are required to stipulate as to by the provisions of said Chapter 1, constitutes CONSULTANT'S certification that he is aware of the provisions of said Chapter 1 and will comply with them and further constitutes CONSULTANT'S certification as follows: "I am aware of the provisions of Section 3700 of the California Labor Code which require every employer to be insured against liability for worker's compensation or to undertake self-insurance in accordance with the provisions of that Code, and I will comply with such provisions before commencing the performance of the work of this contract."

3.5.3. Pursuant to Section 1773 of the Labor Code, the general prevailing wage rates, including the per diem wages applicable to the work, and for holiday and overtime work, including employer payments for health and welfare, pension, vacation, and similar purposes, in the county in which the work is to be done have been determined by the Director of the California Department of Industrial Relations. These wages are available from the California Department of Industrial Relations' Internet website at <http://www.dir.ca.gov>, and are available at the main office of COUNTY.

4. INDEPENDENT CONTRACTOR: COUNTY retains CONSULTANT on an independent contractor basis. CONSULTANT is not, and shall not be considered to be in any manner,

an employee, agent or representative of the COUNTY. CONSULTANT shall not be entitled to any benefits payable to employees of COUNTY including County Workers' Compensation benefits. COUNTY is not required to make any deductions from the compensation payable to CONSULTANT under this Agreement, and as an independent contractor, CONSULTANT hereby holds COUNTY harmless from any and all claims that may be made against COUNTY based upon any contention by any third party that an employer-employee relationship exists by reason of this Agreement.

Personnel performing any services under this Agreement on behalf of CONSULTANT shall at all times be under CONSULTANT'S exclusive direction and control. CONSULTANT shall pay all wages, salaries and other amounts due such personnel in connection with their performance of service and as required by law. CONSULTANT shall be responsible for all reports and obligations respecting such personnel, including but not limited to, social security taxes, income tax withholdings, unemployment insurance, and workers' compensation insurance.

5. CONSULTANT'S RESPONSIBILITY: It is understood that the CONSULTANT has the skills, experience and knowledge necessary to perform the services agreed to be performed under this Agreement, and that the COUNTY relies upon the CONSULTANT'S representations about its skills, experience and knowledge to perform the CONSULTANT'S services in a competent manner. Acceptance by the COUNTY of the services to be performed under this Agreement does not operate as a release of said CONSULTANT from responsibility for the work performed. It is further understood and agreed that the CONSULTANT is apprised of the scope of the work to be performed under this Agreement and the CONSULTANT agrees that said work can and shall be performed in a fully competent manner.

6. INDEMNITY AND HOLD HARMLESS

6.1 Basic Indemnity. To the fullest extent permitted by Applicable Law, CONSULTANT agrees to defend (through legal counsel reasonably acceptable to County), indemnify, and hold harmless County of Riverside, its Agencies, Districts, Departments and Special Districts, Board of Supervisors, elected and appointed officials, and each of their respective directors, members, officers, employees, agents, representatives and volunteers ("Indemnitee(s)"), and each of them, from any and all Losses that arise out of or relate to any act

or omission constituting ordinary and not professional negligence (including, without limitation, negligent breach of contract), recklessness, or willful misconduct on the part of CONSULTANT or its Subconsultants, or their respective employees, agents, representatives, or independent contractors.

“Losses” shall mean any and all economic and non-economic losses, costs, liabilities, claims, damages, actions, judgments, settlements and expenses, including, without limitation, full and actual attorney’s fees (including, without limitation, attorney’s fees for trial and on appeal), expert and non-expert witness fees, arbitrator and arbitration fees and mediator and mediation fees.

CONSULTANT further agrees to and shall indemnify and hold harmless the Indemnitees from all liability arising from suits, claims, demands, actions, or proceedings made by agents, employees or subcontractors of CONSULTANT for salary, wages, compensation, health benefits, insurance, retirement or any other benefit not explicitly set forth in this contract and arising out of work performed for County pursuant to this Agreement. The Indemnitees shall be entitled to the defense and indemnification provided for hereunder regardless of whether the Loss is in part caused or contributed to by the acts or omissions of an Indemnitee or any other person or entity; provided, however, that nothing contained herein shall be construed as obligating CONSULTANT to indemnify and hold harmless any Indemnitee to the extent not required under the provisions of Paragraph 6.2, below.

6.2 Indemnity for Design Professional Services. To the fullest extent permitted by Applicable Law, CONSULTANT agrees to defend (through legal counsel reasonably acceptable to County), indemnify and hold harmless the Indemnitees, and each of them, against any and all Losses that arise out of, pertain to, or relate to, any negligence, recklessness or willful misconduct constituting professional negligence on the part of CONSULTANT or its Subconsultants, or their respective employees, agents, representatives, or independent contractors. The Indemnitees shall be entitled to the defense, and indemnification provided for hereunder regardless of whether the Loss is, in part, caused or contributed to by the acts or omissions of an Indemnitee or any other person or entity; provided, however, that nothing contained herein shall be construed as obligating

CONSULTANT to indemnify and hold harmless any Indemnitee to the extent not required under the provisions of this section. CONSULTANT shall defend and pay, all costs and fees, including but not limited to attorney fees, cost of investigation, and defense, in any loss, suits, claims, demands, actions, or proceedings to the extent and in proportion to the percentage, such costs and fees arise out of, pertain to, or relate to the negligence, recklessness or willful misconduct of CONSULTANT arising out of or from the performance of professional design services under this Agreement. The duty to defend applies to any alleged or actual negligence, recklessness, willful misconduct of CONSULTANT. The cost for defense shall apply whether or not CONSULTANT is a party to the lawsuit, and shall apply whether or not CONSULTANT is directly liable to the plaintiffs in the lawsuit. The duty to defend applies even if Indemnitees are alleged or found to be actively negligent, but only in proportion to the percentage of fault or negligence of CONSULTANT.

Without affecting the rights of County under any other provision of this Agreement, CONSULTANT shall not be required to indemnify or hold harmless or provide defense or defense costs to an Indemnitee for a Loss due to that Indemnitee's negligence, recklessness or willful misconduct; provided, however, that such negligence, recklessness or willful misconduct has been determined by agreement of CONSULTANT and Indemnitee or has been adjudged by the findings of a court of competent jurisdiction.

CONSULTANT agrees to obtain or cause to be obtained executed defense and indemnity agreements with provisions identical to those set forth in this section from each and every Subconsultant, of every Tier.

CONSULTANT's indemnification obligations under this Agreement shall not be limited by the amount or type of damages, compensation or benefits payable under any policy of insurance, workers' compensation acts, disability benefit acts or other employee benefit acts.

The Indemnitees shall be entitled to recover their attorneys' fees, costs and expert and consultant costs in pursuing or enforcing their right to defense and/or indemnification under this Agreement.

7. INSURANCE: Without limiting or diminishing the CONSULTANT'S obligation to

indemnify or hold the COUNTY harmless, CONSULTANT shall procure and maintain or cause to be maintained, at its sole cost and expense, the following insurance coverage during the term of this Agreement. As respects to the insurance section only, the COUNTY herein refers to the County of Riverside, its Agencies, Districts, Special Districts, and Departments, their respective directors, officers, Board of Supervisors, employees, elected or appointed officials, agents or representatives as Additional Insureds.

A. Workers' Compensation:

If the CONSULTANT has employees as defined by the State of California, the CONSULTANT shall maintain statutory Workers' Compensation Insurance (Coverage A) as prescribed by the laws of the State of California. Policy shall include Employers' Liability (Coverage B) including Occupational Disease with limits not less than \$1,000,000 per person per accident. The policy shall be endorsed to waive subrogation in favor of The County of Riverside.

B. Commercial General Liability:

Commercial General Liability insurance coverage, including but not limited to, premises liability, unmodified contractual liability, products and completed operations liability, personal and advertising injury, and cross liability coverage, covering claims which may arise from or out of CONSULTANT'S performance of its obligations hereunder. Policy shall name the COUNTY as Additional Insured. Policy's limit of liability shall not be less than \$1,000,000 per occurrence combined single limit. If such insurance contains a general aggregate limit, it shall apply separately to this Agreement or be no less than two (2) times the occurrence limit.

C. Vehicle Liability:

If vehicles or mobile equipment are used in the performance of the obligations under this Agreement, then CONSULTANT shall maintain liability insurance for all owned, non-owned or hired vehicles so used in an amount not less than \$1,000,000 per occurrence combined single limit. If such insurance contains a general aggregate limit, it shall apply separately to this Agreement or be no less than two (2) times the occurrence limit. Policy

shall name the COUNTY as Additional Insureds.

D. Professional Liability:

CONSULTANT shall maintain Professional Liability Insurance providing coverage for the CONSULTANT'S performance of work included within this Agreement, with a limit of liability of not less than \$1,000,000 per occurrence and \$2,000,000 annual aggregate. If CONSULTANT'S Professional Liability Insurance is written on a claims made basis rather than an occurrence basis, such insurance shall continue through the term of this Agreement and CONSULTANT shall purchase at his sole expense either 1) an Extended Reporting Endorsement (also, known as Tail Coverage); or 2) Prior Dates Coverage from new insurer with a retroactive date back to the date of, or prior to, the inception of this Agreement; or, 3) demonstrate through Certificates of Insurance that CONSULTANT has maintained continuous coverage with the same or original insurer. Coverage provided under items; 1), 2) or 3) will continue as long as the law allows.

E. General Insurance Provisions - All lines:

1) Any insurance carrier providing insurance coverage hereunder shall be admitted to the State of California and have an A M BEST rating of not less than A: VIII (A:8) unless such requirements are waived, in writing, by the County Risk Manager. If the County's Risk Manager waives a requirement for a particular insurer such waiver is only valid for that specific insurer and only for one policy term.

2) The CONSULTANT must declare its insurance self-insured retention for each coverage required herein. If any such self-insured retention exceed \$500,000 per occurrence each such retention shall have the prior written consent of the County Risk Manager before the commencement of operations under this Agreement. Upon notification of self-insured retention unacceptable to the COUNTY, and at the election of the Country's Risk Manager, CONSULTANT'S carriers shall either; 1) reduce or eliminate such self-insured retention as respects this Agreement with the COUNTY, or 2) procure a bond which guarantees payment of losses and related investigations, claims administration, and defense costs and expenses.



3) CONSULTANT shall cause CONSULTANT'S insurance carrier(s) to furnish the County of Riverside with either 1) a properly executed original Certificate(s) of Insurance and certified original copies of Endorsements effecting coverage as required herein, and 2) if requested to do so orally or in writing by the County Risk Manager, provide original Certified copies of policies including all Endorsements and all attachments thereto, showing such insurance is in full force and effect. Further, said Certificate(s) shall contain the covenant of the insurance agent/producer that thirty (30) days written notice shall be given to the County of Riverside prior to cancellation of such insurance except ten (10) days for cancellation due to nonpayment. In the event of a material modification, cancellation, expiration, or reduction in coverage, this Agreement shall terminate forthwith, unless the County of Riverside receives, prior to such effective date, another properly executed original Certificate of Insurance and original copies of endorsements or certified copies of the policies, including all endorsements and attachments thereto evidencing coverage's set forth herein and the insurance required herein is in full force and effect. ***CONSULTANT shall not commence operations until the COUNTY has been furnished original Certificate (s) of Insurance and certified original copies of endorsements and if requested, review original of the policies of insurance including all endorsements and any and all other attachments as required in this Section. An individual authorized by the insurance carrier to do so on its behalf shall sign the original endorsements for each policy and the Certificate of Insurance. Upon COUNTY'S request, CONSULTANT shall make available for inspection by County Risk Manager, at a mutually agreeable location, copies of CONSULTANT'S insurance policies.***

4) It is understood and agreed to by the parties hereto that the CONSULTANT'S insurance shall be construed as primary insurance, and the COUNTY'S insurance/or deductible and/or self-insured retentions or self-insured program shall not be construed as contributory.

5) If, during the term of this Agreement or any extension thereof, there is a material

change in the scope of services; or, there is a material change in the equipment to be used in the performance in the scope of work; or, the term of this Agreement, including any extension thereof, exceeds five (5) years; the COUNTY reserves the right to adjust the types of insurance and the monetary limits of liability required under this Agreement, if in the County Risk Manager's reasonable judgment, the amount or type of insurance carried by the CONSULTANT has become inadequate.

6) CONSULTANT shall pass down the insurance obligations contained herein to all tiers of subcontractors working under this Agreement.

7) The insurance requirements contained in this Agreement may be met with a program(s) of self-insurance acceptable to the COUNTY.

8) CONSULTANT agrees to notify COUNTY of any claim by a third party or any incident or event that may give rise to a claim arising from the performance of this Agreement.

8. TERMINATION: COUNTY may, by written notice to CONSULTANT, terminate this Agreement in whole or in part at any time. Such termination may be for COUNTY'S convenience or because of CONSULTANT'S failure to perform its duties and obligations under this Agreement including, but not limited to, the failure of CONSULTANT to timely perform services pursuant to the Scope of Services described in Exhibit "A" of this Agreement.

8.1 Discontinuance of Services. Upon Termination, CONSULTANT shall, unless otherwise directed by the Notice, discontinue all services and deliver to the COUNTY all data, estimates, graphs, summaries, reports, and other related materials as may have been prepared or accumulated by CONSULTANT in performance of services, whether completed or in progress.

8.2 Effect of Termination For Convenience. If the termination is to be for the convenience of the COUNTY, the COUNTY shall compensate CONSULTANT for services satisfactorily provided through the date of termination. CONSULTANT shall provide documentation deemed adequate by COUNTY to show the services actually completed by CONSULTANT prior to the date of termination. This Agreement shall terminate thirty (30) days following receipt by the CONSULTANT of the written Notice of Termination.

8.3 Effect of Termination For Cause. If the termination is due to the failure of CONSULTANT to fulfill its obligations under this Agreement, CONSULTANT shall be compensated for those services which have been completed in accordance with this Agreement and accepted by the COUNTY. In such case, the COUNTY may take over the work and prosecute the same to completion by contract or otherwise. Further, CONSULTANT shall be liable to the COUNTY for any reasonable additional costs incurred by the COUNTY to revise work for which the COUNTY has compensated CONSULTANT under this Agreement, but which the COUNTY has determined in its sole discretion needs to be revised in part or whole to complete the Project. Prior to discontinuance of services, the COUNTY may arrange for a meeting with CONSULTANT to determine what steps, if any, CONSULTANT can take to adequately fulfill its requirements under this Agreement. In its sole discretion, County's Representative may propose an adjustment to the terms and conditions of the Agreement, including the contract price. Such contract adjustments, if accepted in writing by the Parties, shall become binding on CONSULTANT and shall be performed as part of this Agreement. In the event of termination for cause, unless otherwise agreed to in writing by the parties, this Agreement shall terminate seven (7) days following the date the Notice of Termination was mailed to the CONSULTANT. Termination of this Agreement for cause may be considered by the COUNTY in determining whether to enter into future agreements with CONSULTANT.

8.4 Notwithstanding any of the provisions of this Agreement, CONSULTANT'S rights under this Agreement shall terminate (except for fees accrued prior to the date of termination) upon dishonesty, or a willful or material breach of this Agreement by CONSULTANT, or in the event of CONSULTANT'S unwillingness or inability for any reason whatsoever to perform the duties hereunder, or if the Agreement is terminated pursuant to Section 8. In such event, CONSULTANT shall not be entitled to any further compensation under this Agreement.

8.5 Cumulative Remedies. The rights and remedies of the parties provided in this Section are in addition to any other rights and remedies provided by law or under this Agreement.

9. CONFLICT OF INTEREST: CONSULTANT covenants that it presently has no interest,

including but not limited to, other projects or independent contracts, and shall not acquire any such interest, direct or indirect, which would conflict in any manner or degree with the performance of services required under this Agreement. CONSULTANT further covenants that in the performance of this Agreement, no person having any such interest shall be employed or retained by it under this Agreement.

10. ADMINISTRATION: The Deputy Director, Facilities Management, Project Management Office (or designee) shall administer this Agreement on behalf of COUNTY.

11. ASSIGNMENT: This Agreement shall not be assigned by CONSULTANT, either in whole or in part, without prior written consent of COUNTY. Any assignment or purported assignment of this Agreement by CONSULTANT without the prior written consent of COUNTY will be deemed void and of no force or effect.

12. NONDISCRIMINATION: CONSULTANT represents that it is an equal opportunity employer and it shall not discriminate against any employee or applicant for employment because of race, religion, color, national origin, ancestry, sex, physical condition, or age. Such non-discrimination shall include, but not be limited to, all activities related to initial employment, upgrading, demotion, transfer, recruitment or recruitment advertising, layoff or termination.

13. ALTERATION: No alteration or variation of the terms of this Agreement shall be valid unless made in writing and signed by the parties hereto, and no oral understanding or agreement not incorporated herein shall be binding on any of the parties hereto. No additional services shall be performed by CONSULTANT without a written amendment to this Agreement.

CONSULTANT understands that the County Purchasing Agent or the County Board of Supervisors are the only authorized COUNTY representatives who may at any time, by written order, make any alterations within the general scope of this Agreement.

If CONSULTANT feels that any work requested of it is beyond the scope of services under this Agreement, any claim by the CONSULTANT for adjustment under this paragraph shall be made within thirty (30) days of when the CONSULTANT is requested to perform the disputed scope of work.

14. LICENSE AND CERTIFICATION: CONSULTANT verifies upon execution of this Agreement, possession of a current and valid license and certification in compliance with any local, State,

and Federal laws and regulations relative to the scope of services to be performed under Exhibit "A", and that services(s) will be performed by properly trained and licensed staff.

15. CONFIDENTIALITY: CONSULTANT shall maintain the confidentiality of any and all records and information accessed or processed under this Agreement. CONSULTANT shall not disclose, except as permitted by this Agreement or as authorized by the COUNTY, any oral or written communication, information, or effort of cooperation between COUNTY and CONSULTANT, or between COUNTY and CONSULTANT and any other party.

16. DOCUMENTS: The COUNTY acknowledges that the CONSULTANT'S reports, drawings, specifications, field data, field notes, laboratory test data, calculations, estimates and other similar documents are instruments of professional service, not products. Although ownership of such documents normally is retained by the CONSULTANT they nonetheless shall in this instance become upon their creation the property of the COUNTY whether the Project is constructed or not. The COUNTY may use design documents and the designs depicted in them, without the CONSULTANT'S consent, in connection with the Project, or other COUNTY Projects, including, without limitation, future additions, alterations, connections, repairs, information, reference, use or occupancy of the Project(s). Any reuse of the documents by COUNTY without the written consent of the CONSULTANT shall be at COUNTY'S sole risk and without liability or legal exposure to the CONSULTANT, and COUNTY shall indemnify, defend and hold the CONSULTANT harmless from any claims or losses arising out of such use of the design documents by the COUNTY.

16.1 Upon completion of each phase of work described in Exhibit "A", the CONSULTANT shall furnish to the COUNTY Three (3) copies of the deliverables, and/or documents completed for that phase as specified in Exhibit "A". Upon approval thereof by the COUNTY, the CONSULTANT shall furnish one reproducible set along with an electronic copy or Compact Disk (CD) of the deliverables and/or documents.

17. JURISDICTION, VENUE: This Agreement is to be construed under the laws of the State of California. The parties agree to the jurisdiction and venue of the appropriate courts in the County of Riverside, State of California.

18. WAIVER: Any waiver by COUNTY of any breach of any one or more of the terms of

this Agreement shall not be construed to be a waiver of any subsequent or other breach of the same or of any other term thereof. Failure on the part of the COUNTY to require exact, full and complete compliance with any terms of this Agreement shall not be construed as in any manner changing the terms hereof, or stopping COUNTY from enforcement hereof.

19. SEVERABILITY: If any provision in this Agreement is held by a court of competent jurisdiction to be invalid, void or unenforceable, the remaining provisions will nevertheless continue in full force without being impaired or invalidated in any way.

20. ENTIRE AGREEMENT: This Agreement constitutes the entire agreement between the parties hereto with respect to the subject matter hereof and all prior or contemporaneous agreements of any kind or nature relating to the same shall be deemed to be merged herein. Any modifications to the terms of this Agreement must be in writing and signed by the parties herein.

21. NOTICES: All correspondence and notices required or contemplated by this Agreement shall be delivered to the respective parties at the addresses set forth below and are deemed submitted one (1) day after their deposit in the United States Mail, postage prepaid:

COUNTY:

Facilities Management

Project Management Office

3450 14<sup>th</sup> Street, Suite 200

Riverside, CA 92501

Attn: Jon Aldana

CONSULTANT:

Ruhnau Clarke Architects

3775 Tenth Street

Riverside, CA 92501

Attn: Roger Clarke, President

22. AUTHORIZATION: The party hereto for the COUNTY has caused their duly authorized representative to approve the contents of this Agreement as representative of the COUNTY'S requirements for this project. The execution of this Agreement by the COUNTY shall be through the authority given in Minute Order 3.16 of June 29, 2021 and for the Purchase Order issued pursuant to the same.

23. COUNTERPARTS; DIGITAL SIGNATURES: This Agreement may be executed in any number of counterparts, each of which will be an original, but all of which together will constitute one instrument. Each party of this Agreement agrees to the use of electronic signatures, such as digital

signatures that meet the requirements of the California Uniform Electronic Transactions Act (“CUETA”) Cal. Civ. Code §§ 1633.1 to 1633.17), for executing this Agreement. The parties further agree that the electronic signatures of the parties included in this Agreement are intended to authenticate this writing and to have the same force and effect as manual signatures. Electronic signature means an electronic sound, symbol, or process attached to or logically associated with an electronic record and executed or adopted by a person with the intent to sign the electronic record pursuant to the CUETA as amended from time to time. The CUETA authorizes use of an electronic signature for transactions and contracts among parties in California, including a government agency. Digital signature means an electronic identifier, created by computer, intended by the party using it to have the same force and effect as the use of a manual signature, and shall be reasonably relied upon by the parties. For purposes of this section, a digital signature is a type of "electronic signature" as defined in subdivision (i) of Section 1633.2 of the Civil Code.

IN WITNESS WHEREOF, the Parties have caused their duly authorized representative to execute this Agreement.

“COUNTY”

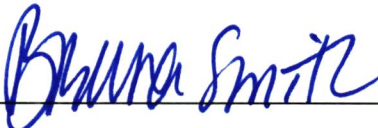
COUNTY OF RIVERSIDE

By:   
\_\_\_\_\_  
KEVIN JEFFRIES  
Chairman, Board of Supervisors

ATTEST:

Kimberly Rector

Clerk of the Board


By:   
\_\_\_\_\_

“CONSULTANT”

Ruhnau Clarke Architects

By: Roger Clarke

Title: President

By:   
\_\_\_\_\_

Federal Tax I.D. No. 95-1924934

Address: 3775 10th Street

Riverside, CA 92501

Deputy

(SEAL)

APPROVED AS TO FORM:

Minh C. Tran

County Counsel

By:           Lisa Sanchez          

LISA SANCHEZ  
Deputy County Counsel





March 9, 2023

RE: A/E Proposal – Parking Lot Expansion of the Western Riverside County Emergency Operations Center

Mr. Jon Aldana

Dear Mr. Aldana,

Supervising Facilities  
Project Manager

We are pleased to present to the County of Riverside Facilities Management Department this fee proposal for parking lot expansion for the Western Riverside County Emergency Operations Center. Our understanding of the project and scope are outlined as follows:

County of Riverside  
Facilities Management

**Project Understanding:**

We understand that the County of Riverside would like to expand their existing parking capacity at the north end of the Western Riverside County Emergency Operations Center site. In addition, the County would like to allow for the inclusion of trailer parking and power to the south end of the site.

3450 14<sup>th</sup> Street  
Riverside, CA 92501

**Scope of Work & Services:**

- Expansion of existing north parking lot (32 additional parking stalls)
- Addition of trailer parking lot (3 trailer parking stalls)
- New 30/50A power service to trailer parking lot
- WQMP

**Deliverables:**

Drawings/Specs to be sent for County review at each of the phases listed below:

- 100% Design Development
- 50% Construction Documents
- 100% Construction Documents
- County Building and Safety / Fire Marshal Plan Approval

**Proposed Project Schedule:**

County Approval of A/E proposal/agreement	March 2023
Project Kick-Off	April 3, 2023
100% Design Development	April 28, 2023
50% Construction Documents	May 12, 2023
100% CD's / Submittal to County Plan Review	June 2, 2023
Comments Return From County Plan Review	July 3, 2023
Pick up County Plan Review Comments	July 4-31, 2023
Plan Approval	August 1, 2023
Bidding / Award	August / September 2023
Construction	October-December 2023
Project Closeout	January 2024



March 9, 2023

RE: A/E Proposal - Parking Lot Expansion of the Western Riverside County Emergency Operations Center

**Exclusions:**

- Plan Check/ Agency Fees
- Work not specifically described above.
- Geotechnical investigation, Topographic, Utility or Boundary Survey

**Compensation:**

Based upon the Scope of Work outlined above and a preliminary cost estimate of \$1,400,000, we propose to establish a fixed fee of **One Hundred Sixty-Three Thousand Five Hundred Dollars (\$163,500)**:

**Fixed Fee is inclusive of all required disciplines to completely design the project.**

Architectural	\$ 116,015
Civil	\$ 13,085
Structural	\$ 6,000
Electrical	\$ 6,500
Landscaping	\$ 5,900
Specifications	\$ 2,500
Allowance - Unforeseen Design Items	\$ 10,000
Allowance - Reimbursables	\$ 3,500
<b>Total Architecture / Engineering Fee</b>	<b>\$163,500</b>

We appreciate the opportunity to present this proposal to The County of Riverside Facilities Management Department. Should you have any questions please give me a call at 951-684-4664.

Respectfully Submitted,

**Bryan K. Dunaj, AIA, LEED AP**  
Architect, Principal

Tel. 951.684.4664

Email. [bdunaj@ruhnaucclarke.com](mailto:bdunaj@ruhnaucclarke.com)

Cc: Roger Clarke, Anna Vallejo, RCA Admins  
Delivered via: Email



**California Secretary of State  
Electronic Filing**



**Corporation - Statement of Information**

Entity Name: RUHNAU CLARKE ARCHITECTS

Entity (File) Number: C0334400

File Date: 03/03/2022

Entity Type: Corporation

Jurisdiction: CALIFORNIA

Document ID: H293230

**Detailed Filing Information**

1. Entity Name: RUHNAU CLARKE ARCHITECTS
  
2. Business Addresses:
  - a. Street Address of Principal Office in California: 3775 10th Street  
Riverside, California 92501  
United States of America
  
  - b. Mailing Address: 3775 10th Street  
Riverside, California 92501  
United States of America
  
  - c. Street Address of Principal Executive Office: 3775 10th Street  
Riverside, California 92501  
United States of America
  
3. Officers:
  - a. Chief Executive Officer: David Ruhnu  
3775 10th Street  
Riverside, California 92501  
United States of America
  
  - b. Secretary: Annalilia Vallejo  
3775 10th Street  
Riverside, California 92501  
United States of America

Document ID: H293230



## California Secretary of State Electronic Filing

Officers (cont'd):

- c. Chief Financial Officer: Roger Keith Clarke  
3775 10th Street  
Riverside, California 92501  
United States of America
4. Director: Roger Keith Clarke  
3775 10th Street  
Riverside, California 92501  
United States of America
- Number of Vacancies on the Board of Directors: 0
5. Agent for Service of Process: Roger Keith Clarke  
3775 10th Street  
Riverside, California 92501  
United States of America
6. Type of Business: Architectural Design

No Officer or Director of this Corporation has an outstanding final judgment issued by the Division of Labor Standards Enforcement or a court of law, for which no appeal therefrom is pending, for the violation of any wage order or provision of the Labor Code.

By signing this document, I certify that the information is true and correct and that I am authorized by California law to sign.

Electronic Signature: Annalilia Vallejo

Use [bizfile.sos.ca.gov](http://bizfile.sos.ca.gov) for online filings, searches, business records, and resources.

Document ID: H293230

**NOTICE INVITING BIDS**

**THE PRESS-ENTERPRISE**

KEEP YOUR EYES ON THE 'PRISE  
pe.com

The Press-Enterprise  
3512 14 Street  
Riverside, California 92501  
(951) 368-9229

**NOTICE IS HEREBY GIVEN** that the County of Riverside ("County") Invites sealed Bids for the construction of the following project ("Work"):

**WESTERN EMERGENCY OPERATION  
CENTER PARKING EXPANSION PROJECT  
(FM08200012205)**

County of Riverside - Clerk of the Board  
PO Box 1147  
Riverside, California 92502

Publication: The Press-Enterprise

PROOF OF PUBLICATION OF

Ad Desc: 0011647574

**FILE NO. 0011647574**

**PROOF OF PUBLICATION**

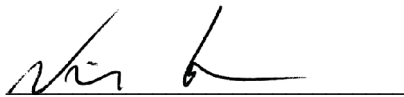
I am a citizen of the United States. I am over the age of eighteen years and not party to or interested in the above-entitled matter. I am an authorized representative of THE PRESS-ENTERPRISE, a newspaper of general circulation, printed and published daily in the County of Riverside, and which newspaper has been adjudicated a newspaper of general circulation by the Superior Court of the County of Riverside, State of California, under date of April 25, 1952, Case Number 54446, under date of March 29, 1957, Case Number 65673, under date of August 25, 1995, Case Number 267864, and under date of September 16, 2013, Case Number RIC 1309013; that the notice, of which the annexed is a printed copy, has been published in said newspaper in accordance with the instructions of the person(s) requesting publication, and not in any supplement thereof on the following dates, to wit:

**02/10/2024, 02/15/2024**

I certify (or declare) under the penalty of perjury that the foregoing is true and correct.

Date: February 15, 2024.

At: Riverside, California



Signature

Bids shall be prepared in conformance with the Instructions to Bidders and other Bidding Documents. Bids must be received, by hand delivery or mail, by the Clerk of the Board located on the 1st floor of the County Administrative Center, 4080 Lemon Street, Riverside, CA 92501, no later than the Bid Closing Deadline of **2:00 p.m. on 03/06/24**, to be thereafter on said date and at said location publicly opened and read aloud. The Bidder assumes sole responsibility for timely receipt of its Bid.

On and after 02/08/24, and up to seventy two hours (72) hours prior to the Bid Closing Deadline, copies of Bidding Documents will be available by contacting Mission Reprographics at (951) 686-8828. Project documents and plan holders list may be downloaded on-line by going to Mission Reprographics Online Plan Room website at <https://www.missionreproplanroom.com/lob/public>. The cost to of bid documents is nonrefundable. Pursuant to Labor Code section 1771.1, any contractor bidding, or subcontractor to be listed on a bid proposal subject to Public Contract Code section 4104, shall not be qualified to bid after March 1, 2015, unless currently registered and qualified to perform public works pursuant to Labor Code section 1725.5. No Contractor or subcontractor may enter into a contract (after April 1, 2015) without proof of current registration to perform public works.

A mandatory Pre-Bid Conference will be conducted on 02/20/24, commencing promptly at 10:00 a.m., at 450 E Alessandro Blvd., Riverside, CA, 92507. Attendance at the mandatory Pre-Bid Conference is required as a condition of bidding. Sign language services are available for the Pre-Bid Conference upon written request received by email at [jharrigan@rivco.org](mailto:jharrigan@rivco.org) at least three (3) business days prior to the Pre-Bid Conference.

The Bidder receiving the Award by the County is required:

(1) to furnish a Performance Bond and Payment Bond as provided in the Instructions to Bidders and other Bidding Documents;

(2) both at the time Bidder submits its Bid and other Bid Submittals and at the time of Award, to: (a) hold a contracting license, active and in good standing, issued by the Contractors State License Board for the State of California for the following license classification(s): Class A or B license classification(s); and (b) hold, or designate a Subcontractor that holds, the certification(s) required by Applicable Laws to perform the following work: storm drain, irrigation, electrical, low voltage, paving, new site lighting, new landscape, new hardscape, extend existing roof top low voltage Infrastructure; and

(3) to comply with the provisions of the California Labor Code, including, without limitation, Sections 1771.4, 1773.1, 1774, 1775 and 1776 of the California Labor Code and including, without limitation, the obligations to pay the general prevailing rates of wages in the locality in which the Work is to be performed and comply with Section 1777.5 of the California Labor Code governing employment of Copies of the prevailing rates of per diem wages are on file at California State Department of Industrial Relations, 464 West Fourth St., Suite 348, San Bernardino, CA 92401, and are available to any interested party on request.

**THIS IS A PUBLIC WORKS PROJECT AND SUBJECT TO COMPLIANCE MONITORING AND ENFORCEMENT BY THE DEPARTMENT OF INDUSTRIAL RELATIONS.** The awarded prime

contractor shall post job site notices as prescribed by regulation starting January 1, 2015. Contractor or subcontractor shall furnish records specified in Labor Code section 1776 to the Labor Commissioner.

Substitution of securities for any moneys withheld by County shall be permitted as provided for by Section 22300 of the California Public Contract Code.

Capitalized terms used herein shall have the meanings assigned to them in the Bidding Documents.

For information contact: Facilities Management, 3450 14th Street, 2nd Floor, Riverside, CA 92501.

Alternative formats available upon request to individuals with disabilities. If you require reasonable accommodation, please contact Clerk of the Board at (951) 955-1069.

Dated: February 7, 2024      KIMBERLY A. RECTOR  
Clerk of the Board of Supervisors  
By: Cindy Fernandez, Clerk of the Board Assistant

**The Press-Enterprise**  
**Published: 2/10, 2/15/24**