

PROJECT MANUAL

FOR THE CONSTRUCTION OF

**County of Riverside
Mental Health Treatment Facility
RCRMC ETS
Expansion Project Phase 2
9990 County Farm Road
Riverside, CA 92503**



DECEMBER 2009

**County of Riverside
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Riverside, CA 92507**

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COUNTY OF RIVERSIDE MENTAL HEALTH TREATMENT FACILITY
RCRMC ETS
EXPANSION PROJECT PHASE 1
9990 COUNTRY FARM ROAD
RIVERSIDE, CA 92503

OSHPD NO. SL081840-33

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GENERAL CONDITIONS OF THE CONTRACT

ARTICLE 1

GENERAL PROVISIONS

1.1 DEFINITIONS

THE CONTRACT DOCUMENTS - The Contract Documents consist of the Contract, the Performance Bond and Payment Bond and any other bond required by the Contract, the drawings, the specifications, addenda issued prior to execution of the Contract, and all modifications thereto.

THE CONTRACT - The Contract Documents form the Contract. The Contract represents the entire and integrated agreement between the parties hereto, and supersedes all prior negotiation, representations, or agreements, either written or oral, including the bidding documents.

ACT OF GOD - An Act of God is an earthquake of magnitude 4.5 or greater on the Richter scale, flood, tornado, or other cataclysmic phenomenon of nature, or rain, snowstorm, windstorm, high water, or other natural phenomenon in excess of the normal as established by National Oceanic and Atmospheric Administration weather data.

ACCEPTANCE - Acceptance is when the County determines all of the Contract requirements have been completed. Execution of the Notice of Completion will signify acceptance. A copy of the Notice of Completion will be sent to the Contractor after execution by the County. Upon receipt of the Notice of Completion, the Contractor will be relieved of the duty of protecting the work, and the County will initiate final settlement and payment.

ARCHITECT - The use of the term Architect shall mean the individual, partnership, corporation, association or joint venture contracted by the County for the design of this Work, as designated on the title sheet of these specifications and Contract Documents.

BENEFICIAL OCCUPANCY - The right of the County to occupy all or any portion of the project prior to final Acceptance of the Work. Such occupancy does not constitute acceptance or completion by the Contractor of the Work or any portion thereof, nor will it relieve the Contractor of the responsibility for correcting defective work or materials found at any time before Acceptance of the Work.

COUNTY - The term County when used herein shall mean the Board of Supervisors of the County of Riverside, a political subdivision of the State of California.

CHANGE ORDER - A Change Order is the document issued by the County authorizing any change or adjustment to the Contract Documents in accordance with Article 19 of this Contract.

CONTRACT DRAWINGS - "Contract drawings" or "drawings" means and includes (a) all drawings which have been prepared on behalf of the County and are included in the Contract Documents and all clarification drawings issued by notice to the bidders thereto; (b) all drawings submitted pursuant to the terms of the Contract by the Contractor to the County during the progress of the Work, which are accepted by the County.

CONTRACTOR'S AGENT - The representative of the Contractor, approved by the County, who shall be present at the Work and be authorized to receive and act upon instructions from the County and to execute and direct the Work on behalf of the Contractor.

CONTRACTOR - When used herein, Contractor means the prime or principal Contractor licensed to perform work in the State of California, including all joint ventures. References to subcontractor or others are only for convenience and all such references shall be considered to refer to the Contractor. The prime or principal Contractor shall be responsible for all subcontractors, and all subcontractors shall require their subcontractors to comply with the relevant provisions of the prime or principal contract.

CRITICAL PATH METHOD(CPM) - "Critical Path Method" is a schedule technique.

DAY - The use of "day" herein means calendar day and shall include every day including Saturdays, Sundays, and legal holidays.

DIRECTOR - The use of "Director" shall mean the Director of Department of Facilities Management of the County or his designated representative.

INSTALL - When used herein, "install" shall mean the complete installation, in place, of any item, equipment or material.

MATERIAL - Material shall be construed to include machinery, equipment, manufactured articles, or construction such as form work, fasteners, etc., and any other classes of material to be furnished in connection with the Contract. All materials shall be new.

NOTICE OF COMPLETION - The Notice of Completion ("NOC") shall be issued at that point in the Contract when the Contractor has completed all Work required in the Contract Documents. The time for issuance shall be determined by the County through a final inspection. The NOC shall be issued by the Board of Supervisors.

NOTICE TO PROCEED - The Notice to Proceed is the written notification from the County giving the Contractor notice to commence with the Work. The Notice to Proceed will specify the start date for the Work and the completion date.

REQUEST FOR INFORMATION - (RFI) The form and procedure established for communication between the Contractor and the County to clarify or interpret the Contract Documents.

REQUEST FOR QUOTATION - (RFQ) A document consisting of supplemental details, instruction, or information issued by the Architect, through the County, for the purpose of obtaining price quotations for possible changes in the Work.

SHALL - When used herein, "shall" means anything, which is mandatory to be performed by the Contractor.

SPECIFICATIONS - The term "Specifications" means that portion of the Contract Documents consisting of the written requirements for materials, equipment, construction systems, standards and workmanship for the Work.

SUBCONTRACTOR - The term "Subcontractor" means a person or firm that has a contract with Contractor or with another subcontractor to perform a portion of the Work. Unless otherwise specifically provided, the term Subcontractor includes Subcontractors of any tier, suppliers, manufacturers, and distributors. The term Subcontractor is referred to throughout the Contract Documents as if singular in number.

WORK - The term "Work" comprises the services and materials required by the Contract Documents, as may be amended, and includes all labor necessary to produce the construction required by the Contract Documents, and all materials and equipment incorporated or to be incorporated in such construction.

1.2 AUTHORITIES AND LIMITATIONS

- 1.2.1** The Board of Supervisors alone have the power to bind the County and to exercise the rights, responsibilities, authorities, and functions vested therein by the Contract Documents, except that they shall have the right to designate authorized representatives to act for them.
- 1.2.2** Neither the Contract, nor any part thereof, nor moneys due or to become due there under may be assigned by the Contractor without the prior written approval of the County, with the exception of the assignments to County which may be required under the terms of this Contract.

1.3 LEGAL REQUIREMENTS

- 1.3.1** Contractor shall keep informed of, and comply with, all federal, state and county laws, ordinances, rules, and regulations applicable to the Work or to those engaged or employed in the Work of this Contract, especially (but not limited to) those laws relating to hours of employment, prevailing wages, payment of wages, sanitary and safety conditions for workers, workers' compensation insurance, type and kind of materials that can be used, non-discrimination in employment and affirmative action programs. Failure to identify a specific provision in these Contract Documents shall not excuse the Contractor from complying with such applicable statutory requirements.
- 1.3.2** If conflict arises between provisions of the Contract Documents and any such laws, rules, or regulations, the Contractor shall notify the County at once in writing. If, before receiving clarification, Contractor performs any portion of the Work affected by such apparent conflict, such performance shall be at Contractor's own risk. Contractor shall not be entitled to any additional compensation or time by reason of the conflict or its later correction.
- 1.3.3** All work and materials shall be in full accordance with the latest applicable (or otherwise noted) codes, rules, and regulations including, but not limited to, the following:
- .Uniform Building Code
 - .Uniform Plumbing Code
 - .Uniform Mechanical Code
 - .Uniform Fire Code
 - .State Fire Marshal
 - .State Industrial Accident Commission's Safety Orders
 - .Rules of Local Utilities
- 1.3.4** Nothing in the specifications is to be construed to permit work not conforming to the above, and expense incurred complying with the above shall be borne by the Contractor. Whenever the specifications and working details require higher standards than those required by the ordinances, codes and statutes, the specifications and

working details shall take priority over the ordinances, codes and statutes.

- 1.3.5** In submitting a bid on this public works projects, or any subcontractor agreeing to supply goods, services, or materials, and entering a contract pursuant thereto, the contractor and/or subcontractor do offer and agree to assign the County 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. Section 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 acknowledgement by the parties.

1.4 STANDARD REFERENCES

- 1.4.1** All documents and publications (such as, but not limited to, manuals, handbooks, codes, standards, and specifications) which are cited in this Contract for the purpose of establishing technical (non-administrative) requirements applicable to equipment, materials, or workmanship under this Contract, shall be deemed to be incorporated herein as though fully set forth.
- 1.4.2** Whenever reference is made to any particular document or publication, the Contractor shall comply with the requirements set out in the edition specified in this Contract, or if not specified, the latest edition or revision thereof, in effect on the date of the solicitation of bid on this project, except as modified by, as otherwise provided in, or as limited to type, class, or grade, in the specifications of this Contract.

1.5 PERMITS, LICENSES, FEES & TAXES

1.5.1 COUNTY'S RESPONSIBILITIES

- a. The County will apply for all plan checks and will apply for and obtain the Building Permit(s), the Grading Permit and Construction Permits required by the County of Riverside, paying all fees in connection therewith.
- b. The County will furnish, at no expense to the Contractor, all on-site inspection of the Work and will arrange and pay for off-site inspection only as noted in the Contract Documents.

1.5.2 CONTRACTOR'S RESPONSIBILITIES

- a. The Contractor shall obtain and pay for all other permits and licenses required for the Work, including excavation permit and for plumbing, mechanical and electrical work and for operations in or over public streets or right of way under jurisdiction of public agencies other than the County.
- b. Exclusive of off-site inspection specified herein to be the County's responsibility, the Contractor shall arrange and pay for all off-site inspection of the Work, including certification, required by the specifications, drawings, or by governing authorities.
- c. Before Acceptance of the project by the County, the Contractor shall submit all licenses, permits, and certificates of inspection to the County.

1.6 SEPARATE CONTRACTS

- 1.6.1** The County reserves the right to perform work related to this project with its own forces, and to award separate contracts in connection with other portions of the project or other work on the site. The Contractor shall cooperate with others in the prosecution of all work and shall not interfere with material, appliances or workmen of the County or any other contractor engaged by the County at the site of the Work. In case of disagreement regarding such use, the matter shall be referred to the County whose decision relative to said use shall govern.
- 1.6.2** The Contractor shall afford the County and separate contractors reasonable opportunity for the introduction and storage of their materials and equipment and the execution of their work, and shall properly connect and coordinate Contractor's Work with theirs.
- 1.6.3** If any part of the Contractor's Work depends for proper execution or results upon the work of the County or any separate contractor, the Contractor shall inspect and promptly report to the County any discrepancies or defects in such other work that render it unsuitable for such proper execution and results. Failure of the Contractor to so inspect and report shall constitute an acceptance of the County's or the separate contractor's work as fit and proper to receive the Work, except as to defects which may develop in the other separate contractor's work after the execution of the Contractor's Work.
- 1.6.4** Should the Contractor cause damage to the work or property of any separate contractor on the Project, the Contractor shall, upon due notice, settle with such other contractor by agreement, if both will so settle. If such separate contractor sues the County because of any damage alleged to have been so sustained, the Contractor agrees to indemnify and defend the County in such proceedings with the County retaining the right to select and hire independent counsel for the County paid by the Contractor.
- 1.6.5** Any cost caused by defective or ill-timed work shall be borne by the party responsible therefore.

1.7 COUNTY'S AUTHORIZED REPRESENTATIVE, INSPECTOR(S), & ARCHITECT

1.7.1 AUTHORIZED REPRESENTATIVE

The County shall designate a representative during the Work, who shall have the right to be present at the job site during construction and shall supervise any additional representatives appointed by the County.

1.7.2 INSPECTOR(S)

The Inspector(s) shall have the right to observe the installation of all materials and equipment to be incorporated into the Work and the placing of such material and equipment to determine in general if the Work is proceeding in accordance with the Contract Documents. The Inspector(s) is not authorized to make changes in the Contract Documents. On the basis of his observations, he shall keep the County informed as to the progress of the Work. The Inspector shall not be responsible for means, methods, techniques, sequences, or procedures of construction nor for safety precautions and programs in connection with the Work. Nor will the inspector be responsible for the Contractor's failure to carry out the Work in accordance with the Contract Documents.

1.7.3 ARCHITECT

- a. The County has retained an Architect for this project. The Architect will advise and consult with the County, and the County will issue instructions to the Contractor. The Architect will be requested to interpret the requirements of the Contract. When requested by the County, the Architect will, within a reasonable time, render such interpretations as he may deem necessary for the proper execution of the Work.
- b. The Architect will make periodic visits to the job site to familiarize himself generally with the progress and quality of the Work and to determine in general whether the work is proceeding in accordance with the Contract Documents. Based on such observations he will recommend approval of applications for progress payments made by Contractor. The Architect shall not be responsible for means, methods, techniques, sequences, or procedures of construction nor for safety precautions and programs in connection with the Work. Nor will the Architect be responsible for the Contractor's failure to carry out the Work in accordance with the Contract Documents.

ARTICLE 2 BONDS AND INSURANCE

2.1 BIDS OF \$25,000 OR LESS

2.1.1 If the total amount bid on the Work is \$25,000 or less, the payment bond and performance bond are not required, provided that one payment of all compensation shall be made following Acceptance of all work.

2.2 BONDS

2.2.1 GENERAL REQUIREMENTS

a. Before commencing any Work under this Contract, the Contractor shall file four of each bond with the County. These bonds shall be in the amounts and for the purposes specified below. They shall be surety bonds issued by:

- (1) Either a California Admitted Surety OR a current Treasury Listed Surety (Federal Register).

And

- (2) Either a current A.M. Best A VIII rated Surety OR an admitted surety insurer which complies with the provisions of the Code of Civil Procedure, § 995.660.

b. Should any surety or sureties upon said bonds or any of them become insufficient, Contractor shall renew said bond or bonds with good and sufficient sureties within ten (10) calendar days after receiving notice from the County that the surety or sureties are insufficient. Cost of bonds shall be included in the bid price.

2.2.2 PERFORMANCE BOND

The successful bidder shall deliver to the County an executed Performance Bond on the attached form in an amount equal to 100% of the accepted bid as security for the faithful performance of the Contract.

2.2.3 PAYMENT BOND

The successful bidder shall deliver to the County an executed Payment Bond on the attached form in an amount equal to 100% of the accepted bid as security for the payment of all persons performing labor and furnishing materials in connection with the Work.

2.3 INSURANCE

2.3.1 GENERAL REQUIREMENTS

Before commencing this Work under the Contract, and without limiting or diminishing CONTRACTOR'S obligation to indemnify and hold the COUNTY harmless, the Contractor shall procure and maintain, or cause to be maintained at its sole cost and expense, the following insurance coverages during the term of this Contract.

2.3.2 WORKERS' COMPENSATION INSURANCE

Contractor shall secure 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. Policy shall be endorsed, if applicable, to provide a Borrowed Servant/Alternate Employer Endorsement, and contain a Waiver of Subrogation in favor of the County of *Riverside* Pursuant to Section 3700 of the Labor Code of the State of California, 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 Contract."

2.3.3 COMMERCIAL GENERAL LIABILITY:

Commercial General Liability insurance coverage, including but not limited to, premises liability, contractual liability, products/completed operations if applicable, personal and advertising injury – which may arise from or out of CONTRACTOR'S operations, use, and management of the premises, or the performance of its obligations hereunder. Policy shall name the County of Riverside—it's Director's, Officers, special Districts, Board of Supervisors, employees, agents or representatives as Additional Insured, and contain a Waiver of Subrogation in favor of the County of Riverside. Policy limits shall not be less than \$1,000,000 per occurrence combined single limits. 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 also contain coverage for \$5,000 Medical Payments coverage per accident, per person, and Fire Legal Liability in an amount not less than \$50,000.

2.3.4 VEHICLE LIABILITY:

If CONTRACTOR'S vehicles or licensed mobile equipment are used on County property, or used in any manner on behalf of the County, CONTRACTOR shall maintain auto liability insurance for all owned, non-owned and hired automobiles in an amount not less than \$1,000,000 per occurrence combined single limit, \$2,000,000 in the aggregate. Policy shall name the County of Riverside, its Director's Officers, Special Districts, Board of Supervisors, employees, agents, or representatives as Additional Insured, and provide a Waiver of Subrogation in favor of the County of Riverside.

2.3.5 PROPERTY (PHYSICAL DAMAGE):

All-Risk property insurance coverage for the full replacement value of all CONTRACTOR'S equipment, improvements/alterations, temporary structures, and systems (Care, Custody, and Control of CONTRACTOR) used on COUNTY property, or used in any way connected with the accomplishment of the Work performed in this contract.

2.3.6 COURSE OF CONSTRUCTION INSURANCE

CONTRACTOR shall provide All Risk Builder's Risk (Course of Construction) insurance, including earthquake and flood if in an earthquake or flood zone (required on financed or bond financing arrangements), covering the COUNTY, the CONTRACTOR and every subcontractor of every tier for the entire project including property to be used in the construction of the project while such property is at off site storage locations or while in transit. Policy shall include coverage for 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. Policy shall be written on a completed value form. Policy shall also provide coverage for temporary structures (onsite offices, etc.), fixtures, machinery and equipment being installed as part of the construction project. (The Base Bid including course of construction insurance shall be used for determination of lowest bid, unless otherwise stated in the bid form.)

CONTRACTOR shall provide a bid price with Course of Construction insurance as outlined herein, and shall also separately provide the cost of the Course of Construction insurance and deductible; and shall declare all terms, conditions, coverages and limits upon request of COUNTY. COUNTY RETAINS THE RIGHT TO CHOOSE TO USE ITS OWN COURSE OF CONSTRUCTION PROGRAM. If the COUNTY program is chosen, 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 whatever. If COUNTY elects the CONTRACTOR's All Risk Builder's Risk Program, CONTRACTOR shall be responsible for any and all policy deductibles.

2.3.7 GENERAL INSURANCE PROVISION – ALL LINES:

- a. Any insurance carrier providing insurance coverage hereunder shall be admitted to the State of California unless waived, in writing, by the County Risk Manager. Carrier(s) shall have an A.M. BEST rating of not less than an A:VIII. Insurance deductibles or self-insured retentions must be declared by the carrier(s), and such deductibles and retentions shall have the prior written consent from the County Risk Manager. At the election of the Risk Manager, carriers shall provide written notification, and shall either 1) reduce or eliminate such deductibles or self-insured retentions, or 2) procure a bond which guarantees payment of losses and related investigations, claims administration, and defense costs and expenses. If no written notice is received from the County Risk Manager within ten (10) days of the acceptance of agreement, then such deductibles or self-insured retentions shall be deemed acceptable.
- b. Cause its 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, or 2) if requested to do so 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. The County of Riverside, its Director's and Officers, Special

Districts, Board of Supervisors, elected officials, employees, agents or representatives are named as Additional Insureds. Further, said Certificate(s) and policies of insurance shall contain the covenant of the insurance carrier(s) that shall provide no less than thirty (30) days written notice be given to the County of Riverside prior to any material modification or cancellation of such insurance. In the event of a material modification or cancellation of 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 original policies, including all endorsements and attachments thereto evidencing coverages set forth herein and the insurance required herein is in full force and effect. **CONTRACTOR shall not take possession, or use the Premises, or commence operations under this Agreement until the County of Riverside has been furnished original Certificate(s) of Insurance and certified original copies of Endorsements or policies of insurance including all Endorsements and any and all other attachments as required in this Section. The original Endorsements for each policy and the Certificate of Insurance shall be signed by an individual authorized by the insurance carrier to do so on its behalf.**

- c. It is understood and agreed to by the parties hereto and the insurance company(s), that the Certificate(s) of Insurance and policies shall so covenant and shall be construed as primary, and the COUNTY'S insurance and/or deductibles and/or self-insured retentions or self-insured programs shall not be construed as contributory.

The County of Riverside's Reserved Rights-Insurance. The County of Riverside reserves the right to adjust the monetary limits of insurance coverage's during the term of this agreement or any extension thereof-if in the County Risk Manager's reasonable judgment, the amount or type of insurance carried by the CONTRACTOR becomes inadequate.

- d. CONTRACTOR shall pass down the insurance obligations contained herein to all tiers of sub-consultants working under this Agreement.

2.4 INDEMNITY AND HOLD HARMLESS

- 2.4.1 CONTRACTOR agrees to and shall indemnify and hold the COUNTY-its officers, employees and agents free and harmless from any and all claims, actions, damages and liabilities of whatsoever kind and nature arising from death, personal injury, property damage or other cause asserted or, based upon any negligent act or omission of CONTRACTOR, its employees, agents, invitees, or any subcontractor of CONTRACTOR relating to or in any way connected with the accomplishment of the work or performance of services under this Agreement, regardless of the existence or degree of fault or negligence on the part of the COUNTY or any officer or employee of said COUNTY, other than the sole active negligence or willful misconduct of COUNTY-its Directors and Officers, Special Districts, Board of Supervisors, elected officials, employees, agents or representatives. As part hereto of the foregoing indemnity CONTRACTOR agrees to protect and defend at its own expense, including attorneys' fees the COUNTY-its Directors and Officers, Special Districts, Board of Supervisors, elected officials, employees, agents or representatives from any and all legal action based upon any acts or omissions, as stated hereinabove, by any person or persons.
- 2.4.2 If any such claim, action, or proceeding is brought against County or County's officers, agents, employees, or independent contractors, Contractor, upon notice from County, shall defend the same at Contractor's expense by counsel satisfactory to County.
- 2.4.3 County shall promptly notify Contractor of any claim, action, or proceeding against County or County's officers, agents employees, independent contractors, and consultants relating to the performance, or omission

to perform, any term or condition of this Contract. County shall cooperate fully in the defense of such claim, action, or proceeding.

- 2.4.4 County shall not be liable or responsible for any accident, loss or damage occurring to the Work prior to the completion and Acceptance of same, unless otherwise specifically agreed to at the time of occupancy by the County.

ARTICLE 3 SITE CONDITIONS

3.1 DIFFERING SITE CONDITIONS

- 3.1.1 The Contractor shall have reviewed and ascertained pertinent local conditions such as location, accessibility, and general character of the site and satisfy himself as to the conditions under which the Work is to be performed. No claim for allowances shall be made because of Contractor's error or negligence in acquainting himself with the conditions at the site.
- 3.1.2 The Contractor shall carefully study and compare the Contract Documents with each other and with information furnished by County. The Contractor shall promptly report in writing to County any errors, inconsistencies, or omissions in the Contract Documents or inconsistencies with applicable code requirements observed by Contractor.
- 3.1.3 If Contractor performs any construction activity which it knows or should know involves an error, inconsistency, or omission without notifying and obtaining the written consent of County, Contractor shall be responsible for the resultant losses, including, without limitation, the costs of correcting defective work.
- 3.1.4 The County will furnish surveys necessary to properly locate the property and establish the boundaries thereof with general reference points as well as to enable the Contractor to proceed with the Work.
- 3.1.5 The Contractor shall provide competent engineering services to lay out the Work and all parts thereof and to establish all grades and elevations in accordance with the Contract requirements. He shall verify the figures shown on the survey and approach drawings before undertaking any construction work and shall be responsible for the accuracy of the finished work.
- 3.1.6 The Contractor shall protect and preserve established bench marks and monuments and shall make no changes in locations without the written approval of the County. Any bench marks or monuments that are lost or destroyed shall be replaced by the Contractor subsequent to notification and approval from County.

3.2 SITE INVESTIGATION AND CONDITIONS AFFECTING THE WORK

- 3.2.1 The Contractor acknowledges by submission of his/her bid that he has satisfied himself as to the character, quality, and quantity of surface and subsurface materials or obstacles to be encountered insofar as this information is reasonably ascertainable from an inspection of the site, including any exploratory work deemed necessary by the Contractor. Any failure of the Contractor to take the actions described and acknowledged in this paragraph will not relieve the Contractor from responsibility for estimating the difficulty and cost of successfully performing the Work, or for proceeding to successfully perform the Work without additional expense to the County.

3.3 DIMENSIONS AND MEASUREMENTS

- 3.3.1 All dimensions shown for existing conditions and all dimensions required for work that is to connect with work now in place, shall be verified and calculated by the Contractor by actual measurement of the existing work. Any discrepancies between the Contract Documents and the existing conditions shall be referred to the authorized representative of the County before any work affected thereby has been performed. Failure to notify the County before starting work will be considered acceptance by the Contractor. Where doubts as to dimensions exist, County shall determine the correct dimensions.

ARTICLE 4 SPECIFICATIONS AND DRAWINGS

4.1 GENERAL PROVISIONS

4.1.1 SUBDIVISIONS

For convenience, the specifications are arranged into several sections, but such separation shall not be considered as the limits of the work required of any separate trade. The terms and conditions of such limitations are wholly between the Contractor and his subcontractors. Requirements contained in any section are required as if contained in all sections and are the responsibility of the Contractor. The Contractor, prior to awarding subcontracts, will assure the Work required as a whole has been coordinated among the subcontracts.

4.1.2 RECORD DOCUMENTS

- a. The Contractor shall keep on the Work site a copy of the awarded construction documents (drawings and specifications) and shall at all times give the County and Architect access thereto.
- b. The Contractor will be given one set of drawings and specifications which shall be kept at the site of the Work at all times and updated weekly. Payment may be withheld if drawings are not kept current. Exact locations of all pipes and conduits and all changes in construction and details shall be indicated and dimensions provided upon these drawings, and all changes in materials and equipment installed shall be indicated in these specifications. Upon completion and prior to Acceptance of the Work, a final reproducible (transparencies) set of project record documents and specifications shall be submitted to the County by the Contractor. County will furnish a set of reproducibles.
- c. The working details will indicate dimensions, position, and kind of construction, and the specifications, qualities, and methods. Any Work indicated on the working details and not mentioned in the specifications, or vice versa, shall be furnished as though fully set forth in both. Work not particularly detailed, marked, or specified shall be the same as similar work that is detailed, marked, or specified.
- d. In case of discrepancy in the documents, the matter shall be promptly submitted to the County, who shall make a determination in writing. Any adjustment by the Contractor without such a determination shall be at its own risk and expense. The County shall furnish from time to time such detailed information as considered necessary to clarify the Work.
- e. Where the word "similar" occurs on the drawings, it shall have a general meaning and not be interpreted as meaning identical, and all details shall be worked out in relation to their location and their connection with other parts of the work.
- f. Standard details or specification drawings are applicable when listed, bound with specifications, noted

on the drawings or referenced elsewhere in the specifications. Where the notes on the drawings indicate modifications, such modifications shall govern.

- g. All drawings, specifications and copies thereof furnished to the Contractor are the property of the County and shall not be used on other work without its consent. Upon completion of this project, all copies of the drawings and specifications shall be returned to the County.

4.2 SUMMARY OF THE ORDER OF THE PROCEDURE

4.2.1 In case of conflicts between the Contract Documents, the order of precedence shall be as follows:

- 1) Modifications or changes last in time are first in precedence.
- 2) Addenda.
- 3) County-Contractor agreement.
- 4) General Conditions except for specific modifications thereto stated in the Supplementary Conditions.
- 5) Supplementary Conditions.
- 6) Division One Specifications.
- 7) Division Two through Sixteen Specifications.
- 8) Drawings - as between figured dimensions given on drawings and the scaled measurements, the figured dimension shall govern; as between large-scale drawings and small-scale drawings, the larger scale shall govern.
- 9) Structural drawings
- 10) Architectural drawings.
- 11) As between detailed drawings and typical details bound within the specifications, the detailed drawings govern.
- 12) In the event provisions of codes, safety orders, contract documents, referenced manufacturer's specifications or industry standards are in conflict, the more restrictive and higher quality shall govern.
- 13) Schedules shown on the drawings take precedence over conflicting information given on other drawings.
- 14) Mechanical drawings.
- 15) Electrical drawings.

4.3 CLARIFICATIONS/REQUEST FOR INFORMATION AND ADDITIONAL INSTRUCTIONS

4.3.1 NOTIFICATION BY CONTRACTOR

- a. Should Contractor discover what he perceives to be conflicts, omissions, or errors in the Contract Documents, or have any question concerning interpretation or clarification of the Contract Documents, or if it appears that the work to be done or any matters relative thereto are not sufficiently detailed or explained in the Contract Documents, then, before proceeding with the work affected, Contractor shall notify County's authorized representative in writing, and request interpretation, clarification, or additional detailed information concerning the work. The Contractor shall ask for the clarification (Request for Information) immediately upon discovery but no less than 14 calendar days prior to the start date of the activities related to the clarification, based on the latest updated version of the accepted Progress Schedule. County, whose decision shall be final and conclusive, shall resolve such questions and issue instructions to Contractor. Should Contractor proceed with work affected before receipt of instructions from County, Contractor shall remove and replace or adjust work which is not in accordance with the instructions from County and shall be

responsible for resultant damage, defect or added cost. In event of failure to agree as to scope of Contract requirements, Contractor shall follow the procedure set forth in the DISPUTES article.

- b. The Contractor shall not be entitled to any compensation for delays, disruptions, inefficiencies or additional administrative effort caused by the Contractor's untimely review of the Contract Documents for potential conflicts, omissions, discrepancies or ambiguities.
- c. County may charge back to the Contractor, time and expense associated with RFI's, as may be reasonably determined by the County to be unnecessary.

4.3.2 ADDITIONAL DETAILED INSTRUCTIONS

- a. The County may furnish additional detailed written instructions on any Request for Information to further explain the Work. If in the opinion of Contractor, the additional detailed instructions constitute work in excess of the scope of the Contract, he must submit written notice thereof immediately to the County, but no later than seven (7) calendar days following receipt of such instruction(s), and in any event prior to commencement of work thereon. The Contractor shall not be entitled to additional compensation due to any additional instructions unless the Contractor shall have given the appropriate written notice. County will then consider such notice and, if in its judgment it is justified, the County instructions will be revised or extra work shall be authorized by Change Order. In the event of a dispute hereunder, attention is directed to the DISPUTES article.

ARTICLE 5 SHOP DRAWINGS AND SUBMITTALS

5.1 SHOP DRAWINGS, PRODUCT DATA, COORDINATION DRAWINGS AND SCHEDULES

- 5.1.1 Shop drawings are drawings submitted to the County by the Contractor showing detail of the proposed fabrication and assembly of structural elements and the installation (i.e., form, fit, and attachment details) of materials or equipment. It includes drawings, diagrams, layouts, schematics, descriptive literature, illustrations, schedules, fabrication, erection and setting drawings, manufacturers' scale drawings, wiring and control diagrams, cuts or entire catalogs, pamphlets, and performance and test data, and similar materials furnished by the Contractor to explain in detail specific portions of the Work required by the Contract. The County may duplicate, use, and disclose in any manner and for any purpose shop drawings delivered under this Contract.
- 5.1.2 The Contractor shall coordinate all shop drawings and review them for accuracy, completeness, and compliance with Contract requirements, and shall indicate its approval thereon as evidence of such coordination and review. Shop drawings submitted to the County without evidence of the Contractor's approval shall be returned for resubmission. The Architect will indicate review for compliance of the shop drawings, and if not in compliance as submitted, shall indicate the reasons therefore. Any work done before such review shall be at the Contractor's risk. Review by the Architect shall not relieve the Contractor from responsibility for any errors or omissions in such drawings, nor from responsibility for complying with the requirements of this Contract, except with respect to variations described and approved in accordance with paragraph 5.1.3.
- 5.1.3 If shop drawings show any variations from the Contract requirements, the Contractor shall describe such variations in writing, separate from the drawings, at the time of submission. If the Architect approves any such variation, no change in time or price will be allowed for Contractor changes. Should the Architect make changes on the shop drawings which affect time and/or cost, the Contractor will immediately notify the County with a Request for Information. If the Contractor fails to issue the Request for Information within seven (7) calendar days from receipt of the returned shop drawing, the Contractor shall have waived his right to any

potential Change Order.

- 5.1.4** The Contractor shall submit shop drawings, coordination drawings, and schedules for review as required by the Contract Documents. The Contractor will provide a submittal schedule listing all shop drawings and submittals, the submission dates by the Contractor, and return dates from the Architect. This schedule will be provided fourteen (14) calendar days after the Notice to Proceed.
- 5.1.5** Shop drawings and schedules, other than catalogs, pamphlets, and similar printed material, shall be submitted with one reproducible plus one copy.
- 5.1.6** Each shop drawing or coordination drawing shall have a blank area 4 by 4 inches located adjacent to the title block. The title block shall display the following:
- 1) Number and title of drawing
 - 2) Date of drawing or revision
 - 3) Name of project building or facility
 - 4) Name of Contractor and (if appropriate) name of subcontractor submitting drawings
 - 5) Clear identity of contents and location on the work
 - 6) Project title and project number
 - 7) Submittal number
- 5.1.7** Unless otherwise provided in this Contract or otherwise directed by County, shop drawings, coordination drawings, and schedules shall be submitted to the Architect with a letter, sufficiently in advance of construction requirements to permit no less than twenty (21) calendar days for checking and appropriate action.

5.2 SAMPLES

- 5.2.1** After the award of the Contract, the Contractor shall deliver samples required by the specifications to the County for approval. The Contractor shall prepay any shipping charges. Any materials or equipment for which samples are required shall not be used in the Work until reviewed by County.
- 5.2.2** Each sample shall have a label indicating:
- 1) Name of project building or facility, project title, and project number.
 - 2) Name of Contractor and, if appropriate, name of subcontractor.
 - 3) Identification of material or equipment with specification requirement.
 - 4) Place of origin.
 - 5) Name of manufacturer and brand (if any).
 - 6) Identify by specification section.
- 5.2.3** Samples of finished materials shall have additional markings that will identify them in reference to the finish schedules.
- 5.2.4** The Contractor shall mail a letter in triplicate under separate cover submitting each shipment of samples and containing the information required in paragraph 5.2.2. He shall enclose a copy of this letter with the shipment and send a copy to the County representative on the project. Approval of a sample shall be only for the characteristics or use named in such review and shall not be construed to change or modify any Contract requirement. Substitutions will not be permitted unless they are approved under paragraph 5.3.
- 5.2.5** Approved samples not destroyed in testing will be sent to the County. Approved samples of hardware in good condition will be marked for identification and may be used in the Work. Materials and equipment

incorporated in the Work shall match the approved samples. Other samples not destroyed in testing or not approved will be returned to the Contractor at his expense if so requested at time of submission.

- 5.2.6 Failure of any material to pass the specified tests will be sufficient cause for refusal to consider any further samples of the same brand or make of that material or equipment under this Contract.
- 5.2.7 Samples of various materials or equipment delivered on the site or in place, may be taken by the County for testing. Samples failing to meet Contract requirements will automatically void previous approvals of the items tested. The Contractor shall replace such materials or equipment found not to have met Contract requirements, or there shall be a proper adjustment of the Contract price as determined by the County.
- 5.2.8 Unless otherwise specified, when tests are required, only one test of each sample proposed for use will be made at the expense of the County. Samples which do not meet specification requirements will be rejected. Requests for testing of additional samples by Contractor may be made by the County at the expense of the Contractor.

5.3 SUBSTITUTIONS

- 5.3.1 Wherever the name, or brand, or manufacturer of an article is specified in the Contract Documents, it is used as a measure of quality and utility or a standard. Except in those instances where the product is designated to match others presently in use, specifications calling for a designated material, product, thing or service by specific brand or trade name shall be deemed to be followed by the words "or equal" so that bidders may propose any equal material, product, thing or service in their bid. If the Contractor desires to use any other brand or manufacturer of equal quality and utility to that specified, he shall list definite particulars of that which he considers equivalent to the specified item in his bid. The Contractor shall have **ten (10) days prior to bidding** ~~thirty-five (35) days after the award of the Contract~~ for submission of data substantiating substitution of "equal" items. The County will then determine whether or not the proposed name brand or article is equal in quality and utility to that specified in the Contract Documents, and its written decision shall be final.
- 5.3.2 No proposal will be considered unless accompanied by complete information and descriptive data necessary to determine the equality of the offered materials, articles, or equipment. Samples shall be provided when requested by the County.
- 5.3.3 The burden of proof as to the comparative quality or suitability of the offered materials, articles, or equipment shall be upon the Contractor. The County shall be the sole judge as to such matters. In the event that the County rejects the use of such alternative materials, articles, or equipment, then one of the particular products designated by brand name in the specifications shall be furnished.
- 5.3.4 The County will examine Contractor's submittals with reasonable promptness. Return of the submittals to the Contractor shall not relieve the Contractor from responsibility for deviations and alternatives from the Contract Documents nor shall it relieve him from responsibility for errors in the submittals. A failure by the Contractor to identify, in his letter of transmittal, material deviations from the Contract Documents shall void the submittal and any action taken thereon by the County. When specifically requested by the County, the Contractor shall resubmit such shop drawing(s), descriptive data, and samples as may be required.
- 5.3.5 If any mechanical, electrical, structural, or design revisions are required for the proper installation and fit of alternative materials, articles, or equipment, or because of deviations from the Contract Documents, such changes shall not be made without the consent of the County's authorized representative, and shall be made without additional cost to the County, such costs, including the fees of the Architect, to be borne by the Contractor.

ARTICLE 6 SCHEDULES

6.1 CONSTRUCTION SCHEDULE

- 6.1.1** The Contractor shall prepare and submit to the County a practicable schedule showing the order in which the Contractor proposes to perform the work, and the dates on which the Contractor contemplates starting and completing the salient features of the work (including acquiring materials and equipment). The schedule shall be in the form of a CPM (critical path method) schedule, of suitable scale to indicate appropriately the percentage of work scheduled for completion by any given date during the period. The scheduled completion date shall be the same as the contractual completion date, for the initial schedule and subsequent updates. Any proposed early completion date shall show the difference between that date and the contract completion date as Float, which shall belong to both the County and Contractor.
- 6.1.2** If, in the opinion of the County, the Contractor falls behind the approved schedule, the Contractor shall take steps necessary to improve its progress, without additional cost to the County. The Contractor shall submit any supplementary schedule or schedules in CPM form as the County deems necessary to demonstrate how the approved rate of progress will be regained.
- 6.1.3** All schedule updates must accurately reflect the as-built schedule. There shall be no change to the Critical Path without the County's written consent.

ARTICLE 7 TIME, LIQUIDATED DAMAGES AND EXTENSIONS

7.1 TIME OF WORK

The Contractor shall commence work on this project immediately upon receipt of the written Notice to Proceed and shall perform the work diligently to completion within the number of calendar days specified in the Contract. Neither site access nor physical work shall be commenced before the Contract is fully executed, and bonds, insurance and the schedule are submitted as required by the Contract Documents. No work shall be done on Saturday, Sunday and holidays and no work shall be performed outside of normal working hours without the prior written consent of the County, unless required by these Specifications. See: Working Hours.

7.2 LIQUIDATED DAMAGES

If the Work is not completed within the time required, damage will be sustained by the County. It is and will be impracticable and extremely difficult to ascertain and determine actual damage which County will sustain by reason of such delay; and it is therefore agreed that Contractor will pay to County the sum of \$insert amount per day for each and every day's delay in finishing the Work beyond the time prescribed. If the Contractor fails to pay such liquidated damages, the County may deduct the amount thereof from any money due or that may become due the Contractor under the Contract.

7.3 UNAVOIDABLE DELAYS

7.3.1 TIME EXTENSION

- a. The Contractor will be granted an extension of time for completion of the Work beyond that named in the Contract Documents, for delays which may result through causes beyond the

control of the Contractor and which he could not have avoided by the exercise of care, prudence, foresight and diligence. The appropriate extension of time shall constitute full compensation. Costs associated with extended overhead will not be considered.

- b. If the Contractor is allowed extensions of time in which to complete the Work equal to the sum of all unavoidable delays, plus any adjustments of contract time due to contract change orders, during such extension of time liquidated damages shall not be charged to the Contractor.
- c. Unavoidable delays within the meaning of this section shall be those caused by Acts of God or of the public enemy, fire, epidemics, or strike. There will be no liquidated damages for delays as described within this paragraph.
- d. Delays in the performance of parts of the work which may in themselves be unavoidable, but do not necessarily prevent or delay the performance of critical activity(s) while the activity(s) is on the Critical Path, will not be considered as unavoidable delays within the meaning of the contract and shall not be the basis of a claim for delay.

7.3.2 WEATHER

Inclement weather shall not be a prima facie reason for granting a time extension. The Contractor shall make every effort to continue work under prevailing conditions. However, if the inclement weather prevents the Contractor from beginning at the usual starting time, or prevents the Contractor from proceeding with seventy-five percent (75%) of the normal labor and equipment force towards completion of the day's current Critical Path activities (shown on the most current, and accepted schedule update) for a period of at least five (5) hours, and the crew is dismissed as a result thereof, the County will designate such time as unavoidable delay and grant a one (1) calendar day, non-compensable, time extension.

7.3.3 NOTICE OF DELAYS

- a. Whenever the Contractor foresees any delay in the performance of a Critical Path work activity, and in any event immediately upon the occurrence of any delay which he regards as an unavoidable delay, the Contractor shall notify the County in writing of such delay and its cause, in order that the County may take immediate steps to prevent, if possible, the occurrence or continuance of the delay, and may determine whether the delay is to be considered avoidable or unavoidable, how long it continues, and to what extent the prosecution and completion of the work are to be delayed thereby.
- b. After the completion of any part or the whole of the Work, the County, in calculating the amount due the Contractor, will assume that any and all delays which have occurred have been avoidable delays, except such delays as shall have been called to the attention of the County at the time of their occurrence and found by the County to have been unavoidable as substantiated by a change order. The Contractor shall make no claims that any delay not called to the attention of the County at the time of its occurrence has been an unavoidable delay.

7.4 REQUEST FOR TIME EXTENSION

- 7.4.1** In the event the Contractor requests an extension of contract time for unavoidable delay, justification shall be

submitted no later than seven (7) calendar days after the initial occurrence of any such delay. When requesting time for proposed change orders, the request(s) must be submitted with the proposed change order with full justification. If the Contractor fails to submit justification he shall waive his right to a time extension at a later date. Justification must be based on the currently accepted contract schedule as updated at the time of occurrence of delay or execution of work related to any change(s) in the scope of work. The justification must include a schedule, including, but not limited to, the following information:

- a. The duration to perform the activity relating to the change(s) in the work and the resources (manpower, equipment, material, etc.) required to perform these activities within the stated duration.
- b. Logical activity ties to the contract schedule for the proposed changes and/or delay showing the activity/activities in the schedule whose start or completion dates are affected by the change and/or delay.

7.4.2 The County, after receipt of such justification and supporting evidence, shall make its finding of fact. The County's decision shall be final and conclusive and the County will advise the Contractor in writing of such decision. If the County finds that the Contractor is entitled to any extension of Contract time, the County's determination as to the total number of days of extension shall be based upon the latest updated version of the approved contract schedule.

7.4.3 In the event the Contractor disagrees with the County's decision, the Contractor shall be required to submit a claim pursuant to the DISPUTE article.

ARTICLE 8 PERFORMANCE

8.1 SUPERVISION & CONSTRUCTION PROCEDURES

8.1.1 The Contractor shall supervise and direct the work. The Contractor shall be solely responsible for all construction means, methods, techniques, sequences, procedures, project safety, and shall coordinate all portions of the Work under the Contract, including the relations of the various trades to the progress of the Work, in accordance with the provisions of the Contract Documents.

8.1.2 The Contractor shall be responsible to the County for the acts and omissions of the Contractor's employees, subcontractors, and their agents and employees, and any other persons performing any of the work under a contract with the Contractor.

8.1.3 The Contractor is an independent contractor and nothing in the Contract Documents shall be interpreted to make the Contractor an agent of the County.

8.2 SUPERVISION

8.2.1 Within seven (7) days after the Notice to Proceed, the Contractor shall provide to the County an organization chart outlining key job personnel. The Contractor will also provide a Letter of Authority or Corporate Resolution for the individual(s) authorized to sign documents on its behalf, i.e., payment requests, change orders, inspection reports, etc.

8.2.2 The Contractor shall employ, during the progress of the Work, a competent Project Superintendent and any necessary assistants, as approved by the County. The Project Superintendent shall not be changed except with the consent of the Authorized Representative of County, unless the Superintendent proves to be unsatisfactory

to the Contractor or ceases to be in his employ. The County shall be notified immediately of any new Superintendent appointed to the Work and the Contractor shall submit qualifications for approval. The Superintendent shall represent the Contractor and all directions given to him shall be as binding as if given to the Contractor.

8.2.3 The County shall be supplied at all times with the name and telephone number of a person in charge of or responsible for the Work, who can be reached for emergency work twenty-four (24) hours a day, seven (7) days a week.

8.3 CONDUCT OF WORK

8.3.1 In connecting one kind of work with another, marring or damaging same will not be permitted and, in the event such occurs, shall be corrected by the Contractor at its cost prior to acceptance by the County. Should improper work of any trade be covered by another which results in damage or defects, the whole work affected shall be made good by the Contractor without expense to County.

8.4 PROTECTION OF WORK & PROPERTY

8.4.1 The Contractor shall continuously maintain adequate protection of the Work from damage and shall protect the County's property from injury or loss in connection with this Contract. He shall make good any such damage, injury, or loss, except what may be directly due to errors in the Contract Documents or caused by agents or employees of the County. He shall adequately protect adjacent property as provided by law and the Contract Documents.

8.4.2 The Contractor shall preserve and protect all structures, equipment, and vegetation (such as trees, shrubs, and grass) on or adjacent to the Work site which are not to be removed and which do not unreasonably interfere with the work required under this Contract.

8.4.3 The Contractor shall protect from damage all existing improvements and utilities at or near the Work site and on adjacent property of a third party, the locations of which are made known to or should be known by the Contractor. The Contractor shall repair any damage to those facilities, including those that are the property of a third party, resulting from failure to comply with the requirements of this Contract or failure to exercise reasonable care in performing the Work. If the Contractor fails to repair the damage promptly, the County may have the necessary work performed and charge the cost to the Contractor.

8.5 CONTRACTOR'S RESPONSIBILITY FOR WORK

8.5.1 Until Acceptance of the Work by the County, Contractor shall have the charge and care thereof and shall bear risk of injury or damage to any part of the Work by action of the elements. If a separate Contractor sues the Owner, on account of any loss so sustained, the County shall notify the Contractor, who shall indemnify and hold harmless the County against any expenses, or judgment arising therefrom.

8.5.2 Contractor, at its cost, shall rebuild, repair, restore and make good all damages from the elements to any portion of the Work occasioned by such causes before its Acceptance.

8.5.3 No advertising of any description will be permitted in or about the Work, except by order of the County.

8.5.4 Contractor shall not create or permit the continued existence of any nuisance in or about the Work.

8.6 UTILITIES

- 8.6.1 Unless otherwise provided for under separate sections herein, Contractor will arrange all water, gas, and electricity required for construction purposes until acceptance of the Work. Contractor shall pay for such services unless otherwise specifically noted.
- 8.6.2 Utilities shall not be interrupted except with the approval of the County. A two (2) work day written notice is required prior to any and all interruptions. Interruptions shall be scheduled so as to minimize duration and disruption to existing operations.
- 8.6.3
- a. The Contractor shall send notices, make all necessary arrangements, and perform all other services required in the care and maintenance of all public utilities.
 - b. Enclosing or boxing in, for protection of any public utility equipment, shall be done by the Contractor. Upon completion of the Work, the Contractor shall remove all enclosures, and leave in a finished condition.
 - c. All connections to public utilities shall be made and maintained in a manner so as not to interfere with the continuing use of same by the County during the entire progress of the Work.

8.7 WORKING HOURS

- 8.7.1 All work shall be performed on a calendar day basis during the customary working hours of the trades involved unless otherwise specified in this Contract. Work performed by the Contractor of his own volition outside such established working hours shall be at no additional expense to the County and without County approval.
- 8.7.2 It is expressly stipulated that no laborer, workman, or mechanic employed at any time by the Contractor or by any subcontractor(s) under this Contract upon the Work or any part thereof, shall be required or permitted to work thereon more than eight (8) hours during any one calendar day and forty (40) hours during any one calendar week, except, as provided by Section 1815 of the California Labor Code. It is further expressly stipulated that for each and every violation of Sections 1811-1815, inclusive, of the California Labor Code, all the provisions of which are deemed to be incorporated herein, said contractor shall forfeit, as a penalty to County, twenty-five dollars (\$25.00) for each laborer, workman, or mechanic employed in the execution of this Contract by contractor for each calendar day during which said laborer, workman, or mechanic is required or permitted to work more than eight hours in any one calendar day and forty hours in any one calendar week in violation of the provisions of said Sections of the Labor Code.
- 8.7.3 The Contractor, and each subcontractor, shall keep an accurate record showing the names of and actual hours worked each calendar day and each calendar week by all laborers, workmen, and mechanics employed by them in connection with the Work contemplated by this Contract, which record shall be open at all reasonable hours to the inspection of the County or its officers or agents and to the Division of Labor Standards Enforcement of the Department of Industrial Relations.
- 8.7.4 No construction work shall be done on Saturdays, Sundays or County holidays and no work shall be performed outside of normal working hours without the prior written consent of the County. In any event, all work shall be subject to approval of the County. Prior to start of such work, the Contractor shall arrange with the County for the continuous or periodic inspection of the Work and testing of materials, when necessary. If requests are made by the Contractor for permission to work overtime, nights, Saturdays, Sundays or County holidays, and

such requests are granted, the Contractor shall bear all extra expense to the County for inspection and other incidental expenses caused by such overtime work. If contractors are requested, in the interest of the County, to work overtime by the County, or if overtime work is specifically required by these specifications, all extra expense of inspection will be paid by the County.

8.8 MATERIAL & EQUIPMENT

8.8.1 Materials, equipment, and articles incorporated into the Work shall be new and of equal quality to the types and grades specified. When not particularly specified, the Contractor shall submit for approval satisfactory evidence as to the kind and quality of material. See SUBSTITUTION provision 5.3 concerning "or equal" requirements and procedure for submitting alternative material, articles, or equipment.

8.8.2 All materials shall be delivered so as to insure a speedy and uninterrupted progress of the Work. All materials shall be stored so as to cause no obstruction and so as to prevent overloading of any portion of the structure on the Work site, and the Contractor shall be entirely responsible for damage or loss by weather, theft, vandalism, or other cause.

8.8.3 Materials shall be stored to assure the preservation of their quality and fitness for the Work. Stored materials shall be reasonably accessible for inspection. When considered necessary by the County, stored materials shall be placed on wooden platforms or on other hard, clean surfaces and not directly on the ground, and shall be placed under cover when so directed.

8.9 LAYOUT OF WORK

8.9.1 The Contractor shall lay out its work from established base lines and bench marks indicated on the drawings, and shall be responsible for all measurements in connection with the layout. The Contractor shall furnish, at its own expense, all stakes, templates, platforms, equipment, tools, material, and labor required to lay out any part of the Work. The Contractor shall be responsible for executing the Work to the lines and grades that may be established or indicated in the Contract Documents. The Contractor shall also be responsible for maintaining and preserving all stakes and other marks established by the County until authorized to remove them. If such marks are destroyed by the Contractor before their removal is authorized, the County may replace them and deduct the expense of the replacement from any amounts due or to become due to the Contractor.

8.10 USE OF PREMISES

8.10.1 The Contractor shall maintain the entire premises under his control in an orderly condition. He shall store his apparatus, materials, supplies and equipment in such a manner as will not interfere with the progress of his work or the work of other contractors.

8.11 OPERATIONS & STORAGE

8.11.1 The Contractor shall confine all operations (including storage of materials) on County premises to areas authorized or approved by the County.

8.11.2 Temporary buildings (e.g., storage sheds, shops, offices) and utilities may be erected by the Contractor only with the approval of the County and shall be built with labor and materials furnished by the Contractor without expense to the County. The temporary buildings and utilities shall remain the property of the Contractor and shall be removed by the Contractor at his expense upon completion of the work.

8.11.3 The Contractor shall, under regulations prescribed by the authority having jurisdiction, use only established

roadways, or use temporary roadways constructed by the Contractor when and as authorized by the authority having jurisdiction. When materials are transported in performance of the Work, vehicles shall not be loaded beyond the loading capacity recommended by the manufacturer of the vehicle or prescribed by any Federal, State, or County regulation. When it is necessary to cross curbs or sidewalks, the Contractor shall protect them from damage. The Contractor shall repair, or pay for the repair, of any damaged curbs, sidewalks, or roads.

8.12 HEAT/POWER/LIGHT

8.12.1 Unless otherwise specified or already provided by the County, the Contractor shall:

- a. Provide heat, as necessary to protect all work, materials, and equipment against injury from dampness and cold;
- b. Provide heat as necessary in the area where work is to be done to provide the minimum temperature recommended by the supplier or manufacturer of the material;
- c. Provide electric power and light as required for performance of the Work.

8.13 CLEANING UP

8.13.1 The Contractor shall at all times keep the work area, including storage areas, free from accumulations of waste materials. Before completing the Work, the Contractor shall remove from the work and premises any weeds, rubbish, tools, scaffolding, equipment, and materials that are not the property of the County. Upon completing the Work, the Contractor shall leave the work area in a clean, neat, and orderly condition satisfactory to the County.

ARTICLE 9 SAFETY & HEALTH

9.1 ACCIDENT PREVENTION

9.1.1 In performing this Contract, the Contractor shall provide for protecting the lives and health of employees and other persons; preventing damage to property, materials, supplies, and equipment; and avoiding work interruptions. For these purposes, the Contractor shall:

- a. Provide a copy of its safety program;
- b. Provide appropriate safety barricades, signs, and signal lights;
- c. Comply with standards issued by the U.S. Government, State, County and City, and other governing agencies having jurisdiction;
- d. Ensure that any additional measures the County determines to be reasonably necessary for this purpose are taken.

9.1.2 The Contractor shall maintain an accurate record of exposure data on all accidents incident to work performed under this Contract resulting in death, traumatic injury, occupational disease, or damage to property, materials, supplies, or equipment. The Contractor shall report this data in the manner prescribed by the County.

9.1.3 Before beginning excavation for a trench 5 feet or more in depth, Contractor shall provide evidence of having obtained a permit from the authority having jurisdiction.

9.1.4 Nothing herein shall be deemed to allow use of shoring, sloping, or protective systems less effective than those required by the Construction Safety Orders of the California Division of Industrial Safety.

9.2 SANITARY FACILITIES

9.2.1 Contractor shall supply and maintain at its expense such toilets and other sanitary facilities including those which are accessible by the disabled as per ADA and Title 24 requirements necessary for use by visitors and workers employed at the job site. Such facilities shall be approved by the County.

9.3 RESPONSIBILITY FOR COMPLIANCE WITH CAL-OSHA

9.3.1 All work, materials, work safety procedures and equipment shall be in full accordance with the latest Cal-OSHA rules and regulations.

9.3.2 Contractor warrants that he and each of his subcontractors shall, in performance of this Contract, comply with each and every compliance order issued pursuant to Cal-OSHA. The Contractor assumes full and total responsibility for compliance with Cal-OSHA standards by his subcontractors as well as himself. The cost of complying with any order and/or payment of any penalty assessed pursuant to Cal-OSHA shall be borne by the Contractor. Nothing contained therein shall be deemed to prevent the Contractor and his subcontractors from otherwise allocating between themselves responsibility for compliance with Cal-OSHA requirements; provided, however, that the Contractor shall not thereby, in any manner whatsoever, be relieved of his responsibility to the County as herein set forth.

9.4 TOXIC AND HAZARDOUS MATERIALS AND WASTE

9.4.1 ASBESTOS

Operations which may cause release of asbestos fibers into the atmosphere shall meet the requirements of Title 8 CCR General Industrial Safety Orders, Section 5208 and California law. Some operations which may cause such concentrations include sanding, grinding, abrasive blasting, sawing, drilling, shoveling, or otherwise handling materials containing asbestos so that dust will be raised.

9.4.2 TOXIC MATERIALS

Operations which release toxic materials into the atmosphere shall meet the requirements of Title 8 CCR, General Industrial Safety Orders. Some operations which may release such materials include use of adhesives, sealants, paint, and other coatings.

9.4.3 LEAD-BASED PAINT

Lead-based paint is prohibited. Lead-based paint is defined as:

- a. Any paint containing more than five-tenths of one percentum lead by weight (calculated as lead metal in the total non-volatile content of the paint) or the equivalent measure of lead in the dried film of paint applied or both; or
- b. For paint manufactured after June 22, 1977, any paint containing more than six one-hundredths of one percentum lead by weight (calculated as lead metal) in the total content of the paint or the equivalent measure of lead in the dried film or paint already applied.

9.4.4 HAULING AND DISPOSAL

All hauling and disposal shall meet requirements of Title 22 CCR, Division 4. Chapter 30, "Minimum Standards for Management of Hazardous and Extremely Hazardous Wastes."

9.4.5 ASBESTOS PROHIBITED

No products or materials containing asbestos shall be incorporated into the Work without the prior written approval of the County.

ARTICLE 10 COUNTY-FURNISHED PROPERTY

10.1 COUNTY-FURNISHED PROPERTY

10.1.1 The County may furnish to the Contractor property as identified in the specification(s) to be incorporated or installed into the Work or used in performing the Contract. The listed property will be furnished f.o.b. railroad cars at the place specified in the Contract or f.o.b. truck at the project site. The Contractor is required to accept delivery. When the property is delivered, the Contractor shall verify its quantity and condition and acknowledge receipt in writing to the County within twenty-four (24) hours of delivery, also specifying any damage to or shortage of the property as received. All such property shall be installed or incorporated into the Work at the expense of the Contractor, unless otherwise indicated in this Contract.

10.1.2 Each item of property to be furnished under this clause shall be identified by the Contractor in a schedule by quantity, item, and description. Schedule form will be provided by the County.

10.1.3 The Contractor shall be held responsible for all material delivered to him and deductions will be made from any moneys due him to make good any shortages and deficiencies, from any cause whatsoever, which may occur after such delivery.

10.1.4 The Contractor shall set up accounting records and establish an inspection procedure as approved by the County.

ARTICLE 11 BENEFICIAL OCCUPANCY

11.1 BENEFICIAL OCCUPANCY

11.1.1 The County shall have the right to take possession of or use any completed or partially completed portion of the Work. The County's possession or use shall not be deemed an acceptance of any Work under the Contract. The Contractor will continue to pay for any portion of the utilities which he is using.

11.1.2 While the County has such possession or use, the Contractor shall be relieved of the responsibility for the loss of or damage to that portion of the Work resulting from the County's possession or use. If Contractor believes the partial possession or use by the County will delay the progress of the Work or will cause additional expense to the Contractor, Contractor shall immediately submit a written request for an equitable adjustment in the Contract price or the time of completion. County will then consider such request and, if in its judgment it is justified, the County will modify the contract in writing accordingly. In the event the Contractor disagrees with the County's decision, the Contractor shall be required to submit a claim pursuant to the DISPUTE article.

ARTICLE 12 INSPECTION AND TESTING

12.1 INSPECTION AND TESTING

- 12.1.1** The Contractor shall maintain an adequate inspection system and perform such inspections as will ensure that the work called for by this Contract conforms to contract requirements. The Contractor shall maintain complete inspection records and make them available to the County. The County shall at all times have access to the Work, and the Contractor shall provide proper facilities for such access and for inspection.
- 12.1.2** County inspections and tests are for the sole benefit of the County and do not:
- a. Relieve the Contractor of responsibility for providing adequate quality control measures;
 - b. Relieve the Contractor of responsibility for damage to or loss of the material before Acceptance;
 - c. Constitute or imply Acceptance; or
 - d. Affect the continuing rights of the County after Acceptance regarding latent defects, gross mistakes, fraud or the County's rights under any warranty or guarantee.
- 12.1.3** The presence or absence of a County inspector does not relieve the Contractor from any Contract requirement, nor is the inspector authorized to change any term or condition of the specifications without the County's written authorization.
- 12.1.4** The Contractor shall promptly furnish, without additional charge, all facilities, labor, and material reasonably needed for performing such safe and convenient inspections and tests as may be required by the County. The County may charge to the Contractor any additional cost of inspection or test when work is not ready at the time specified by the Contractor for inspection or test, or when prior rejection makes reinspection or retest necessary. Special, full size, and performance tests shall be performed as described in the Contract.
- 12.1.5** The Contractor shall, without charge, replace or correct work found by the County not to conform to contract requirements, unless in the public interest the County consents to accept the work with an appropriate adjustment in Contract price. The Contractor shall promptly segregate and remove rejected material from the premises.
- 12.1.6** If, before Acceptance of the Work, the County decides to examine already completed work by removing it or tearing it out, the Contractor, on request, shall promptly furnish all necessary facilities, labor, and material. If the work is found to be defective or nonconforming in any material respect due to the fault of the Contractor or its subcontractors, the Contractor shall defray the expenses of the examination and of satisfactory reconstruction. However, if the work is found to meet Contract requirements, the County shall issue a Change Order for such removal and reinstallation.
- 12.1.7** The Contractor shall at all times maintain proper facilities and provide safe access for inspection by the County to all parts of the work, and to the shops wherein the work is in preparation. Where the specifications require work to be specially tested or approved, it shall not be tested or covered up without timely notice to the County of its readiness for inspection and without the approval or consent of County. Should any such work be covered up without such notice, approval, or consent, it must, if required by County, be uncovered for examination at the Contractor's expense.

- 12.1.8** The Contractor shall notify the County at least one (1) work day in advance of the time scheduled for the inspection. Should the Contractor fail to notify the County and proceed with work requiring inspection, all such work is rejected, and no further work shall be done on that portion of the project until the rejected work is accepted by the County. Should the Contractor request acceptance of such rejected work the County shall, at the Contractor's expense, secure the services of private material testing laboratories, consulting engineers or licensed land surveyors, who shall certify that said work does in fact conform to the requirements of the Contract Documents. The work previously rejected shall be accepted by the County after receipt of such certification if the County approves of such certification.
- 12.1.9** If the Contractor does not promptly replace or correct rejected work, the County may (1) by contract or otherwise, replace or correct the work and charge the cost to the Contractor or (2) terminate for default the Contractor's right to proceed.
- 12.1.10** Construction review of the Contractor's performance by the County is not intended to include the review of the adequacy of the Contractor's safety measures, in, on, or near the construction site.
- 12.1.11** The County will pay for initial testing services specified to be performed by the County. When initial tests indicate non-compliance with the Contract Documents, subsequent retesting occasioned by the non-compliance shall be performed by the same testing agency, and costs thereof will be deducted by the County from the Contract sum.

12.2 INSPECTION BY OTHER JURISDICTIONS

Whenever any part of the Work to be performed is under the jurisdiction or control of another public entity, including but not limited to: The United States Government, State of California, or City, such work shall be subject to inspection by the officials of such entities and it must pass inspection, in addition to County inspection, and such other inspections as may otherwise be provided for in the Contract Documents.

12.3 FINAL INSPECTION AND TESTS

The Contractor shall give the County at least ten (10) calendar days advance written notice of the date the Work will be fully completed and ready for final inspection and tests. Final inspection and tests will be started within ten (10) calendar days from the date specified in the aforementioned notice unless the County determines that the Work is not ready for final inspection and so informs the Contractor.

ARTICLE 13 ACCEPTANCE

13.1 ACCEPTANCE OF THE WORK

- 13.1.1** After the final inspection by County and all the contract documentation has been received, it will be recommended to the County Board of Supervisors to accept the Work and file a Notice of Completion. Upon approval of the Notice of Completion, a copy will be sent to the Contractor. (See final payment clause.) Upon Acceptance of the Work, Contractor will be relieved of the duty of maintaining and protecting the Work. Neither determination by the County that the Work is complete, nor Acceptance thereof, shall operate as a bar to County's claim against Contractor pursuant to Contractor's warranty and guarantees.
- 13.1.2** Partial payments shall not be construed as acceptance of any part of the Work.
- 13.1.3** In judging the Work, no allowance for deviations from the drawings and specifications will be made, unless already approved in writing at the time and in the manner as called for herein.

- 13.1.4 County shall be given adequate opportunity to make any necessary arrangements for fire insurance and extended coverage.
- 13.1.5 The Acceptance of the Work will not be recommended until all requirements of the Contract Documents are complete and approved by the County. This shall include, but is not limited to, all construction, guarantee forms, parts lists, schedules, tests, operating instructions, as-built drawings, and all other documentation identified by the Contract Documents.

ARTICLE 14 WARRANTY AND GUARANTEES

14.1 CONTRACTOR'S WARRANTY AND GUARANTEE

- 14.1.1 Contractor warrants that all materials and equipment furnished under this Contract shall be new unless otherwise specified, and that all Work performed under this Contract conforms to the Contract requirements and is free of any defect whether performed by the Contractor or any subcontractor or supplier.
- 14.1.2 This warranty shall continue for a period of one (1) year from the date of filing of Notice of Completion on the Work. The Performance Bond shall remain in force during the warranty period.
- 14.1.3 The Contractor shall remedy at the Contractor's expense any damage to County-owned or controlled real or personal property, when that damage is the result of:
- a. The Contractor's failure to conform to Contract requirements or
 - b. Any defect of equipment, material, workmanship, or design furnished by the Contractor.
- 14.1.4 The Contractor shall restore any work damaged in fulfilling the terms and conditions of this Article. The Contractor's warranty with respect to work repaired or replaced will run for one (1) year from the date of repair or replacement.
- 14.1.5 The County shall notify the Contractor, in writing, within a reasonable time after the discovery of any failure, defect, or damage. The Contractor shall within ten (10) calendar days after being notified in writing by the County of any work not in accordance with the requirements of the Contract or any defects in the Work, commence, and perform with due diligence, all work necessary to fulfill the terms of this Article. If the Contractor fails to remedy any defect, or damage within fourteen (14) calendar days after receipt of notice, the County shall have the right to replace, repair, or otherwise remedy the defect, or damage at the Contractor's expense. Payment due to the Architect from the County for extra architectural services required in the enforcement of Contractor's guarantee after Acceptance of the Work shall be paid to the County by the Contractor.
- 14.1.6 In the event of any emergency constituting an immediate hazard to health or safety of County employees, property, or licensees, when caused by work of the Contractor that is not in accordance with the Contract requirements, the County may undertake at Contractor's expense and without prior notice, all work necessary to correct such hazardous condition(s).
- 14.1.7 With respect to all warranties, express or implied, from subcontractors, manufacturers, or suppliers for work performed and materials furnished under this Contract, the Contractor shall:
- a. Obtain all warranties that would be given in normal commercial practice;

- b. Require all warranties to be executed, in writing, for the benefit of the County, unless directed otherwise by the County; and
- c. Enforce all warranties for the benefit of the County, unless otherwise directed by the County.

14.1.8 This warranty shall not limit the County's rights under the Inspection and Acceptance section(s) of this Contract with respect to latent defects, gross mistakes, or fraud.

ARTICLE 15 ENVIRONMENTAL PROTECTION

15.1 DUST CONTROL

15.1.1 The Contractor shall provide any and all dust control required.

15.1.2 Whenever the Contractor is negligent in providing dust control, the County shall order the Contractor to provide such dust control. If the Contractor does not comply promptly with such order, the County shall have the authority to provide such dust control and charge the Contractor therefore by deducting the cost from progress payments to the Contractor as such costs are incurred by the County. The County shall not be held responsible for schedule delays due to actions taken by County to mitigate the failure of the Contractor in providing dust control.

15.2 EXCESSIVE NOISE

15.2.1 The Contractor shall use only such equipment on the Work and in such state of repair, that the emission of sound therefrom is within the noise tolerance level of that equipment as established by CAL-OSHA.

15.2.2 Should the County determine that the muffling device on any equipment used on the Work is ineffective or defective so that the noise tolerance of such equipment is exceeded, such equipment shall not, after such determination by the County, be used on the Work until its muffling device is repaired or replaced so as to bring the noise tolerance level of such equipment within such standards.

15.3 POLLUTION CONTROL, CLEANING

15.3.1 The Contractor shall not, in connection with the Work, discharge any smoke, dust, or other contaminants into the atmosphere which are in violation of South Coast Air Quality Management District standards or discharge any fluids or materials into any lake, river, stream, or channel as will violate regulations of State of California Water Resources Board. The Contractor shall control accumulation of waste materials and rubbish and dispose of waste materials and rubbish off-site at a minimum of weekly intervals. Burning of materials is not permitted.

ARTICLE 16 EMPLOYMENT PRACTICES

16.1 QUALIFICATIONS FOR EMPLOYMENT AND APPRENTICESHIP STANDARDS

16.1.1 In accordance with Section 1735 of the California Labor Code, no person under the age of 16 years and no person currently serving sentence in a penal or correctional institution shall be employed to perform any Work under this Contract. No person whose age or physical condition is such as to make his employment dangerous to his health or safety or to the health or safety of others shall be employed to perform Work under this Contract; provided that this requirement shall not operate against any physically handicapped persons otherwise employable where such persons may be safely assigned to Work which they ably perform.

- 16.1.2** This contract is subject to the provisions of Sections 1777.5 and 1777.6 of the California Labor Code concerning the employment of apprentices by the Contractor or any subcontractor under him. Section 1777.5 as amended, requires the Contractor or subcontractor employing tradesmen in any apprenticeable occupation to apply to the Joint Apprenticeship Committee nearest the site of this project and which administers the apprenticeship program in that trade for a certificate of approval. The certificate will also fix the ratio of apprentices to journeymen that will be used in the performance of the Contract.
- 16.1.3** The Contractor is required to make contributions to funds established for the administration of apprenticeship programs if he employs registered apprentices or journeymen in any apprenticeable trade on such contracts and if other contractors on the public works site are making contributions.
- 16.1.4** All employees engaged in work on the project under this Contract shall have the right to organize and bargain collectively through representatives of their own choosing, and such employees shall be free from interference, restraint, and coercion of employers in the designation of such employees for the purpose of collective bargaining or other mutual aid or protection, and no person seeking employment under this Contract shall be required as a condition of initial or continued employment to join any company, union, or to refrain from joining, organizing, or assisting a labor organization of such person's own choosing. No person in the employment of the County shall be employed by this contractor.

16.2 WAGES & RECORDS

16.2.1 WAGE RATES

- a. Pursuant to Section 1770 and 1773 et seq. of the Labor Code of the State of California, the Director of Industrial Relations has ascertained the general prevailing rate of per diem wages and the rates for overtime and holiday work in the locality in which the work is to be performed for each craft, classification, or type of workman needed to execute the contract which will be awarded to the successful bidder, copies of which are on file and available upon request at the Clerk of the Board, Board of Supervisors, 4080 Lemon St., 14th Floor, Riverside, CA 92501-3655, and shall be posted at the job site.
- b. It shall be mandatory upon the Contractor and upon any subcontractor under him, to pay not less than the said specified rates to all laborers, workmen, and mechanics employed in the execution of the Contract. It is further expressly stipulated that the Contractor shall, as a penalty to County, forfeit twenty-five dollars (\$25.00) for each calendar day, or portion thereof, for each laborer, workman, or mechanic paid less than the stipulated prevailing rates for any work done under this Contract by him or by any subcontractor under him; and Contractor agrees to comply with all provisions of Section 1770 et. seq. of the Labor Code.
- c. In case it becomes necessary for the Contractor or any sub-contractor to employ on the project under this Contract any person in a trade or occupation (except executives, supervisory, administrative, clerical, or other non-manual workers as such) for which no minimum wage rate is herein specified, the Contractor shall immediately notify the County who will promptly thereafter determine the prevailing rate for such additional trade or occupation and shall furnish the Contractor with the minimum rate based thereon. The minimum rate thus furnished shall be applicable as a minimum for such trade or occupation from the time of the initial employment of the person affected and during the continuance of such employment.

- d. The County will not recognize any claim for additional compensation because of the payment by the Contractor of any wage rate in excess of the prevailing wage rate set forth as provided herein. The possibility of wage increases is one of the elements to be considered by the Contractor in determining his bid, and will not under any circumstances be considered as the basis of a claim against the County on the Contract.

16.2.2 WAGE RECORDS

- a. The Contractor and each subcontractor shall keep or cause to be kept an accurate record (certified payroll) showing the names and occupations of all laborers, workers, and mechanics employed by him in connection with the execution of this Contract or any subcontract thereunder. The record shall show the actual per diem wages paid to each of said workers, which records shall be provided to the County, and to the Division of Labor Standards Enforcement upon its request. Copies provided will include one which has the name and social security numbers marked out.

16.3 NOTICE OF LABOR DISPUTES

16.3.1 If the Contractor has knowledge that any actual or potential labor dispute is delaying or threatens to delay the timely performance of this Contract, the Contractor shall immediately give notice, including all relevant information, to the County.

16.3.2 The Contractor agrees to insert the substance of this clause, including this paragraph into any subcontract in which a labor dispute may delay the timely performance of this Contract; except that each subcontract shall provide that in the event its timely performance is delayed or threatened by delay by any actual or potential labor dispute, the subcontractor shall immediately notify the next higher tier subcontractor or the prime Contractor, as the case may be, of all relevant information concerning the dispute.

16.4 NONDISCRIMINATION

16.4.1 EQUAL EMPLOYMENT OPPORTUNITY

- a. Contractor agrees for the duration of this Contract that it will not discriminate against any employee or applicant for employment because of race, color, religion, sex, national origin, age, political affiliation, marital status, or handicap. The Contractor will take affirmative action to insure that employees are treated during employment or training without regard to their race, color, religion, sex, national origin, age, political affiliation, marital status, or handicap. Such action shall include, but not be limited to, the following: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The Contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided setting forth the provisions of this nondiscrimination clause.
- b. The Contractor will in all solicitations or advertisements for employees placed by or on behalf of the Contractor, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, national origin, age, political affiliation, marital status, or handicap.
- c. The Contractor will send to each labor union or other representative of workers with which it

has a collective bargaining agreement or other contract or understanding, a notice advising the workers' representative of the Contractor commitments under this agreement.

- d. The Contractor agrees that it will comply with the provisions of Titles VI and VII of the Civil Rights Act, Revenue Sharing Act Title 31, U.S. Code Section 2716, and California Government Code Section 12990.
- e. The Contractor agrees that it will assist and cooperate with the County, the State of California and the United States Government in obtaining compliance with the equal opportunity clause, rules, regulations, and relevant orders of the State of California and United States Government issued pursuant to the Acts.
- f. In the event of the Contractor's non-compliance with the discrimination clause, the affirmative action plan of this contract, or with any of the said rules, regulations or orders, this Contract may be canceled, terminated, or suspended in whole or in part by the County.

16.4.2 HANDICAPPED NON-DISCRIMINATION

This project is subject to Section 504 of the Rehabilitation Act of 1973 as amended, (29 U.S.C. 794), and the Americans with Disabilities Act of 1990, as amended, and all requirements imposed by the guidelines and interpretations issued thereto. In this regard, the County and all of its contractors and subcontractors will take all reasonable steps to ensure that handicapped individuals have the maximum opportunity for the same level of aid, benefit or service as any other individual.

16.4.3 FAIR EMPLOYMENT AND HOUSING ACT ADDENDUM

In the performance of this Contract, the Contractor will not discriminate against any employee or Applicant for employment because of race, sex, color, religion, ancestry, or national origin. The Contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment, without regard to their race, sex, color, religion, ancestry, or national origin. Such action shall include, but not limited to, the following: employment, upgrading, promotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The Contractor shall post in conspicuous places, available to employees and applicants for employment, notices to be provided by the State or local agency setting forth the provisions of this Fair Employment and Housing Section.

16.4.4 ACCESS TO RECORDS

The Contractor will permit access to his records of employment, employment advertisements, application forms, and other pertinent data and records by the State Fair Employment and Housing Commission, or any other agency of the State of California designated by the awarding authority, for the purposes of investigation to ascertain compliance with the Fair Employment and Housing section of this Contract.

16.4.5 REMEDIES FOR WILLFUL VIOLATION

The State or local agency may determine a willful violation of the Fair Employment and Housing provision to have occurred upon receipt of a final judgment having that effect from a court in an action to which Contractor was a party, or upon receipt of a written notice from the Fair Employment and Housing Commission that it has investigated and determined that the Contractor has violated the Fair Employment and Housing Act and has

issued an order or obtained an injunction under Government Code Sections 12900, et seq.

ARTICLE 17 SUBCONTRACTING

17.1 SUBCONTRACTORS

- 17.1.1** A subcontractor is an individual, firm or corporation having a direct contract with the Contractor or with any other subcontractor for the performance of a part of the Work. In accordance with Section 4104 of the Public Contract Code, each Contractor, in his bid, shall include the name and location of each subcontractor who will perform work or labor, or render services to the Contractor in or about the Work in an amount in excess of one half of 1% of the Contractor's total bid.
- 17.1.2** The County reserves the right to approve all subcontractors. Such approval shall be a consideration to the awarding of the Contract and unless notification to the contrary is given to the Contractor prior to the signing of the Contract, the list of subcontractors which is submitted with his proposal will be deemed to be acceptable.
- 17.1.3** The Contractor shall be as fully responsible to the County for the acts and omissions of his subcontractors and of persons either directly or indirectly employed by them, as he is for the acts and omissions of persons directly employed by him.
- 17.1.4** Nothing contained in the Contract Documents shall create any contractual relationship between any subcontractor and the County.
- 17.1.5** The divisions or sections of the specifications are not intended to control the Contractor in dividing the Work among subcontractors or to limit the work performed by any trade.

17.2 RELATIONS OF CONTRACTOR AND SUBCONTRACTOR

- 17.2.1** The Contractor agrees to bind every subcontractor by the terms of the Contract with the County, the General Conditions, Supplementary Conditions, and the drawings and specifications as far as applicable to his work, unless specifically noted to the contrary in a subcontract approved in writing as adequate by the County.

17.3 SUBCONTRACTS

- 17.3.1** Pursuant to the provisions of Sections 4100 to 4114 of the California Public Contract Code, inclusive, the Contractor shall not, without the consent of the County, either:
- a. Substitute any persons as subcontractors in place of the subcontractors designated in his original bid without the consent of County. (The County's consent can only be given in cases permitted by Public Contract Code Section 4107.)
 - b. Permit any subcontract to be assigned or transferred or allow any work to be performed by anyone other than the original subcontractor listed in his bid.
 - c. Sublet or subcontract any portion of the work in excess of one-half of one percent of his bid to which his original bid did not designate a subcontractor.

Should the Contractor violate any of the provisions of Sections 4100 to 4114, inclusive, of the Public Contract Code, his so doing shall be deemed a violation of this Contract, and the County may either cancel the contract, or assess the Contractor a penalty in the amount of not more than ten (10) percent of the amount of the

subcontract involved, or both.

ARTICLE 18 TAXES

18.1 SALES AND PAYROLL TAXES

18.1.1 Each Contractor, subcontractor, and material dealer shall include in their bid all applicable taxes including but not limited to sales tax and payroll taxes required by law.

ARTICLE 19 CHANGES

19.1 CHANGE ORDER WORK

19.1.1 The County reserves the right to make changes in the work without impairing the validity of the Contract. The County may make changes to the work, or suspend the work, and all such changes or suspension are within the contemplation of the parties and will not be a basis for compensable delay. Such changes may be made in accordance with any of the following methods:

- a. By written change order to the Contract ordered by the Board of Supervisors.
- b. By written change order, signed by the Director of Facilities Management in the manner and amounts specified by Board Policy B-11.
- c. By written authorization, issued by the Director of Facilities Management, for items of work done under unit prices. The cost or credit for such added or omitted work shall be determined by multiplying the number of units added to or omitted from the work by the applicable unit price.

19.1.2 Upon receipt of a proposed Change Order from County, the Contractor shall submit a proposal in accordance with the requirements and limitations set forth in this "Change Orders" article, for work involved in the contemplated change.

19.1.3 The Contractor must submit a cost proposal within fifteen (15) calendar days after receipt of the proposed change order. The Contractor must submit cost proposals in less than fifteen (15) calendar days if requested by the County or if required by schedule limitations.

19.1.4 If the Contractor fails to submit the cost proposal within the 15-day period (or as requested), the County has the right to order the Contractor in writing to commence the work immediately on a force account basis and/or issue a lump sum change to the contract price in accordance with the County's estimate of cost. If the change is issued based on the County estimate, the Contractor will waive his right to dispute the action unless within fifteen (15) calendar days following completion of the added/deleted work, the Contractor presents proof that the County's estimate was in error.

19.1.5 If the County disagrees with the proposal submitted by Contractor, it will notify the Contractor in writing and the Contractor may elect to proceed under the DISPUTE article of this Contract, or, in the event either party contests the price or time extension of Change work, or time is of the essence, the County may issue a Construction Change Directive and the contractor shall proceed with the work. The County will provide its opinion of the appropriate price and/or time extension in a "Response to Change Order Request." If the contractor agrees with the County's estimate, a change order will be issued by the County. If no agreement can be reached, the County shall have the right to issue the Change Order Directive setting forth its unilateral

determination of the reasonable additions or savings in costs and time attributable to the extra or deleted work. Such determination shall become final and binding if the Contractor fails to submit a Claim in writing to the County, within twenty-one (21) days of the Change Order Directive, disputing the terms of such Directive. No dispute, disagreement or failure of the parties to reach agreement regarding the amount, if any, of any adjustment to the contract sum or contract time shall relieve the Contractor from the obligation to proceed with performance of the work, including extra work, promptly and expeditiously.”

- 19.1.6 The Contractor will give notice of a requested change on his letterhead within seven (7) calendar days of discovery and, if the County agrees, a proposed change order will be issued on the County's standard change order form.
- 19.1.7 If any change involves an increase or decrease in the cost of the Contractor's work, a change order shall state the amount to be added or deducted from the Contract amount, and the additional time, if any, needed for the performance of such work.
- 19.1.8 Any changes to the Contract amount shall be in a lump sum mutually agreed to by the Contractor and the County, except that when, in the opinion of the County, such basis is not feasible the change to the Contract amount shall be determined upon a cost-plus-percentage basis with a guaranteed maximum lump sum cost within the limitations provided by law.
- 19.1.9 Each lump sum quotation from the Contractor shall be accompanied by sufficiently detailed estimates to permit verification of totals in accordance with (a) through (d) in 19.1.11 below.
- 19.1.10 When the work is to be done on a cost-plus-percentage basis, the Contractor shall submit statements as required by the County showing all labor, material, and equipment costs incurred, and upon completion of the work, a summary of costs, including overhead and profit, and in accordance with Item (a) through (d) in 19.1.11 below.
- 19.1.11 Estimates for lump sum quotations and accounting for cost-plus-percentage work shall be limited to direct expenditures necessitated specifically by the subject extra work, and shall be segregated as follows:
 - a. Labor. The costs of labor will be the actual cost for wages prevailing locally for each craft or type of worker at the time the extra work is done, plus employer payments of payroll taxes and insurance, health and welfare, pension, vacation, apprenticeship funds, and other direct costs resulting from Federal, State or local laws, as well as assessment or benefits required by lawful collective bargaining agreements. The use of a labor classification which would increase the extra work cost will not be permitted unless the contractor establishes the necessity for such additional costs. Labor costs for equipment operators and helpers shall be reported only when such costs are not included in the invoice for equipment rental.
 - b. Materials. The cost of materials reported shall be at invoice or lowest current price at which such materials are locally available in the quantities involved, plus sales tax, freight and delivery.
 - c. Tool and Equipment Use. No payment will be made for the use of tools which have a replacement value of \$100 or less. Regardless of ownership, the rates to be used in determining equipment use costs shall not exceed listed rates prevailing locally at equipment rental agencies, or distributors, at the time the work is performed.

- d. Overhead, Profit and Other Charges. The mark-up for overhead and profit on work added to the Contract shall be according to the following Schedule.
- (1) For work performed by the Contractor's forces the added cost for overhead and profit shall not exceed fifteen (15%) percent of the net cost of the work, equipment, labor and materials.
 - (2) For work performed by a subcontractor, the added cost for overhead and profit shall not exceed fifteen (15%) percent of the net cost of the work, equipment, labor and materials, to which the Contractor may add five (5) percent of the subcontractor's price of the work.
 - (3) For work performed by a sub-subcontractor the added cost for overhead and profit shall not exceed fifteen (15 %) percent of the net cost for work, equipment, labor and materials to which sub-contractor and general contractor may each add an additional five (5 %) percent of the total price from the lower tier subcontractor.
 - (4) "Net Cost" is defined as consisting of costs of labor, materials and equipment use and/or rental only. The costs of applicable insurance and bond premium will be reimbursed to the Contractor and subcontractors at cost only, without mark-up.
 - (5) The cost of direct supervision, except when provided by working foreman whose time is included above, of change order work when done exclusively, and not in conjunction or at the same time as, other work performed on the job and when approved in advance by the County's authorized representative, including only payroll taxes, insurance, pension and direct costs for the labor of supervision may be charged to the change order. The cost of transportation, use of vehicle and other costs incurred by supervision will not be allowed.

19.1.12 For added or deducted work by subcontractors, the Contractor shall furnish to the County the subcontractor's signed detailed estimate of the cost of labor, material and equipment, including the markup by such subcontractor for overhead and profit. The same requirement shall apply to sub-subcontractors.

19.1.13 For added or deducted work furnished by a vendor or supplier, the Contractor shall furnish to the County a detailed estimate or quotation of the cost to the Contractor for such work, signed by such vendor or supplier.

19.1.14 Any change in the work involving both extras and credits shall show a new total cost, including subcontracts. Allowance for overhead and profit, as specified therein, shall be applied if the net total cost is an extra; overhead and profit allowances shall not be applied if the net total cost is a credit. The estimated cost of deductions shall be based on labor and material prices on the date the Contract was executed.

19.1.15 The Contractor shall identify any adjustment in time of the final completion of the Work as a whole which is directly attributable to the changed work within fifteen (15) calendar days of receipt of the proposed change order. The Contractor's request for a change in time will be supported by a detailed schedule analysis including a schedule indicating the activities which have been affected and the additional time being requested.

- a. For a change in time for the Work, the Contractor shall be entitled only to such adjustments where completion of the entire Work (critical path) is delayed due to the performance of the changed work. Failure to request extra time when submitting such estimate shall constitute

waiver of the right to subsequently claim adjustment in time for final completion based upon such changed work.

- b. If the County and the Contractor fail to arrive at an agreement on the amount of extra cost, credit or time extension for a proposed change, a change order will be processed in the amount believed by the County to be reasonable, and the Contractor shall proceed with the work. If the Contractor believes that the amount or time stipulated in the change order is not reasonable for the work required, he may elect to issue a notification in accordance with the DISPUTES article for review by the County, stating therein the basis for his dispute with such change order.

19.1.16 Any change in the Work shall conform to the original Contract Documents insofar as they may apply without conflict to the conditions involved in the change.

19.1.17 Payment for additional work or extras, if any, shall become due and payable in accordance with the provisions for payment in the Contract.

19.1.18 Contractor shall not reserve a right to assess impact cost, extended job site costs, extended overhead, and/or constructive acceleration at a later date as related to any and all changes. All costs or estimated costs must be supported with full schedule and cost documentation with each proposed change within the prescribed submission times. If a request for a change is denied and the Contractor disputes the denial, the Contractor must supply the aforementioned documentation to support his claim under the DISPUTES article of this Contract. No claims shall be allowed for impact, extended overhead costs, and/or construction acceleration due to the multiplicity of changes and/or clarifications. Any attempt by Contractor to change or modify the change order form (sample included herein) shall void the form, including any letters the Contractor may issue in conjunction therewith.

19.1.19 All alterations, extensions of time, extra and additional work and other changes authorized by these specifications or any part of the Contract may be made without securing consent of the surety or sureties on the contract bonds.

19.2 CHANGE ORDERS AND LABOR RATES GUIDELINES

19.2.1 The following are guidelines for preparing change orders:

a. Labor Rates:

- (1) To establish the labor rate for each classification and trade, a breakdown shall be submitted to the County.
- (2) Labor rates are based on current prevailing state and federal wages. Only those benefits mandated by law or a valid labor contract are paid by the County.
- (3) Payroll taxes shall be paid as mandated by law. Labor related insurances shall be paid according to industry standard average.
- (4) No other costs related to labor shall be paid by County.

b. Change Orders:

- (1) Change orders shall be prepared in accordance with the project contract.
- (2) No insurance costs are paid by County, except for labor insurances specified in this guideline under section 1 titled "LABOR RATES".
- (3) Material cost shall be broken down on a separate sheet, and for those jobs designated as time and material shall be supported by valid invoices from suppliers.
- (4) Hours for non-productive labor, such as non-working foremen or general foremen, shall be paid only when justified in the opinion of the County, and approved by the County. The total number of nonproductive labor hours shall be limited to a maximum of 15% of the total number of productive labor hours.
- (5) Cost of use of special equipment shall be paid when justified in the opinion of the County, and approved by the County. Equipment refers to special equipment that is needed to perform that specific job, and does not include the usual tools customarily required for that trade. Small tools costs are not paid by County.
- (6) Material transportation costs are paid by County when justified in the opinion of the County, and approved by the County's authorized representative.
- (7) Overhead, profit and fees on subcontracts, are paid according to the contract.
- (8) No costs other than those designated above shall be paid by County. The percentages of overhead and fee allowed with change orders have been established to account for any other direct or indirect costs that might be incurred due to the change order.

19.3 AUDIT

- 19.3.1** The County shall have the right to examine and audit all books, estimates, records, contracts, documents, bid documents, subcontracts, and other data of the Contractor (including computations and projections) related to negotiating, pricing, or performing the modification in order to evaluate the accuracy and completeness of the cost or pricing data at no additional cost to the County.
- 19.3.2** The Contractor shall make available at its office at all reasonable times the materials described in paragraph 19.3.1 above, for examination, audit, or reproduction, until 4 years after final payment under this Contract.
- 19.3.3** The Contractor shall insert a clause containing all the provisions of this 19.3, including this paragraph, in all subcontracts over \$10,000 under this contract.

ARTICLE 20 PAYMENT

20.1 PROGRESS PAYMENTS

- 20.1.1** The County shall pay the Contractor the price as provided in this Contract.
- 20.1.2** The County shall make progress payments monthly as the Work proceeds, on estimates approved by the County. The Contractor shall furnish a breakdown of the total contract price, in a format provided by the County, showing the amount included therein for each principal category of the work, in such detail as

requested, to provide a basis for determining progress payments.

- 20.1.3** Contractor shall submit to the County vouchers, schedule activities, or other satisfactory proof of the value of any work for which he claims payment on such account, and receipts showing that progress payments have been duly made on such contracts, and for materials furnished.
- 20.1.4** In the preparation of estimates, the County may authorize 75% of the value of material delivered and satisfactorily stored on the site, and preparatory work done to be taken into consideration for major equipment if:
- a. Consideration is specifically authorized by this Contract; and
 - b. The Contractor furnishes certified receipt that it has acquired title and paid invoices for such material and that the material will be used to perform this Contract.
- 20.1.5** On the 25th of each month the Contractor will submit his request for payment. Prior to that submittal the County will review the requested percentage of completion for each activity. The payment request will be in the format as provided by the County and will refer to the schedule.
- 20.1.6** Upon receipt of a payment request, the County shall:
- a. Review that request as soon as practicable after receipt for the purpose of determining that the payment request is a proper payment request; and
 - b. Any payment request determined not to be a proper request suitable for payment shall be returned to the Contractor as soon as practicable, but not later than seven (7) calendar days after receipt. The returned request for payment shall be accompanied by a document setting forth in writing the reasons why the payment request is not proper.
- 20.1.7** Any progress payment which is undisputed and properly submitted and remains unpaid for thirty (30) calendar days after receipt by County shall accrue interest to the Contractor equivalent to the legal rate set forth in subdivision (a) of Section 685.010 of the California Code of Civil Procedure. The number of days available to the County to make a payment without incurring interest pursuant to this section shall be reduced by the number of days by which the County exceeds the seven-day return requirement set forth in 20.1.6 above.
- 20.1.8** In making these progress payments, there shall be retained ten percent (10%) from the amount of each progress payment until the work is 50% complete. After the 50% completion point, if satisfactory progress is being made and at the sole discretion of the County, the retention may be reduced to a minimum of 5% of the contract .
- 20.1.9** Except as otherwise prohibited by law, the Contractor may elect to receive all payments due under the contract pursuant to this section without any retention, by posting securities in accordance with Public Contract Code Section 22300.
- 20.1.10** Contractor and each subcontractor shall pay each of its employees engaged in work under this Contract in full (less deductions made mandatory by law) in accordance with California law.
- 20.1.11** The County may withhold (in excess of retentions) or, on account of subsequently discovered evidence, nullify the whole or a part of any certificate to such extent as may be necessary to protect the County from loss on

account of:

- a. Defective work not remedied.
- b. Claims filed or reasonable evidence indicating probable filing of claims.
- c. Failure of the Contractor to make payments properly to subcontractors or for material or labor.
- d. Damage to another Contractor.
- e. Delays in progress toward completion of the work, with the stipulated amount of liquidated damages being withheld for each day of delay for which no extension is granted.
- f. Default of the Contractor in the performance of the terms of the Contract.

20.1.12 Should stop notices be filed with the County, County shall withhold the amount required plus 25% from certificates until such claims shall have been resolved pursuant to applicable law. California Civil Code Section 3179 et seq.

20.1.13 At the election of the County, Contractor shall provide, within ten (10) calendar days of receipt of each progress payment, unconditional waivers and release of lien rights, signed by Contractor and each of its subcontractors and materials suppliers, in the form established therefore by Section 3262 of the Civil Code.

20.1.14 All material and work covered by progress payments made shall, at the time of payment, become the sole property of the County, but this shall not be construed as:

- a. An acceptance of any work not in accordance with the Contract Documents; or
- b. Waiving the right of the County to require the fulfillment of all of the terms of the contract.

20.2 FINAL PAYMENT

20.2.1 GENERAL

- a. The County shall pay the amount due the Contractor under this Contract after:
 - 1.) The Acceptance of all work and Notice of Completion per the terms of this Contract;
 - 2.) Presentation of a properly executed voucher;
 - 3.) Release of all liens and Stop Notices; and
 - 4.) Presentation of release of all claims against the County arising by virtue of this Contract, other than claims and disputes in stated amounts, that the Contractor has specifically excepted from the operation of the release.
- b. The Contractor may, if any subcontractor refuses to furnish a release or receipt in full,

furnish a bond satisfactory to the County, to indemnify him against any lien.

20.2.2 FINAL CERTIFICATE FOR PAYMENT

- a. When the work is ready for acceptance by the County, the Department of Facilities Management will certify and submit to the Board of Supervisors a Notice of Completion. Upon approval of the Notice of Completion, a copy will be sent to the Contractor.
- b. Notice of Completion will be recorded by the County upon completion and Acceptance of the Work. Providing no stop notices have been filed, thirty-five (35) calendar days after filing of such Notice of Completion, payment due under the contract will become due to the Contractor and the County shall so certify authorizing the final payment.

20.2.3 FINAL PAYMENT

- a. After Acceptance of Work, the County will submit to Contractor a statement of the sum due Contractor under this contract, together with County payment in the amount thereof. Said statement shall take into account the contract price, as adjusted by any change orders; amounts already paid; sums to be withheld for incomplete work; liquidated damages; and for any other cause under the Contract.
- b. The Contractor shall, from the effective date of Acceptance until the expiration of four years after final settlement under this Contract, preserve and make available to the County, all its books, records, documents, and other evidence bearing on the costs and expenses of the Contractor under this Contract.

ARTICLE 21 SUSPENSION OF WORK/TERMINATION

21.1 NON-COMPLIANCE WITH CONTRACT REQUIREMENTS

21.1.1 In the event the Contractor, after receiving written notice from the County of non-compliance with any requirement of this Contract, fails to promptly initiate appropriate action to comply with the specified requirement, the County shall have the right to withhold payment for work completed under the Contract until the Contractor has complied with the notice or has initiated such action as may be appropriate to comply, within a reasonable period of time. The Contractor shall not be entitled to any extension of contract time or payment for any costs incurred for work under this article.

21.1.2 Should the Contractor abandon the Work called for under the Contract, or assign his Contract, or unnecessarily and unreasonably delay the work, or willfully violate or perform the work in bad faith, the County shall have the power to notify the Contractor to discontinue all work or any part thereof under this Contract, and thereupon the Contractor shall cease to continue said work or such part thereof as the County may designate, and the County shall have the power to employ such persons as it may consider desirable, and to obtain by contract, purchase, hire or otherwise, such implements, tools, material or materials as the County may deem advisable to work at and be used to complete the work herein described, or such part thereof as shall have not been completed, and to use such material as it may find upon the site of the work, and to charge the expense of such labor and material, implements and tools to the Contractor, and the expense so charged shall be deducted and paid by the County out of such monies as may either be due, or may at any time thereafter become due to the Contractor under the Contract.

21.2 TERMINATION

21.2.1 TERMINATION FOR BREACH

If the Contractor should be adjudged bankrupt or if he should make a general assignment for the benefit of his creditors, or if a receiver should be appointed on account of his insolvency, or if he or any of his subcontractors should violate any of the provisions of the Contract, the County may serve written notice upon him and his surety of its intention to terminate Contractor's performance hereunder, said notice shall contain the reasons for such intention to terminate Contractor's performance, and, unless within ten (10) calendar days after serving of said notice, such violation shall cease and satisfactory arrangements for correction thereof be made, Contractor's performance shall, upon the expiration of said ten (10) calendar days, cease and terminate. In the event of any such termination, the County shall immediately serve written notice thereof upon the surety and the Contractor, and the County may take over the Contractor's work and prosecute the same to completion by contract or by any other method it may deem advisable, for the account and at the expense of the Contractor, and the Contractor and his surety shall be liable to the County for any excess cost occasioned the County thereby, and in such event the County may without liability for so doing take possession of and utilize in completing the work, such materials, appliances, plants, and other property belonging to the Contractor as may be on the site of the work and necessary therefore.

21.2.2 TERMINATION FOR CONVENIENCE

- a. If the construction of the project herein is damaged, which damage is determined to have been proximately caused by an Act of God, in excess of 5% of the contract amount, provided that the work damaged is built in accordance with applicable building standards and the plans and specifications, then the County may, without prejudice to any other right or remedy, terminate the Contract.
- b. The County may terminate performance of work under this Contract in whole or in part, if the County determines that a termination is in the County's interest. The County shall terminate by delivering to the Contractor a Notice to Terminate specifying the extent of termination and the effective date.
- c. After receipt of such Notice, and except as directed by the County, the Contractor shall immediately proceed with the following obligations, regardless of any delay in determining or adjusting any amounts due under this clause:
 - (1) Stop work as specified in the notice.
 - (2) Place no further subcontracts or orders (referred to as subcontracts in this clause) for materials, services, or facilities, except as necessary to complete any continued portion of the Contract.
 - (3) To terminate all subcontracts to the extent they relate to the work terminated.
 - (4) With approval or ratification to the extent required by the County, settle all outstanding liabilities and termination settlement proposals arising from termination of subcontracts; the approval or ratification will be final for purposes of this clause.
 - (5) As directed by the County, transfer title and deliver to the County (1) the fabricated

or unfabricated parts; work in progress, completed work, supplies, and other material produced or acquired for the work terminated; and (2) the completed or partially completed plans, drawings, information, and other property that, if the contract had been completed, would be required to be furnished to the County.

- (6) Complete performance of work not terminated.
 - (7) Take any action that may be necessary, or that the County may direct, for the protection and preservation of the property related to this contract that is in the possession of the Contractor and in which the County has or may acquire an interest.
 - (8) Use its best efforts to sell, as directed or authorized by the County, any property of the types referred to in subparagraphs above; provided, however, that the Contractor (1) is not required to extend credit to any purchaser and (2) may acquire the property under the conditions prescribed by, and at prices approved by the County. The proceeds of any transfer or disposition will be applied to reduce any payments to be made by the County under this contract, credited to the price or cost of the work, or paid in any other manner directed by the County.
- d. After termination, the Contractor shall submit a final termination settlement proposal to the County in the form and with the certification prescribed by the County. The Contractor shall submit the proposal promptly, but no later than thirty (30) days from the effective date of termination. If the Contractor fails to submit the proposal within the time allowed, the County may determine, on the basis of information available, the amount, if any, due the Contractor because of the termination and shall pay the amount determined.
- e. Subject to subparagraph (2) above, the Contractor and the County may agree upon the whole or any part of the amount to be paid because of the termination. The amount may include a reasonable allowance for profit on work done. However, the agreed amount, may not exceed the total contract price as reduced by:
- (1) the amount of payments previously made and;
 - (2) the contract price of work not terminated. The contract shall be amended with a Change Order, and the Contractor paid the agreed amount.
- f. If the Contractor and County fail to agree on the whole amount to be paid the Contractor because of the termination of work, the County shall pay the Contractor the amounts determined as follows:
- (1) For contract work performed before the effective date of termination, the total (without duplication of any terms) of:
 - (i) The cost of this work;
 - (ii) The cost of settling and paying termination settlement proposals under terminated subcontracts that are properly chargeable to the terminated portion of the contract if not included in subdivision (i) above; and

- (iii) A sum, as profit on (i) above, determined by the County to be fair and reasonable; however, if it appears that the Contractor would have sustained a loss on the entire contract had it been completed, the County shall allow no profit under this subdivision (iii).
- (2) The reasonable costs of settlement of the work terminated including:
 - (i) Accounting, clerical, and other expenses reasonably necessary for the preparation of termination settlement proposals and supporting data; and
 - (ii) Storage, transportation, and other costs incurred, reasonably necessary for the preservation, protection, or disposition of the termination inventory.
- g. Except for normal spoilage, the County shall exclude from the amounts payable to the Contractor the fair value, as determined by the County, of defective work, and of property that is destroyed, lost, stolen, or damaged so as to become undeliverable.
- h. The Contractor shall have the right to make a claim under the DISPUTES article, from any determination made by the County.
- i. In arriving at the amount due the Contractor, there shall be deducted:
 - (1) All unliquidated advance or other payments to the Contractor under the terminated portion of this Contract;
 - (2) Any claim which the County has against the Contractor under this Contract; and
 - (3) The agreed price for, or the proceeds of sale of, materials, supplies, or other things acquired by the Contractor or sold under the provisions of this clause and not recovered by or credited to the County.
- j. If the termination is partial, the Contractor may file a proposal with the County for a Change Order of the price(s) of the continued portion of the Contract. The County shall process any Change Order agreed upon. Any proposal by the Contractor for an equitable adjustment under this clause shall be requested within thirty (30) days from the effective date of termination unless extended in writing by the County.
- k. The County may, under the terms and conditions it prescribes, make partial payments and payments against costs incurred by the Contractor for the terminated portion of the Contract, if the County believes the total of these payments will not exceed the amount to which the Contractor will be entitled. If the total payments exceed the amount finally determined to be due, the Contractor shall repay the excess to the County upon demand, together with interest.
 - l. Unless otherwise provided in this Contract or by statute, the Contractor will maintain all records and documents relating to the terminated portion of this Contract for 4 years after final settlement. This includes all books and other evidence bearing on the Contractor's costs and expenses under this Contract. The Contractor shall make these records and documents available to the County, State and/or the U.S. Government or their representatives at all reasonable times, without any direct charge.

ARTICLE 22 DISPUTES/CLAIMS

22.1 CLAIMS RESOLUTION

In accordance with Public Contract Code Sections 20104 20104.6 and other applicable law, public works claims of \$375,000 or less which arise between the Contractor and the Owner shall be resolved under the following the statutory procedure unless the Owner has elected to resolve the dispute pursuant to Public Contract Code Section 10240 et seq.

- a. All claims shall be submitted in writing and accompanied by substantiating documentation. Claims must be filed on or before the date of final payment unless other notice requirements are provided in the contract. "Claim" means a separate demand by the claimant for (1) a time extension, (2) payment of money or damages arising from work done by or on behalf of the claimant and payment of which is not otherwise expressly provided for or the claimant is not otherwise entitled, or (3) an amount the payment of which is disputed by the Owner.
- b. Claims Under \$50,000. The Owner shall respond in writing to the claim within 45 days of receipt of the claim, or, the Owner may request, in writing, within 30 days of receipt of the claim, any additional documentation supporting the claim or relating to defenses or claims the Owner may have. Of additional information is needed thereafter, it shall be provided upon mutual agreement of the Owner and the claimant. The Owner's written response shall be submitted 15 days after receiving the additional documentation, or within the same period of time taken by the claimant to produce the additional information, whichever is greater.
- c. Claims over \$50,000 but less than or equal to \$375,000. The Owner shall respond in writing within 60 days of receipt, or, may request in writing within 30 days of receipt of the claim, any additional documents supporting the claim or relating to defenses or claims the Owner may have against the claimant. If additional information is needed thereafter, it shall be provided pursuant to mutual agreement between the Owner and the claimant. The Owner's response shall be submitted within 30 days after receipt of the further documents, or within the same period of time taken by the claimant to produce the additional information or documents, whichever is greater. The Contractor shall make these records and documents available to the County, State and/or the U.S. Government or their representatives at all reasonable times, without any direct charge.
- d. If the claimant disputes the Owner's response, or if the Owner fails to respond within the statutory time period(s), the claimant may so notify the Owner within 15 days of the receipt of the response or the failure to respond, and demand an informal conference to meet and confer for settlement. Upon such demand, the Owner shall schedule a meet and confer conference within 30 days.
- e. If following the meet and confer conference, the claim or any portion thereof remains in dispute, the claimant may file a claim pursuant to Government Code 900 et seq. and Government Code 910 et seq. For purposes of those provisions, the time within which a claim must be filed shall be tolled from the time the claimant submits the written claim until the time the claim is denied, including any time utilized for the meet and confer conference.
- f. If a civil action is filed to resolve any claim, the provisions of Public Contract Code 20104.4

shall be followed, providing for nonbinding mediation and judicial arbitration.

22.2 CLAIM FORMAT/REQUIREMENTS

22.2.1 The Contractor will submit the claim justification in the following format:

- a. Summary of claim merit and price plus clause under which the claim is made.
- b. List of documents relating to claim
 - (a) Specifications
 - (b) Drawings
 - (c) Clarifications (RFIS)
 - (d) Schedules
 - (e) Other
- c. Chronology of events and correspondence
- d. Analysis of claim merit
- e. Analysis of claim cost
- f. Analysis of Time in CPM format
- g. Cover letter and certification (form included herein)

22.2.2 If any claim submitted includes a request for overhead, the County may request a Profit & Loss statement and supporting documentation from Contractor. If requested, such documentation must be submitted for the County to consider the claim.

22.2.3 Submission of a claim, properly certified, with all required supporting documentation, and written rejection or denial of all or part of the claim by County, is a condition precedent to any action, proceeding, litigation, suit, general conditions claim, or demand for arbitration by Contractor.

22.3 NOTICE OF THIRD PARTY CLAIMS

The County shall provide notification to the Contractor within a reasonable time after receipt of any third-party claim relating to the Construction Contract.

DIVISION 02
SITE CONSTRUCTION

02300. EARTHWORK

02316 GRANULAR BASE

END OF TABLE OF CONTENTS

SECTION 02316

GRANULAR BASE

PART 1 GENERAL

1.1 SUMMARY

- A. Includes But Not Limited To
 - 1. Furnish and install granular base under interior slabs-on-grade as described in Contract Documents.
- B. Products Installed But Not Supplied Under This Section
 - 1. Under-slab vapor retarder and seam tape.
- C. Related Sections
 - 1. Section 07261 - Furnishing of vapor retarder and seam tape

1.2 REFERENCES

- A. American Society For Testing And Materials
 - 1. ASTM E 1643-98, 'Standard Practice for Installation of Water Vapor Retarders Used in Contact with Earth or Granular Fill Under Concrete Slabs'

PART 2 PRODUCTS

2.1 GRANULAR BASE

- A. Gravel - 1/4 inch minimum to one inch maximum well-graded, clean gravel or crushed rock.

PART 3 EXECUTION

3.1 INSTALLATION

- A. Install vapor retarder in accordance with ASTM E 1643 and following instructions.
 - 1. Install vapor retarder over compacted subgrade so entire area under slab is covered.
 - 2. Lap joints 3 inches minimum and seal with specified seam tape.
 - 3. Seal vapor retarder around pipes, conduits, and other utility items which penetrate vapor retarder using factory-fabricated boot installed as recommended by Manufacturer.
 - 4. Except for punctures required for reinforcing seal tears and punctures prior to placing granular base.
- B. Place 4 inches minimum of granular base over vapor retarder, level, and compact with two passes of 2-1/2 ton minimum roller.
- C. Do not allow water onto vapor retarder or granular base prior to placing of concrete.

3.2 FIELD QUALITY CONTROL

- A. Notify Architect 2 days before installation of concrete to allow inspection of vapor retarder and granular base installation.

END OF SECTION

DIVISION 03

CONCRETE

03100 CONCRETE FORMS AND ACCESSORIES

03152 ANCHORS AND INSERTS

03200 CONCRETE REINFORCEMENT

03210 REINFORCING STEEL

03300 CAST-IN-PLACE CONCRETE

03313 NORMAL WEIGHT STRUCTURAL CONCRETE

03390 CONCRETE CURING

03600 GROUTS

03603 NON-METALLIC GROUT

END OF TABLE OF CONTENTS

SECTION 03152

ANCHORS AND INSERTS

PART 1 GENERAL

1.1 SUMMARY

- A. Products Supplied But Not Installed Under This Section
 - 1. Concrete anchors and inserts not specified elsewhere.
- B. Related Sections
 - 1. Section 03313 - Installation
 - 2. Section 05090 - Quality of anchor bolts

1.2 SUBMITTALS

- A. Product Data - Manufacturer's product literature for each item.
- B. Quality Assurance / Control - Manufacturer's installation recommendations for each item.

PART 2 PRODUCTS

2.1 MANUFACTURED UNITS

- A. Adhesive Anchors
 - 1. Acceptable Products -
 - a. HIT RE 500-SD System by Hilti
 - b. Power-Fast System by Powers Fastening
 - c. SET-XP Adhesive by Simpson
- B. Drilled-In Anchors
 - 1. Acceptable Products -
 - a. SUP-R-Stud TZ by MKT Fastening
 - b. Kwik Bolts by Hilti
 - c. TruBolt Carbon Wedge Anchors by ITW Ramset / Redhead
 - d. Power-Stud by Powers Fastening
 - e. Strong Bolt Wedge Anchors by Simpson

2.2 MANUFACTURERS

- A. MKT Fastening Corp, Lonoke, AR (800) 336-1640 or (501) 676-2222
- B. Hilti Fastening Systems, Tulsa, OK (800) 333-1150 or (918) 252-6000 www.hilti.com
- C. ITW Ramset / Redhead, Wood Dale, IL (708) 350-0370 www.ramset-redhead.com
- D. Powers Fastenings Inc, New Rochelle, NY (800) 243-8160 or (914) 235-6300 www.powers.com
- E. Simpson Strong-Tie, Pleasanton, CA (800) 999-5099 or (925) 460-9912 www.strongtie.com
- F. Equal as approved by Architect before installation. See Section 01600.

PART 3 EXECUTION

3.1 INSTALLATION

- A. Epoxy Anchors
 - 1.
- B. Drilled-In Anchors
 - 1.

END OF SECTION

SECTION 03210

CONCRETE REINFORCING STEEL

PART 1 GENERAL

1.1 SUMMARY

- A. Includes But Not Limited To
 - 1. Furnish and install concrete reinforcing steel as described in Contract Documents.

1.2 REFERENCES

- A. American Concrete Institute
 - 1. ACI 318-05
- B. American Society For Testing And Materials
 - 1. ASTM A615/A615M-04.a, 'Standard Specification for Deformed and Plain Billet-Steel Bars for Concrete Reinforcement'

1.3 SUBMITTALS

- A. Quality Assurance / Control
 - 1. Reinforcing placement drawings.
 - 2. Mill certificates.

1.4 DELIVERY, STORAGE, AND HANDLING

- A. Reinforcing steel shall be free of heavy rust scales and flakes, or other coating at time of delivery and placing. Properly protect rebar on site after delivery.
- B. Deliver bars separated by size and tagged with manufacturer's heat or test identification number.

PART 2 PRODUCTS

2.1 MATERIAL

- A. Reinforcing Steel
 - 1. Rebars shall have grade identification marks and conform to ASTM A 615.
 - a. Grade 60 minimum, except dowels which are to be field bent Grade 40 minimum.
 - b. Bars shall be deformed type.
 - c. Bars shall be free of heavy rust scales and flakes, or other bond-reducing coatings.
- B. Rebar Spacing Blocks
 - 1. Acceptable Manufactured Types -
 - a. Single cover Frank bar chair with wire by Rebar Couplerbox Inc, Humble, TX
 - b. The Tie Brick, Pensacola, FL (888) 766-3326 or (850) 479-4670
www.innovative-solutions.net
 - c. Equals as approved by Architect before installation. See Section 01600.
 - 2. Other Approved Types -
 - a. Plain concrete blocks.

2.2 FABRICATION

- A. Fabricate reinforcing steel according to 'ACI Detailing Manual,' 2004 edition, and details on Drawings.

PART 3 EXECUTION

3.1 INSTALLATION

- A. Site Tolerances
 - 1. Provide following minimum concrete cover for reinforcement (ACI 318-05)
 - a. Concrete cast against and permanently exposed to earth -
 - 1) Interior Slabs-on Grade - 2 inches
- B. Bend bars cold.
- C. Accurately place and support with chairs, bar supports, spacers, or hangers as recommended by 'ACI Detailing Manual,' 2004 edition, except slab on grade work. Support bars in slabs on grade and footings with specified rebar spacing blocks around the perimeter and 4-1/2 feet on center each way maximum to maintain specified concrete cover. Install spacer blocks at bar intersections.
- D. Dowel vertical reinforcement for formed concrete columns or walls out of footing or structure below with rebar of same size and spacing required above.
- E. Securely anchor and tie reinforcing bars and dowels prior to placing concrete.
- F. Avoid splices of reinforcing bars at points of maximum stress. Lap bars 40 bar diameters minimum unless dimensioned otherwise on the Drawings. Run steel reinforcing bars continuous through cold joints.

END OF SECTION

SECTION 03313

NORMAL WEIGHT STRUCTURAL CONCRETE

PART 1 GENERAL

1.1 SUMMARY

- A. Includes But Not Limited To
 - 1. Furnish and install Project concrete work as described in Contract Documents.
 - 2. Quality of concrete used on Project but furnished under other Sections.
- B. Products Installed But Not Supplied Under This Section
 - 1. Inserts, bolts, boxes, templates, and fastening devices for other work, including those for bases only for Mechanical and Electrical.
 - 2. Concrete accessories.
- C. Related Sections
 - 1. Section 02316 - Granular base course under slabs
 - 2. Divisions 15 And 16 - Mechanical and electrical devices including boxes, conduits, pipes, hangers, inserts, and other work to be embedded in concrete work prior to placing.
 - 3. Furnishing of items to be embedded in concrete specified in Section involved.
 - 4. Owner will provide concrete leveling compounds and patching compounds required for carpet installation.

1.2 REFERENCES

- A. American Society For Testing And Materials
 - 1. ASTM C 33-03, 'Standard Specification for Concrete Aggregates'
 - 2. ASTM C 94/C94M-04, 'Standard Specification for Ready-Mixed Concrete'
 - 3. ASTM C 150-04, 'Standard Specification for Portland Cement'
 - 4. ASTM C 260-01, 'Standard Specification for Air-Entraining Admixtures for Concrete'
 - 5. ASTM C 494/C494M-04, 'Standard Specification for Chemical Admixtures for Concrete'
 - 6. ASTM C 618-03, 'Standard Specification for Coal Fly Ash and Raw or Calcined Natural Pozzolan for Use as a Mineral Admixture in Portland Cement Concrete'
 - 7. ASTM E 1155-96 (2001), 'Standard Test Method for Determining F_F Floor Flatness and F_L Floor Levelness Numbers'

1.3 SYSTEM DESCRIPTION

- A. Design Requirements
 - 1. Concrete elements of Project are designed to following values -
 - a. Mix Type 1 - 2500 psi
 - b. Mix Type 2 - 2500 psi
- B. Performance Requirements
 - 1. Conform to requirements of ASTM C 94 unless specified otherwise.
 - 2. For testing purposes, following concrete strengths are required -
 - a. At 7 days - 60 percent minimum of 28 day strengths
 - b. At 28 days -
 - 1) Mix Type 1 - 3000 psi
 - 2) Mix Type 2 - 4500 psi

1.4 SUBMITTALS

- A. Shop Drawings - Show dimensioned locations of anchor bolts for hold-down anchors and columns.
- B. Quality Assurance / Control
 - 1. Concrete mix design.

2. Delivery Tickets - Require mix plant to furnish delivery ticket for each batch of concrete. Keep delivery tickets at job-site for use of Owner or his representatives. Tickets shall show following
 - a. Name of ready-mix batch plant
 - b. Serial number of ticket
 - c. Date and truck number
 - d. Name of Contractor
 - e. Name and location of Project
 - f. Specific class or designation of concrete conforming to that used in Contract Documents
 - g. Amount of concrete
 - h. Time loaded
 - i. Type, name, manufacturer, and amount of admixtures used
 - j. Amount and type of cement
 - k. Total water content
 - l. Sizes and weights of sand and aggregate

1.5 QUALITY ASSURANCE

- A. Pre-Installation Conference
 1. Schedule pre-installation conference after placing of footings, installation of foundation forms and reinforcing steel, and installation of anchors, inserts, and blockouts in foundation walls and slabs, but prior to placing of concrete.
 2. In addition to agenda items specified in Section 01300, review following -
 - a. Approved mix design and use of admixtures
 - b. Installation scheduling, coordination, and placement of items installed in and under floor slab
 - c. Placement, finishing, and curing of concrete
 - d. Concrete slab tolerances and corrective measures if tolerances not met.

1.6 PROJECT CONDITIONS

- A. Project Environmental Requirements
 1. Cold Weather Concreting Procedures -
 - a. No frozen materials shall be used.
 - b. Forms, reinforcement, and fillers shall be free from frost. Place no concrete on frozen ground.
 - c. For temperatures below 40 deg F, maintain concrete at between 60 and 80 deg F when placing, and 50 deg F minimum for five days if regular concrete, or at 50 deg F for three days if high early strength concrete, or longer if determined necessary by Architect.
 - d. Housing, covering, or other protection shall remain in place for 24 hours after heat is discontinued.
 2. Hot Weather Concreting Procedures -
 - a. Maximum concrete temperature allowed is 90 deg F in hot weather.
 - b. Cool aggregate and subgrades by sprinkling.
 - c. Avoid cement over 140 deg F.
 - d. Use cold mixing water or ice.
 - e. Use fog spray or evaporation retardant to lessen rapid evaporation from concrete surface.

PART 2 PRODUCTS

2.1 MATERIALS

- A. Portland Cement - Meet requirements of ASTM C 150, Type I or II.
- B. Aggregates
 1. Coarse -
 - a. Meet requirements of ASTM C 33 or nonconforming aggregate which by test or actual service produces concrete of required strength and conforms to local governing codes.

b. Aggregate shall be uniformly graded as follows -

1) Flat Work - Size No. 67

<u>Sieve</u>	<u>Percent Passing</u>
One inch	100
3/4 inch	90 - 100
3/8 inch	20 - 55
No. 4	0 - 10
No. 8	0 - 5

2) All Other - Size No. 57

<u>Sieve</u>	<u>Percent Passing</u>
1-1/2 inch	100
One inch	95 - 100
1/2 inch	25 - 60
No. 4	0 - 10
No. 8	0 - 5

2. Fine - Meet requirements of ASTM C 33.

<u>Sieve</u>	<u>Percent Passing</u>
3/8 inch	100
No. 4	95 - 100
No. 8	80 - 100
No. 16	50 - 85
No. 30	25 - 60
No. 50	10 - 30
No. 100	2 - 10

C. Water - Clear, apparently clean, and potable.

D. Admixtures And Miscellaneous

1. Mineral -

a. Fly Ash Pozzolan - Meet requirements of ASTM C 618, Class F or C and with loss on ignition (LOI) of 3 percent maximum.

2. Chemical -

a. No admixture shall contain calcium chloride nor shall calcium chloride be used as an admixture. All chemical admixtures used shall be from same manufacturer and compatible with each other.

b. Air Entraining Admixture -

1) Meet requirements of ASTM C 260.

2) Approved Products -

- a) Air Mix 200 or AEA-92 by Euclid
- b) Air plus or Super Air Plus by Fritz-Pak
- c) MB-VR or MB-AE by Master Builders
- d) Sika Air by Sika
- e) Daravair or Darex II AEA by W R Grace.

c. Water Reducing Admixture -

1) Meet requirements of C 494, Type A and containing not more than 0.05 percent chloride ions.

2) Approved Products -

- a) Eucon WR 75 or Eucon 91 by Euclid
- b) FR-2 or FR-3 by Fritz-Pak
- c) Pozzoloth Normal by Master Builders
- d) Plastocrete 160 by Sika
- e) Daracem 50/55, WRDA-64, or WRDA-82 by W R Grace.

d. Water Reducing, Retarding Admixture -

1) Meet requirements of ASTM C 494, Type D and contain not more than 0.05 percent chloride ions.

2) Approved Products -

- a) Eucon Retarder 75 by Euclid
- b) FR-1 or Modified FR-1 by Fritz-Pak
- c) Pozzoloth Retarder by Master Builders
- d) Plastiment by Sika
- e) Daratard-17 or Daratard-40 by W R Grace.

- e. High Range Water Reducing Admixture (Superplasticizer) -
 - 1) Meet requirements of ASTM C 494, Type F or G and containing not more than 0.05 percent chloride ions.
 - 2) Approved Products -
 - a) Eucon 37 or Eucon 537 by Euclid
 - b) Supercizer 1 through 7 by Fritz-Pak
 - c) Rheobuild 1000 by Master Builders
 - d) Sikament 300 by Sika
 - e) Darachem-100 or WRDA-19 by W R Grace.
- f. Non-Chloride, Non-Corrosive Accelerating Admixture -
 - 1) Meet requirements of ASTM C 494, Type C or E and not contain more chloride ions than are present in municipal drinking water.
 - 2) Approved Products -
 - a) Accelguard 80 by Euclid
 - b) Daraset or Polarset by W R Grace.
- 3. Evaporation Retardant -
 - a. Approved Products -
 - 1) Sure Film J-74 by Dayton Superior
 - 2) Euco-Bar By Euclid Chemical Co
 - 3) E-Con by L & M Construction Chemicals
 - 4) Confilm by Master Builders
- 4. Bonding Agents -
 - a. Approved Products -
 - 1) Day Chem Ad Bond (J-40) by Dayton Superior
 - 2) Flex-Con by Euclid Chemical Co
 - 3) Larsen Weldcrete by Larsen Products Corp
 - 4) Everbond by L & M Construction Chemicals
 - 5) Acryl Set by Master Builders
 - 6) Sonocrete by Sonneborn
 - 7) Tamms Bond by TAMMS Industries
 - 8) Acrylic Additive by W R Bonsal
 - 9) Intralok by W R Meadows

2.2 MANUFACTURERS

- A. Dayton Superior Concrete Chemicals, Miamisburg, IL (877) 823-4860 or (937) 866-1286
www.daytonsuperiorchemical.com
- B. Euclid Chemical Company, Cleveland, OH (800) 321-7628 or (216) 531-9222
www.euclidchemical.com
- C. Fritz-Pak Concrete Admixtures, Dallas, TX (888) 746-4116 or (214) 221-9494 www.fritzpak.com
- D. Grace Construction Products, Cambridge, MA (800) 354-5414 or (617) 876-1400 www.gcp-grace.com
- E. L & M Construction Chemicals, Omaha, NB (800) 362-3331 or (402) 453-6600 www.lmcc.com
- F. Larsen Weldcrete by Larsen Products Corp, Rockville, MD (800) 633-6668
www.larsenproducts.com
- G. Master Builders, Cleveland, OH (800) 628-9990 or (216) 831-5500 www.masterbuilders.com
- H. Sika Corporation, Lyndhurst, NJ (800) 933-7452 or (201) 933-8800 www.sika.com
- I. Sonneborn, Shakopee, MN (800) 496-6067 or (612) 496-6000 www.chemrex.com
- J. TAMMS Industries, Mentor, OH (800) 862-2667 or (815) 522-3394 www.tamms.com
- K. W R Bonsal, Charlotte, NC (800) 334-0784 or (704) 525-1621 www.bonsal.com
- L. W R Meadows, Elgin, IL (800) 342-5979 or (847) 683-4500 www.wrmeadows.com

2.3 MIXES

- A. Submit mix designs to meet following requirements
 - 1. Proportions -
 - a. Mix Type 1 -
 - 1) Minimum weight cement per cu yd concrete - 517 lbs
 - 2) Air Entrainment - 3 percent, plus or minus 1-1/2 percent
 - 3) Water / Cement Ratio - 0.50 maximum by weight

- b. Mix Type 2 -
 - 1) Minimum weight cement per cu yd concrete - 564 lbs
 - 2) Air Entrainment - 6 percent, plus or minus 1-1/2 percent
 - 3) Water / Cement Ratio - 0.45 maximum by weight
 - c. Do not add water any time during mixing cycle above amount required to meet specified water / cement ratio. No reduction in the amount of cementitious material is allowed.
2. Admixtures -
- a. Mix design shall show proposed admixture, amount, usage instructions, and justification for proposed use. Do not use any admixture without Architect's written approval.
 - b. Mineral - An amount of specified fly ash not to exceed 15 percent of weight of cement may be substituted for cement. If substituted, consider fly ash with cement in determining amount of water necessary to provide specified water / cement ratio.
 - c. Chemical -
 - 1) 4 inch slump maximum before addition of high range water reducer.
 - 2) 8 inch slump maximum with use of high range water reducer.
 - 3) Specified accelerator or retarder may be used if necessary to meet environmental conditions.

PART 3 EXECUTION

3.1 PREPARATION

- A. Inserts, bolts, boxes, templates, pipes, conduits, and other accessories required by Divisions 15 and 16 shall be installed and inspected prior to placing concrete.
- B. Install inserts, bolts, boxes, templates, pipes, conduits, and other accessories furnished under other Sections to be installed as part of work of this Section. Tie anchor bolts for hold-down anchors and columns securely to reinforcing steel.
- C. Remove water and debris from space to be placed.

3.2 INSTALLATION

- A. Site Tolerances
 - 1. ACI Standards shall govern concrete work except where specified differently.
 - 2. Variation In Grade -
 - a. Floor Slabs - 1/8 inch in any 10 feet of floor slab and 3/8 inch over entire floor slab
 - b. Other Slabs - 1/4 inch in any 10 feet of slab and 3/4 inch over entire slab
 - 3. Variation in thickness - 1/4 to 1/2 inch standard, 5 percent for footings
 - 4. Variation in plan -
 - a. 0 to 20 feet - 1/2 inch
 - b. 40 feet or more - 3/4 inch standard, plus 1/2 inch for footings.
 - 5. Variation in eccentricity - 2 percent for footings
 - 6. Variation in openings -
 - a. Size - Plus 1/8 inch
 - b. Location - 1/4 inch
 - 7. Variation from plumb - 1/4 inch maximum
 - 8. Variation in stairs and landings -
 - a. Consecutive steps -
 - 1) Treads - 1/8 inch
 - 2) Risers - 1/16 inch
 - b. Flight of stairs -
 - 1) Treads - 1/4 inch
 - 2) Risers - 1/8 inch 3 mm
- B. Concrete Types
 - 1. Use specified concrete mix types in following Project elements. If Project elements specified to use Mix Type 1 will be exposed to weather through a winter freeze / thaw season during construction period, use Mix Type 2 for those Project elements.

- a. Mix Type 1 -
 - 1) Footings
 - 2) Foundation Walls
 - 3) Interior Slabs
- b. Mix Type 2 -
 - 1) Exterior concrete

C. Placing

- 1. Place as soon after mixing as possible. Deposit as nearly as possible in final position. Placing of concrete shall be continuous until a panel or section is complete.
- 2. Placing Rate - In order to avoid overloading of forms and ties, observe following rate of filling per hour for various air temperatures -

<u>Temperature</u>	<u>Rate of Fill per Hour</u>
40 deg F	2 feet
50 deg F	3 feet
60 deg F	4 feet
70 deg F	5 feet
- 3. Compact concrete in forms by vibrating and other means where required. Thoroughly work in concrete around reinforcing bars.
- 4. Do not embed aluminum in concrete.
- 5. Do not use contaminated, deteriorated, or re-tempered concrete.
- 6. Avoid accumulation of hardened concrete.
- 7. Joints -
 - a. Where possible, locate joints under partitions or where joints will cause least disruption to floor coverings.
 - b. Construction Joints - Locate where shown on Drawings to least impair strength of completed structure. Construction joints in foundation walls shall not occur within 6 feet of corner and be keyed.

D. Bonding Fresh And Hardened Concrete

- 1. Re-tighten forms.
- 2. Roughen surfaces.
- 3. Clean off foreign matter and laitance.
- 4. Wet but do not saturate.
- 5. Slush with neat cement grout or apply bonding agent.
- 6. Proceed with placing new concrete.

E. Special Requirements

- 1. Footings -
 - a. Level top of finish footing and leave rough.
 - b. Where joints are required, bulkhead, key horizontally, and dowel with two No. 5 rebars, 48 inches long.
- 2. Foundations And Walls - Leave steel projecting where required for floor tie.
- 3. Exterior Slabs -
 - a. Dusting with cement not permitted.
 - b. For continuous placing and where shown on Drawings, saw cut one inch deep control joints before shrinkage occurs.
- 4. Equipment Bases - Coordinate with appropriate Sections for locations and dimensions.
- 5. Anchor Bolts - Place anchor bolts not tied to reinforcing steel immediately following leveling of concrete. Reconsolidate concrete around bolt immediately after placing bolt. Do not disturb bolts during finishing process.

F. Finishing

- 1. Rubbed Finish, Exposed Vertical Surfaces -
 - a. Immediately after removing forms, remove joints, marks, bellies, projections, loose materials, and cut back metal ties from surfaces to be exposed.
 - b. Point up voids with cement mortar, 1:2 mix, and rub exposed surface with carborundum to smooth, even surface.

2. Steel Trowel Finishes, Interior Flatwork -
 - a. Float and steel trowel interior slabs after concrete has set enough to avoid bringing water and fines to surface.
 - b. If power troweling is used, get approval of finish from Architect.
 3. Broom Finishes, Exterior Flatwork Not Specified in Section 02776 -
 - a. Broom finish exterior slabs.
 - b. Round edges including edges formed by expansion joints.
 - c. Remove edger marks.
- G. Curing - Keep concrete moist seven days minimum for regular concrete and three days for high early strength. Do not use concrete curing compounds without Architect's written approval. Do not use curing compounds to replace moist curing unless accepted in writing by Architect.

3.3 FIELD QUALITY CONTROL

- A. Inspection
1. Forms - Notify Architect three days minimum prior to placing concrete for footings, foundation walls, and building slabs.
 2. Main Building Slab - In event of dispute, Owner may have an independent testing laboratory test floor for specified flatness in accordance with ASTM E 1155, and for conformance with design grade with either optical or laser level.

3.4 ADJUSTING

- A. Remedy For Out-of-Tolerance Building Slabs
1. Sections of slabs not meeting specified tolerances but within 10 percent of specified tolerances may be corrected by grinding or filling. Sections measuring outside specified correctable tolerances shall be removed and replaced.
 - a. If 10 foot long straight edge is used to check floor flatness, procedure shall be performed as follows: Place ends of straightedge on 3/8 inch high shims. Floor is satisfactory if 5/16 inch diameter steel rod rolled under straightedge will not touch anywhere along 10 foot length and 7/16 inch diameter steel rod will not fit under straightedge anywhere along 10 foot length.
 2. If floor leveling compounds or concrete patching compounds are required to bring floor into specified tolerances, they will be provided by Owner in conjunction with carpet installation and back-charged to Contractor.

3.5 PROTECTION

- A. Protect concrete which has not received its initial set from precipitation to avoid excess water in mix and unsatisfactory surface finish.

END OF SECTION .

SECTION 03390

CONCRETE CURING

PART 1 GENERAL

1.1 SUMMARY

- A. Includes But Not Limited To
 - 1. Furnish and apply curing compounds to Portland cement concrete paving as described in Contract Documents.

1.2 REFERENCES

- A. American Society For Testing & Materials
 - 1. ASTM C 309-03, 'Standard Specification for Liquid Membrane-Forming Compounds for Curing Concrete'

1.3 SUBMITTALS

- A. Product Data - Manufacturer's product data.
- B. Quality Assurance / Control - Manufacturer's printed installation instructions.

PART 2 PRODUCTS

2.1 MATERIALS

- A. Exterior
 - 1. Low VOC (less than 350 grams per liter), water-borne, membrane forming curing compound meeting requirements of ASTM C 309, Type 2.
 - 2. Acceptable Products -
 - a. Day Chem White Pigmented (J-10-W) by Dayton/Richmond Concrete Accessories, Miamisburg, IL (800) 745-3700 or (937) 866-0711 www.daytonrichmond.com
 - b. Kurez VOX White by Euclid Chemical Co, Cleveland, OH (800) 321-7628 or (216) 531-9222 www.euclidchemical.com
 - c. Horncure 200-W by TAMMS Industries, Mentor, OH (800) 218-2667 or (815) 522-3394 www.tamms.com
 - d. L & M Cure R-2 by L & M Construction Chemicals, Omaha, NE (800) 362-3331 or (402) 453-6600 www.lmcc.com
 - e. 1200 White by W. R. Meadows, Elgin, IL (800) 342-5976 or (847) 683-4500 www.wrmeadows.com
 - f. Equal as approved by Architect before use. See Section 01600.

PART 3 EXECUTION

3.1 PREPARATION

- A. Protection - Protect surfaces which will be receiving products or systems incompatible with curing compounds. Where such surfaces do receive curing compound, remove to extent required by installer of products and systems to be subsequently installed and at no additional cost to Owner.

END OF SECTION

SECTION 03603

NON-METALLIC GROUT

PART 1 - GENERAL

1.1 SUMMARY

- A. Includes But Not Limited To:
1. Furnish and install structural grout for securing anchor bolts and hardware in concrete as described in Contract Documents.

1.2 REFERENCES

- A. American Society For Testing And Materials:
1. ASTM C 1107-02, 'Standard Specification for Packaged Dry, Hydraulic-Cement Grout (Non-shrink).'

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Commercial non-shrink grout conforming to requirements of ASTM C 1107, Type B or Type C.

2.2 MANUFACTURERS

- A. Approved Products:
1. Normal Construction Grout A by Bonsal American, Charlotte, NC (800) 334-0784 or (704) 525-1621. www.bonsal.com
 2. Advantage 1107 Grout by Dayton/Richmond, Miamisburg, OH (800) 745-3700 or (937) 866-0711. www.daytonrichmond.com
 3. NS Grout by Euclid Chemical Co, Cleveland, OH (800) 321-7628 or (216) 531-9222 www.euclidchemical.com
 4. 5 Star Special Grout 110 by Five Star Products Inc, Fairfield, CT (800) 243-2206 or (203) 336-7900. www.fivestarprouducts.com
 5. Duragrout by L&M Construction Chemicals Inc, Omaha, NE (800) 362-3331 or (402) 453-6600. www.lmcc.com
 6. Masterflow 555 Pre-mixed Grout by Master Builders, Cleveland, OH (800) 628-9990 or (216) 831-5500. www.masterbuilders.com.
 7. Sonogrout 10K by Sonneborn Building Products, Shakopee, MN (800) 496-6067 or (612) 496-6000. www.chemrex.com
 8. Tamms Grout 621 by TAMMS Industries, Mentor, OH (800) 218-2667 or (815) 522-3394. www.tamms.com
 9. U S Spec MP Grout by U S Mix Products Co (800) 397-9903 or (303) 778-7227. www.usspec.com
 10. CG-86 Grout by W R Meadows, Elgin, IL (800) 342-5979 or (847) 683-4500. www.wrmeadows.com

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Completely eliminate air pockets and provide full contact between grout and item being grouted.

END OF SECTION

DIVISION 05

METALS

05000 BASIC METAL MATERIALS AND METHODS

05080 FACTORY-APPLIED METAL COATINGS
05090 METAL FASTENING

05100 STRUCTURAL METAL FRAMING

05124 STRUCTURAL STEEL FRAMING
05129 MISCELLANEOUS STRUCTURAL STEEL

05400 COLD-FORMED METAL FRAMING

05410 LOAD-BEARING METAL FRAMING

05500 METAL FABRICATIONS

05584 METAL BRACKETS

END OF TABLE OF CONTENTS

SECTION 05080

FACTORY-APPLIED METAL COATINGS

PART 1 GENERAL

1.1 SUMMARY

- A. Includes But Not Limited To
 - 1. Quality of factory- or shop-applied priming applied to steel supplied to Project without finish coat.
 - 2. Quality of and procedures for field touch-up and repair of factory-applied priming and galvanizing.
- B. Related Sections
 - 1. Sections under 09900 heading - Finish painting

1.2 REFERENCES

- A. American Society For Testing And Materials
 - 1. ASTM A 780-00, 'Practice for Repair of Damaged and Uncoated Areas of Hot-Dip Galvanized Coatings'
 - 2. ASTM B 695-00, 'Standard Specification for Coatings of Zinc Mechanically Deposited on Iron and Steel'

1.3 SUBMITTALS

- A. Product Data - Product data and samples

PART 2 PRODUCTS

2.1 MATERIALS

- A. Factory- And Shop-Applied Primer
 - 1. Compatible with and of equal or better quality than finish paint system to be applied by Sections under 09900 heading. Primer on unexposed, unfinished surfaces may be fabricator's standard shop coat.
- B. Repairs To Primed Surface - Unless otherwise specified, use primer which matches characteristics of original primer and is compatible with and of equal or better quality than finish paint system to be applied by Sections under 09900 heading.
- C. Material For Repairs Of Galvanized Surfaces
 - 1. Non-Structural, Non-Load-Bearing Items Not Exposed To Weather -
 - a. Zinc-Rich Paints -
 - 1) Zinc-Dust Content - Dried film shall contain 94 percent of zinc-dust by weight.
 - 2) Approved Manufacturers -
 - a) Galvax by Alvin Products Inc, Lawrence, MA (508) 975-4580
www.alvinproducts.com
 - b) ZRC Cold Galvanizing Compound by ZRC Chemical Products Co, Quincy, Mass (800) 831-3275 or (617) 328-6700 www.zincrich.com
 - 2. Structural, Load-Bearing Items And Items Exposed To Weather -
 - a. Zinc-Based Solders, Powder, Or Rod -
 - 1) Zinc-Cadmium solder with liquidus temperature range from 518 to 527 deg F, or
 - 2) Zinc-Tin-Lead alloy with liquidus temperature range from 446 to 500 deg F.
 - b. Sprayed Zinc - Wire, ribbon, or powdered zinc suitable for process.

PART 3 EXECUTION

3.1 PREPARATION

- A. Cleaning, grinding, or otherwise preparing welds in structural steel to receive coatings shall be done within limits acceptable to welder responsible for structural integrity.
- B. Surfaces shall be clean, dry and free of oil, grease, and corrosion products.
- C. Preparation Of Primed, Ungalvanized Surfaces - Clean welds and grind serious abrasions.
- D. Preparation Of Galvanized Surfaces
 - 1. Follow requirements of ASTM A 780 and following -
 - 2. For Repair Using Zinc-Rich Paints -
 - a. Blast clean surfaces to near-white metal, in accordance with SSPC-SP10 (1 to 2 mil anchor pattern), as minimum.
 - b. Where circumstances do not allow blast cleaning, power disk sand to bright metal finish.
 - c. Extend surface preparation into undamaged galvanized area.
 - d. Remove flux residue and weld spatter from welded areas.
 - 3. For Repair Using Zinc-Based Alloys -
 - a. Clean surface to be reconditioned using wire brush, light grinding action, or mild blasting.
 - b. Extend surface preparation into surrounding, undamaged galvanized areas.
 - c. Remove flux residue and weld spatter from welded areas.
 - d. Preheat cleaned area to at least 600 deg F.
 - 1) Do not overheat surface beyond 750 deg F or allow surrounding galvanized coatings to be burned.
 - 2) Wire brush surface during preheating.
 - 4. For Repair Using Sprayed Zinc (Metallizing) -
 - a. Blast clean surfaces to near-white metal, in accordance with SSPC-SP5 as minimum.
 - b. Extend surface preparation into undamaged galvanized area.
 - c. Remove flux residue and weld spatter from welded areas.

3.2 REPAIR / RESTORATION

- A. Repairs To Primed, Ungalvanized Surfaces
 - 1. Thoroughly clean metal and give one prime coat of specified material, well-worked into metal joints and open spaces. Match existing primed finish as required.
 - a. Do not apply primer at temperatures below 45 deg F.
 - b. Protect un-primed machine-finished surfaces against corrosion by priming.
- B. Repairs To Galvanized Surfaces
 - 1. Non-Structural, Non-Load-Bearing Items Not Exposed To Weather -
 - a. Repair Using Zinc-Rich Paints - Spray or brush-apply zinc-rich paint to prepared area. Apply paint as recommended by Paint Manufacturer in single application employing multiple spray passed to achieve dry film thickness of 2 mils.
 - 2. Structural, Load-Bearing Items And Items Exposed To Weather -
 - a. Repair Using Zinc-Based Alloys -
 - 1) Rub cleaned, preheated areas with repair stick to deposit evenly distributed layer of zinc alloy. If powdered zinc alloys are used, sprinkle powder on surface and spread out with spatula or similar tool.
 - 2) Remove flux residue by rinsing with water or wiping with damp cloth.
 - b. Repair Using Sprayed Zinc (Metallizing) - Apply 2 mil minimum coating by means of metal-spraying pistols fed with either zinc wire or zinc powder in accordance with requirements of ASTM B 695, Type I.
 - 3. All Items -
 - a. Apply repair materials immediately after surface preparation is complete.
 - b. Take thickness measurements with either magnetic or electromagnetic gauge to ensure applied coating is as specified or agreed to.

END OF SECTION

SECTION 05090

METAL FASTENING

PART 1 GENERAL

1.1 SUMMARY

- A. Includes But Not Limited To
 - 1. Quality of structural bolts used on Project.
 - 2. Requirements and standards for site welded metal-to-metal connections.
- B. Related Sections
 - 1. Furnishing and installing of structural bolts specified under Section concerned.
 - 2. Performance of welding specified under Section concerned.

1.2 REFERENCES

- A. American National Standards Institute / American Welding Society
 - 1. ANSI / AWS D1.1/D1.1M-2004, 'Structural Welding Code - Steel'
 - 2. ANSI / AWS D1.3-98, 'Structural Welding Code - Sheet Steel'
- B. American Society For Testing And Materials
 - 1. ASTM A A36/A36M-04, 'Standard Specification for Carbon Structural Steel'
 - 2. ASTM A 108-30, 'Standard Specification for Steel Bars, Carbon, Cold Finished, Standard Quality'
 - 3. ASTM A 307-30, 'Standard Specification for Carbon Steel Bolts and Studs 60 000 psi Tensile Strength'
 - 4. ASTM A 325M-03, 'Standard Specification for structural bolts, steel, heat treated 830 Mpa Minimum tensile strength [Metric]'
 - 5. ASTM A 496-02, 'Standard Specification for Steel Wire, Deformed, for Concrete Reinforcement'

1.3 QUALITY ASSURANCE

- A. Qualifications - Welders shall be certified and bear evidence of certification 30 days before commencing work on Project. If there is doubt as to proficiency of welder, Architect may require welder to take another test, at no expense to Owner. Certification shall be by Pittsburgh Laboratories or other authority approved by Architect before performance of welding.
- B. Certifications - Maintain welder's certifications on job-site.

PART 2 PRODUCTS

2.1 MANUFACTURED UNITS

- A. Bolts And Threaded Fasteners
 - 1. Anchor Rods For Steeple Base Connections - Conform with ASTM A 36.
 - 2. Bolts -
 - a. Conform with requirements of ASTM A 307, Grade A., except where conformance with ASTM A 325 is required on Drawings.
 - b. Anchor Bolts - Non-headed type threaded 2 inches minimum. Anchor hook to project 2 inches minimum including bolt diameter.
- C. Arc-Welding Electrodes - Type E70XXAWS Iron and Steel Arc-welding electrodes and meeting current AISC Specifications.

PART 3 EXECUTION

3.1 PERFORMANCE

- A. Welding shall meet requirements of ANSI / AWS D1.1 and D1.3.

END OF SECTION

SECTION 05124

STRUCTURAL STEEL FRAMING

PART 1 GENERAL

1.1 SUMMARY

- A. Includes But Not Limited To
 - 1. Furnish and install structural steel framing as part of building structure as described in Contract Documents.
- B. Products Supplied But Not Installed Under This Section
 - 1. Structural anchors, plates, channels, angles, etc, to be cast into concrete
- C. Related Sections
 - 1. Division 03 - Installation of structural items to be cast into concrete

1.2 REFERENCES

- A. American Institute of Steel Construction
 - 1. AISC 360-2005 Specification for Structural Steel Buildings.
- B. American Society For Testing And Materials
 - 1. ASTM A 36/A36M-04, 'Standard Specification for Carbon Structural Steel'
 - 2. ASTM A 53/A53M-04, 'Standard Specification for Pipe, Steel, Black and Hot Dipped, Zinc Coated, Welded and Seamless'
 - 3. ASTM A 500-03, 'Specification for Cold-Formed Welded and Seamless Carbon Steel Structural Tubing in Rounds and Shapes'

1.3 SUBMITTALS

- A. Product Data - Submit product data and samples, if requested by Architect.
- B. Shop Drawings
 - 1. Tower shop drawings and calculations, prepared and stamped by structural engineer, shall include, but not be limited to, sub-framing and connections required to connect fiberglass to tower.
 - 2. Show other fabricated work.

1.4 QUALITY ASSURANCE

- A. Requirements - Structural metal shall be product of domestic mill.

PART 2 PRODUCTS

2.1 MATERIALS

- A. Beams, Columns, Angles, Channels, and Miscellaneous steel parts of steel framing systems shown on Drawings
 - 1. Meet requirements of ASTM A 36.
 - 2. W, S, HP, C, or TEE shapes in horizontal or vertical application, together with angles, plates, etc, as shown on Drawings.
- B. Structural Pipe
 - 1. Meet requirements of ASTM A 53, Type E or S, Grade B.
 - a. Weight Class, STD, Schedule 40
 - b. Weight Class, XS, Schedule 80

- C. Structural Tubing - Meet requirements of ASTM A 500, Grade B.

2.2 FABRICATION

- A. AISC's 360 shall serve as minimum standards.
- B. Shop prime structural steel.
- C. Fabricate items to be embedded in concrete or masonry according to approved details of work to be connected.
- D. Taper final section of tower, which forms core of gold-leafed bronze statue, to fit into next lower section. Deliver this final section to firm fabricating statue so it may become part of statue and subsequently be fitted into tower.

PART 3 EXECUTION

3.1 ERECTION

- A. Interface With Other Work - Furnish items to be embedded in concrete or masonry to Division 03 or 04 respectively in time to be securely tied in place before placing concrete and grout.
- B. AISC's 360 shall serve as minimum standards. Erection includes setting, aligning, and bracing as necessary.
- C. Plates or Channels Embedded in Concrete - Tack weld bolts to plates or channels to prevent bolts from turning when nuts are tightened.

END OF SECTION

SECTION 05129

MISCELLANEOUS STRUCTURAL STEEL

PART 1 GENERAL

1.1 SUMMARY

- A. Products Supplied But Not Installed Under This Section
 - 1. Structural steel
 - 2. Lintels
 - 3. Pipe for bollards
- B. Related Sections
 - 1. Section 05080 - Quality of priming
 - 2. Section 05090 - Quality of welding

1.2 REFERENCES

- A. American Society For Testing And Materials
 - 1. ASTM A 36/A36M-04, 'Standard Specification for Carbon Structural Steel'
 - 2. ASTM A 53/A53M-04, 'Standard Specification for Pipe, Steel, Black and Hot-Dipped, Zinc-Coated, Welded and Seamless'
 - 3. ASTM A 500-03, 'Standard Specification for Cold-Formed Welded and Seamless Carbon Steel Structural Tubing in Rounds and Shapes'

PART 2 PRODUCTS

2.1 MATERIALS

- A. Miscellaneous Structural Steel - Meet requirements of ASTM A 36.
- B. Structural Pipe
 - 1. Meet requirements of ASTM A 53, Type E or S, Grade B.
 - a. Weight Class, STD, Schedule 40
 - b. Weight Class, XS, Schedule 80
 - c. Weight Class, DXS
- C. Structural Tubing - Meet requirements of ASTM A 500, Grade B.
- D. Shop Primer
 - 1. Concealed Steel - Fabricator's standard shop coat.
 - 2. Exposed Steel To Receive Finish - Primer shall be acceptable to Finish Manufacturer.

2.2 FABRICATION

- A. After fabrication and before shop priming, hot-dip or mechanically galvanize lintels to be installed in exterior walls and bollards.
- B. Shop prime steel provided under this Section.

PART 3 EXECUTION - Not Used

END OF SECTION

SECTION 05410

LOAD-BEARING METAL FRAMING

PART 1 GENERAL

1.1 SUMMARY

- A. Includes But Not Limited To
 - 1. Furnish and install load bearing metal framing system and blocking as described in Contract Documents.
- B. Related Sections
 - 1. Section 05080 - Galvanizing repair
 - 2. Section 09110 - Non-load-bearing metal wall framing

1.2 REFERENCES

- A. American Society For Testing And Materials
 - 1. ASTM A653/A653M-04a, 'Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process'
 - 2. ASTM A 924-04, 'Standard Specification for General Requirements for Steel Sheet, Metallic-Coated by the Hot-Dip Process'
 - 3. ASTM C 955-03, 'Standard Specification for Load-Bearing (Transverse and Axial) Steel Studs, Runners (Tracks), and Bracing or Bridging for Screw Application of Gypsum Board and Metal Plaster Bases'
 - 4. ASTM C 1007-04, 'Standard Specification for Installation of Load Bearing (Transverse and Axial) Steel Studs and Related Accessories'

1.3 SUBMITTALS

- A. Shop Drawings - Show special components and installations not fully dimensioned or detailed in Manufacturer's Product data.
- B. Quality Assurance / Control
 - 1. Placing, fabrication, blocking, and erection drawings prior to commencing work.
 - 2. Manufacturer's technical product data, installation instructions, and recommendations for each component of system.
 - 3. ICBO Evaluation Report.

1.4 QUALITY ASSURANCE

- A. Regulatory Requirements - ICBO approved
- B. Pre-Installation Conference - Schedule pre-installation conference meeting after submittals have been reviewed and returned by Architect, but before beginning metal framing work.

PART 2 PRODUCTS

2.1 COMPONENTS

- A. Framing
 - 1. Fabricate studs and tracks in accordance with ASTM C 955 from metal meeting requirements of ASTM A 653, SQ (Structural Quality), - Grade 50 Class 2 minimum or ASTM A 924 with G-60 coating. 16 ga minimum with 1-5/8 inch wide flange.
 - 2. Bridging, blocking, strapping, and other accessories shall be as required by Manufacturer's system.

- B. Fasteners
 - 1. Corrosion-resistant coated, self-drilling, self-threading steel drill screws

2.2 ACCEPTABLE MANUFACTURERS

- A. Any member of Steel Stud Manufacturer's Association

PART 3 EXECUTION

3.1 INSTALLATION

- A. Interface With Other Work
 - 1. Coordinate with other Sections to provide blocking necessary for their work.
 - 2. Coordinate with other Sections for location of blocking required for installation of equipment and building specialties.
- B. General - Install metal framing in accordance with ASTM C 1007.
- C. Erection Tolerances
 - 1. 1/4 inch in 20 feet, non-cumulative in length of wall.
 - 2. 1/8 inch in 10 feet with 1/4 inch maximum in height of wall.
 - 3. Distances between parallel walls shall be 1/4 inch maximum along length and height of wall.
 - 4. Space individual framing members plus or minus 1/8 inch maximum from required location. Cumulative error shall not exceed minimum fastening requirements of sheathing or other finishing materials.
- C. Wall Framing
 - 1. Securely anchor tracks to supporting structures.
 - 2. Provide complete uniform and level bearing support for bottom track.
 - 3. Securely anchor abutting pieces of track to common structural element or butt weld or splice.
 - 4. Securely attach studs to flanges or webs of both upper and lower tracks, and plumb and align.
 - 5. Install jack studs at door heads and elsewhere as required to furnish structural support and securely attach to supporting members.
 - 6. Provide temporary bracing until erection is completed.
 - 7. Install wall stud bridging in manner to provide resistance to both minor axis bending and rotation. Space bridging rows equally not to exceed 48 inches.
 - 8. Furnish and install insulation equal to that specified in Division 07 in doubled jamb studs and doubled header members which will not be accessible to insulation installer.
 - 9. Wrap multiple, adjacent framing members with duct tape or otherwise secure to eliminate 'chattering.'
 - 10. Use grommets at framing penetrations where unsecured items pass through.
- D. Joists
 - 1. Align and securely anchor track to supporting structure. Install joists fastening to both flanges of joist track. Space joists 2 inches maximum from abutting walls.
 - 2. Frame openings with built-up joist headers consisting of joist and joist track, nesting joists, or other acceptable combination of connected joists.
 - 3. Install joist reinforcement at interior supports with single length of joist section directly over interior support, with joists lapped an amount equal to joist reinforcement.
 - 4. Install web stiffeners to transfer axial loads of walls above.
 - 5. Install bridging at both ends of joists and at intervals required by Contract Documents.
 - 6. Secure joists to load bearing interior walls to prevent lateral movement of bottom flange.

3.2 PROTECTION

- A. Repair galvanizing as specified in Section 05080.

END OF SECTION

SECTION 05584
METAL BRACKETS

PART 1 GENERAL

1.1 SUMMARY

- A. Products Supplied But Not Installed Under This Section
 - 1. Metal brackets necessary to support vanities in Rest Rooms.
 - 2. Metal brackets necessary to support Dressing Room benches.

- B. Related Sections
 - 1. Section 05080 - Quality of priming
 - 2. Section 05090 - Quality of welding
 - 3. Section 06201 - Installation
 - 4. Section 09924 - Finish painting

1.2 REFERENCES

- A. American Society For Testing And Materials
 - 1. ASTM A 36/A36M-04, 'Standard Specification for Carbon Structural Steel'

PART 2 PRODUCTS

2.1 MATERIALS

- A. Steel - Meet requirements of ASTM A 36.

2.2 FABRICATION

- A. Fabricate as detailed.

- B. Grind exposed welds smooth and polish to match non-welded metal finish.

- C. After fabrication and drilling of mounting holes, shop prime.

PART 3 EXECUTION - Not Used

END OF SECTION

DIVISION 06
WOOD AND PLASTICS

06100 ROUGH CARPENTRY

06110 WOOD FRAMING

06200 FINISH CARPENTRY

06201 GENERAL FINISH CARPENTRY REQUIREMENTS
06202 DOOR, FRAME, AND FINISH HARDWARE INSTALLATION
06221 MISCELLANEOUS TRIM AND MOLDING
06271 CLOSET AND STORAGE SHELVING

06400 ARCHITECTURAL WOODWORK

06401 GENERAL ARCHITECTURAL WOODWORK REQUIREMENTS
06411 CUSTOM CASEWORK / PREMIUM GRADE
06415 PLASTIC LAMINATE

06600 PLASTIC FABRICATIONS

06650 SOLID POLYMER FABRICATIONS

END OF TABLE OF CONTENTS

SECTION 06110

WOOD FRAMING

PART 1 GENERAL

1.1 SUMMARY

- A. Includes But Not Limited To
 - 1. Furnish and install wood blocking as described in Contract Documents.
- B. Products Installed But Not Supplied Under This Section
 - 1. Miscellaneous structural steel elements
- C. Related Sections
 - 1. Section 05129 - Furnishing of miscellaneous structural steel

PART 2 PRODUCTS

2.1 MATERIALS

- A. Dimension Lumber
 - 1. Meet requirements of PS 20-70 and National Grading Rules for softwood dimension lumber.
 - 2. Bear grade stamp of WWPA, SPIB, or other association recognized by American Lumber Standards Committee identifying species of lumber by grade mark or by Certificate of Inspection.
 - 3. Lumber 2 inches or less in nominal thickness shall not exceed 19 percent in moisture content at time of fabrication and installation and be stamped 'S-DRY', 'K-D', or 'MC15'.
 - 4. Lumber shall be S4S.
 - 5. Pressure Treated Plates / Sills -
 - a. 2x4 - Standard and better Douglas Fir, Southern Pine, or HemFir.
 - b. 2x6 And Wider - No. 2 Douglas Fir, Southern Pine, HemFir., or MSR 1650f - 1.5e
- B. Sill Sealer - Closed-cell polyethylene foam, 1/4 inch thick by width of plate.

PART 3 EXECUTION

3.1 ERECTION

- A. General - Use pressure treated wood for wood members in contact with concrete or masonry, including wall, sill, and ledger plates, door and window subframes and bucks, etc.
- B. Interface With Other Work - Coordinate with other Sections for location of blocking required for installation of equipment and building specialties. Do not allow installation of gypsum board until required blocking is in place.
- C. Walls
 - 1. Connection -
 - a. Backing And Blocking - Refer to details for method of connection.

END OF SECTION

SECTION 06201

GENERAL FINISH CARPENTRY REQUIREMENTS

PART 1 GENERAL

1.1 SUMMARY

- A. Includes But Not Limited To
 - 1. Furnish and install sealants required for items installed under this Section, as described in Contract Documents.
 - 2. Furnish and install following items as described in Contract Documents -
 - a. Upper and Lower Cabinets.
- B. Products Installed But Not Supplied Under This Section
 - 1. Architectural Woodwork
- C. Related Sections
 - 1. Sections under 06400 heading - Furnishing of Architectural Woodwork
 - 2. Section 06401 - Quality of wood materials to be used in Finish Carpentry
 - 3. Section 07920 - Quality of sealants, submittal and installation requirements

PART 2 PRODUCTS

2.1 MATERIALS

- A. Glue - Waterproof and of best quality.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Site Verification of Conditions
 - 1. Verify walls, ceilings, floors, and openings are plumb, straight, in-line, and square before installing Architectural Woodwork. Report conditions that are not in compliance to Architect before starting installation.
 - 2. Install Architectural Woodwork after wall and ceiling painting is completed in areas where Architectural Woodwork is to be installed.

3.2 INSTALLATION

- A. General Architectural Woodwork Installation
 - 1. Installation standards for Architectural Woodwork shall be AWI Premium grade minimum.
 - 2. Work shall be fabricated in accordance with measurements taken on Project site.
 - 3. Scribe, miter, and join accurately and neatly to conform to details.
 - 4. Exposed surfaces shall be machine sanded, ready for finishing.
 - 5. Allow for free movement of panels.
 - 6. Countersink nails. Countersink screws and plug those exposed to view.
- B. Items Installed But Not Supplied Under This Section - Install in accordance with requirements specified in Section supplying item.

END OF SECTION

SECTION 06202

DOOR, FRAME, AND FINISH HARDWARE INSTALLATION

PART 1 GENERAL

1.1 SUMMARY

- A. Includes But Not Limited To
 - 1. Furnish and install sealants for calking door frames as described in Contract Documents.
- B. Products Installed But Not Supplied Under This Section
 - 1. Flush wood doors
 - 2. Hollow metal door frames
 - 3. Finish hardware
- C. Related Sections
 - 1. Section 07920 - Quality of sealants
 - 2. Sections under 08100 and 08200 headings - Furnishing of doors and metal frames
 - 3. Sections under 08700 heading - Furnishing of finish hardware

1.2 SUBMITTALS

- A. Quality Assurance / Control
 - 1. Inspection report verifying correct operation and adjustment of installed hardware.
 - 2. Copy of 'Installation Guide for Doors & Hardware' by Door & Hardware Institute. Guide may be obtained from Door and Hardware Institute (DHI).

1.3 QUALITY ASSURANCE

- A. Regulatory Requirements - Fire door installations shall meet code requirements.
- B. Pre-Installation Conference
 - 1. Schedule conference after hardware has been delivered to site and organized into hardware groups by door, but prior to installation of hardware.
 - 2. Check for appropriate blocking and for correct hardware models and fasteners for substrates.
 - 3. Review set of Manufacturer's installation, adjustment, and maintenance instructions submitted under Section 08701.

1.4 DELIVERY, STORAGE, AND HANDLING

- A. Wood Doors
 - 1. Do not have doors delivered to building site until after plaster, cement, and taping compound are dry. If doors are to be stored at job-site for more than one week, seal top and bottom edges if not factory sealed.
 - 2. Store flat on a level surface in a dry, well ventilated building. Cover to keep clean but allow air circulation.
 - 3. Handle with clean gloves and do not drag doors across one another or across other surfaces.
 - 4. Do not subject doors to abnormal heat, dryness, or humidity or sudden changes therein. Condition doors to average prevailing humidity of locality before hanging.
- B. Keys - Immediately prior to Final Acceptance Meeting, turn change keys over to Owner properly organized, tagged, and placed in new or existing key cabinet.

1.5 OWNER'S INSTRUCTIONS

- A. Explain keying systems at time keys and locking mechanisms are tested by using Owner's Operations And Maintenance Manual.

PART 2 PRODUCTS - Not Used

PART 3 EXECUTION

3.1 INSTALLATION

- A. Hollow Metal Frames
 - 1. Site Tolerances -
 - a. Squareness - 1/16 inch from top edge to opposite top edge.
 - b. Plumbness - 1/16 inch from top of jamb to bottom of jamb.
 - c. Alignment - 1/16 inch from plane of left side face of jamb to right side face of jamb.
 - d. Twist - 1/16 inch across throat of jamb plane measured across each face to plane of opposite jamb throat.
 - e. Finished Clearance Between Door And Frame -
 - 1) 1/16 inch at head and hinge jamb plus 1/16 inch maximum
 - 2) 1/8 inch at strike jamb plus or minus 1/16 inch maximum.
 - 3) 1/2 inch to top of finished floor surface or 1/4 inch to top of threshold, plus or minus 1/16 inch maximum.
 - 2. Set frame in location and level head.
 - 3. Equalize with adjustable floor anchor.
 - 4. Set spreaders and fasten jambs to floor and wall.
 - a. Wood spreaders shall be square, fabricated from lumber one inch minimum thick, be same length as door opening at header, and same depth as frame.
 - b. Cut notches for frame stops.
 - c. Do not remove spreaders until frames are permanently anchored in wall.
 - d. Use one spreader at base of frame and another at strike level.
 - e. Do not use temporary spreaders welded to base of jambs during installation of frame.
 - 5. Fill gap between frame and framing with urethane foam or tightly-packed fiberglass insulation. If urethane foam is used, coat interior of frames with foam prior to installing frame. Trim excess before installation of frame.
 - 6. Calking -
 - a. Caulk around both sides of frames of doors receiving acoustical seals with specified sealant.
- B. Doors
 - 1. When Project is completed, doors shall not bind, stick, or be mounted so as to cause future hardware difficulties.
 - 2. Do not impair utility or structural strength of door in fitting of door, applying hardware, or cutting and altering door louvers, panels, or other special details.
- C. Hardware
 - 1. General -
 - a. Install using set of Manufacturer's installation, adjustment, and maintenance instructions submitted with hardware under Section 08701. Follow as closely as possible.
 - b. Mount closers on jamb stop side of door (Parallel Arm) where it is physically possible to do so and not hinder operation of door or closer.
 - 2. Hardware for Wood Doors -
 - a. If doors are not factory-machined, use hardware templates furnished by Hardware Manufacturer when mounting hardware.
 - b. Set hinges flush with edge surface. Be sure that hinges are set in a straight line to prevent distortion.
 - c. Mount door latches high in strike plate opening so when door later settles, latch will not bind.

3.2 FIELD QUALITY CONTROL

- A. Tests - Arrange to have keys brought to Project site and, in meeting attended by local representatives and Architect, test every new key and locking mechanism.

END OF SECTION

SECTION 06221

MISCELLANEOUS TRIM AND MOLDING

PART 1 GENERAL

1.1 SUMMARY

- A. Includes But Not Limited To
 - 1. Furnish and install wood trim not specified elsewhere as described in Contract Documents.
- B. Related Sections
 - 1. Section 06201 - General Finish Carpentry Requirements

PART 2 PRODUCTS

2.1 MATERIALS

- A. Meet requirements of Section 06401.
 - 1. Paneling - Hardwood panel product with plain sliced Red Oak veneer.
 - 2. Hardwood - Plain sawn Red Oak.
 - 3. Softwood - Solid stock Pine, C or better, S4S.

PART 3 EXECUTION - Not Used

END OF SECTION

SECTION 06271

CLOSET AND STORAGE SHELVING

PART 1 GENERAL

1.1 SUMMARY

- A. Includes But Not Limited To
 - 1. Furnish and install shelving not part of casework, including mounting hardware, as described in Contract Documents.

PART 2 PRODUCTS

2.1 COMPONENTS

- A. Shelves
 - 1. Conform to applicable requirements of Section 06401 and 06412.
 - 2. Use 3/4 inch Kortron or Melamine faced Panel Product.
- B. Shelf Brackets And Standards
 - 1. Brackets -
 - a. Size according to shelf width, end of bracket to be within 2 inches of front edge of shelf.
 - b. Approved Model -
 - 1) 187WH extra heavy duty brackets by Knape & Vogt
 - 2. Standards -
 - a. Approved Model -
 - 1) 87WH extra heavy duty standard by Knape & Vogt

2.2 MANUFACTURER

- A. Knape & Vogt, Grand Rapids, MI (800) 253-1561 or (616) 459-3311 www.kv.com

PART 3 EXECUTION

3.1 INSTALLATION

- A. Attach standards by screws into framing members or special blocking. Utilize all available pre-drilled screw holes in standards.

END OF SECTION

SECTION 06401

GENERAL ARCHITECTURAL WOODWORK REQUIREMENTS

PART 1 GENERAL

1.1 SUMMARY

- A. Includes But Not Limited To
 - 1. General standards for materials and fabrication of Architectural Woodwork and for hardware associated with Architectural Woodwork.
- B. Related Sections
 - 1. Section 06110 - Furring and blocking

1.2 REFERENCES

- A. Architectural Woodwork Institute
 - 1. AWI, 'Architectural Woodwork Standards, 1st Edition, October 1, 2009'

1.3 SYSTEM DESCRIPTION

- A. Performance Requirements - AWI Premium Grade is minimum acceptable standard, except where explicitly specified otherwise, for materials, construction, and installation of architectural woodwork.

1.4 SUBMITTALS

- A. Product Data - Manufacturer's literature for specialty items and hardware not manufactured by Architectural Woodwork fabricator.

1.5 DELIVERY, HANDLING, AND STORAGE

- A. Assemble architectural woodwork at Architectural Woodwork Fabricator's plant and deliver ready for erection insofar as possible.
- B. Protect architectural woodwork from moisture and damage while in transit to job site. Unload and store in place where it will be protected from moisture and damage and convenient to use.

PART 2 PRODUCTS

2.1 MATERIALS

- A. Lumber
 - 1. Grade -
 - a. No defects in boards smaller than 600 sq in.
 - b. One defect per additional 150 sq inches in larger boards.
 - c. No mineral grains accepted.
 - 2. Allowable Defects -
 - a. Tight knots not exceeding 1/8 inch in diameter. No loose knots permitted.
 - b. Patches (dutchmen) not apparent after finishing when viewed beyond 18 inches.
 - c. Checks or splits not exceeding 1/32 inch by 3 inches and not visible after finishing when viewed beyond 18 inches.
 - d. Stains, pitch pockets, streaks, worm holes, and other defects not mentioned are not permitted.
 - e. Normal grain variations, such as cats eye, bird's eye, burl, curl, and cross grain are not considered defects.
 - 3. Use maximum lengths possible, but not required to exceed 10 feet without joints. No joints closer than 72 inches in straight run.

4. Moisture content shall be 6 percent maximum at fabrication. No opening of joints due to shrinkage is acceptable.

2.2 FABRICATION

- A. Fabricate work in accordance with measurements taken on job site.
- B. 'Ease' sharp corners and edges of exposed members to promote finishing and protect users from splinters.
- C. Fabricate so veneer grain is vertical.
- D. Joints
 1. Use lumber pieces with similar grain pattern when joining end to end.
 2. Compatibility of grain and color from lumber to panel products is required.
- E. Finish Tolerances
 1. No planer marks (KCPI) allowed. Sand all wood members and surfaces to 100 grit.
 2. Maximum Gap - None allowed.
 3. Flushness Variation - 0.015 inch maximum.
 4. Sanding Cross Scratches - 1/4 inch maximum
 5. Plug screw holes. Screw locations not to be visible beyond 18 inches.
- F. Installation Tolerances
 1. Ensure all edges are flush and tight against adjacent walls, cabinets and surfaces. Scribe all pieces to fit tight against all edges.
- G. Install hardware in accordance with Manufacturer's directions. Leave operating hardware operating smoothly and quietly.
- H. Remove or repair damaged surface of or defects in exposed finished surfaces of architectural woodwork to match adjacent similar undamaged surface.

PART 3 EXECUTION - Not Used

END OF SECTION