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

ITEM: 15.1
(ID # 30713)
MEETING DATE:
Tuesday, July 14, 2026

FROM : DEPARTMENT OF WASTE RESOURCES

SUBJECT: DEPARTMENT OF WASTE RESOURCES: Approval of Contract Documents, including Plans and Specifications, and Bid Advertisement for the On-Call Gas Collection Systems Construction Project at Badlands and Lamb Canyon Landfills, District 5 [$0 – 100% Department of Waste Resources Enterprise Funds], (CEQA Exempt per State CEQA Guidelines Section 15301, 15302, 15303, 15304, and 15061(b)(3)).

RECOMMENDED MOTION: That the Board of Supervisors:

1. Find that the Project is exempt from the California Environmental Quality Act (CEQA) pursuant to State CEQA Guidelines Sections 15061(b)(3) (General Rule for Exemption), and categorically exempt pursuant to Sections 15301 (Existing Facilities), 15302 (Replacement and Reconstruction), 15303 (New Construction or Conversion of Small Structures), and 15304 (Minor Alterations of Land);

2. Approve the Contract Documents, including the Plans and Specifications, for the On-Call Construction of Gas Collection Systems at the Badlands and Lamb Canyon Landfills;

3. Authorize the General Manager-Chief Engineer of the Department of Waste Resources (Department) to advertise for bids to be received in the Department Office located at 14310 Frederick Street, Moreno Valley, CA 92553, up to the hour of 10:00 a.m. on Thursday, August 6, 2026, at which time the bids will be opened; and

4. Direct the Department to file the Notice of Exemption with the County Clerk and the State Clearinghouse upon approval of the Project.

ACTION:Policy

Andrew Cortez 6/18/2026

MINUTES OF THE BOARD OF SUPERVISORS

On motion of Supervisor Gutierrez, seconded by Supervisor Medina and duly carried, IT WAS ORDERED that the above matter is approved as recommended.

Ayes:	Medina, Spiegel, and Gutierrez
Nays:	None
Absent:	Washington and Perez
Date:	July 14, 2026
xc:	Waste

Kimberly A. Rector
Clerk of the Board
By: _____
Deputy

FINANCIAL DATA	Current Fiscal Year:	Next Fiscal Year:	Total Cost:	Ongoing Cost
COST	$ 0	$ 0	$ 0	$ 0
NET COUNTY COST	$ 0	$ 0	$ 0	$ 0

SOURCE OF FUNDS: 100% Waste Resources Enterprise Funds	**Budget Adjustment:** No
	For Fiscal Year: 26/27 - 28/29

C.E.O. RECOMMENDATION: Approve

BACKGROUND:

Summary

The Badlands and Lamb Canyon landfills gas collection systems are an integral part of the Department of Waste Resources (Department) efforts to comply with landfill air quality regulations. As the landfill continues to accept solid waste and as the waste continues to degrade, the gas collection systems continue to require construction enhancements to enable effective and efficient gas collection. Construction enhancements include new and replacement gas collection wells, gas collection piping, gas condensate drain piping, and perimeter monitoring probes.

The gas collection system construction enhancements will take place on an on-call basis. It is anticipated that the contract will reduce the cost and time involved in bidding separate public works projects, especially with respect to very small projects that cannot be planned for ahead of time or that require short and strict regulatory completion times. It will also allow the Department to have a contractor under agreement at reasonable prices when the need arises, rather than having to pay inflated prices for emergency work.

The Board has awarded similar on-call construction projects through the California Public Works Contract process. To ensure continuity of regulatory compliance at both Badlands and Lamb Canyon Landfills, the Department is proposing to advertise a new three-year contract to provide the necessary construction enhancements to the gas collection systems.

California Environmental Quality Act (CEQA) Findings

The Project is exempt from CEQA pursuant to the State CEQA Guidelines Sections 15061(b)(3) (General Rule for Exemption), and categorically exempt pursuant to Section 15301 Existing Facilities, 15302 (Replacement and Reconstruction), 15303 (New Construction or Conversion of Small Structures), and 15304 (Minor Alterations of Land). The Project contemplated in this Form 11 involves approval of a contract for the construction of gas collection systems at the Badlands and Lamb Canyon Landfills. The Contract Documents, including Plans and Specifications, will be advertised and, ultimately, a contractor will be selected to complete the work (under a separate Board action). The proposed contract work is located within the permitted landfill disturbance areas. This work would not have a direct, indirect, or cumulatively significant effect

on the environment. A Notice of Exemption (NOE) to this effect will be filed with the County Clerk and State Clearinghouse upon Project approval.

Impact on Citizens and Businesses

This contract ensures that landfill gas generated within the Badlands and Lamb Canyon Landfills will be collected and controlled in a cost-effective manner and in compliance with various local, state, and federal environmental regulations. Thereby ensuring that the subject landfills operate consistently with environmental stewardship best practices for the benefit of Riverside County citizens and businesses.

Price Reasonableness

The Engineer's estimate for this three-year on-call contract is $6,550,000. If approved, this action will authorize the Department to advertise and pursue competitive bids through the California Public Works Contract process. The Department will return to the Board of Supervisors to seek approval to award the contract to the lowest responsive and responsible bidder.

ATTACHMENTS:

Attachment A: Contract Documents for the On-Call Construction of Gas Collection Systems at Badlands and Lamb Canyon Landfills

Attachment B: CEQA NOE 26-04

Crystal Carrillo
Crystal Carrillo, Senior Management Analyst 7/8/2026

Aaron Gettis
Aaron Gettis, Chief Deputy County Counsel 6/25/2026



CONTRACT DOCUMENTS

FOR

THE ON-CALL CONSTRUCTION OF

LANDFILL GAS COLLECTION SYSTEMS

AT

BADLANDS AND LAMB CANYON LANDFILLS

2026-2029

FORM APPROVED COUNTY COUNSEL
BY: _____ 6/24/2026
LISA SANCHEZ DATE

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ADMINISTRATIVE PROVISIONS

FOR

THE ON-CALL CONSTRUCTION OF

GAS COLLECTION SYSTEMS

AT

BADLANDS AND LAMB CANYON LANDFILLS

JUNE 2026

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NOTICE INVITING BIDS

The Riverside County Department of Waste Resources, hereinafter called "**County**," invites sealed bids for:

GAS COLLECTION SYSTEMS

AT

BADLANDS AND LAMB CANYON LANDFILLS

1. **CONTRACT DOCUMENTS AVAILABLE:** On or after June 15, 2026, an official copy of the Contract Documents (as enumerated in the Construction Agreement) may be examined at the County's office located at 14310 Frederick Street, Moreno Valley, CA 92553, and may be obtained upon payment to the County of $5.00 per set (received at the County's office) or $10.00 per set if mailed by U.S. mail (mailing cost does not apply when using recipient's mailing account number). No refund will be made.

   A digital copy of the Contract Documents and Project Drawings in PDF format will be available on the Department of Waste Resources' website http://www.rcwaste.org. The Project Drawings will also be available in digital AutoCAD (.dwg) format on the Department of Waste Resources' website. This digital data is to be used at the Bidder's own discretion. The County is not responsible for the manner in which the Bidder chooses to use the digital data. The County is not responsible for how this digital data might be converted by the Bidder to another format. The Bidder is solely responsible for its use of this digital data.

2. **ADDENDA:** Interpretations, corrections, clarifications, and changes to the Contract Documents will be made by Addenda. Each Addendum, if any, shall be adopted as a part of the Contract Documents, a copy of which may be examined at the County's office and obtained as further described in Section 1 above. A copy of all Addenda will also be provided to prospective Bidders as further described in Section 2.10 of Article 2, Bidding Procedures, in the Instructions to Bidders. It is the Bidder's responsibility to actively check for the issuance of Addenda.

3. **BID SECURITY:** Each Bid Proposal must be accompanied by a Bid Security, in the form of either cash, a certified check, a cashier's check, or a Bidder's Bond executed by an Admitted Surety Insurer ("Bid Bond") equal to ten percent (10%) of the total aggregate amount of the Bid. The Bid Bond shall be payable to the County of Riverside (the "Bid Security") as a guarantee that the Bidder will, if awarded the Contract, execute a satisfactory Contract, furnish the required bonds, and provide the required Certificates of Insurance.

4. **BID DEADLINE, PLACE FOR RECEIPT AND OPENING:** Bid Proposals must be placed in a sealed envelope clearly marked "Bid Proposal." Bid Proposals must be submitted in accordance with Instructions to Bidders and other Contract Documents and filed with the County **before** 10:00 AM on Thursday, August 6, 2026 ("Bid Deadline") at 14310 Frederick Street, Moreno Valley, CA 92553, which time and place are fixed for the public opening of bids. The County reserves the right to extend the Bid Deadline by Addendum issued no less than seventy-two (72) hours before the new Bid Deadline.

5. **NOTICE OF PRE-BID SITE VISIT, CONFERENCE OR MEETING:** A **mandatory** pre-bid site visit, conference, or meeting will be conducted at the BADLANDS LANDFILL on Tuesday July 28, 2026 at 8:00 AM, immediately following by a visit on the same day to the LAMB CANYON LANDFILL on Tuesday July 28, 2026. The BADLANDS LANDFILL site address is 31125 Ironwood Avenue, Moreno Valley. The LAMB CANYON LANDFILL site address is 16411 Lamb Canyon Road, Beaumont. Failure to attend the mandatory pre-bid conference and job walk, or arriving at the pre-bid conference and job walk late, will disqualify your Bid. All attendees are required to sign-in to be acknowledged as being in attendance and eligible to bid and receive Addenda. Attendance at the BADLANDS LANDFILL and the LAMB CANYON LANDFILL are both required.

6. **DEADLINE FOR BIDDER REQUESTS FOR INFORMATION:** All questions and requests for clarification or interpretation of the Contract Documents must be submitted in writing by Friday July 31, 2026 at 5:00 PM Alexander Carry via e-mail to WasteEnv-Engineers@rivco.org. Any requests for information or clarification submitted after the date and time specified above will not be considered.

7. **CONTRACT DURATION:** The Work must be completed by June 30, 2029. Work shall be completed as individual Work Orders, as specified in these Contract Documents.

8. **PAYMENT AND PERFORMANCE BOND:** The successful Bidder must furnish County with Payment and Performance Bonds, with each issued by a California Admitted Surety Insurer, and each in an amount equal to 100% of the Contract Price.

9. **PUBLIC WORKS BIDDER REGISTRATION:** Pursuant to Labor Code Section 1771.1, any Bidder bidding and Subcontractors to be listed on a Bid Proposal shall not be eligible to bid on or be listed in a Bid Proposal, subject to Public Contract Code Section 4104, or engage in the performance of any Contract for Public Work, unless currently registered with the Department of Industrial Relations and qualified to perform Public Works pursuant to Labor Code Section 1725.5. No Bidder or Subcontractor may be awarded a Public Works Contract or enter into a Contract without proof of current registration to perform Public Works.

10. **PUBLIC WORKS PROJECT SUBJECT TO PREVAILING WAGE LAWS:** This Project is subject to the provisions of Labor Code Section 1720 et seq., and the requirements of Title 8 of the California Code of Regulations Section 16000 et seq., which govern the payment of prevailing wages on Public Works projects. General prevailing rate of per diem wages and general prevailing rate of per diem wages for holiday and overtime work, including employer payments for health and welfare, pension, vacation, apprentices and similar purposes for each craft, classification or type of workman needed for execution of Contracts under the jurisdiction of the County have been obtained by the County from the Director of Industrial Relations of the State of California for the area where the Work is to be done. These are on file at the County's office, and will be made available to any interested person upon request and are also on the DIR website, https://www.dir.ca.gov/OPRL/DPreWageDetermination.htm. This project is subject to compliance monitoring and enforcement by the Department of Industrial Relations. The Contractor shall post job site notices, including a copy of the prevailing rate of per diem wage determinations made by the Director for the Department of Industrial Relations and other

notices prescribed by regulations that comply with the provisions of the California Labor Code, including, without limitation, Sections 1771.4, 1773.1, 1773.2, 1774, 1775, 1776, and 1777.5.

Contractor shall furnish the records specified in Labor Code Section 1776, including but not limited to certified payroll records, directly to the Labor Commissioner for the Department of Industrial Relations.

11. **SUBSTITUTION OF SECURITIES:** Substitution of securities for any monies withheld by County shall be permitted as provided for by Section 22300 of the California Public Contract Code.

12. **CONTRACTOR'S LICENSE:** Bidders submitting Bid Proposals for this Project shall have an active and in good standing Class A Contractor's license, or combination of class C licenses that make up a majority of the Work with a HAZ endorsement, from the State of California at the Bid Deadline, or in the case of federal funding, at Contract Award, in order to be considered eligible for the Contract Award. The license(s) shall remain active and in good standing throughout the entire duration of the Project.

    Subcontractors must possess the appropriate licenses for each specialty subcontracted.

13. **LIQUIDATED DAMAGES:** If the Contractor fails to complete the Work within the Contract Time, County shall assess liquidated damages against Contractor at the daily rate established in the Construction Agreement.

14. **WITHDRAWAL OF BIDS/PERIOD OF BID IRREVOCABILITY:** No bid may be withdrawn or changed after the Bid Deadline, except as otherwise provided by law. A Bidder may request County consent to allow a Bidder to withdraw its Bid in accordance with Public Contract Code Section 5100 et seq. Each Bidder agrees by submitting a Bid that its Bid shall remain open, is irrevocable, and may not be modified, withdrawn, or cancelled for a period of at least sixty (60) Calendar Days after the Bid Deadline.

15. **ACCEPTANCE AND REJECTION OF BIDS:** County reserves the right to reject any or all Bids or to waive irregularities or informalities in any Bids or in the bidding.

16. **CONTRACT AWARD/ALTERNATE BID ITEMS:** Award will be made to the responsive and responsible Bidder submitting the lowest Bid price; however, if Alternate Bid Items are included in the Bid form, the lowest Bid will be determined in accordance with Paragraph 3.1 of the Instructions to Bidders.

17. **BIDDER QUALIFICATIONS AND PROJECT REFERENCES:**

    A Bidder must satisfy the following requirements to bid on this Project:

    a. Successfully installed a minimum of 10,000 linear feet of HDPE header pipe in a landfill for the collection of landfill gas.

    b. Constructed 5,000 linear feet of horizontal landfill gas collection well trench.

    c. Drilled and constructed 1,000 linear feet of vertical landfill gas collection well.

Bidders shall provide all reference information requested on the Project Reference Form for the Bidder and for any and all Subcontractor(s) listed to perform any Work that requires the above qualifications.

With the submittal of the Bid Proposal, the Bidder shall submit for approval by the County documented evidence of satisfaction of the Bidder Qualifications listed above, including the name and experience of the superintendent and lead personnel that will be responsible for each category of Work listed under the preceding paragraph "**Bidder Qualifications and Project References**". As part of this submittal, **Project Reference Forms** shall be completed indicating, at a minimum, the name, address, and phone number of the project owner and owner's representative, the location of the project, the amount of material installed, and the completion date.

18. WORK PERFORMED BY THE CONTRACTOR: The successful Bidder shall perform, with its own organization, Work amounting to at least fifty percent (50%) of the Contract Price, except that any designated "Specialty Items" may be performed by subcontract and the amount of any such "Specialty Items" may be deducted from the Contract Sum before computing the amount of Work required to be performed by the Contractor. See Section 3-2 of the General Provisions and Section 3.3 of the Special Provisions.

Dated: _____

RIVERSIDE COUNTY
DEPARTMENT OF WASTE RESOURCES

_____
Andy Cortez, General Manager - Chief Engineer

INSTRUCTIONS TO BIDDERS

ARTICLE 1 - GENERAL CONDITIONS

1.1 DEFINITIONS

Capitalized terms used on the Contract Documents shall have the meanings assigned to them in the Construction Agreement, Bonds, other Forms, General Provisions, Special Provisions, Detailed Provisions, or elsewhere in the Contract Documents. Capitalized terms so defined shall have the meanings assigned to them in, or if none is assigned as reasonably interpreted according to the context of, the portion of the Contract Documents where such terms are used.

1.2 ENGINEER'S ESTIMATE AND ESTIMATED QUANTITIES

Any Engineer's estimate provided by the County relating to this Work has been provided strictly for informational purposes, and cannot be relied upon by any Bidder as representing an accurate estimate of the value of the Work. The purpose of providing any such Engineer's estimate is simply to provide each potential Bidder with some preliminary information relating to whether the Work may be within its bonding capacity and available resources. Under no circumstance may a Bidder rely upon the Engineer's estimate as representing a reasonable value of the Work. Sometimes Engineer's estimates are significantly higher or lower than the actual Bids received.

The estimated quantities set forth in the Bid Item List are approximate only, and are provided only as a basis for the comparison of Bids. The amount of Work to be done or materials to be furnished by the Bidder as stated in the Bid Proposal (except for lump sum items) are only estimates and are not to be taken as an express or implied statement that the actual amount of Work or materials will correspond to the estimate. The County reserves the right to increase, decrease, or to entirely eliminate certain items from the Work or materials if found desirable or expedient. The County shall not be responsible for the accuracy of the estimate of quantities. The Bidder shall judge for itself, after considering all circumstances and conditions, the costs and quantities of materials involved in the Work. Payment shall be made only for actual quantities of items of Work constructed in accordance with the Contract Documents. Unit Prices shall include all overhead, profit, general conditions cost and fee for the Work described. The Contractor will be allowed no Claims for anticipated profits, loss of profits or for any damages of any sort because of any difference between the estimated and the actual amounts of Work done, or materials furnished or used in the Project except as provided by Change Order.

1.3 BASIS FOR DETERMINING AGREEMENT OF FIGURES FOR UNIT PRICES

All prices and totals provided by Bidder in the Bid Proposal are subject to verification and correction by County. All Bid prices including, but not limited to, lump sum prices and Alternate Bid Item prices, are deemed to include the cost of all materials, equipment, labor (at prevailing wage rates), transportation, delivery, installation, supervision, overhead, profit, licenses, permits, fees, bonds, insurance, all sales, use and other taxes legally chargeable, and all other costs and expenses incidental to the Work. If the Unit Prices and the extended total amounts inserted by the Bidder in the Bid Proposal do not agree, the Unit Prices alone will be considered as representing the Bidder's intention and will be used to determine the lowest Bid, except as follows:

A. If the amount set forth as a Unit Price is ambiguous, unintelligible, or uncertain for any reason, or is omitted, or is the same amount as the entry in the "Total" column, then the amount set forth in the "Total" column for the item shall prevail and shall be divided by the estimated quantity for the item and the price thus obtained shall be the Unit Price.

(Decimal Errors) If the product of the entered Unit Price and the estimated quantity is exactly off by a factor of ten, one hundred, etc., or one-tenth, or one-hundredth, etc. from the entered total, the discrepancy will be resolved by using the entered Unit Price or item total, whichever most closely approximates percentage-wise the Unit Price or item total in the County's final estimate of cost.

1.4 TRADE NAMES AND "OR EQUAL" SUBSTITUTIONS

The materials, products and equipment described in the Contract Documents establish a standard of required function, dimension, appearance and quality to be met by any proposed substitution. Pursuant to Public Contract Code section 3400, all specifications calling for a designated material, product, thing, or service by specific brand or trade name shall be deemed to include the words "or equal," unless the Notice Inviting Bids sets forth a finding in accordance with Public Contract Code section 3400 that substitutions are not permitted for such particular material, product, thing or service; provided, however, that permissible exceptions or other requirements shall be specifically noted in the Detailed Provisions. Bidders wishing to obtain authorization for an "or equal" substitution of an equivalent material, product or equipment not expressly noted in the Detailed Provisions, shall submit all requests for "or equal" substitution using the form included at the end of Detailed Provisions Section 01 6000 – Product Requirements, together with data substantiating Bidder's representation that the non-specified item is of equal quality to the item specified within thirty-five (35) calendar days after award of the Contract.

Authorization of an "or equal" substitution of equivalent materials is solely within the discretion of the County and, if given, shall be made by Addendum or Change Order issued through the County. Bids shall not be based on any "or equal" substitution request that has not been authorized in writing by Addendum. In the absence of a written Addendum authorizing a pre-Bid Or Equal Substitution request, the request shall be deemed denied.

1.5 INSPECTION OF SITE AND UNDERSTANDING OF CONTRACT DOCUMENTS

Prior to submission of a Bid, Bidders must have examined the site and fully acquainted themselves with the Contract Documents and all conditions affecting the Work. Failure of a Bidder to examine any of the Bidding Documents or to inspect the site, will not relieve the successful Bidder from any obligation with respect to the Bid, the Contract, or the Work required under the Contract Documents. By the submittal of a Bid Proposal, the Bidder will be deemed to have personally examined the site and the drawings, to have carefully read all of the specifications and other Contract Documents, and to be fully satisfied in its ability to meet all the difficulties attending the execution of the Work. The Bidder agrees that if it is awarded the Contract it will make no Claim against the County based on ignorance or misunderstanding of the Contract Documents; and that the Bidder fully understands the payment method for the Work.

Where the County has made investigations of subsurface conditions in areas where Work is to be performed, or in other areas, such investigations are made only for the purpose of study and design.

Where such investigations have been made, the Bidder may, upon request, inspect the County's public records of such investigations. The records of such investigations are not a part of the Contract and are solely for the convenience of the Bidder. It is expressly understood and agreed that the County assumes no responsibility whatsoever in respect to the sufficiency or accuracy of the investigations thus made, the records thereof, or of the interpretations set forth therein or made by the County in its use thereof, and there is no warranty or guarantee, either express or implied, that the conditions indicated by such investigations or records thereof are representative of those existing throughout such areas, or any part thereof, or that unlooked-for developments may not occur, or that materials other than, or in proportions different from those indicated, may not be encountered. No information derived from inspection of such records will in any way relieve the Bidder from its obligations under the Contract Documents.

1.6 QUALIFICATIONS OF BIDDERS AND ADDITIONAL INFORMATION

No Bid Proposal will be accepted from a Bidder who is not licensed under laws of the State of California, as evidenced by the submittal of the Bidder's Statement of Licensure form by Bidder with the Bid Proposal. No award will be made to any Bidder who cannot give satisfactory assurance to the County as to its ability to carry out the Contract, both from its financial standing and by reason of its previous experience as a Contractor on Work of the nature contemplated in the Contract. If a Bidder is a corporation, limited partnership or limited liability company, such entity shall be (1) duly incorporated, formed, or organized; (2) authorized to transact and do business in the State of California; and (3) current, active and in good standing under the laws of the State of California. Bidder shall complete the Bidder's Statement of Qualifications and Project References and submit it as part of its Bid. Notwithstanding the provisions of Section **4.4** herein, the Bidder's Statements of Qualifications and attachments shall not be public records.

Upon County's request, a Bidder whose Bid is under consideration for the award of the Contract shall promptly submit satisfactory evidence to County demonstrating the Bidder's financial resources, experience in the field, organization, and other factors evidencing Bidder's ability to successfully execute and complete the Contract. By signing the Bid Proposal, a Bidder authorizes County to contact third parties and authorizes release of information from third parties to the County to verify a Bidder's qualifications and information included in the Bid.

1.7 BALANCED BID

The Bidder is cautioned against the unbalancing of its Bid by including its overhead and profit into one or two items only when there are a number of items on the Bid Item List. The overhead and indirect charges should be prorated on all items in the Bid Item List included in the Bid Proposal. Bids in which the prices are mathematically or materially unbalanced may be rejected. Following are the U.S. Comptroller General's definitions of mathematically and materially unbalanced bids:

- A bid is mathematically unbalanced if the bid is structured on the basis of nominal prices for some Work and inflated prices for other Work; that is, each element of the bid must carry its proportionate share of the total cost of the Work plus profits.

- A bid is materially unbalanced if there is reasonable doubt that award to the Bidder submitting the mathematically unbalanced bid will result in the lowest ultimate cost to the County.

1.8 ANTI-DISCRIMINATION

It is the policy of the County that, in connection with all Work performed under this Contract, there be no discrimination against any prospective or active employee engaged in the Work because of race, color, ancestry, national origin, religious creed, sex, age, marital status, or sexual preference. The Contractor agrees to comply with applicable Federal and California laws including, but not limited to, the California Fair Employment and Housing Act, beginning with Labor Code Section 1735. In addition, the Contractor agrees to require like compliance by any Subcontractors employed on the Work.

1.9 REQUIRED SUBMITTALS

There are a number of forms and other documents required as submittals by the Bidder during the various stages of the Project. **Table 1** provides a checklist of submittals required by the Bidder as provided in the Administrative and General Provisions. Bidders acknowledge that submittal of the documents listed in the following table do not guarantee a complete Bid submittal package.

Table 1: Required Submittal Checklist

	BID DOCUMENT	SUBMITTAL TIMEFRAME	CONTRACT DOCUMENT REFERENCE
☐	Bid Proposal	at Bid	Administrative Provisions
☐	List of Subcontractors	at Bid	Administrative Provisions: Instructions to Bidders, Article 2, Section 2.8
☐	Bidder's Statement of Licensure	at Bid	Administrative Provisions: Instructions to Bidders, Article 1, Section 1.6
☐	Non-Collusion Declaration	at Bid	Administrative Provisions, Instructions to Bidders, Article 2, Section 2.12
☐	Iran Contracting Act Certification	at Bid	Administrative Provisions, Instructions to Bidders, Article 2, Section 2.14
☐	Economic Sanctions in Response to Russia's Actions in Ukraine	at Bid	Administrative Provisions, under Section "Bid Proposal"
☐	Bid Security (10% of Bid Price)	at Bid	Administrative Provisions: Instructions to Bidders, Article 2, Section 2.7
☐	Project Reference Form(s) (Minimum of 5 References) Must provide all the information described on the Project Reference Form.	at Bid	Administrative Provisions: Notice Inviting Bids to Contractors, Submittal Requirements, Instructions to Bidders, Article 1, Section 1.6
☐	Bidder's Statement of Qualifications Form(s)	at Bid	Administrative Provisions: Instructions to Bidders, Article 1, Section 1.6, and Article 3
☐	Construction Agreement	within **5 days** of Notice of Intent to Award	Administrative Provisions
☐	Performance Bond (100% of Contract Price)	within **5 days** of Notice of Intent to Award	Administrative Provisions: Instructions to Bidders, Article 4, Section 4.2
☐	Payment Bond (100% of Contract Price)	within **5 days** of Notice of Intent to Award	Administrative Provisions: Instructions to Bidders, Article 4, Section 4.2
☐	Workers' Compensation Bidder Certificate	within **5 days** of Notice of Intent to Award	Administrative Provisions, under Section "Construction Agreement, Bonds, and Other Forms"
☐	Declaration of Sufficiency of Funds	within **5 days** of Notice of Intent to Award	Administrative Provisions, under Section "Construction Agreement, Bonds, and Other Forms"
☐	Evidence of Insurance and Endorsements	within **5 days** of Notice of Intent to Award	Administrative Provisions: Article 4, Section 4.1.1
☐	Construction Schedule	within **5 days** of Work Order Issuance	Administrative Provisions: Article 4, Section 4.1.2
☐	Affirmative Action Compliance Program (for Bidders with 50+ Employees)	within **30 days** of Award of Contract	General Provisions: Section 5, Subsection 5-2.6

ARTICLE 2 - BIDDING PROCEDURES

2.1 PUBLIC OPENING OF BID PROPOSALS

Bid Proposals will be opened and read publicly at the time and place indicated in the Notice Inviting Bids. Bidders or their authorized agents are invited to be present. The County may, in its sole discretion, elect to postpone the opening of the submitted Bids. Without limitation to the County's right to reject all Bids received, if two or more Bids from Bidders determined to be responsible are both the same amount and are the lowest bids received, then the County may accept the Bid it determines, at its sole discretion, to be in the County's best interest.

2.2 BID PROPOSAL FORMS AND SIGNATURES

Attention of all Bidders is called to all Bid Proposal forms attached hereto and Bidders are cautioned that all Bid Proposals submitted must be signed where so indicated by the person or persons duly authorized to sign on behalf of the Bidder and must be accompanied by the proper declaration, properly executed, and proof of acknowledgement. Bids without valid required signature(s) may be considered non-responsive. Bid Proposals must be made on the forms furnished by the County. If any Bidder makes any alteration or otherwise deviates from, or makes and qualifications of the Bidder's Proposal forms in separate documents submitted with the Bidder's Proposal, the Bid may be considered non-responsive.

2.3 SUBMISSION OF BID PROPOSALS

The Bid Proposal, Bid Security, and other Bid Proposal submittals shall be enclosed by the Bidder in a sealed opaque envelope. Said envelope, as well as any other, outer envelope or packaging in which said envelope may have been placed by Bidder or the carrier for delivery, shall be addressed and delivered as provided in the Notice Inviting Bids bearing on the outside the Bidder's name and address, the Project name, Facility Name, and Bid Deadline. If the Bid is sent by mail, the sealed envelope shall be enclosed in a separate mailing envelope with the notation "SEALED BID ENCLOSED" on the face thereof.

In order to receive consideration, Bids must be received **before** the Bid Deadline. Bids shall be submitted on the pre-printed forms provided by the County. Bids submitted on any other forms may be rejected as non-responsive. All required submissions are identified in **Table 1** above. All information required in Bid forms must be completely and accurately provided. All blanks must be legibly executed in a non-erasable medium. If any Bidder makes any alteration, strike-through or otherwise deviates from any of the pre-printed Bid forms, or makes any qualifications of the Bid Forms in separate documents submitted with the Bid, the Bid may be considered non-responsive. The Bid amount shall be stated in numerals where so indicated in the Bid forms. Incomplete Bids may be rejected as non-responsive. Each Bidder is solely responsible for all costs and expenses incurred in preparing a Bid. Bidders wishing to submit a Bid for more than one Bid Package category must submit a full, complete, original executed Bid and all required Bid forms and attachments.

2.4 TIMELY RECEIPT

The Bidder assumes full and sole responsibility for timely receipt of its Bid Proposal, including its Bid Security and all other Bid submittals, at the location designated in the Notice Inviting Bids. A

Bid is considered submitted only if the outer envelope containing the Bid is stamped by the County's date/time stamp device at the place designated for submittal of the Bid. The County's date/time stamp is controlling and determinative as to the date and time of the Bidder's submittal of its Bid. Bids received **on or after** the Bid Deadline are non-responsive and will be returned to the Bidder unopened.

2.5 DELIVERY METHOD

Submittal of Bid Proposals shall be by hand delivery or mail, only. Oral, telephonic, telegraphic, facsimile or other electronic transmission is not permitted.

2.6 INVALID BID PROPOSALS

Bid Proposals submitted by fax or e-mail and those which fail to reach the place fixed for opening of Bid Proposals prior to the date and hour set for opening same will not be considered.

2.7 BID SECURITY: BIDDER'S CASH, CHECK OR BOND

Each Bid Proposal must be accompanied by Bid Security, in the form of cash, certified check, cashier's check, or by a Bid Bond only on the form supplied by the County, drawn in favor of the County in an amount not less than ten percent (10%) of the total amount of the Bid. This Bid Security shall be given as a guarantee that the Bidder, if identified on the Notice of Intent to Award, will execute and deliver the Construction Agreement, the required Payment and Performance Bonds, and the required certificates of insurance in accordance with the Bid Proposal accepted by the County. In default of execution of the Construction Agreement and/or delivery of said Payment and Performance Bonds and Certificates of Insurance, such Bid Security may be forfeited, and the County may award the Contract to another Bidder or obtain new Bids on said Work. The Bid Security, cash, Bid Bond or check shall, in addition, be forfeited. The Bid Security will be returned upon the close of the period for Bid Withdrawal established in the Notice Inviting Bids to the successful Bidder upon execution of the Construction Agreement. NO BONDS WILL BE ACCEPTED UNLESS SUBMITTED ON THE FORM SUPPLIED BY THE COUNTY.

2.8 SUBLETTING AND SUBCONTRACTING

2.8.1. LIST OF SUBCONTRACTORS.

Each Bidder shall submit a proposed List of Subcontractors in accordance with the Subletting and Subcontracting Fair Practices Act, Public Contract Code Section 4100 et seq. The County has furnished a form for this purpose. If additive Alternate Bid Items are included in the Bidding Documents, Bidder shall identify Subcontractors performing additive Alternate Bid Items when such Work or combination of base Contract Work and alternate Work exceeds one-half (1/2) of one percent (1%) of the total Bid price. If a Bidder fails to specify a Subcontractor or if a Bidder specifies more than one Subcontractor for the same portion of Work to be performed under the Contract in excess of one-half (1/2) of one percent (1%) of the Bidder's total bid, the Bidder agrees that it is fully qualified to perform that portion itself and that the Bidder shall perform that portion itself. The County may require the three (3) lowest Bidders to submit other information pertinent to the proposed Subcontractors' quality, fitness, capacity and experience to satisfactorily perform the Work. Failure to timely submit such additional Subcontractor information may result in the Bid being deemed non-responsive and the Bid may be rejected by the County.

2.8.2. WORK OF SUBCONTRACTORS.

The organization or arrangements of the Specifications and Plans shall not limit the extent of the Work of the Contract Documents. Accordingly, all Bidders are encouraged to disseminate all of the Specifications, Drawings and other Contract Documents to all persons or entities submitting sub-bids to the Bidder. The omission of any portion or item of Work from the Bid or from sub-bids that is reasonably inferable from the Contract Documents is not a basis for adjustment of the Contract Price or the Contract Time.

2.8.3. BIDDER-PERFORMED WORK.

After the Bid Deadline, the County may require the three (3) lowest Bidders to submit information about Bidder-performed Work including, but not limited to, the dollar value or percentage value of Work to be performed by Bidder in conformity with the Contract Documents. See Section 3-2 of the General Provisions and Section **3.3** of the Special Provisions regarding requirements for Contractor-performed Work.

2.8.4. INELIGIBLE SUBCONTRACTORS.

The successful Bidder is prohibited from performing Work on the Project with any Subcontractor who is ineligible to perform Work on a Public Works project pursuant to Sections 1725.5, 1777.1 or 1777.7 of the California Labor Code. By submitting a Bid, each Bidder certifies that it has investigated the eligibility of each and every listed Subcontractor and has determined that none is ineligible to perform Work pursuant to the Labor Code.

2.9 INTERPRETATION OF CONTRACT DOCUMENTS AND ADDENDA

Discrepancies, omissions, ambiguities, or requirements likely to cause disputes shall be immediately brought to the attention of the County. When appropriate, Addenda will be issued by the County. No communication by anyone except by an Addendum affects the meaning or requirements of the Contract Documents. Should it appear that the Work to be done is not sufficiently detailed or explained in the Contract Documents, the Bidder must bring this to the County's attention in writing prior to submittal of the Bid. If at any time (before or after submittal of its Bid Proposal) the Bidder is of the opinion that there is or may be a discrepancy or inconsistency in the plans, drawings, specifications or other Contract Documents, it shall immediately report this in writing to the County and shall not proceed with any related Work until ordered so to do. All Bidders shall submit such written requests to County on or before the deadline established in the Notice Inviting Bids unless modified by Addendum (i.e., at least **seven (7) calendar days** prior to the Bid Deadline, unless modified by Addendum). The person or entity submitting the request will be responsible for its proper delivery to County.

Interpretations, corrections, clarifications and changes to the Contract Documents will be made by Addenda. The County reserves the right to issue Addenda to the Contract Documents no later than seventy-two (72) hours prior to the Bid Deadline. Addenda will be transmitted by the County to all prospective Bidders who (1) attended and signed in at the pre-bid visit, conference, or meeting (if any), (2) downloaded a copy of these Contract Documents at https://www.rcwaste.org/business/bids, and/or (3) have submitted a written request for notice of Addenda to the Riverside County Department of Waste Resources located at 14310 Frederick St.,

Moreno Valley, CA 92553, including in such request the Bidder's name and address for mailing. Each potential Bidder shall leave with the County its name, address, and fax number for the purpose of receiving Addenda. Addenda will be issued on https://www.rcwaste.org/business/bids alongside these Contract Documents. To be considered, a Bid Proposal must list and take into account all issued Addenda. Failure of the Bidder to receive any Addendum shall not relieve the Bidder from any of its obligations under its Bid Proposal. It is the Bidder's responsibility to actively check for the issuance of Addenda. The costs of performance by Bidder of all items of Work and other obligations contained in all Addenda issued by the County shall be deemed included in the amount of the Bid Proposal. The Bidder shall identify and list in its Bid Proposal all Addenda received from the County. Failure to list all Addenda may be a basis for determining that a Bid Proposal is non-responsive.

2.10 POSTPONEMENT OF BID DEADLINE

The County reserves the right to postpone the time and date for the public opening of bids as specified in the Notice Inviting Bids to Contractors by issuance of an Addendum to the Contract Documents no later than seventy-two (72) hours prior to the specified time and date for public opening of bids.

2.11 REJECTION OF BID PROPOSALS CONTAINING ALTERATIONS, ERASURES OR IRREGULARITIES

Bid Proposals may be rejected if they show any alterations of form, additions not called for, conditional Bid Proposals, incomplete Bid Proposals, erasures, or irregularities of any kind. Erasures or interlineations in the Bid Proposal must be explained or noted over the signature of the Bidder. The County may determine as unresponsive any Bid Proposal in which any statement or representation made or incorporated by reference in the Bid Proposal, including any Bid submittal comprising the Bid Proposal, is false, incorrect or materially incomplete and misleading.

2.12 DISQUALIFICATION OF BIDDERS INTERESTED IN MORE THAN ONE BID

No person, firm, or corporation shall be allowed to make, or file, or be interested in more than one Bid; however, a person, firm, or corporation that has submitted a sub-bid to a Bidder or that has quoted prices of materials to a Bidder, is not, thereby disqualified from submitting a sub-bid or quoting prices to other Bidders or making a Bid as the prime Contractor. More than one Bid Proposal from an individual, a firm or partnership, a corporation or an association under the same or different names will not be considered. Reasonable grounds for believing that any Bidder is interested in more than one Bid Proposal for the Work contemplated will cause the rejection of all Bid Proposals in which such Bidder is interested. If there is any reason for believing that collusion exists among the Bidders, none of the participants in such collusion will be considered in awarding the Contract. In accordance with Public Contract Code Section 7106, each Bidder shall submit a Non-Collusion Declaration, signed under penalty of perjury, certifying that the Bid is not the result of and has not been influenced by collusion.

2.13 WITHDRAWAL OF BID PROPOSALS

Any Bid Proposal may be withdrawn at any time prior to the hour Bid Deadline, provided that a request in writing, executed by the Bidder or its duly authorized representative, for the withdrawal of such Bid Proposal, and filed with the County. The withdrawal of a Bid Proposal shall not

prejudice the right of a Bidder to file a new Bid Proposal. Once submitted, all Bids are irrevocable, except as otherwise provided by law. Requests for withdrawal of Bids after the Bid Deadline shall be made only in accordance with Public Contract Code § 5100, *et seq.* Each Bidder agrees by submitting a Bid that its Bid shall remain open, is irrevocable, and may not be modified, withdrawn or cancelled for the period specified in the Notice Inviting Bids, unless a Bidder and, if applicable, its Bid Bond surety, agree to extend the period of Bid irrevocability.

2.14 IRAN CONTRACTING ACT CERTIFICATION

Each Bidder shall submit the certification required by the Iran Contracting Act of 2010, Public Contract Code section 2200 et seq. with its Bid on the County-prescribed form.

ARTICLE 3 - CONSIDERATION OF BIDS

3.1 BASIS OF AWARD/ALTERNATE BID ITEMS

It is the intent of the County to award the Contract, if it be awarded, to the lowest, responsible and qualified Bidder submitting a Bid in accordance with the requirements of the Contract Documents based upon all Bid items.

A responsible Bidder is a Bidder who has demonstrated the attributes of trustworthiness, as well as quality, fitness, capacity and experience of the Bidder to satisfactorily perform the proposed Work and satisfy the requirements of the Contract. The County may determine a Bidder to be non-responsible for purposes of this proposed Work, if the Board of Supervisors for the County, in its discretion, finds that the Bidder has done any such acts or omissions, including without limitation, that: (1) violated a term of a Contract for any Public Works project, including one with the County; (2) reflects negatively on the Bidder's quality, fitness or capacity to perform a Contract with the County or any public entity; (3) made any false statements or Claims against the County or any public entity; (4) demonstrates or indicates a lack of business integrity or honesty including such acts or omissions that would demonstrate a pattern or practice of such negative business practices; or (5) violated any law or regulation required of a Contractor in the submission of bids to or performance under any Contracts with any public entity.

3.1.1. NO ALTERNATE BID ITEMS.

If Alternate Bid Items are not called for in the Contract Documents:

A. The lowest Bid shall be determined by the lowest Base Bid.

B. If a submitted Bid includes alternate prices for any Bid Item, the County may reject the Bid.

3.1.2. ALTERNATE BID ITEMS.

If Alternate Bid Items are called for in the lowest Bid shall be determined by the lowest total of the prices on the Base without consideration of Alternate Bid Items:

A. Each Bidder must fill in the prices for all Alternate Bid Items indicated on the Schedule of Bid Items;

B. If no change in the Base Bid is required, enter "No Change" in the blank for the price of the Alternate Bid Item;

C. Any Bid that does not include prices for any Alternate Bid Item may result in the Bid being rejected as non-responsive; and

D. County reserves the right, in its sole discretion, to select any, all, or none of the Alternate Bid Items at the time of award of the Contract, regardless of whether those Alternative Bid Items were used in the analysis to determine the lowest Bid.

3.2 NOTICE OF INTENT TO AWARD

Following public opening and reading of Bids, and prior to the period of Bid irrevocability established in the Notice Inviting Bids, the County will issue a Notice of Intent to Award identifying the name of the Bidder to whom the County intends to award the Contract, which will be e-mailed to all Bidders submitting a Bid Proposal ("Notice of Intent to Award"). The County, in its sole and absolute discretion, may elect to request that some Bidders extend the period of Bid irrevocability and thereafter, to extend the time for its issuance of its Notice of Intent to Award.

3.3 BID PROTESTS

Any Bidder submitting a Bid Proposal to the County may file a protest of the County's proposed award of the Contract provided that each and all of the following are complied with:

1. The bid protest is in writing.

2. The bid protest is both filed with and received by Andy Cortez, General Manager – Chief Engineer at the following address, 14310 Frederick Street, Moreno Valley, CA 92553, not more than five (5) business days following the date of issuance of the Notice of Intent to Award. Failure to timely file and serve the bid protest under this provision shall constitute grounds for the County's denial of the bid protest without consideration of the grounds stated therein.

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

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

3.4 ACCEPTANCE AND REJECTION OF BIDS AND POST BID INTERVIEWS

The County reserves the right to: waive any irregularities or informalities in any Bids or in the bidding process; judge the Bidder's representations as stated in the Bid forms, including the Bidder's Statement of Qualifications, and any post-Bid information to determine whether or not Bidder is qualified to perform the Work; be the sole judge regarding the suitability of the products, services or supplies offered; not purchase all items or the full quantity of each item listed in the Bidding Documents; reject any or all Bids; modify, cancel or withdraw the Notice Inviting Bids; issue a new Notice Inviting Bids; suspend or abandon the Project; appoint evaluation committees to review bids and seek the assistance of outside technical experts in Bid evaluation; waive deficiencies, informalities and minor irregularities in Bids; require a Bidder to provide a guarantee (or guarantees) of the Contract by a third party; and to not issue a Notice to Proceed after execution of the Contract. In submitting a Bid, the Bidder is specifically acknowledging the County holds

these rights. The Notice Inviting Bid does not commit the County to enter into a Contract, to reject, in its sole discretion, all Bids, nor does it obligate the County pay for any costs incurred in preparation and submission of a Bid or in anticipation of a Contract. By submitting a Bid, the Bidder disclaims any right to be paid for such costs associated with any and all Bid Proposals. Bids may be considered irregular and may be rejected for reasons that include, but are not limited to, the following:

1. If the forms furnished by the County are not used or are altered.

2. If there are material additions, qualifications, conditions, or irregularities of any kind which may make the Bid incomplete, indefinite, or ambiguous.

3. If the Bidder adds any provisions reserving its rights to accept or reject any award of Contract.

4. If the lump sum price, provided by the Bidder, is obviously unbalanced or is excessive or may materially affect the final cost of the Work. In case of an error in an extension, the price upon which the extension is based shall take precedence.

5. If the Bidder fails to complete, in any manner, the Bid forms where information is requested so that the Bid may not be properly evaluated.

6. If the Bid Bond/Security does not accompany the Bid Proposal.

7. If Bidder has been delinquent or unfaithful in the performance of any former Contract with the County.

8. If the Bid is received after the Bid Deadline.

9. If the County determines that any information provided by a Bidder is false or misleading or is so incomplete as to be false or misleading.

Prior to award of the Contract, and if requested by County, the Bidder agrees to meet with the County to review the details and calculations of the Bid Proposal and the Bidder's understanding of any aspect of the Work.

3.5 RETURN OF BID SECURITY

Upon an award of the Contract, the County will return the Bid Security accompanying those Bid Proposals that are not considered in making the award within a reasonable period of time, but not to exceed beyond sixty (60) days from the time the award of the Contract is made by the County. All other Bid Securities will be held until the Contract has been fully executed and the required bonds and Certificates of Insurance have been provided by the successful Bidder, after which such Bid Securities will be returned to the respective Bidders whose Bid Proposal they accompany.

ARTICLE 4 - POST NOTICE OF INTENT TO AWARD

4.1 POST-NOTICE OF INTENT TO AWARD SUBMITTALS

Within the time periods set forth below, the successful Bidder identified in the Notice of Intent to Award as the successful Bidder shall submit the following additional Post-Notice of Intent to Award submittals, completed and signed in the manner required by the Contract Documents, to the County at 14310 Frederick Street, Moreno Valley, CA 92553:

4.1.1. WITHIN FIVE (5) DAYS AFTER ISSUANCE BY COUNTY TO BIDDER OF THE NOTICE OF INTENT TO AWARD AND PRIOR TO THE CONTRACT AWARD, SUCH CONTRACTOR SHALL SUBMIT TO THE COUNTY THE FOLLOWING:

(1) Construction Agreement duly executed by an authorized delegate of the Contractor;

(2) Performance Bond and Payment Bond (issued by Surety), as set forth in Paragraph 4.2 below;

(3) Evidence of Insurance and Endorsements, as specified in Section 5-3 of the General Provisions;

(4) Workers' Compensation Certificate and Waiver of Subrogation Endorsement, in the form specified by the Contract Documents; and

(5) Declaration of Sufficiency of Funds (required only if the Bidder has not entered into a collective bargaining agreement covering the workers to be employed for performance of the Work), in the form specified by the Contract Documents.

4.2 CONTRACT SECURITY - PERFORMANCE AND PAYMENT BONDS

Contractor shall furnish two (2) Surety bonds in duplicate, one as a security for the faithful performance of the Contract in the amount equal to one hundred percent (100%) of the Contract Price (the "Performance Bond"), and one as security for the payment of all persons performing labor and furnishing materials in connection with the Contract in an amount equal to one hundred percent (100%) of the Contract Price (the "Payment Bond"). Both the Performance Bond and Payment Bond shall be issued by an Admitted Surety. The Surety on the Performance Bond shall have an A.M. Best's Insurance Rating of A:VIII (A:8) or better. All bonds must be submitted on forms provided by the County. Notary acknowledgements of the signatures of the Contractor and Surety(ies) are required. The attorney-in-fact who executes the required Performance Bond and Payment Bond on behalf of the Surety shall affix thereto a certified and current copy of the power of attorney authorizing such attorney-in-fact to execute same on behalf of such Surety. Bonds submitted in any other form will not be accepted. Should any Surety on the Payment Bond or Performance Bond be deemed unsatisfactory by the County, Contractor shall upon notice promptly substitute new bonds satisfactory to the County. All bonds must be issued by California Admitted Surety Insurers which are authorized by the State of California to issue such bonds.

4.3 FORFEITURE OF BID SECURITY FOR FAILURE TO POST SECURITY AND EXECUTE AGREEMENT

In the event the Bidder, to whom an award is made, fails or refuses to post the required bonds and provide the required Certificates of Insurance and fails to return executed copies of the Construction Agreement within five (5) days after the prescribed forms are presented to it for signature, the County may declare the Bidder's Bid Security forfeited as damages caused by the failure of the Bidder to post such security and execute such copies of the Construction Agreement and may award the Work to the next lowest responsible Bidder, or may call for new bids.

4.4 PUBLIC RECORDS

County seeks to conduct its business openly. Upon opening, all Bids shall be regarded as public, with the exception of the Statement of Qualifications and attachments and those elements of each Bid that are identified by the Bidder as business or trade secrets and plainly marked as "trade secret," "confidential," or "proprietary." Each element of a Bid which a Bidder desires not to be considered public must be clearly marked as set forth above; any blanket statement (i.e. regarding entire pages, documents, or other, non-specific designations) shall not be sufficient and shall not bind the County in any way whatsoever. If County receives a request from a third party to make a Bid available for inspection or copying, the County will notify the Bidder of the request. If a Bidder instructs the County that the information is not to be released, County will withhold the information, provided, the Bidder expeditiously seeks a protective order from a court of competent jurisdiction to prevent such release. If disclosure is required by law (despite the Bidder's request for confidentiality), the County shall not in any way be liable or responsible for the disclosure of such records or part thereof.

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BID PROPOSAL

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BID PROPOSAL

TO THE BOARD OF SUPERVISORS OF THE COUNTY OF RIVERSIDE:

The undersigned hereby declares:

(a) That the only persons or parties interested in this Bid Proposal as principals are the following:

_____

_____

(If the Bidder is a corporation, give the name of the corporation and the name of its president, secretary, treasurer, and manager. If a co-partnership, give the name under which the co-partnership does business, and the names and addresses of all co-partners. If an individual, state the name and address under which the Contract is to be drawn). If a limited liability company, give the names and addresses of the manager and all members.

(b) That this Bid Proposal is made without collusion with any other person, firm or corporation.

(c) That the Bidder has carefully examined the location of the proposed Work, and has familiarized itself with all of the physical, climatic or other conditions related to the Work.

(d) That the Bidder has carefully examined all of the specifications, plans, and other Contract Documents, and makes this Bid Proposal in accordance therewith.

(e) That, if this Bid Proposal is accepted, the Bidder will enter into a written Contract with the County of Riverside.

(f) That the Bidder proposes to enter into such Contract and to accept in full payment for the Work actually done at the prices shown in the attached schedule. It is understood that the quantities listed (except for those shown as "Final" or "Lump Sum (L.S.)") are but estimates only and final payment will be based on actual quantities whatever they may be, subject to such adjustments and alterations as elsewhere provided for in the Contract Documents.

As Bid Security, accompanying this Bid Proposal is cash, a certified check, cashier's check or Bid Bond payable to the order of the County of Riverside in the sum of: TEN PERCENT (10%) OF THE TOTAL BID PROPOSAL.

THE REQUIRED REFERENCES AND OTHER REQUIRED DOCUMENTS MUST BE ATTACHED TO THIS BID PROPOSAL

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Bidder bids as follows on this Bid Item List for **GAS COLLECTION SYSTEMS** at the BADLANDS AND LAMB CANYON LANDFILLS located in Riverside County, California:

Fiscal Year 2026-2027 Project Totals

ITEM NO.	ITEM OF WORK	UNIT	QUANTITY	UNIT COST	TOTAL COST
1.1	Mobilization for Horizontal Well Construction	LS	4		
1.2	Mobilization for Vertical Well Construction	LS	3		
1.3	Mobilization for Header and Lateral Pipe Install	LS	4		
1.4	Mobilization for Relocating Header and Lateral Pipe	LS	2		
1.5	Mobilization for Probe Construction	LS	1		
2.1	Landfill Trenching, Backing and Compacting (including Refuse Excavation, Handling and Disposal)	LF	6000		
2.2	Native Soil Trenching, Backfilling and Compacting	LF	1000		
3	Install Horizontal Well	LF	5500		
4	Install Aggregate Pit	EA	16		
5.1	Drill and Install LFG Vertical Wells up to 135 feet	LF	4000		
5.2	Drill and Install Vertical Gas Wells up to 135 feet, 2 in 1	LF	400		
6.1	Drill and Install LFG Vertical Wells From 136 Feet up to 220 feet	LF	2000		
6.2	Drill and Install Vertical Gas Wells From 136 Feet up to 220 feet, 2 in 1	LF	400		
6.3	Drill and Install LFG Vertical Wells From 221 Feet up to 320 feet	LF	300		
7.1	Drill and Install Native Wells up to 320 feet	LF	300		
7.2	Drill and Install Native Probes, 2 Depths	LF	300		
7.3	Drill and Install Native Probes, 3 Depths	LF	150		
7.4	Drill and Install Native Probes, 4 Depths	LF	30		
8	Install 2” HDPE Pipe	LF	0		
9	Install 3” HDPE Lateral Pipe	LF	500		
10	Install 4" HDPE Lateral Pipe	LF	2000		
11	Install 6” HDPE Lateral Pipe	LF	400		
12	Install 8” HDPE Header Pipe	LF	0		
13	Install 10” HDPE Header Pipe	LF	0		
14	Install 12” HDPE Header Pipe	LF	3000		
15	Install 16” HDPE Header Pipe	LF	200		
16	Install 18” HDPE Header Pipe	LF	2000		
17	Install 20” HDPE Header Pipe	LF	0		

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ITEM NO.	ITEM OF WORK	UNIT	QUANTITY	UNIT COST	TOTAL COST
18	Install 24” HDPE Header Pipe	LF	1000		
19	Re-locate 2” HDPE Pipe	LF	0		
20	Re-locate 3” Lateral Pipe	LF	0		
21	Re-locate 4” Lateral Pipe	LF	0		
22	Re-locate 6” Header Pipe	LF	0		
23	Re-locate 8” Header Pipe	LF	0		
24	Re-locate 10" Header Pipe	LF	0		
25	Re-locate 12" Header Pipe	LF	0		
26	Re-locate 16" Header Pipe	LF	0		
27	Re-locate 18" Header Pipe	LF	0		
28	Re-locate 20" Header Pipe	LF	0		
29	Re-locate 24" Header Pipe	LF	0		
30	Install Butterfly Valve on existing segments of 8"-24" diameter HDPE	EA	16		
31	Cut and Move 2" HDPE Pipe - 8" Header Pipe	LF	2000		
32	Cut and Move 10" Header Pipe - 24" Header Pipe	LF	2000		
33.1	Install Well Assembly	EA	16		
33.2	Re-locate Well Assembly	EA	12		
34	Install Probe Monument	EA	3		
35.1	Demobilization for New Construction	EA	12		
35.2	Demobilization for Relocation	EA	2		
35.3	Demobilization in Between Days	EA	0		
36	Soil Haul within Landfill Property	CY	100		
37	T&M	LS	1	$600,000	$600,000

For the Total FY 26/27 Bid Proposal of: **TOTAL COST (State in Figures) $**_____

_____

(Write out Total Bid Amount in Words), subject to additions and deductions as provided for in this Agreement.

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Fiscal Year 2027-2028 Project Totals

ITEM NO.	ITEM OF WORK	UNIT	QUANTITY	UNIT COST	TOTAL COST
1.1	Mobilization for Horizontal Well Construction	LS	4		
1.2	Mobilization for Vertical Well Construction	LS	3		
1.3	Mobilization for Header and Lateral Pipe Install	LS	4		
1.4	Mobilization for Relocating Header and Lateral Pipe	LS	2		
1.5	Mobilization for Probe Construction	LS	1		
2.1	Landfill Trenching, Backing and Compacting (including Refuse Excavation, Handling and Disposal)	LF	4000		
2.2	Native Soil Trenching, Backfilling and Compacting	LF	200		
3	Install Horizontal Well	LF	3500		
4	Install Aggregate Pit	EA	8		
5.1	Drill and Install Vertical Gas Wells up to 135 feet	LF	3000		
5.2	Drill and Install Vertical Gas Wells up to 135 feet, 2 in 1	LF	400		
6.1	Drill and Install Vertical Gas Wells From 136 Feet up to 220 feet	LF	1500		
6.2	Drill and Install Vertical Gas Wells From 136 Feet up to 220 feet, 2 in 1	LF	400		
6.3	Drill and Install Vertical Gas Wells From 221 Feet up to 320 feet	LF	300		
7.1	Drill and Install Native LFG Wells up to 320 feet	LF	200		
7.2	Drill and Install Native Probe, 2 Depths	LF	200		
7.3	Drill and Install Native Probe, 3 Depths	LF	100		
7.4	Drill and Install Native Probe, 4 Depths	LF	20		
8	Install 2” HDPE Pipe	LF	300		
9	Install 3” HDPE Lateral Pipe	LF	500		
10	Install 4" HDPE Lateral Pipe	LF	1000		
11	Install 6” HDPE Lateral Pipe	LF	400		
12	Install 8” HDPE Header Pipe	LF	300		
13	Install 10” HDPE Header Pipe	LF	300		
14	Install 12” HDPE Header Pipe	LF	1000		
15	Install 16” HDPE Header Pipe	LF	0		
16	Install 18” HDPE Header Pipe	LF	1000		
17	Install 20” HDPE Header Pipe	LF	200		

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ITEM NO.	ITEM OF WORK	UNIT	QUANTITY	UNIT COST	TOTAL COST
18	Install 24” HDPE Header Pipe	LF	500		
19	Re-locate 2” HDPE Pipe	LF	0		
20	Re-locate 3” Lateral Pipe	LF	0		
21	Re-locate 4” Lateral Pipe	LF	0		
22	Re-locate 6” Header Pipe	LF	200		
23	Re-locate 8” Header Pipe	LF	200		
24	Re-locate 10" Header Pipe	LF	200		
25	Re-locate 12" Header Pipe	LF	300		
26	Re-locate 16" Header Pipe	LF	200		
27	Re-locate 18" Header Pipe	LF	200		
28	Re-locate 20" Header Pipe	LF	300		
29	Re-locate 24" Header Pipe	LF	0		
30	Install Butterfly Valve on existing segments of 8"-24" diameter HDPE	EA	4		
31	Cut and Move 2" HDPE Pipe - 8" Header Pipe	LF	1000		
32	Cut and Move 10" Header Pipe - 24" Header Pipe	LF	1000		
33.1	Install Well Assembly	EA	16		
33.2	Re-locate Well Assembly	EA	6		
34	Install Probe Monument	EA	2		
35.1	Demobilization for New Construction	EA	11		
35.2	Demobilization for Relocation	EA	2		
35.3	Demobilization in Between Days	EA	5		
36	Soil Haul within Landfill Property	CY	150		
37	T&M	LS	1	$500,000	$500,000

For the Total FY 27/28 Bid Proposal of: **TOTAL COST (State in Figures) $**_____

_____

(Write out Total Bid Amount in Words), subject to additions and deductions as provided for in this Agreement.

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Fiscal Year 2028-2029 Project Totals

ITEM NO.	ITEM OF WORK	UNIT	QUANTITY	UNIT COST	TOTAL COST
1.1	Mobilization for Horizontal Well Construction	LS	4		
1.2	Mobilization for Vertical Well Construction	LS	3		
1.3	Mobilization for Header and Lateral Pipe Install	LS	4		
1.4	Mobilization for Relocating Header and Lateral Pipe	LS	2		
1.5	Mobilization for Probe Construction	LS	1		
2.1	Landfill Trenching, Backing and Compacting (including Refuse Excavation, Handling and Disposal)	LF	4000		
2.2	Native Soil Trenching, Backfilling and Compacting	LF	500		
3	Install Horizontal Well	LF	3500		
4	Install Aggregate Pit	EA	8		
5.1	Drill and Install Vertical Gas Wells up to 135 feet	LF	3000		
5.2	Drill and Install Vertical Gas Wells up to 135 feet, 2 in 1	LF	400		
6.1	Drill and Install Vertical Gas Wells From 136 Feet up to 220 feet	LF	1500		
6.2	Drill and Install Vertical Gas Wells From 136 Feet up to 220 feet, 2 in 1	LF	400		
6.3	Drill and Install Vertical Gas Wells From 221 Feet up to 320 feet	LF	300		
7.1	Drill and Install Native LFG Wells up to 320 feet	LF	200		
7.2	Drill and Install Native Probe, 2 Depths	LF	200		
7.3	Drill and Install Native Probe, 3 Depths	LF	100		
7.4	Drill and Install Native Probe, 4 Depths	LF	20		
8	Install 2” HDPE Pipe	LF	0		
9	Install 3” HDPE Lateral Pipe	LF	500		
10	Install 4" HDPE Lateral Pipe	LF	1000		
11	Install 6” HDPE Lateral Pipe	LF	400		
12	Install 8” HDPE Header Pipe	LF	0		
13	Install 10” HDPE Header Pipe	LF	0		
14	Install 12” HDPE Header Pipe	LF	1000		
15	Install 16” HDPE Header Pipe	LF	0		
16	Install 18” HDPE Header Pipe	LF	1000		
17	Install 20” HDPE Header Pipe	LF	0		

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ITEM NO.	ITEM OF WORK	UNIT	QUANTITY	UNIT COST	TOTAL COST
18	Install 24” HDPE Header Pipe	LF	500		
19	Re-locate 2” HDPE Pipe	LF	200		
20	Re-locate 3” Lateral Pipe	LF	200		
21	Re-locate 4” Lateral Pipe	LF	200		
22	Re-locate 6” Header Pipe	LF	0		
23	Re-locate 8” Header Pipe	LF	0		
24	Re-locate 10" Header Pipe	LF	0		
25	Re-locate 12" Header Pipe	LF	0		
26	Re-locate 16" Header Pipe	LF	0		
27	Re-locate 18" Header Pipe	LF	0		
28	Re-locate 20" Header Pipe	LF	0		
29	Re-locate 24" Header Pipe	LF	200		
30	Install Butterfly Valve on existing segments of 8"-24" diameter HDPE	EA	4		
31	Cut and Move 2" HDPE Pipe - 8" Header Pipe	LF	1000		
32	Cut and Move 10" Header Pipe - 24" Header Pipe	LF	1000		
33.1	Install Well Assembly	EA	16		
33.2	Re-locate Well Assembly	EA	6		
34	Install Probe Monument	EA	2		
35.1	Demobilization for New Construction	EA	11		
35.2	Demobilization for Relocation	EA	2		
35.3	Demobilization in Between Days	EA	0		
36	Soil Haul within Landfill Property	CY	150		
37	T&M	LS	1	$500,000	$500,000

For the Total FY 28/29 Bid Proposal of: **TOTAL COST (State in Figures) $**_____

_____

(Write out Total Bid Amount in Words), subject to additions and deductions as provided for in this Agreement.

For the Total Bid Proposal of (Sum FY26/27, 27/28 and 28/29):
TOTAL COST (State in Figures) $_____

_____

(Write out Total Bid Amount in Words), subject to additions and deductions as provided for in this Agreement.

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Bidder Acknowledges Receipt of Addenda No(s): _____

Name of Bidder: _____

Address: _____

Telephone: _____

Contractor's License No. and Classification: _____

Department of Industrial Relations (DIR) Registration Number: _____

Signature: _____

Name: _____

Title: _____

Dated: _____

Signature: _____

Name: _____

Title: _____

Dated: _____

A general partner must sign on behalf of a partnership. The president or **two (2)** corporate officers must sign on behalf of a corporation unless the corporation has a corporate resolution that allows one person, other than the president to sign on behalf of the corporation; if applicable, said resolution must be attached hereto.

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LIST OF SUBCONTRACTORS

The name, the location of the place of business, the California Contractor License Number, and Public Works Contractor Registration Number issued pursuant to Section 1725.5 of the Labor Code of each Subcontractor who will perform work or labor or render service to the Bidder in or about the construction of the Work or improvement, or a Subcontractor who specially fabricates and installs a portion of the Work or improvement, in an amount in excess of one-half (½) of one percent (1%) of the Bidder's total bid and the portion of the Work by indicating the Item No. of the Work which will be done by each such Subcontractor is as follows:

Bid Item No. (s):

_____

Name of Subcontractor: _____

Location: _____

Subcontractor's License No.: _____

Department of Industrial Relations (DIR) Registration Number: _____

Bid Item No. (s):

_____

Name of Subcontractor: _____

Location: _____

Subcontractor's License No.: _____

Department of Industrial Relations (DIR) Registration Number: _____

Bid Item No. (s):

_____

Name of Subcontractor: _____

Location: _____

Subcontractor's License No.: _____

Department of Industrial Relations (DIR) Registration Number: _____

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Bid Item No. (s):

_____

Name of Subcontractor: _____

Location: _____

Subcontractor's License No.: _____

Department of Industrial Relations (DIR) Registration Number: _____

Bid Item No. (s):

_____

Name of Subcontractor: _____

Location: _____

Subcontractor's License No.: _____

Department of Industrial Relations (DIR) Registration Number: _____

Bid Item No. (s):

_____

Name of Subcontractor: _____

Location: _____

Subcontractor's License No.: _____

Department of Industrial Relations (DIR) Registration Number: _____

Bid Item No. (s):

_____

Name of Subcontractor: _____

Location: _____

Subcontractor's License No.: _____

Department of Industrial Relations (DIR) Registration Number: _____

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PROJECT REFERENCE FORM

Project Reference No. _____	
Project Name:	
Project Location:	
Contractual Completion Date:	
Adjusted Completion Deadline Based on Time Extensions Granted by Owner:	
Actual Completion Date:	
Contracted Project Cost: Final Project Cost: Reason for Difference:	
Did change orders exceed 10% of original Contract sum? If yes, explain.	
Were any liquidated damages assessed against the Bidder on this project? If yes, explain.	
Project Owner:	
Owner's Mailing Address:	
Name of Owner's Representative:	
Representative's Email Address:	
Representative's Telephone Number:	
Name of Bidder's Project Manager/Lead in Office: Superintendent/Lead on Site:	
Brief Description of Work Performed (Describe how the Scope of Work meets the Experience Criteria for the Project that is the subject of this Bid):	

Bidder shall provide all of the project reference information requested on this Project Reference Form for the Bidder and also for any and all Subcontractor(s) listed to perform any Work that requires the qualifications described for this project in the Bidders Qualifications Section on page III of the Notice Inviting Bids.

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BIDDER'S STATEMENT OF QUALIFICATIONS FORM

Bidder shall complete the entire Statement of Qualifications Form and submit it with its Bid Proposal for the Project in accordance with the Instructions to Bidders. Failure to complete this Form will be grounds for immediate disqualification for this proposed Work. Any explanation requested by a Bidder regarding the meaning or interpretation of this Statement of Qualification must be requested in writing and submitted in sufficient time to allow for a written reply to reach Bidder before the submission of its Bid Proposal. Oral explanations or instructions will not be provided. Any information provided to any prospective Bidder concerning this Statement of Qualification will be furnished to all prospective Bidders as an Addendum to the Contract Documents.

1	Has Bidder's Contractor's License been revoked or suspended by any governmental agency at any time in the last five (5) years?	☐ **YES**	☐ **NO**
2	In the last five (5) years has Bidder been denied an award of a Public Works Contract based on a finding by a public agency that your company was not a responsible bidder? If YES, attach description of each instance including details and owner's name and phone number.	☐ **YES**	☐ **NO**
3	Has Bidder defaulted on a Contract or been terminated for cause by any public agency on any project in California within the past five (5) years?	☐ **YES**	☐ **NO**
4	In the last five (5) years has Bidder, or any firm with which any of your company's owners, officers or partners was associated, been debarred, disqualified, removed or otherwise prevented from bidding on, or completing, any government agency or Public Works project for any reason? If YES, attach description of each instance including details and owner's name and phone number.	☐ **YES**	☐ **NO**
5	Has Bidder been assessed and paid liquidated damages pursuant to a Contract for a project with a public owner within the past five (5) years? If YES, explain and indicate on a separate signed sheet(s) the project name(s), damage(s), and date(s).	☐ **YES**	☐ **NO**
6	Has a Surety completed a Contract for Bidder, or paid for completion because your firm was in default or terminated on a Public Works project with any public agency within the last five (5) years?	☐ **YES**	☐ **NO**
7	Has any insurer had to pay amounts to third parties that were in any way related to construction activities of Bidder on a Public Works project for any public agency within the past five (5) years? If YES, explain and indicate on a separate signed sheet(s) the project name(s), damage(s), and date(s).	☐ **YES**	☐ **NO**
8	Has Bidder had any Claims, litigation, or disputes ending in judgments, settlement, mediation or arbitration, or termination for cause associated with any project in the past five (5) years? If yes, attach description of each instance including details of total Claim amount, settlement amount, and owner's name and phone number.	☐ **YES**	☐ **NO**
9	Has Bidder been cited, fined, penalized or otherwise found to have violated any prevailing wage or labor code provision within the past five (5) years? If YES, attach description of each occurrence.	☐ **YES**	☐ **NO**
10	In the past five (5) years, has Bidder or any of its owners or officers been charged and convicted of a crime under federal, state, or local law involving: (1) Bidding for awarding of, or performance of a Contract with a public entity; (2) Making a false Claim(s) to any public entity or government agency; or (3) Fraud, theft, or other acts of dishonesty to any contracting party within the past ten (10) years?	☐ **YES**	☐ **NO**

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Certification

The Bidder's Statement of Qualifications Form submitted by corporations must be signed with the legal name of the corporation, followed by the name of the state of incorporation and by the signature and designation of the chairman of the board, president or any vice president, and then followed by a second signature by the secretary, assistant secretary, the chief financial officer or assistant treasurer. All persons signing must be authorized to bind the corporation in the matter. The name of each person signing shall also be typed or printed below the signature. Satisfactory evidence of the authority of each officer signing on behalf of a corporation shall be furnished.

The Bidder's Statement of Qualifications Form submitted by partnerships must furnish the full name of all partners and must be signed in the partnership name by a general partner with authority to bind the partnership in such matters, followed by the signature and designation of the person signing. The name of the person signing shall also be typed or printed below the signature.

Each person signing below makes the following representations under penalty of perjury:

The submitter of the foregoing answers has read the same and the matters stated therein are true to the best of his or her own personal knowledge. This information is provided for the purpose of qualifying to bid on the Project, and any individual, company or other agency named herein is hereby authorized to supply the awarding body with any information necessary to verify the prospective bidder's statements. By signing below, the submitter and the named Contractor hereby grant permission to the County to contact any or all of the above listed persons or entities to confirm facts or otherwise investigate the above facts and issues.

The submitter understands that any statement which is proven to be false shall be grounds for immediate disqualification from bidding on the Project. The submitter whose signature appears below represents and warrants that he or she has authority to bind the named Contractor.

I,_____ (Name), the undersigned, am the _____ (Title),

with the authority to act for and on behalf of _____ (Contractor Entity Name), declare under penalty of perjury under the laws of the State of California that the foregoing information provided in this Bidder's Statement of Qualification Form is true, full, and correct.

I understand that making a false statement may result in disqualification from bidding on any Public Works project, registering as a Public Works Contractor with the Department of Industrial Relations, and may be grounds for termination of a Public Works Contract.

Executed on this:_____ day of _____ at_____.
(Date) (Month / Year) (City / State)

Name of Contractor Representative: _____

Signature of Contractor Representative: _____

(ADD ADDITIONAL SIGNATURE PAGES AS NECESSARY TO COMPLY WITH THE CERTIFICATION REQUIREMENTS ABOVE.)

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BIDDER'S STATEMENT OF LICENSURE

The undersigned does certify under oath that the information provided herein is true and sufficiently complete as not to be misleading.

1. Full Legal Name of Bidder: _____
2. Legal Capacity: □ Corporation □ Partnership □ Individual □ Joint Venture □ Other_____
3. Address of Bidder: _____
4. How many years has Bidder been in business as a Contractor? _____
5. How many years has Bidder been in business under its present name? _____
6. Under what other or former name have you operated? _____
7. Bidder certifies that it is the license under State of California Contractors License No. _____; said Contractors License is current and valid; and is of a classification appropriate to the Work to be undertaken for the County, a Class _____ license.
8. List other Contractors License classifications in which Bidder holds in California: _____

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct.

Dated: _____

Signature: _____

Name: _____

Title: _____

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

(Public Contract Code Section 7106)

The undersigned declares:

I am the_____ (Title) of_____ (Company), the party making the foregoing Bid.

The Bid is not made in the interest of, or on behalf of, any undisclosed person, partnership, company, association, organization, or corporation. The Bid is genuine and not collusive or sham. The Bidder has not directly or indirectly induced or solicited any other Bidder to put in a false or sham Bid. The Bidder has not directly or indirectly colluded, conspired, connived, or agreed with any Bidder or anyone else to put in a sham Bid, or to refrain from bidding. The Bidder has not in any manner, directly or indirectly, sought by agreement, communication, or conference with anyone to fix the Bid price of the Bidder or any other Bidder, or to fix any overhead, profit, or cost element of the Bid price, or of that of any other Bidder. All statements contained in the Bid are true. The Bidder has not, directly or indirectly, submitted his or her Bid price or any breakdown thereof, or the contents thereof, or divulged information or data relative thereto, to any corporation, partnership, company, association, organization, Bid depository, or to any member or agent thereof, to effectuate a collusive or sham Bid, and has not paid, and will not pay, any person or entity for such purpose.

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

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct and that this declaration is executed on:

_____ [Date], at _____ [City], _____ [State].

Signature of Declarant: _____

Printed/Typed Name of Declarant: _____

Name of Bidder: (Company): _____

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IRAN CONTRACTING ACT CERTIFICATION

(Public Contract Code sections 2200-2208)

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

1. Certification:

   Certify it is not on the current list of persons engaged in investment activities in Iran created by the California Department of General Services ("DGS") pursuant to Public Contract Code section 2203(b) and is not a financial institution extending twenty million dollars ($20,000,000) or more in credit to another person, for 45 calendar days or more, if that other person will use the credit to provide goods or services in the energy sector in Iran and is identified on the current list of persons engaged in investment activities in Iran created by DGS;

   OR

2. Exemption:

   Demonstrate it has been exempted from the certification requirement for that solicitation or Contract pursuant to Public Contract Code section 2203(c) or (d).

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

Option #1 – Certification

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

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

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Option #2 – Exemption

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

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

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

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ECONOMIC SANCTIONS IN RESPONSE TO RUSSIA'S ACTIONS IN UKRAINE

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

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

1. Desisting from making any new investments or engaging in financial transactions with Russian institutions or companies that are headquartered or have their principal place of business in Russia;
2. Not transferring technology to Russia or companies that are headquartered or have their principal place of business in Russia; and
3. Direct support to the government and people of Ukraine.

To comply with this requirement, please insert your Contractor name and Federal ID Number (if available) on the Certification Form on Page XXXIV execute by a duly authorized representative for the contractor and return with the bid proposal.

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

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

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

CERTIFICATION

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

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

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BID BOND

(Public Work – Public Contract Code Section 20129(a) –
Not necessary when cash, cashier's check or certified check accompanies Bid)

Recitals:

1. _____ (Bidder) has submitted its Bid Proposal to the County of Riverside, by and for the Department of Waste Resources, for the construction of the Public Work known as **GAS COLLECTION SYSTEMS** at the BADLANDS AND LAMB CANYON LANDFILLS, in accordance with a Notice Inviting Bids dated _____.

2. WHEREAS,

_____

_____

_____
(Name, address, and telephone number of Bidder),

the undersigned Bidder, as Principal, has submitted the accompanying Bid Proposal, which as a condition of submittal shall include Bid Security pursuant to Public Contract Code §20129 in the amount of ten percent (10%) of the Bid amount, which security may be in the form of a Bid Bond issued by an Admitted surety insurer pursuant to Code of Civil Procedure Section 995.120.

3. WHEREAS,

_____

_____

_____
(Name, address, and telephone number of Surety),

the undersigned Surety, hereafter called Surety, is the surety, an Admitted surety insurer pursuant to Code of Civil Procedure Section 995.120, on this Bond.

(This page left intentionally blank.)

Agreement: NOW, THEREFORE, We, Bidder as principal and Surety as surety, jointly and severally agree and state as follows:

1. The amount of the obligation of this Bond is 10% of the amount of the Total Bid Proposal price and inures to the benefit of County.

2. This Bond is exonerated by (1) County rejecting said Bid Proposal or, in the alternate, (2) if said Bid Proposal is accepted, Bidder executes the Construction Agreement and furnishes the Bonds and certificates of insurance as agreed to in its Bid Proposal, otherwise it remains in full force and effect until forfeiture resulting from failure of Bidder to act as agreed to in its Bid Proposal.

3. Surety, for value received, stipulates and agrees that its obligations hereunder shall in no way be impaired or affected by any extension of time within which County may accept the Bid Proposal and waives notice of any such extension.

4. This Bond is binding on our heirs, executors, administrators, successors and assigns.

5. The penal sum guaranteed by this Bond shall be forfeited to the County in the event of any of the following:

    a. Principal withdraws said Bid after the Bid Deadline in violation of the Contract Documents and Applicable Law; or

    b. Principal fails to provide the County within the time specified in the Contract Documents, the executed Construction Agreement, insurance and bonds.

Dated: _____

By: _____ By: _____

Title: _____ Title: _____

(Surety) (Bidder)

NOTE: This Bond must be executed by both parties with corporate seal affixed. All signatures must be acknowledged by a notary (attach acknowledgments). A power of attorney for the attorney-in-fact of the Surety must be attached.

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CONSTRUCTION AGREEMENT, BONDS, AND OTHER FORMS

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CONSTRUCTION AGREEMENT

THIS CONSTRUCTION AGREEMENT ("**Agreement**") is made as of _____ and is by and between the COUNTY OF RIVERSIDE, through its Department of Waste Resources, a political subdivision of the State of California, (County) and _____, (Contractor). The indemnity and insurance obligations of Contractor, as set forth in Section **5-3** General Provisions, shall commence upon execution of this Agreement.

IT IS AGREED BY THE PARTIES AS FOLLOWS:

1. **The Work**. Contractor shall furnish all tools, equipment, apparatus, facilities, labor, supervision, services, transportation, materials and other required items necessary to perform the Work for the project, **GAS COLLECTION SYSTEMS** at the BADLANDS AND LAMB CANYON LANDFILLS (the "**Project**"), and Contractor shall do all things necessary to accomplish and complete the Work described in and in exact conformity with the Contract Documents, subject to such inspection as County deems appropriate.

2. **Contract Documents**. The Contract Documents for the Project, except Change Orders and Construction Change Directive issued after execution of this Agreement, are enumerated as follows:

(a) Construction Agreement, including:
   a. Exhibit A, Bidder's completed Bid Item List, List of Subcontractors, and Non-Collusion Declaration,
   b. Exhibit B, Workers' Compensation Contractor Certificate,
   c. Exhibit C, Declaration of Sufficiency of Funds,
   d. Exhibit D, Evidence of Insurance,

(b) Administrative Provisions;
(c) General Provisions;
(d) Special Provisions
(e) Detailed Provisions for **GAS COLLECTION SYSTEMS** at the BADLANDS AND LAMB CANYON LANDFILLS;
(f) Appendix A – Landfill Site Rules;
(g) Appendix B – SCAQMD Permits to Operate/Construct;
(h) Appendix C – Project Drawings for **GAS COLLECTION SYSTEMS**;
(i) Standard Specifications for Public Works Construction, Latest Edition, with Amendments ("**Standard Specifications**" or "**Greenbook**");
(j) Any other documents included in or incorporated into the Contract Documents;
(k) Addenda Nos. _____;
(l) Orders, instructions, drawings and plans issued by County during the course of the Work in accordance with the provisions of the Contract Documents.

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Each of the listed documents presently in existence are by this reference incorporated into this Agreement and each of these documents not now in existence are incorporated herein as of the time of their issuance.

The following are not considered Contract Documents and stand alone:

- Payment Bond and Performance Bond
- Escrow Agreement (optional)

3. Precedence of the Contract Documents. In the event of conflict between any of the Contract Documents, the provision placing a more stringent requirement on the Contractor shall prevail. The Contractor shall provide the better quality or greater quantity of Work and/or materials unless otherwise directed by County in writing. In the event none of the Contract Documents place a more stringent requirement or greater burden on the Contractor, the controlling provision shall be that which is found in the document with higher precedence. The order of precedence, from highest to lowest, shall be as follows:

- Permits issued by jurisdictional regulatory agencies.
- Change Orders, Construction Change Directives and/or Supplemental Agreements, or Addenda to any of the Contract Documents; whichever occurs last.
- Construction Agreement.
- Detailed Provisions.
- Special Provisions.
- Administrative Provisions.
- General Provisions.
- Project Drawings and Specifications as listed in Appendix C.
- Standard Drawings.
- Reference Specifications.

Detail drawings shall take precedence over general drawings.

4. Notice to Proceed. The County will not issue the Notice to Proceed before the Contractor submits the Performance Bond, Payment Bond, certificates of insurance, construction schedule, Public/Site Safety Plan, and Project-specific SWPPP supplement. After receipt of the construction schedule, Public/Site Safety Plan, and Project specific SWPPP supplement, the County will review said documents and provide appropriate comments. The Contractor will be required to address all comments from the County and resubmit within five (5) Working Days.

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5. Contract Time for Completion and Liquidated Damages. The Contractor shall diligently and continuously prosecute the entire Project to Final Completion before June 30, 2029, as may be modified by a Change Order or Construction Change Directive. The entire Project is composed of individual Work Orders, issued by the County. The number of Working Days charged to the Contractor shall be as set forth in Section **4.2** of the Special Provisions. The length of each Working Day shall be from 7:00 AM to 4:00 PM, including one hour for lunch break, unless otherwise approved in writing by the County.

The following days have been designated by the County as Legal Holidays:

• January 1st	New Year's Day
• Third Monday in January	Martin Luther King, Jr. Birthday
• February 12th	Lincoln's Birthday
• Third Monday in February	Washington's Birthday (observed)
• Last Monday in May	Memorial Day
• July 4th	Independence Day
• First Monday in September	Labor Day
• Second Monday in October	Columbus Day
• November 11th	Veteran's Day
• Fourth Thursday in November	Thanksgiving Day
• Fourth Friday in November	day after Thanksgiving Day
• December 25th	Christmas Day

For a Legal Holiday that falls on a Saturday, both the Saturday and the preceding Friday shall be considered Legal Holidays. For a Legal Holiday that falls on a Sunday, both the Sunday and following Monday shall be considered Legal Holidays.

The Contractor shall not be permitted to work on days designated by the County as Legal Holidays unless the Contractor submits a written request to work and the request is approved in writing by the County. All Contractor requests to work on designated Legal Holidays shall be submitted at least seven (7) calendar days prior to the requested date(s).

It is agreed by the parties to the Contract that in the case all the Work called for under the Contract in all parts and requirements is not finished or completed within the number of Working Days as set forth in this Agreement, damage will be sustained by the County, and that it is and will be impractical and extremely difficult to ascertain and determine the actual damage which the County will sustain in the event of and by reason of such delay; and it is therefore agreed that the Contractor will pay to the County the sum of One Thousand Dollars ($1,000) per day for each and every calendar days delay in finishing the Work in excess of the number of Working Days prescribed above as liquidated and agreed damages; and the Contractor agrees to pay said liquidated damages herein provided for, and further agrees that the County may deduct the amount thereof from any moneys due or that may become due the Contractor under the Contract. The Parties intend for the liquidated damages set forth herein to apply to this Contract as set forth in Government Code Section 53069.85 and in Public Contract Code Section 7203.

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Liquidated damages are owed automatically and without notice of any kind upon the accrual of each day of delay. County may at any time deduct liquidated damages as are payable hereunder from money due or to become due to Contractor, or pursue any other legal remedy to collect such liquidated damages from Contractor and/or its Surety. Neither the County's failure or delay in deducting liquidated damages from payments otherwise due Contractor, nor County's failure or delay in notifying Contractor of the accrual of liquidated damages, shall be deemed a waiver of County's right to liquidated damages.

County's rights under this Section shall not be interpreted as precluding or limiting: (1) any right or remedy of County arising from an event of Contractor default other than a failure to complete the Work within the Contract Time; or (2) County's right to order an acceleration, at Contractor's expense, of performance of the Work to overcome delay, including, without limitation, a delay for which County has the right to assess and/or accrue liquidated damages. The availability of liquidated damages shall not limit County's right to terminate the Contractor's performance and accrual and/or assessment of liquidated damages does not constitute a waiver of such rights.

6. Contract Price and Payment.

6.1 **Contract Price.** The Contract Price is the total aggregate amount of the Contractor's Total Bid Proposal based on the estimated quantities listed in the Bid Proposal as set forth in the award of the Contract approved by the County's Board of Supervisors. The estimated quantities will not govern final payment. The Contractor will receive and accept and the County will pay the Unit Prices and lump sum prices only for actual quantities of installed items constructed in accordance with the Contract Documents specified in the attached Bid Item List which is incorporated herein by reference as Exhibit A, as full compensation for the Contractor's full performance of the Contract including furnishing all labor, materials, and equipment for doing all the Work contemplated and embraced in this Agreement. Upon completion of the Work, if the actual installed quantities show either an increase or decrease from the estimated quantities in the Bid Proposal, the Unit Prices (including lump sum prices) will prevail.

6.2 **Payment Procedures.** Based upon applications for payment submitted by the Contractor to the County, the County shall make payments to the Contractor in accordance with Article 7 of the General Provisions.

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7. Bonds. The Contractor shall provide two surety bonds. The Contractor shall furnish a satisfactory Performance Bond meeting all statutory requirements of the State of California on the form provided by the County. The bond shall be furnished as a guarantee of the faithful performance of the requirements of the Contract Documents as may be amended from time to time, including, but not limited to, liability for delays and damages (both direct and consequential) to the County and the County's separate Contractors and consultants, warranties, guarantees, and indemnity obligations, in an amount that shall remain equal to one hundred percent (100%) of the Contract Price.

The Contractor shall furnish a separate satisfactory Labor and Materials Payment Bond meeting all statutory requirements of the State of California on the form provided by the County in an amount that shall remain equal to one hundred percent (100%) of the Contract Price to secure payment of all Claims, demands, stop payment notices, or charges of the State of California, of material suppliers, mechanics, or laborers employed by the Contractor or by any Subcontractor, or any person, form, or entity eligible to file a stop payment notice with respect to the Work.

All bonds shall be executed by a California-admitted surety insurer. Bonds issued by a California-admitted surety insurer listed on the latest version of the U.S Department of Treasury Circular 570 shall be deemed accepted unless specifically rejected by the County. Bonds issued by sureties not listed in Treasury Circular 570 must be accompanied by all documents enumerated in California Code of Civil Procedure Section 995.660(a). The bonds shall bear the same date as the Contract. The attorney-in-fact who executes the required bonds on behalf of the surety shall affix thereto a certified and current copy of the power of attorney. In the event of changes that increase the Contract Price, the amount of each bond shall be deemed to increase and at all times remain equal to the Contract Price. The signatures shall be acknowledged by a notary public. Every bond must display the surety's bond number and incorporate the Contract for construction of the Work by reference. The terms of the bonds shall provide that the surety agrees that no change, extension of time, alteration, or modification of the Contract Documents or the Work to be performed thereunder shall in any way affect its obligations and shall waive notice of any such change, extension of time, alteration, or modification of the Contract Documents. The surety further agrees that it is obligated under the bonds to any successor, grantee, or assignee of the County.

Upon the request of any person or entity appearing to be a potential beneficiary of bonds covering payment of obligations arising under the Contract, the Contractor shall promptly furnish a copy of the bonds or shall authorize a copy to be furnished.

Should any bond become insufficient, or should any of the sureties, in the opinion of the County, become non-responsible or unacceptable, the Contractor shall, within ten (10) Calendar Days after receiving notice from the County, provide written documentation to the Satisfaction of the County that Contractor has secured new or additional sureties for the bonds; otherwise the Contractor shall be in default of the Contract. No further payments shall be deemed due or will be made under Contract until a new surety(ies) qualifies and is accepted by the County.

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RIVERSIDE COUNTY DEPARTMENT OF
WASTE RESOURCES
14310 Frederick Street
Moreno Valley, CA 92553

By: _____ Date: _____
Andy Cortez
General Manager – Chief Engineer

COUNTY OF RIVERSIDE

By: _____ Date: _____
Chair, Board of Supervisors

ATTEST:

By: _____
Kimberly Rector, Clerk of the Board

By: _____ Date: _____
Deputy

(Seal)

CONTRACTORS LICENSE NOTICE

Contractors are required by law to be licensed and regulated by the Contractors State License Board which has jurisdiction to investigate complaints against Contractors if a complaint regarding a patent act or omission is filed within four years of the date of the alleged violation. A complaint regarding a latent act or omission pertaining to structural defects must be filed within 10 years of the date of the alleged violation. Any questions concerning a Contractor may be referred to the Registrar, Contractors State License Board, P.O. Box 26000, Sacramento, California 95826.

_____
CONTRACTOR

By: _____ Date: _____

Name: _____

Title: _____
(If corporation, attach corporate seal)

License No.:_____

Federal Tax I.D. No.:_____

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EXHIBIT A

(Construction Agreement for the Riverside County Department of Waste Resources, **GAS COLLECTION SYSTEMS** at the BADLANDS AND LAMB CANYON LANDFILLS, located in Riverside County, California.)

It is understood that the quantities listed in this Bid Proposal (except for those shown as "Final" or "Lump Sum (L.S.)") are but estimates only and final payment will be based on actual quantities whatever they may be, subject to such adjustments and alterations as elsewhere provided for in the Contract Documents. Notwithstanding anything to the contrary in the Contract Documents, Contractor will not be entitled to an adjustment of any unit cost, except as expressly agreed to in writing by the County, which agreement shall be within the County's sole and absolute discretion. Items with zero quantity are not expected to occur during the project period, but will be paid at the rate listed in this Bid Proposal.

Fiscal Year 2026-2027 Project Totals

ITEM NO.	ITEM OF WORK	UNIT	QUANTITY	UNIT COST	TOTAL COST
1.1	Mobilization for Horizontal Well Construction	LS	4		
1.2	Mobilization for Vertical Well Construction	LS	3		
1.3	Mobilization for Header and Lateral Pipe Install	LS	4		
1.4	Mobilization for Relocating Header and Lateral Pipe	LS	2		
1.5	Mobilization for Probe Construction	LS	1		
2.1	Landfill Trenching, Backing and Compacting (including Refuse Excavation, Handling and Disposal)	LF	6000		
2.2	Native Soil Trenching, Backfilling and Compacting	LF	1000		
3	Install Horizontal Well	LF	5500		
4	Install Aggregate Pit	EA	16		
5.1	Drill and Install Vertical Gas Wells up to 135 feet	LF	4000		
5.2	Drill and Install Vertical Gas Wells up to 135 feet, 2 in 1	LF	400		
6.1	Drill and Install Vertical Gas Wells From 136 Feet up to 220 feet	LF	2000		
6.2	Drill and Install Vertical Gas Wells From 136 Feet up to 220 feet, 2 in 1	LF	400		
6.3	Drill and Install Vertical Gas Wells From 221 Feet up to 320 feet	LF	300		
7.1	Drill and Install Native LFG Wells up to 320 feet	LF	300		
7.2	Drill and Install Native Probe, 2 Depths	LF	300		
7.3	Drill and Install Native Probe, 3 Depths	LF	150		
7.4	Drill and Install Native Probe, 4 Depths	LF	30		
8	Install 2" HDPE Pipe	LF	0		
9	Install 3" HDPE Lateral Pipe	LF	0		
10	Install 4" HDPE Lateral Pipe	LF	2000		
11	Install 6" HDPE Lateral Pipe	LF	400		

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ITEM NO.	ITEM OF WORK	UNIT	QUANTITY	UNIT COST	TOTAL COST
12	Install 8” HDPE Header Pipe	LF	0		
13	Install 10” HDPE Header Pipe	LF	0		
14	Install 12” HDPE Header Pipe	LF	3000		
15	Install 16” HDPE Header Pipe	LF	0		
16	Install 18” HDPE Header Pipe	LF	2000		
17	Install 20” HDPE Header Pipe	LF	0		
18	Install 24” HDPE Header Pipe	LF	1000		
19	Re-locate 2” HDPE Pipe	LF	0		
20	Re-locate 3” Lateral Pipe	LF	0		
21	Re-locate 4” Lateral Pipe	LF	0		
22	Re-locate 6” Header Pipe	LF	0		
23	Re-locate 8” Header Pipe	LF	0		
24	Re-locate 10" Header Pipe	LF	0		
25	Re-locate 12" Header Pipe	LF	0		
26	Re-locate 16" Header Pipe	LF	0		
27	Re-locate 18" Header Pipe	LF	0		
28	Re-locate 20" Header Pipe	LF	0		
29	Re-locate 24" Header Pipe	LF	0		
30	Install Butterfly Valve on existing segments of 8"-24" diameter HDPE	EA	16		
31	Cut and Move 2" HDPE Pipe - 8" Header Pipe	LF	2000		
32	Cut and Move 10" Header Pipe - 24" Header Pipe	LF	2000		
33.1	Install Well Assembly	EA	16		
33.2	Re-locate Well Assembly	EA	12		
34	Install Probe Monument	EA	3		
35.1	Demobilization for New Construction	EA	12		
35.2	Demobilization for Relocation	EA	2		
35.3	Demobilization in Between Days	EA	0		
36	Dirt Haul Trip within Site	EA	0		
37	T&M	LS	1	$600,000	$600,000

For the Total FY 27 Bid Proposal of: **TOTAL COST (State in Figures)** **$**_____

(Write out Total Bid Amount in Words), subject to additions and deductions as provided for in this Agreement.

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Fiscal Year 2027-2028 Project Totals

ITEM NO.	ITEM OF WORK	UNIT	QUANTITY	UNIT COST	TOTAL COST
1.1	Mobilization for Horizontal Well Construction	LS	4		
1.2	Mobilization for Vertical Well Construction	LS	2		
1.3	Mobilization for Header and Lateral Pipe Install	LS	4		
1.4	Mobilization for Relocating Header and Lateral Pipe	LS	2		
1.5	Mobilization for Probe Construction	LS	1		
2.1	Landfill Trenching, Backing and Compacting (including Refuse Excavation, Handling and Disposal)	LF	4000		
2.2	Native Soil Trenching, Backfilling and Compacting	LF	500		
3	Install Horizontal Well	LF	3500		
4	Install Aggregate Pit	EA	8		
5.1	Drill and Install Vertical Gas Wells up to 135 feet	LF	3000		
5.2	Drill and Install Vertical Gas Wells up to 135 feet, 2 in 1	LF	400		
6.1	Drill and Install Vertical Gas Wells From 136 Feet up to 220 feet	LF	1500		
6.2	Drill and Install Vertical Gas Wells From 136 Feet up to 220 feet, 2 in 1	LF	400		
6.3	Drill and Install Vertical Gas Wells From 221 Feet up to 320 feet	LF	300		
7.1	Drill and Install Native LFG Wells up to 320 feet	LF	200		
7.2	Drill and Install Native Probe, 2 Depths	LF	200		
7.3	Drill and Install Native Probe, 3 Depths	LF	100		
7.4	Drill and Install Native Probe, 4 Depths	LF	20		
8	Install 2” HDPE Pipe	LF	0		
9	Install 3” HDPE Lateral Pipe	LF	0		
10	Install 4" HDPE Lateral Pipe	LF	1000		
11	Install 6” HDPE Lateral Pipe	LF	400		
12	Install 8” HDPE Header Pipe	LF	0		
13	Install 10” HDPE Header Pipe	LF	0		
14	Install 12” HDPE Header Pipe	LF	1000		
15	Install 16” HDPE Header Pipe	LF	0		
16	Install 18” HDPE Header Pipe	LF	1000		
17	Install 20” HDPE Header Pipe	LF	0		

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ITEM NO.	ITEM OF WORK	UNIT	QUANTITY	UNIT COST	TOTAL COST
18	Install 24” HDPE Header Pipe	LF	500		
19	Re-locate 2” HDPE Pipe	LF	0		
20	Re-locate 3” Lateral Pipe	LF	0		
21	Re-locate 4” Lateral Pipe	LF	0		
22	Re-locate 6” Header Pipe	LF	0		
23	Re-locate 8” Header Pipe	LF	0		
24	Re-locate 10" Header Pipe	LF	0		
25	Re-locate 12" Header Pipe	LF	0		
26	Re-locate 16" Header Pipe	LF	0		
27	Re-locate 18" Header Pipe	LF	0		
28	Re-locate 20" Header Pipe	LF	0		
29	Re-locate 24" Header Pipe	LF	0		
30	Install Butterfly Valve on existing segments of 8"-24" diameter HDPE	EA	4		
31	Cut and Move 2" HDPE Pipe - 8" Header Pipe	LF	1000		
32	Cut and Move 10" Header Pipe - 24" Header Pipe	LF	1000		
33.1	Install Well Assembly	EA	16		
33.2	Re-locate Well Assembly	EA	6		
34	Install Probe Monument	EA	2		
35.1	Demobilization for New Construction	EA	11		
35.2	Demobilization for Relocation	EA	2		
35.3	Demobilization in Between Days	EA	0		
36	Dirt Haul Trip within Site	EA	0		
37	T&M	LS	1	$400,000	$400,000

For the Total FY28 Bid Proposal of: **TOTAL COST (State in Figures)** **$**_____

_____

(Write out Total Bid Amount in Words), subject to additions and deductions as provided for in this Agreement.

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Fiscal Year 2028-2029 Project Totals

ITEM NO.	ITEM OF WORK	UNIT	QUANTITY	UNIT COST	TOTAL COST
1.1	Mobilization for Horizontal Well Construction	LS	4		
1.2	Mobilization for Vertical Well Construction	LS	2		
1.3	Mobilization for Header and Lateral Pipe Install	LS	4		
1.4	Mobilization for Relocating Header and Lateral Pipe	LS	2		
1.5	Mobilization for Probe Construction	LS	1		
2.1	Landfill Trenching, Backing and Compacting (including Refuse Excavation, Handling and Disposal)	LF	4000		
2.2	Native Soil Trenching, Backfilling and Compacting	LF	500		
3	Install Horizontal Well	LF	3500		
4	Install Aggregate Pit	EA	8		
5.1	Drill and Install Vertical Gas Wells up to 135 feet	LF	3000		
5.2	Drill and Install Vertical Gas Wells up to 135 feet, 2 in 1	LF	400		
6.1	Drill and Install Vertical Gas Wells From 136 Feet up to 220 feet	LF	1500		
6.2	Drill and Install Vertical Gas Wells From 136 Feet up to 220 feet, 2 in 1	LF	400		
6.3	Drill and Install Vertical Gas Wells From 221 Feet up to 320 feet	LF	300		
7.1	Drill and Install Native LFG Wells up to 320 feet	LF	200		
7.2	Drill and Install Native Probe, 2 Depths	LF	200		
7.3	Drill and Install Native Probe, 3 Depths	LF	100		
7.4	Drill and Install Native Probe, 4 Depths	LF	20		
8	Install 2” HDPE Pipe	LF	0		
9	Install 3” HDPE Lateral Pipe	LF	0		
10	Install 4" HDPE Lateral Pipe	LF	1000		
11	Install 6” HDPE Lateral Pipe	LF	400		
12	Install 8” HDPE Header Pipe	LF	0		
13	Install 10” HDPE Header Pipe	LF	0		
14	Install 12” HDPE Header Pipe	LF	1000		
15	Install 16” HDPE Header Pipe	LF	0		
16	Install 18” HDPE Header Pipe	LF	1000		
17	Install 20” HDPE Header Pipe	LF	0		

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ITEM NO.	ITEM OF WORK	UNIT	QUANTITY	UNIT COST	TOTAL COST
18	Install 24” HDPE Header Pipe	LF	500		
19	Re-locate 2” HDPE Pipe	LF	0		
20	Re-locate 3” Lateral Pipe	LF	0		
21	Re-locate 4” Lateral Pipe	LF	0		
22	Re-locate 6” Header Pipe	LF	0		
23	Re-locate 8” Header Pipe	LF	0		
24	Re-locate 10" Header Pipe	LF	0		
25	Re-locate 12" Header Pipe	LF	0		
26	Re-locate 16" Header Pipe	LF	0		
27	Re-locate 18" Header Pipe	LF	0		
28	Re-locate 20" Header Pipe	LF	0		
29	Re-locate 24" Header Pipe	LF	0		
30	Install Butterfly Valve on existing segments of 8"-24" diameter HDPE	EA	4		
31	Cut and Move 2" HDPE Pipe - 8" Header Pipe	LF	1000		
32	Cut and Move 10" Header Pipe - 24" Header Pipe	LF	1000		
33.1	Install Well Assembly	EA	16		
33.2	Re-locate Well Assembly	EA	6		
34	Install Probe Monument	EA	2		
35.1	Demobilization for New Construction	EA	11		
35.2	Demobilization for Relocation	EA	2		
35.3	Demobilization in Between Days	EA	0		
36	Dirt Haul Trip within Site	EA	0		
37	T&M	LS	1	$400,000	$400,000

For the Total FY29 Bid Proposal of: **TOTAL COST (State in Figures)** **$**_____

_____

(Write out Total Bid Amount in Words), subject to additions and deductions as provided for in this Agreement.

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PERFORMANCE BOND

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

KNOW ALL PERSONS BY THESE PRESENTS:

WHEREAS, the Board of Supervisors ("Board") for the County of Riverside, ("County") and _____ _____, ("Contractor)" have entered into a Contract for the furnishing of all materials and labor, services and transportation, necessary, convenient, and proper to perform the following project:

CONSTRUCTION of GAS COLLECTION SYSTEMS at BADLANDS AND LAMB CANYON LANDFILLS

("Contract") which Contract dated as of the date of the last signature on the signature page and all of the Contract Documents attached to or forming a part of the Contract, are hereby referred to and made a part hereof;

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

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

1. Perform all the Work required to complete the Project; and

2. Pay to the County all damages the County incurs as a result of the Contractor's failure to perform all the Work required to complete the Project.

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

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As a condition precedent to the satisfactory completion of the Contract, the above obligations shall hold good and remain in effect for a period equal to the warranty and/or guarantee periods of the Contract, during which time Surety's obligations shall continue if Contractor shall fail to make full, complete, and satisfactory repair and replacements and totally protect the County from loss or damage resulting from or caused by defective materials or faulty workmanship. The obligations of Surety hereunder shall continue so long as any obligation of Contractor remains. Nothing herein shall limit the County's rights or the Contractor or Surety's obligations under the Contract, law or equity, including, but not limited to, California Code of Civil Procedure section 337.15.

Whenever Contractor shall be, and is declared by County to be, in default under the Contract, the Surety shall promptly either remedy the default, or, if the Contract is terminated by County or the Contractor's performance of the Work is discontinued, Surety shall take one of the following actions:

(1) Promptly complete the Contract through its agents or independent Contractors, subject to acceptance of such agents or independent Contractors by County as hereinafter set forth, in accordance with its terms and conditions and to pay and perform all obligations of Contractor under the Contract (including without limitation, all obligations with respect to payment of liquidated damages) to be secured with performance and payment bonds extended by a qualified surety equivalent to the "Balance of the bonds issued on the Construction Contract and pay to the County the amount of damages in excess of the Balance of the Contract Price (as hereinafter defined) incurred by the County as a result of the Contractor Default; or

(2) Waive its right to arrange for completion of the Work and pay to the County the amount of damages in excess of the Balance of the Contract Price incurred by the County as a result of the Contractor Default, subject to the penal amount of this bond as set forth above.

If the Surety elects to complete the Contract Subject to the commitment by the County to pay the Balance of the Contract Price, the Surety is obligated, without duplication, for (a) the responsibilities of the Contractor for correction of defective Work and completion of the Construction Contract; (b) additional legal, design professional and delay costs resulting from the Contractor's Default, and resulting from the actions or failure to act of the Surety; and (c) liquidated damages caused by delayed completion of the Work.

The term "**Balance of the Contract Price**," as used herein, shall mean the total amount payable to Contractor by County under the Contract and any modifications thereto, less the amount previously paid by County to the Contractor and less amounts that County is authorized to withhold or deduct from payment under the terms of the Contract and Applicable Law.

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If the Surety does not proceed as provided above with reasonable promptness, the Surety shall be deemed to be in default on this Bond seven (7) days after receipt of an additional written notice from the County to the Surety demanding that the Surety perform its obligations under this Bond, and the County shall be entitled to enforce any remedy available to the County.

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

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

In the event any legal proceeding or arbitration is brought upon this bond by County and judgment or award is entered in favor of County as the prevailing party, Surety shall pay all costs and attorney's fees incurred by the County.

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

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

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

Signature provisions on following page:

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Affix Seal if Corporation

_____
(Firm Name – Contractor)

_____

_____

_____
(Business Address)

By _____
(Original Signature)

_____
(Title)

_____
(Corporation Name – Surety) **Affix Corporate Seal**

_____

_____

_____
(Business Address)

By _____
(Signature – Attached Notary's Acknowledgment)

_____
ATTORNEY-IN-FACT
(Title-Attach Power of Attorney)

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

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PAYMENT BOND

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

KNOW ALL PERSONS BY THESE PRESENTS:

WHEREAS, the Board of Supervisors ("Board") for the County of Riverside, ("County") and _____ _____, ("Contractor)" have entered into a contract for the furnishing of all materials and labor, services and transportation, necessary, convenient, and proper to perform the following project:

CONSTRUCTION of GAS COLLECTION SYSTEMS at BADLANDS AND LAMB CANYON LANDFILLS

("Contract") which Contract dated as of the date of the last signature on the signature page and all of the Contract Documents attached to or forming a part of the Contract, are hereby referred to and made a part hereof; and

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

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

THE CONDITION OF THIS OBLIGATION IS SUCH that if Contractor, its heirs, executors, administrators, successors, or assigns approved by County, or its Subcontractors, of any contracting tier, shall fail to pay any person or persons named in California Civil Code, Section 9554, then Surety will pay for the same, in or to an amount not exceeding the penal amount hereinabove set forth, and also will pay to the prevailing party if suit is brought upon this bond, reasonable attorney's fees as provided in California Civil Code, Section 9564.

Contractor and Surety agree that this Labor and Materials Payment Bond shall not be considered a part of the Contract between Contractor and the County. Contractor and Surety further agree that this Labor and Materials Payment Bond is a separate obligation of the Contractor and its Surety, and that any attorney's fee provision contained in this Labor and Materials Payment

(This page left intentionally blank.)

Bond shall not apply to the Contract. In the event there is any litigation between the parties arising from the breach of the Contract, each party will bear its own attorneys' fees in the litigation.

It is hereby expressly stipulated and agreed that this bond shall inure to the benefit of any and all persons, companies, and corporations entitled to file Claims under section 9100 of the Civil Code, so as to give a right of action to them or their assigns in any suit brought upon this bond.

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

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

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

Signature provisions on following page:

(This page left intentionally blank.)

Affix Seal if Corporation

_____
(Firm Name – Contractor)

_____
_____
_____
(Business Address)

By _____
(Original Signature)

_____
(Title)

_____
(Corporation Name – Surety) **Affix Corporate Seal**

_____
_____
_____
(Business Address)

By _____
(Signature – Attached Notary's Acknowledgment)

_____
ATTORNEY-IN-FACT
(Title-Attach Power of Attorney)

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

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WORKERS' COMPENSATION CONTRACTOR CERTIFICATE

(Labor Code Sections 1860, 1861 & 3700)

In accordance with the provisions of Section 3700 of the Labor Code, every Contractor shall secure compensation in one or more of the following ways:

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

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

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

Labor Code Section 1861 requires each Contractor to whom a Public Works Contract is awarded shall sign and file with the County the following certification prior to performing the Work of the Public Works construction Contract:

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

By signing this certification, the Contractor understands the requirements of and agrees to comply with the aforementioned requirements.

Name of Contractor: _____

By: _____

Title: _____

(This page left intentionally blank.)

DECLARATION OF SUFFICIENCY OF FUNDS

(California Labor Code Section 2810)

I, the undersigned, an authorized representative of _____("Contractor") with authority to make the statements contained in this Declaration on behalf of Contractor, hereby declare the following:

1. The Contractor's employer identification number for state tax purposes is:

_____.

2. The Contractor's Workers' Compensation insurance policy number is:

_____,

and the name, address, and telephone number of the insurance carrier providing said insurance is:

_____

_____

_____.

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

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

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

_____

_____

_____

(This page left intentionally blank.)

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

Total Number of Workers	Total Amount of Wages	Date(s) for Payment of Wages

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

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

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

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

List of Independent Contractors	Current Local, State and Federal Contractor License Identification Number

(This page left intentionally blank.)

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

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

☐ The actual number of independent Contractors requested in Paragraph 7, above, is unknown and therefore the statement of number of independent Contractors declared therein is based on the Contractor's best estimate available at the time of submitting its Bid, rather than the actual number of independent Contractors that will be utilized, and if and when the actual number of independent Contractors and the other information requested above is available, it will be reported to the County of Riverside by Contractor in writing.

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

_____
(Signature)

_____
Print Name of Signer:

_____
Print Name of Contractor:

(This page left intentionally blank.)

ADD EVIDENCE OF INSURANCE EXHIBIT HERE

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GENERAL PROVISIONS

FOR

THE ON-CALL CONSTRUCTION OF

GAS COLLECTION SYSTEMS

AT

BADLANDS AND LAMB CANYON LANDFILLS

JUNE 2026

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ARTICLE 1 - GENERAL

1-1 GENERAL

Unless otherwise stated, the words directed, required, permitted, ordered, instructed, designated, considered necessary, prescribed, approved, acceptable, satisfactory, or words of like meaning, refer to actions, expressions, and prerogatives of the Engineer.

The phrase unless otherwise specified shall mean unless otherwise specified in the Contract Documents or shown on the Plans.

The Work shall be performed in accordance with these Contract Documents.

1-2 TERMS AND DEFINITIONS

Whenever in these Contract Documents, the following terms or pronouns in place of them are used, the intent and meaning shall be interpreted as follows (See Special Provisions and Detailed Provisions for additional terms and definitions):

a) **Admitted Surety Insurer**. "Admitted Surety Insurer" means corporate issuer or a reciprocal or interinsurance exchange to which the Insurance Commissioner has issued a certificate of authority to transact surety insurance in this state, as defined in Section 105 of the Insurance Code (CCP 995.120).

b) **Agency**. "Agency" whenever used in the Contract Documents shall refer to the County Department of Waste Resources.

c) **Agreement**. "Agreement" means the Construction Agreement included with the Administrative Provisions entered into between the County and the Contractor (sometimes also referred to as the "Contract").

d) **Allowable Costs**. "Allowable Costs" means those costs that are used in calculating Contract Adjustments to the Contract Price.

e) **Allowable Markups**. "Allowable Markups" means those percentage markups used in calculating Contract Adjustments to the Contract Price.

f) **Alternate Bid Item**. "Alternate Bid Item" is Work described in the Contract Documents as Alternate Work, to be added or deducted from the Base Bid, which shall be the Contractor's responsibility, for the price included in the Bid, if the County accepts the Alternate Bid Item.

g) **Applicable Law**. "Applicable Law" means all Federal, State, County and municipal laws, statutes, ordinances, resolutions, codes, rules, regulations, building inspection assessments and recommendations, fire marshal approvals, lawful orders of governmental authorities and life safety codes as may be amended from time to time, governing Contractor's performance of the Work.

h) **Base Bid, Base Bid Price**. "Base Bid" or "Base Bid Price" is the price stated in the Bid for which the Bidder offers to perform the Work described in the Contract Documents as the base Contract Work (i.e. not including Alternate Bid Items).

i) **Bid, Bid Proposal**. "Bid" or "Bid Proposal" is a completed and properly executed offer by the Bidder on County-prescribed forms to perform the Work for the price(s) stated in response to the Notice Inviting Bids.

j) **Bid Item**. "Bid Item" means an item of Work listed on the Bid Item List in the Bid Proposal, for which the Bidder provides a price.

k) **Bid Item List**. "Bid Item List" means the list of items of Work, units of measure, Estimated Quantities, and the prices offered by the Bidder submitted on the County's forms, setting forth the prices for the Work including the Base Bid Price and Alternate Bid Items, if any.

l) **Bidder**. "Bidder" means any individual, firm, partnership, limited liability company, or corporation submitting a Bid for the Work contemplated, acting directly or through a duly authorized representative.

m) **Board or Board of Supervisors**. "Board" or "Board of Supervisors" means the Board of Supervisors of the County, also sometimes referred to as the Board.

n) **Change**. "Change" means a modification, change, addition, substitution or deletion in the Work. Use of the term "Change," in any context, in the Contract Documents shall not be interpreted as implying that the Contractor is entitled to a Contract Adjustment on any basis other than as permitted by the terms of the Contract Documents for Change Orders or Deleted Work.

o) **Change Order**. "Change Order" means a written instrument, signed in accordance with the requirements of the General Provisions, setting forth the agreement of the County and the Contractor on the terms of a Contract Adjustment. See Section **7-4.4.3** of these General Provisions.

p) **Change Order Request**. "Change Order Request" means the Contractor's written request for a Contract Adjustment.

q) **Claim**. "Claim" means a separate demand by the Contractor sent by registered mail or certified mail with return receipt requested for one or more of the following: (a) a time extension, including, without limitation, for relief from damages or penalties for delay assessed by the County under the Contract; (b) payment by the County of money or damages arising from Work done by or on behalf of the Contractor and payment for which is not otherwise expressly provided or to which the Contractor is not otherwise entitled; (c) payment of an amount that is disputed by the County; (d) that Contractor's performance is excused, or (d) other relief. See Article **8** of these General Provisions.

r) **Construction Change Directive**. "Construction Change Directive" means a written instrument issued by the County to the Contractor which: (1) directs the performance of a Change that does not involve a Contract Adjustment; (2) establishes a mutually agreed

basis for compensation to the Contractor for a Change under circumstances where performance of the Change needs to proceed in advance of the County performing a full evaluation of the Contractor's rights relative to a Contract Adjustment; or (3) directs the performance of Work or a Change with respect to which there exists a dispute or question regarding the terms of a Contract Adjustment.

s) **Contract**. "Contract" means the Agreement included in the Administrative Provisions covering the Work signed by County and Contractor, which includes all Contract Documents.

t) **Contract Adjustment**. "Contract Adjustment" means an adjustment, additive or deductive, to the Contract Price or Contract Time permitted by the Contract Documents due to circumstances constituting a Change, Excusable Delay, or Deleted Work.

u) **Contract Documents**. The "Contract Documents" for the Project are enumerated in the Agreement.

v) **Contract Price**. "Contract Price" shall mean either the total aggregate amount of the Lump Sum, Unit Price, or Unit Prices named in the Agreement awarded by the County, subject to adjustment for variances in quantities and Change Orders or Unilateral Change Orders, or the total of all payments under the Contract at the Lump Sum, Unit Price, or Unit Prices based on the Engineer's approvals of installed quantities of Work, as the case may be.

w) **Contract Time**. "Contract Time" means the total number of Working Days stated in the Agreement within which Contractor must complete the Work, as may be modified by a Change Order or Unilateral Change Order.

x) **Contractor**. "Contractor" means the person or persons, entity, including but not limited to, limited liability corporation, co-partnership, or corporation, private or municipal, who have entered into the Agreement with the County, or his or their legal representatives.

y) **County or Owner**. "County" or "Owner" means the County of Riverside, by and through the Department of Waste Resources.

z) **Critical Path**. "Critical Path" is the longest continuous chain of activities for the Work that has the least amount of total float of all chains. In general, a delay on the critical path extends the scheduled completion date of the Work.

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

bb) **Delay**. "Delay" means any circumstances involving delay, disruption, hindrance, or interference to the Critical Path of the Work.

cc) **Deleted Work**. "Deleted Work" means Work that is eliminated or cost reduced pursuant to a Change Order or Unilateral Change Order.

dd) **Department**. "Department" means the Department of Waste Resources, an agency of the County.

ee) **Differing Site Conditions**. "Differing Site Conditions" means unforeseen "changed conditions," as defined in Section **2-6** of these General Provisions, that the Engineer determines constitute a basis for Contract Adjustment.

ff) **Engineer**. "Engineer" means the General Manager -– Chief Engineer of the Riverside County Department of Waste Resources, acting either directly or through properly authorized agents, such agents acting within the scope of the particular duties entrusted to them.

gg) **Excusable Delay**. "Excusable Delay" means a Delay to Contractor's ability to achieve Final Completion of the Work within the Contract Time that is: (1) not caused, in whole or in part, by an act or omission of Contractor or a Subcontractor, of any Tier, to comply with the Contract Documents; (2) unforeseeable, unavoidable and beyond the control of the Contractor and its Subcontractors, of every Tier; and (3) the result of a Force Majeure event. Without limitation to the foregoing, neither the bankruptcy, insolvency nor financial inability of the Contractor any a Subcontractor, of any Tier, nor any failure by a Subcontractor, of any Tier, to perform any obligations imposed by Contract or Applicable Laws shall constitute grounds for Excusable Delay.

hh) **Extra Work**. "Extra Work" means new or unforeseen labor, materials, equipment, services or other work, not reasonably inferable by Contractor or its Subcontractors from the design and other information set forth in the Contract Documents, the performance of which requires the expenditure by Contractor of additional and unforeseen costs. References to Extra Work shall not be interpreted to mean or imply that Contractor is entitled to an adjustment.

ii) **Final Acceptance**. "Final Acceptance" of the Work occurs when the Engineer determines that Final Completion of the Work has been achieved, the Board issues a written acceptance of a completed Contract, and, a Notice of Completion has been recorded with the County of Riverside by the County. The date of Final Acceptance is the date the Notice of Completion is recorded by the County of Riverside Recorder.

jj) **Final Completion**. "Final Completion" is the stage of performance of the Work when:

1. All Work required by the Contract Documents has been fully completed in compliance with the Contract Documents and all Applicable Laws including, but not limited to, correction or completion of all punch list items noted upon Final Completion and final cleaning;

2. Contractor has delivered to County all closeout documentation required by the Contract Documents;

3. Final inspection and approval by the Inspector of Record and all applicable governmental agencies has occurred and a final certificate of occupancy (or equivalent inspection sign-off by applicable governing agency) has been issued by covering the entire Project site without exception or condition; and

4. The County accepts the Work as complete and, in its discretion, records a Notice of Completion and Acceptance.

kk) **Force Majeure**. "Force Majeure" means any of the following unanticipated events not caused by County or Contractor, which materially and adversely affect Contractor's obligations under the Contract: Acts of God as defined in Public Contract Code §7105, embargo, rebellion, war, terrorism, riot, act of sabotage, civil commotion, discovery of any archeological, paleontological or cultural resources, spill of hazardous substances by a third party not under the control of Contractor at or near the Project site which is required to be reported to the California Environmental Protection Agency, Department of Toxic Substances Control, discovery at, near or on the site of any species listed as "threatened" or "endangered" under the Federal or State Endangered Species Act, fire, flood, landslide. Force Majeure does not include epidemic, pandemic, virus, infection or other disease.

ll) **Indemnified Parties**. "Indemnified Parties" shall refer to the County, its agencies, districts, special districts and departments, including but not limited to the Department of Waste Resources, their respective directors, officers, Board of Supervisors, elected and appointed officials, employees, agents and representatives and any parties to whom the County owes a duty to indemnify, defend, and hold harmless for any Work on the Project.

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

nn) **Installation Subcontractor**. "Installation Subcontractor" means a Subcontractor who performs a portion of the Work that includes providing substantial, rather than minor and incidental, services for the installation of temporary or permanent materials, equipment, or facilities at the Project site.

oo) **Laboratory**. "Laboratory" means the laboratory(ies) authorized by the County to test materials and Work involved in the Contract.

pp) **Legal Holiday**. "Legal Holiday" means: New Year's Day; Martin Luther King Jr. Birthday, Lincoln's Birthday; Washington's Birthday (observed); Memorial Day; Independence Day; Labor Day; Columbus Day; Veteran's Day; Thanksgiving Day; day after Thanksgiving; Christmas; and such other days as are declared County holidays by ordinance passed by the Board of Supervisors.

qq) **Non-Compensable Delay**. "Non-Compensable Delay" means a Delay caused by Force Majeure events.

rr) **Notice of Change**. "Notice of Change" means a formal written notice required to be submitted by the Contractor to the County notifying the County of circumstances that the Contractor believes may give rise to a Contract Adjustment.

ss) **Notice of Delay**. "Notice of Delay" means a formal written notice prepared and submitted by the Contractor to the County notifying the County of circumstances that the Contractor believes may give rise to a Contract Adjustment to the Contract Time for Excusable Delay.

tt) **Or Equal Substitution**. "Or Equal Substitution" means the material, product, equipment, process, thing, or services proposed by the Contractor for use in the Work as equivalent to that specified in the Contract Documents, which must be approved as equal in the opinion of the Engineer before used in the Work.

uu) **Plans or Project Drawings**. "Plans" or "Project Drawings" means the official plans, profiles, typical cross sections, general cross sections, working drawings, and supplemental drawings, or exact reproductions thereof, approved by the County, which show the location, character, dimension and details of the Work, and which are to be considered a part of the Contract Documents.

vv) **Project**. "Project" means the total construction of the Project identified in the Notice Inviting Bids of which the Work performed under the Contract Documents may be the whole or a part and which may include construction by other Contractors and the County's own forces.

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

xx) **Request for Extension**. "Request for Extension" means a formal written request submitted by the Contractor to the County setting forth the justification and support for Contractor's request for a Contract Adjustment to the Contract Time.

yy) **Right of Way**. "Right of Way" means the whole established piece of property, which is reserved for and secured for access to or use in constructing the Work.

zz) **Specifications**. "Specifications" means the directions, provisions, and written requirements contained in the Contract Documents as to the method and manner of performing the Work or to the quantities and qualities, standards and workmanship of materials, equipment, systems and related services to be furnished under the Agreement.

aaa) **Subcontractor**. "Subcontractor" means a person or entity that has a direct Contract with the Contractor or with another Subcontractor to perform a portion of the Work, including

without limitation, Subcontractors, Sub-subcontractors, suppliers, equipment operators, manufacturers and vendors, of any and every Tier.

bbb) **Superintendent**. "Superintendent" means the executive representative of the Contractor, present on the Project site at all times while performing the Work, authorized by the Contractor to receive and execute instructions from the County.

ccc) **Surety or Sureties**. "Surety" or "Sureties" means the Admitted Surety Insurer(s), approved by the County, who may guarantee the fulfillment of the Contract by bond, and whose signatures are attached to said bond.

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

eee) **Unexcused Delay**. "Unexcused Delay" means any Delay caused by Contractor, or that is not an Excusable Delay, including, without limitations, the following: (1) Delay caused by an act or omission of the Contractor or a Subcontractor (2) Delay for which the Contractor has failed to provide a timely and complete Notice of Delay or Request for Extension; or (3) Delay associated with any circumstances where the costs or risk associated with such circumstances are designated in the Contract Documents as being at Contractor's risk or Contractor's own expense.

fff) **Unforeseen Difficulties**. "Unforeseen Difficulties" means the risk of all loss or damage, except as noted in Section **5-5.6** of these General Provisions, arising out of the Work, or from any unforeseen obstructions or difficulties which may be encountered during the progress of the Work, or from the action of the weather, or from encumbrances in the line of Work, shall be the responsibility of the Contractor.

ggg) **Unilateral Change Order**. "Unilateral Change Order" means a written Change Order issued by the County for a Contract Adjustment, for which there is no mutual agreement between the County and the Contractor regarding the terms thereof.

hhh) **Unit Price**. "Unit Price" means a Contract Unit Price entered by a Bidder in its Bid for a single unit of a Bid Item of Work or a Stipulated Unit Price established by the County in the Contract Documents.

iii) **Work**. "Work" means all the resources, activities, construction work and other services specified, indicated, shown or reasonably inferable from the Contract Documents including labor, materials, equipment and services to fulfill the Contractor's obligations.

jjj) **Working Day**. "Working Day" means any day (except Saturdays, Sundays, Legal Holidays, and days on which the Contractor is specifically required by the Contract Documents to suspend construction operations) on which the Contractor is not prevented

by inclement weather or resulting conditions from proceeding with at least sixty (60) percent of the normal labor and equipment force engaged in the controlling operation or operations for at least five (5) hours.

1-3 CORRECLATION AND INTENT OF CONTRACT DOCUMENTS

The intent of the Contract Documents is to include all items necessary for the proper execution and completion of the Work by the Contractor. The Contract Documents are complementary, and the Work called for by any one shall be as binding as if called for by all.

1-3.1. SIMILARITY OF WORDS.

Wherever in the Specifications or upon the Plans the words directed, required, permitted, ordered, designated, prescribed, or words of like import are used, it will be understood that the direction, requirements, permission, order, designation, or prescription of the County is intended, and similarly the words approved, acceptable, satisfactory, or words of like import, shall mean approved by, or acceptable to, or satisfactory to, the County, unless otherwise expressly stated.

1-3.2. SEVERABILITY.

The invalidity of any provision of the Contract Documents shall not invalidate the Contract or its remaining provisions. If it is determined that any provision of the Contract Documents violates any law, or is otherwise invalid or unenforceable, then that provision shall be revised to the extent necessary to make that provision legal and enforceable upon mutual agreement of the parties; otherwise, such provisions shall be severed and deleted from the Contract Documents. In such case the Contract Documents shall be construed, to the fullest extent permitted by law, to give effect to the parties' intentions and purposes in executing the Contract.

1-3.3. PROVISIONS DEEMED INSERTED.

Each and every provision of law and clause required to be inserted in the Contract Documents shall be deemed to be inserted herein and the Contract Documents shall be read and enforced as though such provision or clause is included herein, and if through mistake, or otherwise, any such provision is not inserted or not correctly inserted, then upon application of either party, the Contract Documents shall forthwith be physically amended to make such insertion or correction.

1-3.4. SURVIVAL OF PROVISIONS.

The Contract provisions relating to any obligation to provide insurance or indemnity, any waiver, warranty, guarantee or representation, any County right to Subcontractor assignment, joint or direct payment, or audit right given by the Contractor to County, the Claims and dispute resolution provisions, and all other provisions of the Contract Documents, which by their nature should survive termination of the Contract and completion of the Work, shall survive termination of the Contract and completion of the Work and shall be binding upon Contractor and County until any action thereunder is

barred according to terms in the Contract Documents or by the applicable statute of limitations or statute of repose.

ARTICLE 2 - SCOPE OF WORK

2-1 WORK TO BE DONE

The Contractor shall perform all work necessary to complete the Contract in accordance with the Contract Documents. Unless otherwise specified, the Contractor shall furnish all materials, equipment, tools, labor, and incidentals necessary to complete the Work.

The Contractor shall provide all labor, power, light, water, materials, equipment, tools, scaffolding, machinery, transportation, insurance, permits, bonds, temporary protection, watchmen, and Superintendents necessary to construct and complete all Work, and to furnish all materials included in the Contract, except those furnished by the County as specifically stated in the Contract Documents.

2-2 ALTERATIONS AND CHANGES

The Contractor agrees that reasonable alterations and modifications may be made by the County and that this may be done without notice to the Sureties on the Contractor's bonds. If such changes result in increased or decreased quantities under the Bid Items specified in the Agreement, the Contractor will be paid on the basis of actual quantities as measured by the County; and such changes shall not affect the Contract Unit Prices bid by the Contractor.

2-3 RIGHTS OF WAY

The County shall provide the rights of way as specifically described in the Contract Documents upon which the Work under this Contract is to be done, except that the Contractor shall provide land required for the erection of temporary construction facilities and storage of his material, together with right of access to same. Unless otherwise specified, the Contractor shall make arrangements, pay for, and assume all responsibility for acquiring, using, and disposing of additional work areas and facilities temporarily required. The Contractor shall indemnify and hold the Agency harmless from all Claims for damages caused by such actions.

2-3.1. CLEANING UP RIGHTS OF WAY AND TEMPORARY FACILITIES.

The Contractor shall, as directed by the County, remove from the County's right of way and from all public and private property, at its own expense, all temporary structures, rubbish and waste materials resulting from its operations.

2-4 THE CONTRACTOR'S EQUIPMENT AND FACILITIES

2-4.1. GENERAL.

The Contractor shall furnish and maintain in good condition all equipment and facilities as required for the proper execution and inspection of the Work.

The Contractor shall provide and maintain enclosed toilets for the use of employees engaged in the Work. These accommodations shall be maintained in a neat and sanitary condition, and regularly pumped out. The Contractor shall provide a hand washing facility.

The Contractor shall comply with all Applicable Law pertaining to public health, sanitation and physical distancing.

All equipment and facilities shall meet all requirements of Applicable Law.

2-4.2. TEMPORARY UTILITY SERVICES.

The Contractor shall, at its own expense, make all arrangements necessary for the provisions of temporary utility services necessary for its own use during performance of the Work.

The Contractor shall not draw water from any fire hydrant (except to extinguish fire), without obtaining permission from the water utility owner.

2-4.3. CRUSHING AND SCREENING OPERATIONS.

Unless otherwise specified in the Special Provisions and/or Detailed Provisions, the establishment and operation of portable screens and crushers will not be allowed on or adjacent to the Work site.

2-4.4. HAUL ROUTES.

Unless otherwise specified in the Special Provisions and/or Detailed Provisions, haul routes shall be determined by the Contractor.

2-5 CHANGES REQUESTED BY THE CONTRACTOR

Changes in the Plans and Specifications, requested in writing by the Contractor, which do not materially affect the Work, and which are not detrimental to the Work or to the interest of the Agency, may be granted by the Engineer. Nothing herein shall be construed as granting a right to the Contractor to demand acceptance of such changes.

If the Contractor alleges that instructions issued after the date of the Contract will result in increases to the Contract Price or Contract Time, or that Contractor's performance is excused because of the acts or omissions of County. If latent or unforeseen conditions require modification of the Contract Documents, or the Contractor otherwise becomes aware of the need for or desirability of a change in the Work, a Change Order Request ("COR") may be submitted to the County in writing, using the forms provided herein in the Detailed Provisions, and must specify the reasons for such change, including relevant circumstances and impacts on the construction schedule. The Contractor may request additional compensation and/or time through a COR but not for instances that occurred more than ten (10) Calendar Days prior to the COR. Contractor's failure to initiate a COR within such period shall be deemed a waiver of the right to adjustment of the Contract Price or the Contract Time for the alleged change. Any COR that is approved by the County will be incorporated in a Change Order or Construction Change Directive. If the County determines that the Work in question is not a change, the County shall issue a Work Directive, ordering the Contractor to proceed with the Work without delay. If the COR is denied but the Contractor believes that it does have merit, the Contractor may submit a Claim to the County.

2-6 CHANGED CONDITIONS

Contractor shall promptly, and before the following conditions are disturbed and in no event later than two (2) Business Days after first observance of the conditions, notify the County, in writing, of any:

a. Material that the Contractor believes may be material that is hazardous waste, as defined in Section 25117 of the Health and Safety Code, that is required to be removed to a Class I, Class II, or Class III disposal site in accordance with provisions of existing law.

b. Subsurface or latent/concealed physical conditions at the Project differing from those indicated by information about the Project site made available to the Bidder prior to the deadline for submitting bids.

c. Unknown physical conditions at the Project of any unusual nature, different materially from those ordinarily encountered and generally recognized as inherent in Work of the character provided for in the Contract.

Notwithstanding the foregoing, the following conditions are excluded from concealed or unknown conditions: (1) conditions that Contractor had, or should have had, actual or constructive knowledge as of the date of the Agreement; or (2) conditions that could have been discovered by reasonable site investigation or review of other available site information referenced in the Contract Documents prior to the Bid Deadline.

The County shall promptly investigate the conditions, and if it finds that the conditions do materially so differ, or do involve hazardous waste, and cause a decrease or increase in the Contractor's cost of, or the time required for, performance of any part of the Work shall issue a Change Order under the procedures described in the Contract. If the County determines that the conditions at the site are not materially different from those indicated in the Contract Documents and that no change in the terms of the Contract is justified, the County shall promptly notify the Contractor, stating the reasons. In the event that a dispute arises between the County and the Contractor whether the conditions materially differ, or involve hazardous waste, or cause a decrease or increase in the Contractor's cost of, or time required for, performance of any part of the Work, the Contractor shall not be excused from any scheduled completion date provided for by the Contract, but shall proceed with all Work to be performed under the Contract. The Contractor's failure to give notice of changed conditions promptly upon their discovery and before they are disturbed shall constitute a waiver of all Claims in connection therewith.

ARTICLE 3 - CONTROL OF THE WORK

3-1 ASSIGNMENT

The Contract may be assigned only upon prior written consent of the County. Such written consent to sublet, assign or otherwise dispose of any portion of the Contract, shall not be construed to relieve the Contractor of any responsibility for the fulfillment of the Contract.

3-2 SELF-PERFORMANCE

The Contractor shall give its personal attention to the fulfillment of the Contract and shall keep the Work under its control. The Contractor shall perform, with its own organization, Work of a value amounting to not less than 50 percent (50%) of the remainder obtained by subtracting from the total original Contract Price the sum of any item designated herein, in the Bid or in the Special Provisions as "Specialty Items". The furnishing and placing of reinforcing steel, when placing is performed by the supplier, will be considered as a Specialty Item for this purpose; however, the supplier shall be designated in the List of Subcontractors. The value of the Work subcontracted will be based on the Bid Item bid price, if any subdivision of a Bid Item is subcontracted, the entire Bid Item shall be considered as subcontracted.

Any Bid that does not indicate that Work valued at least fifty percent (50%) of the Contract Price (except Specialty Items) will be performed by the Bidder's own forces, will be considered non-responsive and will be rejected with no further consideration. If, after execution of the Agreement, the County discovers the Contractor is performing Work valued at less than fifty percent (50%) of the Contract Price (except Specialty Items), the Contractor will be notified that it is in breach of the Contract. The Contractor's obligation to self-perform at least fifty percent (50%) of the Contract Price (except Specialty Items) is not subject to Change Orders that increase the value of subcontracted items of Work.

3-3 SUBCONTRACTORS

The Contractor shall give personal attention to the fulfillment of the Contract. The Contractor shall keep the Work under its control. Subcontractors shall be considered employees of the Contractor, and the Contractor shall be responsible for their Work.

Before the Work of any Subcontractor is started, the Contractor shall submit to the Engineer for approval a written statement listing the name, Contractor License Number, and business address of each Subcontractor and a description and value of each portion of the Work to be so subcontracted.

Reference is made to the Subletting and Subcontracting Fair Practices Act contained in the California Public Contract Code (commencing with Section 4100). By this reference, said Act is incorporated herein with like effect as if it were here set forth in full, and the parties shall abide by its terms and substitution shall be only as allowed by that Act.

3-3.1. INELIGIBLE SUBCONTRACTORS.

Pursuant to Labor Code Section 1777.1, the Labor Commissioner publishes and distributes a list of Contractors ineligible to perform work as a Subcontractor on a Public Works

project. This list of debarred Contractors is available from the Department of Industrial Relations website at https://www.dir.ca.gov/dlse/debar.html. In addition, Subcontractors shall not be qualified to engage in the performance of this Public Works Project unless currently registered and qualified to perform Public Work pursuant to Labor Code Section 1725.5. Contractor shall not Contract with an uninsured Subcontractor.

3-3.2. COUNTY'S RIGHT TO OBJECT TO SUBCONTRACTORS.

All Subcontractors, whether or not they are required to be listed in Contractor's Bid Proposal, must be acceptable to the County, and/or Agency funding the Project. If the County or funding entity has made a reasonable objection to a Subcontractor proposed by the Contractor, the Contractor shall propose a replacement without increase to the Contract Price or Contract Time.

3-3.3. COORDINATION OF SUBCONTRACTORS.

The Contractor is responsible for properly performing and completing all Work required by the Contract, whether or not the Contractor employs Subcontractors for certain portions of the Work. The Contractor shall coordinate the sequence and timing of his or her efforts and those of any Subcontractors to insure the proper and timely completion of the Work. Contractor shall be responsible for the acts and omissions of its Subcontractors and shall make certain that at all times its Subcontractors comply with the terms of the Contract Documents and Applicable Law. Where a portion of the Work which has been subcontracted by the Contractor is not being prosecuted in a manner satisfactory to the County, the Subcontractor shall be removed immediately on the request of the County and shall not again be employed on the Project.

3-3.4. INCORPORATION OF CONTRACT DOCUMENTS IN SUBCONTRACTS.

Each subcontract or supply agreement shall contain provisions that:

1. Require that the Work being performed pursuant to such subcontract or supply agreement, as the case may be, be performed in accordance with the requirements and intent of the Contract Documents;

2. Require Subcontractors of any tier and supplier to furnish to Contractor or the applicable Subcontractor, as the case may be, in a timely fashion all information necessary for the preparation and submission of the reports, operations and maintenance manuals, warranties, as-built information, and closeout documents required herein;

3. Require that each Subcontractor and supplier continue to perform under its subcontract or supply agreement if the Contract is terminated and if the County takes an assignment of the subcontract or supply agreement and requests the Subcontractor or supplier to continue such performance; and

4. Include the termination and suspension provisions set forth in Sections 6-6, 6-7, and 6-8 below.

If any provision of any subcontract or supply agreement is inconsistent with any provision of the Contract Documents or the intent of the Contract Documents, then the Contract Documents shall control.

3-3.5. PAYMENTS TO SUBCONTRACTORS.

The Contractor shall pay all Subcontractors for and on account of Work of the Contract performed by such Subcontractors within seven (7) days after receipt of payment from County, unless Contractor notifies the County as to the amount and reasons for withholding from payments to Subcontractors.

3-3.6. JOINT AND DIRECT PAYMENTS TO SUBCONTRACTORS.

County reserves the right, upon written notice to Contractor, to issue joint checks to the Contractor and Subcontractor of any Tier, or Suppliers, and to make payment directly to each Subcontractor or Supplier in satisfaction of the County's obligation to make progress payments or the final payment due to Contractor.

3-3.7. ARM'S LENGTH TRANSACTIONS AND COMMERCIALLY USEFUL FUNCTION OF SUBCONTRACTORS.

To assure competitive bids and to assure that no bid rigging, unfair practices, collusion or conflicts of interest occur in connection with the Work, Contractor agrees that all agreements between Contractor and Subcontractors and suppliers for performance of the Work shall be pursuant to arm's length transactions, with unrelated and unaffiliated firms (a "related" or "affiliated" firm is one which is subject to the control of the same persons through joint ownership or otherwise). In all such agreements, each firm shall act in its own best interest, for compensation that reflects the fair market values of the materials or services that are the subject of the transaction.

Contractor further agrees that each Subcontractor and supplier for the Work will perform a commercially useful function (i.e. is responsible for the performance, management and supervision of a distinct element of the Work). A Subcontractor or supplier does not perform a commercially useful function when, for example: the Work is outside the firm's experience or qualifications; the firm provides little or no supervision of the Work; more than fifty percent (50%) of the Work designated to be performed by a Subcontractor is performed by a Sub-subcontractor or supplier; the Subcontractor only purchases materials while performing little or no Work; the firm works for only one prime Contractor; or the same employees work for the firm and the Contractor.

If, upon County's request, Contractor fails to provide adequate assurances of arm's length transactions or that all Subcontractors and suppliers will perform a commercially useful function, Contractor shall remove such Subcontractor or supplier from the Project, exclude the cost associated with such firm from all Applications for Payment and Change Order Requests and, if necessary, propose another Subcontractor or supplier to whom the County has no objection, without increase to the Contract Price or Contract Time.

3-4 AUTHORITY TO THE BOARD AND THE ENGINEER

The County shall have general supervision of the Contract under authority of the Board of Supervisors. The County has the authority to stop the Work whenever such stoppage may be necessary to ensure the proper execution of the Contract. The County shall decide all questions which may arise as to the quality or acceptability of materials furnished, Work performed, and rate or progress of the Work; all questions which may arise as to the interpretation of the Plans and Specifications; all questions as to the acceptable fulfillment of the Contract on the part of the Contractor; and all questions as to compensation. The County's determination and decision thereon shall be final and conclusive.

3-5 INSPECTION

The Work is subject to inspection and approval by the Engineer. The Contractor shall notify the Engineer before inspection is required within the timeframe specified in the Special Provisions and/or Detailed Provisions. Work shall be done only in the presence of the Engineer, unless otherwise approved. Any Work done without proper inspection will be subject to rejection. The Engineer and any authorized representatives shall, at all times, have access to the Work during its construction at shops and yards and while in storage, as well as to the Work site. The Contractor shall provide every reasonable facility for ascertaining that the materials and workmanship conform to the Contract Documents. All Work done and all materials furnished shall be subject to the County's inspection and approval. Inspection of the Work shall not relieve the Contractor of the obligation to fulfill all conditions of the Contract.

Defective Work or unsuitable materials may be rejected, notwithstanding that such Work or materials may have been previously overlooked by County representatives, accepted, or estimated for payment. The Inspector cannot authorize deviations from the Plans, Special Provisions, and Detailed Provisions and does not have the authority to obligate the County financially.

If any Work is concealed or performed without the requisite inspection notice, then the Work shall be subject to such tests or exposure as may be necessary to prove to the Engineer that the materials used and the Work performed are in conformity with the Plans, Special Provisions, and Detailed Provisions, or said materials or Work may be removed and installed or performed again at the discretion of the Engineer. All labor, equipment, and materials necessary for exposing, testing or complete removal, and installation or replacement shall be furnished by the Contractor at its own expense. The Contractor shall replace, at its own expense, any materials or Work damaged by exposure or testing.

Cost of rework inspection incurred by the County will be deducted from the Contract Price via Change Order. Rework inspection cost is as follows:

a. Contractor's failure to complete the Work within the Contract Time, including any previously authorized extensions thereof.
b. Extra inspections required for Contractor's correction of defective Work.
c. Overtime costs for acceleration of Work done for Contractor's convenience.
d. All associated costs including travel.
e. Removal of Defective and Unauthorized Work.

All Work which has been rejected shall be remedied or removed and replaced by the Contractor in an acceptable manner; and no compensation will be allowed for such removal or replacement. Any Work done beyond the lines and grades as described by the Contract Documents, or any Extra Work done without proper written authority, will be considered as unauthorized and will not be paid for. Work so done may be ordered removed at the Contractor's expense. Upon failure on the part of the Contractor to comply, the County shall have authority to cause defective or unauthorized Work to be remedied, or removed and replaced, and to deduct the costs for this Work from any monies due or to become due the Contractor.

3-5.1. THE CONTRACTOR'S REPRESENTATIVE

Before starting the Work, the Contractor shall designate in writing a representative who shall have complete authority to act for it. An alternative representative may be designated as well. The representative or alternate shall be present at the Work site whenever Work is in progress or whenever actions of the elements necessitate its presence to take measures necessary to protect the Work, persons, or property. Any order or communication given to this representative shall be deemed delivered to the Contractor. A joint venture shall designate only one representative and alternate. In the absence of the Contractor or its representative, instructions or directions may be given by the Engineer to the superintendent or person in charge of the specific Work to which the order applies. Such order shall be complied with promptly and referred to the Contractor or its representative.

At all times while performing the Work, the Contractor shall keep a competent Superintendent responsible for the construction of the Work, as well as any necessary assistants. All such persons shall be acceptable to the County continuously throughout the duration of the Project. The Superintendent shall represent the Contractor in his absence and all directions given to him shall be as binding as if given to the Contractor.

Work by Subcontractors will not be allowed in the absence of the Contractor's Superintendent, unless previous arrangements are approved by the Engineer in writing. In the event a Subcontractor attempts to perform Work in the absence of the Superintendent, a STOP WORK NOTICE will be issued to the Subcontractor.

3-6 CONTRACT DOCUMENTS

3-6.1. GENERAL.

The Contractor shall keep at the Work site a copy of the Plans and Specifications, to which the Engineer shall have access at all times.

The Plans, Specifications, and other Contract Documents shall govern the Work. The Contract Documents are intended to be complimentary and cooperative. Anything specified in the Specifications and not shown on the Plans or shown on the Plans and not specified in the Specifications, shall be as though shown on or specified in both.

The Plans shall be supplemented by such Working Drawings and Shop Drawings as are necessary to adequately control the Work.

The Contractor shall, upon discovering any error or omission in the Plans or Specifications, immediately call it to the attention of the Engineer.

3-6.1.1. CONFORMITY WITH PLANS AND ALL ALLOWABLE DEVIATIONS.

Except as otherwise specifically stated in the Contract Documents, finished surfaces in all cases shall conform exactly to the elevations, lines, grades, cross-sections, and dimensions shown or described in the Contract Documents. Any deviations must be authorized in advance in writing by the County.

3-6.1.2. INTERPRETATION OF PLANS AND SPECIFICATIONS.

Should it appear that the Work to be done is not sufficiently detailed or explained in the Contract Documents, the Contractor must bring this to the County's attention in writing prior to submittal of the Contractor's Bid Proposal. In the event of any discrepancy between any drawings and the figures written thereon, the figures shall be taken as correct. The Contractor will not be allowed to take advantage of errors and omissions in the Plans and Specifications.

3-7 SURVEYING

3-7.1. GENERAL.

The Contractor shall preserve construction survey stakes and marks for the duration of their usefulness. If any construction survey stakes are lost or disturbed and need to be replaced, such replacement will be at the expense of the Contractor. The Contractor shall dig all holes necessary for line and grade stakes.

The Contractor shall preserve benchmarks, survey monuments, survey stakes and points set for lines, grades or measurements of Work in their proper places unless removal is authorized by the Engineer.

3-7.2. LINE AND GRADE.

The Work shall conform to the lines, elevations, and grades shown on the Plans.

Three consecutive points set on the same slope shall be used together so that any variation from a straight grade can be detected. Any such variation shall be reported to the Engineer. In the absence of such report, the Contractor shall be responsible for any error in the grade of the Work.

Grades for underground conduits will be set at the surface of the ground. The Contractor shall transfer them to the bottom of the trench.

The Contractor shall provide opportunities and facilities for setting points and making measurements as requested by the County or otherwise as reasonably required. The Contractor shall not proceed until it has made timely demand upon the County for, and has received from the County, such lines and grades as may be necessary as the Work progresses. The Work shall be done in strict conformity with such lines and grades.

The Contractor shall carefully preserve benchmarks, reference points and stakes, and in case of willful or careless destruction, the Contractor shall be charged with the resulting expense and shall be responsible for any mistakes that may be caused by their loss or disturbance.

3-8 WORK SITE MAINTENANCE

3-8.1. AIR POLLUTION CONTROL.

The Contractor shall not discharge smoke, dust, equipment exhaust, or any other air contaminant into the atmosphere in such quantity as will violate any Federal, State, or local regulations. The Contractor shall also abate dust nuisance by cleaning, sweeping, and spraying with water, or other means as necessary.

3-8.2. DUST ABATEMENT.

During the performance of all Work, the Contractor shall take the necessary precautions to avoid any loss or damage resulting from its operations that raise or produce dust. The Contractor will be required to have a positive and continuous method of dust control which is satisfactory to the County. The methods to be used for controlling dust in the construction area and along haul roads shall be approved by the County prior to starting any of the Work. All costs incidental to dust control shall be included in the Unit Prices paid for other items of Work.

3-9 ACCESS TO THE WORK

Unless provided for in the Special Provisions and/or Detailed Provisions, access to the Work from existing roads shall be provided by the Contractor at its expense and maintained in a manner so as not to create a public nuisance. The County assumes no responsibility for the condition or maintenance of any existing road or structure thereon that may be used by the Contractor for performing the Work or for traveling to and from the site of the Work. No additional payment will be made to the Contractor for constructing any temporary road used for construction operations or for improving, repairing, or maintaining any existing road or structure thereon that may be used by the Contractor for performance of the Work under these specifications. The cost of all work described in this paragraph shall be included in the prices bid in the schedule for other items of the Work.

3-10 DAMAGES BY ACT OF GOD

If the construction of the Project herein is damaged, which damage is determined to have been proximately caused by an Act of God, as defined in Public Contract Code Section 7105, in excess of five percent (5%) of the Contract Price, 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.

ARTICLE 4 - CONTROL OF MATERIALS

4-1 GENERAL

Materials, parts, and equipment furnished by the Contractor for the Work shall be new, free of defects, and conform to the requirements in the Contract Documents. Used or secondhand materials, parts, and equipment may be used only if so specified in the Contract Documents.

The quality of materials shall be subject to approval by the Engineer. Materials of quality not conforming to the requirements of the Detailed Provisions shall be considered defective and will be subject to rejection. Defective material, whether in place or not, shall be removed immediately from the Work site by the Contractor, at its expense, when so directed by the Engineer.

If the Contractor fails to replace any defective material after reasonable notice, the Engineer may cause such Work or materials to be replaced. The replacement expense will be deducted from the amount to be paid to the Contractor.

4-1.1. DEFECTIVE MATERIALS.

No rejected materials, the defects of which have been subsequently corrected, shall be used until approval in writing has been given by the County. Upon failure on the part of the Contractor to comply forthwith with any order of the County made under the provisions of this Section, the County shall have authority to remove and replace defective material and to deduct the cost of removal and replacement from any monies due or to become due the Contractor.

4-1.2. ACCEPTANCE OF NONCONFORMING WORK.

If the County prefers to accept Work that is not in accordance with the requirements of the Contract Documents, the County may do so instead of requiring its removal and correction, in which case the Contract Price will be reduced by an amount equal to the entire cost of replacing the Work to make it as originally specified and intended as appropriate and equitable. Such adjustment shall be effected whether or not final payment has been made.

4-1.3. PROPERTY, PLANT AND EQUIPMENT.

Property, plant and equipment ("PP&E") (Contractor's physical or tangible long term assets having a useful life of more than one (1) year (such as vehicles, equipment and machinery) not suitable to produce the quality of Work required will not be permitted to operate on the Project. PP&E shall be designed and constructed in accordance with general practice for such equipment and shall be of sufficient material to carry the Work to completion within the Contract Time. The Contractor shall provide adequate and suitable PP&E to meet these requirements and, when ordered by the County, shall immediately remove unsuitable PP&E from the Project and discontinue the operation of unsatisfactory PP&E. No worn or obsolete equipment shall be used, and in no case shall the maker's rating of the capacity for any equipment be exceeded. All vehicles used to haul materials over existing highways shall be equipped with pneumatic tires.

4-1.4. COUNTY FURNISHED MATERIALS.

The Contractor shall furnish all materials required to complete the Work, except those specified in the Contract Documents to be furnished by the County. Any materials furnished by the County will be delivered to the Contractor at the points specified in the Contract Documents. The Contractor will be held responsible for all materials so delivered to him, and deductions will be made from any monies due Contractor to make good any shortages and deficiencies, from any cause whatsoever, which may occur after such delivery, or for any demurrage charges due to delinquency in unloading.

4-1.5. SOURCE OF SUPPLY AND QUALITY OF MATERIALS.

At the option of the County, the source of supply of any materials shall be approved by the County before the delivery is started. Only materials conforming to the exact requirements of the Contract Documents and approved by the County shall be used in the Work. All materials proposed for use may be inspected or tested by the County at any time during their preparation and use. If it is found that sources of supply which have been approved do not furnish a uniform product, or if the product from any source proves unacceptable at any time, the Contractor shall furnish approved material from other approved sources. No material which, after approval, subsequently becomes unfit for use shall be used in the Work.

4-1.6. MANUFACTURER'S INSTRUCTIONS.

Where it is required in the Contract Documents that materials, products, processes, equipment or the like be installed or applied in accordance with manufacturer's instructions, directions, labels, tags, manuals, trade literature or specifications or words to this effect, it shall be construed to mean that said application or installation shall be in strict accord with current instructions furnished by the manufacturer (whether attached to the material or equipment or published on the manufacturer's website) of the material concerned for use under conditions similar to those at the site. If there is a conflict between manufacturer's instructions and Applicable Law or the Contract Documents, Contractor shall notify Engineer in writing to request clarification.

4-2 PROTECTION

The Contractor shall provide and maintain storage facilities and employ such measures as will preserve the specified quality of materials to be used in the Work. Stored materials shall be reasonably accessible for inspection. The Contractor also adequately protects new and existing Work and all items of equipment for the duration of the Contract.

The Contractor shall not, without the Agency's consent, assign, sell, mortgage, hypothecate, or remove equipment or materials which have been installed or delivered and which may be necessary for the completion of the Work.

4-2.1. STORAGE OF MATERIALS.

Materials shall be so stored as to ensure the preservation of their quality and fitness for the Work. When considered necessary by the County, they shall be placed on wooden

platforms or other hard, clean surfaces and not on the ground. They shall be placed under cover when so directed by the County. Stored materials shall be so located as to facilitate prompt inspection.

4-3 TESTING

4-3.1. SAMPLES AND TESTS.

All testing of materials furnished by the Contractor shall be made in accordance with commonly recognized standards of national organizations for this type of Project, and such special methods and tests as are in use at the laboratory or otherwise determined by the County to be needed. The County shall determine what testing is needed.

Field testing of materials will be made by the County or its representative when deemed necessary as determined by the County; and these tests shall be made in accordance with standard practices of the County or as otherwise needed.

The Contractor shall furnish samples of all materials as requested by the County without charge. No material shall be used until it has been approved by the County. Samples will be secured and tested whenever necessary as determined by the County to determine the quality of the material.

Promptly after the approval of the Contract, the Contractor shall notify the County of the proposed sources of supply of all materials to be furnished by it, using a form which will be supplied by the County upon request.

Whenever reference is made to standard tests or requirements of the County, ASTM International (formerly the American Society for Testing Materials), the American Railway Engineering Association or the American Association of State Highway Officials, the reference shall be construed to mean the standards that are in effect at the date the Agreement is signed with subsequent amendments, changes, or additions as thereafter adopted and published by the organization referred to.

Unless otherwise called for in these General Provisions or the Special Provisions and/or Detailed Provisions, all testing of materials will be performed in such manner and at such locations as deemed necessary by the Engineer to ensure compliance with the Contract Documents. The cost of all re-testing will be borne by the Contractor, and the amount due the County for said re-testing will be deducted from the Contract Price by Change Order.

None of the provisions stated in this section shall relieve the Contractor of its obligations as stated elsewhere in the Contract Documents.

4-4 TRADE NAMES/OR EQUAL SUBSTITUTIONS

Wherever the name, brand, or manufacturer of an item is specified, 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, or as otherwise stated in the Contract Documents, 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”. Listing of materials is not intended to be comprehensive, or in order of preference.

If the Contractor desires to use any other brand or manufacturer of equal quality or utility to that specified in the Contract Documents, the Contractor shall, at its expense, submit a written request to the Engineer for each desired substitution using the form included at the end of **Detailed Provisions Section 01 6000 – Product Requirements**. The Contractor shall have the material tested, as required by the Engineer, to determine that the quality, strength, physical, chemical, or other characteristics, including durability, finish, efficiency, dimensions, service, and suitability are such that the item will fulfill its intended function. Test methods shall be subject to the approval of the Engineer. Test results shall be reported promptly to the Engineer, who will evaluate the results and determine if the substitute item is equivalent. The Engineer’s findings shall be final. Installation and use of a substitute item shall not be made until approved by the Engineer.

If, in the Engineer's opinion, the requested substitution is of lesser quality or in variance with that specified, or if the information submitted is insufficient or incomplete, the requested substitution will not be approved, and the specified materials or equipment shall be furnished. For submittals after award of the Contract, the Contractor shall allow fifteen (15) Working Days for the Engineer to make this determination unless otherwise specified in the Contract Documents.

The specified Contract completion time shall not be affected by any circumstance developing from the provisions of this subsection.

By submitting an Or Equal Substitution request Contractor shall be deemed to certify that:

(i) The proposed Or Equal Substitution is equal to or exceeds all requirements of the pertinent Contract Documents;

(ii) Contractor accepts the warranty and correction obligations in connection with the proposed substitution as if originally specified;

(iii) Contractor will coordinate the installation of the accepted substitute, making such changes as may be required for the Work to be complete in all respects;

(iv) Contractor waives all Claims for additional costs related to the substitution which subsequently become apparent; and

(v) Contractor accepts all responsibility for direct or indirect costs and/or time impacts as result of the substitution including impacts to Work not identified in the proposal.

4-5 PROPERTY RIGHTS IN MATERIALS

Nothing in the Contract shall be construed as vesting in the Contractor any right of property in the materials used after they have been attached or affixed to the Work or the soil. All such materials shall become the property of the County upon being so attached or affixed.

ARTICLE 5 - LEGAL RELATIONS AND RESPONSIBILITY

5-1 LAWS AND REGULATIONS

The Contractor shall keep itself fully informed of State and national laws and County and municipal ordinances and regulations which in any manner affect those employed in the Work or the materials used in the Work or in any way affect the conduct of the Work. The Contractor shall, at all times, observe and comply with such laws, ordinances, and regulations.

Reference to and/or incorporation into the Contract Documents of a particular law, statute, ordinance, rule or regulation is not, nor is it intended to be, a definitive statement of the law applicable to the Contract Documents and the accomplishment of the Work. Contractor must keep informed as to all such Applicable Laws - Federal, State, County, Municipal - as they affect the conduct of the Work and comply with such laws, including, but not limited to, having requisite licenses, obtaining necessary permits, paying necessary fees and taxes, posting notices and installing, operating and maintaining safety precautions and facilities. It is likewise the Contractor's responsibility to see to it that its Subcontractors also fully comply with such Applicable Laws. Contractor shall protect and defend County, its officers, agents, employees and Contractors against any Claim or liability arising from or based upon any alleged violation of such Applicable Laws.

5-2 LABOR

5-2.1. GENERAL.

The Contractor, its agents, and employees shall be bound by and comply with applicable provisions of the Labor Code and Federal, State, and local laws related to labor.

If any Subcontractor or person employed by the Contractor shall fail or refuse to carry out the directions of the County or shall appear to the County to be incompetent or to act in a disorderly or improper manner, he/she shall be discharged immediately upon the request of the County and such person shall not again be employed on the Project.

5-2.2. PREVAILING WAGES.

Pursuant to Section 1773.2 of the Labor Code, the current prevailing rate of per diem wages at the time of the Bid as determined by the Director of the Department of Industrial Relations (DIR) are on file at the office of the Engineer. The Contractor shall post a copy of these rates at the Work site. Pursuant to Sections 1771 and 1774 of the Labor Code, the Contractor and any Subcontractors shall pay not less than the specified prevailing rates of wages to workers employed on the Contract. If the Contract is Federally-funded, the Contractor and any Subcontractors shall not pay less than the higher of these rates or the rates determined by the United States Department of Labor. Pursuant to Section 1775 of the Labor Code, the Contractor and any Subcontractors, shall, as a penalty to the Agency, forfeit the prescribed amounts per Calendar Day, or portion thereof, for each worker paid less than the prevailing wage rates.

5-2.2.1. DETERMINATION OF PREVAILING WAGE RATES.

The County has determined that the Contractor and Subcontractors of any tier must pay not less than the prevailing wage rates to all workers employed in execution of the Contract. The Director of the Department of Industrial Relations, State of California (DIR) pursuant to the California Labor Code, and the United States Secretary of Labor ("Secretary"), pursuant to the Davis-Bacon Act, have determined the general prevailing rates of wages in the locality in which the Work is to be performed. The County has obtained from DIR and from the Secretary determinations of the generally prevailing rates of per diem wages and the prevailing rate for holiday and overtime work in the locality in which the Work is to be performed. Copies of said rates are on file with the Capital Projects Division of the County and will be made available for inspection during regular business hours and are also available on the Internet at the California Department of Industrial Relations website:

http://www.dir.ca.gov/OPRL/DPreWageDetermination.htm
(California prevailing wage rates).

Future effective general prevailing wage rates, which have been predetermined and are on file with the California Department of Industrial Relations are referenced but not printed in the general prevailing wage rates.

The wage rate for any classification not listed, but which may be required to execute the Work, shall be commensurate and in accord with specified rates for similar or comparable classifications for those performing similar or comparable duties. Holidays shall be as defined in the collective bargaining agreement applicable to each particular craft, classification or type of worker employed under the Contract. Per diem wages include employer payments for health and welfare, pensions, vacation, travel time and subsistence pay, apprenticeship or other training programs authorized by California Labor Code § 3093, and similar purposes when the term "per diem wages" is used herein. Holiday and overtime work, when permitted by law, must be paid for at the rate of at least one and one-half (1½) times the above specified rate of per diem wages, unless otherwise specified. In accordance with Section 1773.2 of the California Labor Code, the Contractor must post a schedule showing all applicable prevailing wage rates at appropriate and conspicuous locations on the job site where they can easily be seen by workers.

Contractor is required to utilize apprentices as required by the California Labor Code and applicable regulations. Only apprentices, as defined in California Labor Code § 3077, who are in training under apprenticeship standards and written apprenticeship agreements under California Labor Code § 3070 et seq. are eligible to be employed for the Work.

The Contractor shall comply with all applicable requirements of the California Labor Code, including but not limited to Chapter 2, Subchapter 1, Article 10, Required Apprentices on Public Works Contracts. Reference is made to Chapter 1, Part 7, Division 2 of the California Labor Code (commencing with Section 1720). By this

reference said Chapter 1 is incorporated herein with like effect as if it were here set forth in full. The parties recognize that said Chapter 1 deals with, among other things, discrimination, penalties and forfeitures, their disposition and enforcement, wages, working hours and securing workers' compensation insurance and directly affect the method of prosecution of the Work by Contractor and subject it under certain conditions to penalties and forfeitures. Execution of the Agreement by the parties constitutes their agreement to abide by said Chapter 1. Their stipulation as to all matters which they are required to stipulate to by the provisions of said Chapter 1, constitutes Contractor's certification that it is aware of the provisions of said Chapter 1 and will comply with them and further constitutes Contractor's certification as follows: "I am aware of the provisions of Section 3700 of the California 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 will comply with such provisions before commencing the performance of the Work of this Contract."

5-2.2.2. PAYMENT OF PREVAILING WAGE RATES.

5-2.2.2.1. STATUTORY REQUIREMENTS.

The Project is subject to the provisions of Labor Code § 1720 *et seq*. and the requirements of Title 8 of the California Code of Regulations § 16000 *et seq*., which govern the payment of prevailing wage rates on Public Works projects, including the hauling and delivery of ready-mixed concrete. The Contractor and Subcontractors of any tier shall be governed by and required to comply with these statutes and regulations in connection with the Project. Pursuant to Labor Code § 1771, the Contractor and all Subcontractors of any tier must pay not less than the prevailing wage rates to all workers employed in execution of the Contract. Contractor and Subcontractors must comply with all applicable statutes and regulations, including, but not limited to, Labor Code §§ 1771, 1775, 1777.5, 1813, and 1815.

5-2.2.2.2. WEEKLY PAYMENTS TO EMPLOYEES.

Contractor and all Subcontractors of any tier must pay each worker on the Project, unconditionally and not less often than once each week, the full amounts that are due and payable for the period covered by the particular payday in accordance with the prevailing wage scale determination, regardless of any contractual relationship which may be alleged to exist between the Contractor, Subcontractor, and such laborers. Thus, an employer must establish a fixed workweek and an established payday. On each payday, each worker must receive all sums due at the end of the preceding workweek and must be provided with an itemized wage statement.

5-2.2.2.3. CLASSIFICATIONS.

The County shall require that any class of laborers or mechanics, including apprentices and trainees, which are not listed in the General Wage Determinations and which are to be employed under this Contract, shall be classified conformably

to such wage determinations. In the event the County does not concur in the Contractor's proposed classification or reclassification of a particular class of laborers and mechanics (including apprentices and trainees) to be used, the question, accompanied by the recommendation of the County, shall be referred to the State Director of Industrial Relations for determination.

5-2.2.2.4. FRINGE BENEFIT CASH EQUIVALENT.

The County shall require, whenever the minimum wage rate prescribed for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly wage and the Contractor is obligated to pay a cash equivalent of such a fringe benefit, an hourly cash equivalent thereof must be established. In the event the interested parties cannot agree upon cash equivalent of the fringe benefit, the questions, accompanied by the recommendation of the County, shall be referred to the State Director of Industrial Relations for determination.

5-2.2.3. PENALTY FOR PREVAILING WAGE RATE UNDERPAYMENT.

Pursuant to Labor Code § 1775, the Contractor must, as a penalty, forfeit not more than Two Hundred Dollars ($200.00) to the State or the Owner for each Calendar Day or portion thereof, for each worker paid less than the prevailing wage rates as determined by the Director of the Department of Industrial Relations for such work or craft in which such worker is employed for the Work by the Contractor or by any Subcontractor, of any tier, in connection with the Work. The difference between prevailing wage rates and the amount paid to each worker each Calendar Day, or portion thereof, for which each worker paid less than the prevailing wage rate, must be paid to each worker by the Contractor.

5-2.2.4. WITHHOLDING.

The County shall upon its own action or upon written request of an authorized representative of the Department of Labor or DIR, withhold or cause to be withheld from the Contractor under this Contract so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees, and helpers, employed by the Contractor or any Subcontractor the full amount of wages required by the Contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper, employed or working on the site of the Work, all or part of the wages required by the Contract, the County may, after written notice to the Contractor, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

5-2.2.5. RESPONSIBILITY FOR SUBCONTRACTORS' PAYMENT OF PREVAILING WAGES.

Pursuant to Labor Code § 1774, the Contractor is responsible for ensuring that all Subcontractors of any tier comply with requirements for payment of prevailing wages. Contractor is responsible for Labor Code violations by Subcontractors of any tier. The

Agreement executed between the Contractor and each Subcontractor must contain a copy of the provisions of Labor Code §§ 1771, 1775, 1777.5, 1813, and 1815, at a minimum. Contractor must monitor each Subcontractor's payment of prevailing wage rates. Upon becoming aware of the failure of any Subcontractor of any tier to pay its workers the specified prevailing wage, the Contractor must diligently take action to halt and rectify the failure, including, without limitation, retaining sufficient funds due to the Subcontractor to cover the underpayment. Before making final payment to any Subcontractor, the Contractor must obtain an affidavit from the Subcontractor, signed under penalty of perjury, which states that the Subcontractor has paid the specified, determined prevailing wage rate to its employees for the Project, as well as any amounts due pursuant to Labor Code § 1813. Contractor must provide copies of such affidavits to the Owner and provide Contractor's affidavit that it has paid the specified, determined prevailing wage rate to its employees for the Project, as well as any amounts due under Labor Code § 1813.

5-2.2.6. STATEMENT OF EMPLOYER PAYMENTS.

Within five (5) Calendar Days of the County's request, the Statement of Employer Payments (DSLE Form PW 26) must be completed and submitted to the County by each Contractor and Subcontractor who pays benefits to a third party trust, plan or fund for health and welfare benefits, vacation funds or makes pension contributions. The form must contain, for each worker classification, the fund or trust name, address, administrator, and amount per hour contributed and frequency of contributions. Training fund contributions must also be reported on this form. In February and August of each year during the Project, the Contractor and Subcontractors of any tier must verify changes in wage rates for any trade classifications used on the Project.

5-2.3. PAYROLL RECORDS.

Pursuant to Section 1776 of the Labor Code the Contractor shall keep, make available, and submit to the Engineer upon request, Certified Payroll Records.

5-2.3.1. CERTIFIED PAYROLL RECORDS AND BASIC PAYROLL RECORDS.

The Contractor and Subcontractors of any tier must maintain Certified Payroll Records and "Basic Payroll Records," defined as time cards, front and back copies of canceled checks, cash receipts, trust fund forms, daily logs, employee sign-in sheets, accounting ledgers, tax forms and/or any other record maintained for the purposes of reporting payroll, during the course of the Work and must preserve them for a period of three (3) years after completion of the Project for all trades workers executing the Work of the Contract. Certified Payroll Records must be submitted at the times designated in Section **5-2.3.2** below or upon request as described in Section **5-2.3.3** below. The County reserves the right to require Contractor to routinely submit Basic Payroll Records which may be requested by the County at any time and must be provided within ten (10) Calendar Days following the receipt of the request.

5-2.3.2. SUBMITTAL OF CERTIFIED PAYROLL RECORDS.

Pursuant to Labor Code § 1776, the Contractor and each Subcontractor of any tier must maintain an accurate, weekly payroll record showing the employee full name, address, social security number, work classification, amount paid per hour, straight time, overtime and holiday hours worked each day and weekly totals, the actual per diem wages paid to each person employed for the Work, and the gross/net wages paid for this Project/all projects, as well as the Contractor name and address, Project name and location, and dates of payroll. If payments are made to any third-party trust, funds or plans for health and welfare, pension or vacation trusts, those payments must be stated on the Certified Payroll Record. The basic wage rate paid per hour plus the employer contributions for benefits, including training fund contributions, must at least equal the prevailing wage rate for that classification.

The Contractor must maintain and submit one (1) copy of its Certified Payroll Records and those of its Subcontractors weekly with Contractor's application for payment. The County requires Contractor to submit to the County each week, no later than seven (7) Calendar Days after the payday for the week covered, the Certified Payroll Records of Contractor and its Subcontractors of every tier. If there is no Work on a given week or on a given day, the Certified Payroll Record must indicate "no work" for that week or day(s). The Certified Payroll Records must account for each day of the week including Saturdays, Sundays, and holidays. Contractor and Subcontractors of every tier must write "final" on the last submitted Certified Payroll Record for the Project.

The Certified Payroll Records must be verified by a written declaration made by a person with authority to represent the reporting entity, under penalty of perjury, that the information contained in the payroll record is true and correct and that the reporting entity has complied with the requirements of California Labor Code §§ 1771, 1811, and 1815 for any Work performed by his, her or its employees on the Project.

In addition, the County reserves the right to require the Contractor to provide monthly Certified Payroll Records of local hiring and non-local hiring to ascertain local participation and shall allow the County and County's staff to conduct onsite visits upon request to ascertain local hiring participation.

Contractor agrees that submission of Certified Payroll Records as well as all related or subsequent requests for supporting document made by the County shall be a condition precedent to Contractor's receipt of a progress, final, or retention payment. The County shall withhold any portion of the progress, final, or retention payment up to and including the entire payment until the Certified Payroll Records requirement is met by the Contractor or its Subcontractor. If the Contractor or any Subcontractor is determined to have failed to pay workers in compliance with the applicable prevailing wage sections of the Labor Code, the County shall continue to withhold progress, final, or retention payments until sufficient funds have been withheld for payment of wages to workers and all applicable penalties.

5-2.3.3. MAKING CERTIFIED PAYROLL RECORDS AVAILABLE UPON REQUEST.

Pursuant to Labor Code § 1776, in addition to its obligation to deliver Certified Payroll Records to the Owner on a weekly basis as set forth above, the Contractor must also make payroll records available for inspection at all reasonable hours at the principal office of the Contractor on the following basis: (i) a certified copy of an employee's payroll record must be made available for inspection or furnished to such employee or his/her authorized representative on request; (ii) a certified copy of all payroll records must be made available for inspection or furnished upon request to the Owner, the Division of Labor Standards Enforcement and the Division of Apprenticeship Standards of the Department of Industrial Relations; (iii) a certified copy of payroll records must be made available upon request to the public for inspection or copies thereof made; provided, however, that a request by the public must be made through either the County, the Division of Apprenticeship Standards, or the Division of Labor Standards Enforcement. If the requested payroll records have not been previously provided to the County, the Division of Apprenticeship Standards or the Division of Labor Standards Enforcement, the requesting party must, prior to being provided the records, reimburse the cost of preparation by the Contractor, Subcontractors and the entity through which the request was made; and the public may not be given access to such records at the principal office of the Contractor; (iv) the Contractor must file a certified copy of the payroll records with the entity that requested such records within ten (10) Calendar Days after receipt of a written request; and (v) any copy of records made available for inspection as copies and furnished upon request to the public or any public agency by the County, the Division of Apprenticeship Standards or the Division of Labor Standards Enforcement shall be marked or obliterated in such a manner as to prevent disclosure of an individual's name, address and social security number. The name and address of the Contractor or any Subcontractor, of any tier, performing a part of the Work must not be marked or obliterated. The Contractor must inform the Owner of the location of payroll records, including the street address, city and county and must, within five (5) Working Days, provide a notice of a change or location and address.

5-2.3.4. FORFEITURE FOR FAILURE TO COMPLY WITH WRITTEN RECORD REQUEST LAWS.

The Contractor or Subcontractor shall have **ten (10) Calendar Days** in which to comply, subsequent to receipt of written request regarding Certified Payroll Records or Basic Payroll Records. In the event Contractor or a Subcontractor fails to strictly comply after such ten (10) day period, the Contractor or Subcontractor shall, as a penalty to the State or the Owner, forfeit One Hundred Dollars ($100.00) for each Calendar Day, or portion thereof, for each worker, until strict compliance is effectuated. Upon the request of the Division of Apprenticeship Standards or the Division of Labor Standards Enforcement, these penalties shall be withheld from any portion of the Contract Price then or thereafter due the Contractor. A Contractor is not subject to a penalty assessment pursuant to this paragraph due to the failure of a Subcontractor to comply with this Section.

5-2.4. HOURS OF LABOR.

Pursuant to Section 1810 of the Labor Code, eight (8) hours of labor shall constitute a legal day's work. Pursuant to Section 1813 of the Labor Code, the Contractor and any Subcontractors, shall, as a penalty to the Agency, forfeit the prescribed amount per Calendar Day for each worker required or permitted to work more than eight (8) hours in any one (1) Calendar Day and forty (40) hours in any one (1) Calendar Week without being compensated in accordance with Section 1815 of the Labor Code.

5-2.4.1. LIMITS ON HOURS OF LABOR.

Pursuant to Labor Code § 1810, eight (8) hours of labor shall constitute a legal day's work. Pursuant to Labor Code § 1811, the time of service of any worker employed at any time by the Contractor or by a Subcontractor, of any tier, upon the Work or upon any part of the Work, is limited and restricted to eight (8) hours during any one Calendar Day and forty (40) hours during any one Calendar Week, except as hereafter provided. Notwithstanding the foregoing provisions, Work performed by employees of Contractor or any Subcontractor, of any tier, in excess of eight (8) hours per day and forty (40) hours during any one (1) week, shall be permitted upon compensation for all hours worked in excess of eight (8) hours per day at not less than one and one-half (1½) times the basic rate of pay.

5-2.4.2. PENALTY FOR EXCESS HOURS.

Pursuant to Labor Code §§ 1813 and 1815, the Contractor shall pay to the State or the Owner a penalty of Twenty-five Dollars ($25.00) for each worker employed in the execution of the Contract by the Contractor or any Subcontractor, of any tier, for each Calendar Day during which such worker is required or permitted to work more than eight (8) hours in any Calendar Day and forty (40) hours in any one (1) Calendar Week, in violation of the provisions of the California Labor Code, unless compensation to the worker so employed by the Contractor is not less than one and one-half (1½) times the basic rate of pay for all hours worked in excess of eight (8) hours per day.

5-2.4.3. CONTRACTOR RESPONSIBILITY FOR COST OF EXCESS HOURS.

Any Work performed by workers necessary to be performed after regular working hours or on Sundays or other holidays must be performed without adjustment to the Contract Price or any other additional expense to the County.

5-2.5. APPRENTICES.

Pursuant to Section 1777.5 of the Labor Code, the Contractor shall comply with all requirements for Apprenticeable occupations.

5-2.5.1. APPRENTICESHIP COMMITTEE CONTRACT AWARD INFORMATION.

Pursuant to Labor Code § 1777.5 and Title 8 California Code of Regulations § 230, Contractor and Subcontractors of any tier who are not already approved to train by an apprenticeship program sponsor must, within ten (10) Calendar Days of signing the

Contract or Subcontract, as applicable, but in any event prior to the first day in which the Contractor has workers employed on the Project, must submit Contract Award information. This information may be submitted on a Public Works Contract Award Information form (DAS form 140). The Contract Award information must be provided to the appropriate local apprenticeship committees whose geographic area of operation include the area of the Project and can supply apprentices to the Project.

5-2.5.2. EMPLOYMENT OF APPRENTICES.

Labor Code § 1777.5 and Title 8 California Code of Regulations § 200 et seq. provide detailed requirements for employing apprentices on Public Works. The responsibility of complying with Section 1777.5 of the Labor Code and the regulations lies exclusively with the Contractor. When Contractor or Subcontractor employs workers in any Apprenticeable Craft or Trade, the Contractor and Subcontractor must employ apprentices in at least the ratio set forth in Labor Code Section 1777.5.

Every apprentice employed to perform any of the Work must be paid the prevailing rate of per diem wages for apprentices in the trade to which such apprentice is registered, and such individual must be employed only for the work of the craft or trade to which such individual is registered.

Only apprentices, as defined in Labor Code § 3077, who are in training under apprenticeship standards and written apprenticeship agreements under California Labor Code § 3070 et seq. are eligible to be employed for the Work. The employment and training of each apprentice shall be in accordance with either of the following:

a. The apprenticeship standards and apprentice agreements under which such apprentice is training; or

b. The rules and regulations of the California Apprenticeship Council, including Regulations Section 230.1(c), which requires that apprentices employed on public projects can only be assigned to perform work of the craft or trade to which the apprentice is registered and that the apprentices must at all times work with or under the direct supervision of journeyman/men.

5-2.5.3. APPRENTICESHIP CERTIFICATE AND REQUEST FOR DISPATCH OF APPRENTICES.

a. When the Contractor or any Subcontractor of any tier in performing any of the Work employs workers in any Apprenticeable Craft or Trade, as defined in Section **5-2.5.4** below, the Contractor and such Subcontractor may apply to the Joint Apprenticeship Committee administering the apprenticeship standards of the craft or trade in the area of the site of the Work for a certificate approving the Contractor or such Subcontractor under the apprenticeship standards for the employment and training of apprentices in the area or industry affected, provided, however, that the approval as established by the Joint Apprenticeship Committee or Committees shall be subject to the approval of the Administrator of Apprenticeship. The Joint Apprenticeship Committee or Committees, subsequent to approving the Contractor

or Subcontractor, shall arrange for the dispatch of apprentices to the Contractor or such Subcontractor in order to comply with California Labor Code § 1777.5. There shall be an affirmative duty upon the Joint Apprenticeship Committee or Committees, administering the apprenticeship standards of the crafts or trades in the area of the site of the Work, to ensure equal employment and affirmative action and apprenticeship for women and minorities. Contractors or Subcontractors shall not be required to submit individual applications for approval to local Joint Apprenticeship Committees provided they are already covered by the local apprenticeship standards.

b. Contractors who are not already approved to train apprentices must request dispatch of required apprentices from one of the applicable Apprentices Committees whose geographic area of operation includes the site of the Project by giving the committee actual notice of at least forty-eight (48) hours (excluding Saturdays, Sundays and holidays) before the date on which one or more apprentices are required. Contractors and Subcontractors may use DAS Form 142 to make the request for apprentices. However, if a non-signatory Contractor declines to abide by and comply with the terms of a local committee's standards, the Apprenticeship Committee shall not be required to dispatch apprentices to such Contractor. Conversely, if in response to a written request, an Apprenticeship Committee does not dispatch any apprentice to a Contractor who has agreed to employ and train apprentices in accordance with either the Apprenticeship Committee's Standards or the California Apprenticeship Counsel Regulations (Title 8, Section 230 et seq.) within seventy-two (72) hours of such request (excluding Saturdays, Sundays and holidays) the Contractor shall not be considered in violation of Regulations Section 230.1 as a result of failure to employ apprentices for the remainder of the Project, provided the Contractor has made the request in enough time to meet the required ratio. If an Apprenticeship Committee dispatches fewer apprentices than the Contractor or Subcontractor requested, the Contractor or Subcontractor shall be considered in compliance if the Contractor employs those apprentices who are dispatched, provided that, where there is more than one Apprenticeship Committee able and willing to unconditionally dispatch apprentices, a Contractor or Subcontractor who is not a participant in an apprenticeship program has requested dispatch from at least two (2) committees.

5-2.5.4. RATIO OF APPRENTICES TO JOURNEYMEN.

a. The ratio of Work performed by apprentices to journeymen, who shall be employed in the Work, may be the ratio stipulated in the apprenticeship standards under which the Joint Apprenticeship Committee operates, but in no case shall the ratio be less than one (1) hour of apprentice work for every five (5) hours of labor performed by a journeyman, except as otherwise provided in California Labor Code § 1777.5. The ratio of apprentice work to journeyman work shall apply during any day or portion of a day when any journeyman is employed at the site of the Work and shall be computed on the basis of the hours worked during the day by journeymen so employed. Any Work performed by a journeyman in excess of eight (8) hours per day or forty (40) hours per week shall not be used to calculate the ratio. The

Contractor must employ apprentices for the number of hours computed as above before the end of the Contract or subcontract, as applicable. The Contractor must, however, endeavor, to the greatest extent possible, to employ apprentices during the same time period that the journeymen in the same craft or trade are employed at the site of the Work. Where an hourly apprenticeship ratio is not feasible for a particular craft or trade, the Division of Apprenticeship Standards, upon application of a Joint Apprenticeship Committee, may order a minimum ratio of not less than one (1) apprentice for each five (5) journeymen in a craft or trade classification.

b. The Contractor or any Subcontractor covered by this Paragraph and California Labor Code § 1777.5, that has agreed to be covered by an Apprenticeship Program's standards, upon the issuance of the approval certificate, or that has been previously approved in such craft or trade, must employ the number of apprentices or the ratio of apprentices to journeymen stipulated in the apprenticeship standards, but in no event less than the 1-to-5 hourly ratio. Upon proper showing by the Contractor that it employs apprentices in such craft or trade in the State of California on all of its contracts on an annual average of not less than one (1) apprentice to each five (5) journeymen, the Division of Apprenticeship Standards may grant a certificate exempting the Contractor from the 1-to-5 hourly ratio as set forth in this Paragraph and California Labor Code § 1777.5.

5-2.5.5. EXEMPTION.

The requirement to employ apprentices shall not apply to contracts of General Contractors, or to contracts of Specialty Contractors not bidding for work through a General or Prime Contractor, involving less than Thirty Thousand Dollars ($30,000.00) or twenty (20) Working Days. The term "Apprenticeable Craft or Trade," as used herein shall mean a craft or trade determined as an Apprenticeable occupation in accordance with rules and regulations prescribed by the Apprenticeship Council.

5-2.5.6. CONTRIBUTIONS TO TRUST FUNDS.

The Contractor or any Subcontractor of any tier who performs any of the Work by employment of journeymen or apprentices in any Apprenticeable Craft or Trade shall contribute to the California Apprenticeship Council in the same amount that the Director determines is the prevailing amount of apprenticeship training contributions in the area of the Project. Contractor or any Subcontractor, of any tier, may take as a credit for payments to the Council any amounts paid by the Contractor or Subcontractor to an approved apprenticeship program that can supply apprentices to the Project. Contractors who do not contribute to an apprenticeship program must submit their contributions to the California Apprenticeship Council. Training Fund contributions are due and payable on the 15th day of the month for Work performed during the preceding month. Training contributions to the California Apprenticeship Council shall be paid by check and shall be accompanied by a Completed Training Fund Contribution Form (CAC-2). Contractors who contribute to an apprenticeship program are entitled to a full credit in the amount of those contributions. The Division of Labor Standards Enforcement is authorized to enforce the payment of such contributions to such fund(s)

as set forth in California Labor Code § 227. Such contributions shall not result in an increase in the Contract Price.

5-2.5.7. CONTRACTOR'S COMPLIANCE.

The responsibility of compliance with this Section for all Apprenticeable Trades or Crafts is solely and exclusively that of the Contractor. All decisions of the Joint Apprenticeship Committee(s) under this Section are subject to the provisions of California Labor Code § 3081. In the event the Contractor willfully fails to comply with the provisions of this Paragraph and California Labor Code § 1777.5, pursuant to California Labor Code § 1777.7, the Contractor shall: (i) be denied the right to bid on any Public Works Contract for a period of one (1) year from the date the determination of non-compliance is made by the Administrator of Apprenticeship; and (ii) forfeit, as a civil penalty, One Hundred Dollars ($100.00) for each Calendar Day of noncompliance. Notwithstanding the provisions of California Labor Code § 1727, upon receipt of such determination, the County shall withhold such amount from the Contract Price then due or to become due. Any such determination shall be issued after a full investigation, a fair and impartial hearing, and reasonable notice thereof in accordance with reasonable rules and procedures prescribed by the California Apprenticeship Council. Any funds withheld by the County pursuant to this Paragraph shall be deposited in the fund that funded the Project unless otherwise specified by the County Engineer. The interpretation and enforcement of California Labor Code §§ 1777.5 and 1777.7 shall be in accordance with the rules and procedures of the California Apprenticeship Council.

5-2.6. AFFIRMATIVE ACTION/EQUAL EMPLOYMENT OPPORTUNITY.

The Contractor shall comply with all applicable non-discrimination and equal employment laws. The Contractor shall not discriminate in its recruiting, hiring, promotion, demotion or termination practices on the basis of race, religious creed, color, national origin, ancestry, sex, age or physical handicap in the performance of this Contract and shall comply with the provisions of the California Fair Employment Practice Act (commencing with Section 1410 of the Labor Code), the Federal Civil Rights Act of 1964 (P.L. 88-352) and all amendments thereto, Executive Order No. 11246 (30 Federal Register 12319), as amended, and all administrative rules and regulations issued pursuant to said Acts and Order. See particularly 41 Code of Federal Regulation (CFR) Chapter 60.

Contractor shall require each of its Subcontractors to comply with the preceding Paragraph and shall include in each subcontract language similar to the preceding Paragraph.

Contractor shall permit access to its records of employment, employment advertisement, application forms and other pertinent data and records (including but not limited to certified payroll information) by the County and any Federal or State agency having jurisdiction for the purpose of investigation to ascertain compliance with this Section.

County may assign an affirmative action representative to monitor Contractor and its Subcontractor(s) conduct required by this Section, including the right of entry to the Project

for the purpose of obtaining information from persons performing Work on the Project, provided such inspection does not interfere with the progress of the Work.

Elsewhere in the Contract Documents more specific requirements may be contained covering the same subject matter of this Section. In the case of conflict, the more stringent requirement imposed upon the Contractor shall control.

Transactions of $10,000 or under - Contracts and subcontracts not exceeding $10,000 are exempt from the requirements of this Section. No Contractor or Subcontractor shall procure supplies and/or services in less than usual quantities to avoid applicability of this Section. With respect to contracts and subcontracts for indefinite quantities, this Section applies unless the amount required in any one (1) year under such contracts will reasonably be expected not to exceed $10,000.

Transactions in Excess of $10,000, but less than $50,000 - At County's request, Contractor and associated Subcontractors shall certify that it has in effect an affirmative action plan and agrees to comply with all state and federal laws and regulations regarding Fair Employment Practices. Contractor shall maintain a written copy of its and all Subcontractors' affirmative action plans and furnish County a copy of the said plans upon request. County may require Contractor and Subcontractors to complete an Affirmative Action Compliance Report, on a form furnished by County, setting forth definite goals during the term of this Contract.

Transactions of $50,000 or more - If Contractor or Subcontractors has fifty (50) or more employees and a contract for $50,000 or more, it shall develop and submit to County within thirty (30) days after Award, a written affirmative action compliance program providing in detail specific steps to guarantee equal employment opportunity. Contractor and Subcontractors shall include in its affirmative action program a table of job classifications, which table shall include but need not be limited to job titles, duties and rates of pay.

For the purpose of determining the number of employees, the average of the Contractor's or its Subcontractors' employees from the 12-month period immediately prior to Award, or the total number of employees Contractor or its Subcontractors will have when performing this Contract, whichever is higher, shall be used.

Federally Assisted Construction - If this Project is a federally assisted construction project, then the contract provisions contained in 41 CFR S60-1.4(b) are incorporated herein and Contractor shall likewise incorporate said provisions in each subcontract entered into by Contractor to perform the Work. Federally assisted construction is identified as such in the Notice Inviting Bids.

5-3 INSURANCE

5-3.1. GENERAL.

The County and Contractor shall purchase and maintain insurance, and provide bonds, as set forth in this Section.

5-3.2. GENERAL LIABILITY INSURANCE.

5-3.2.1. INSURANCE FOR EXISTING STRUCTURES, IF ANY.

If the Work involves remodeling an existing structure or constructing an addition to an existing structure, the County shall purchase and maintain, "all-risks" property insurance, on a replacement cost basis, protecting the existing structure against direct physical loss or damage, notwithstanding the undertaking of the Work.

5-3.3. CONTRACTOR'S INSURANCE.

5-3.3.1. CERTIFICATES OF INSURANCE.

The Contractor shall provide Certificates of Insurance and endorsements acceptable to the County evidencing compliance with the requirements in this Section by Contractor, its listed Subcontractors, and, upon County's request, other Subcontractors of any Tier, and suppliers at the following times: (1) concurrently with submission to County of the signed Agreement and bonds and, in any event, prior to commencement of the Work; (2) upon renewal or replacement of each required policy of insurance; and (3) upon the County's written request. An additional certificate and additional endorsement evidencing continuation of commercial liability coverage, including coverage for completed operations, shall be submitted with the final Application for Payment and thereafter upon renewal or replacement of such coverage until the expiration of a minimum of ten (10) years after Final Completion. The certificates will show the County as an additional insured on the Contractor's Commercial General Liability and excess or umbrella liability policy or policies. Each certificate and endorsement is to be signed by a person authorized by that insurer to bind coverage on its behalf. The certificate(s) and endorsement(s) must be in a form approved by County. Upon the County's request, Contractor shall provide copies of all insurance policies required by this Section. The copy of each policy provided shall contain all applicable conditions, definitions, exclusions, list of forms, and endorsements. The policy number shall be included in all certificates, endorsements and riders.

In the event of a material modification, cancellation, expiration, or reduction in coverage, this Contract 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, including all endorsements and attachments thereto evidencing coverage's set forth herein and the insurance required herein is in full force and effect. ***Contractor shall not commence operations until the County has been furnished original Certificate (s) of Insurance and copies of endorsements as required in this Section. An individual authorized by the insurance carrier to do so on its behalf shall sign the original endorsements for each policy and the Certificate of Insurance.*** However, failure to obtain the required documents prior to the Work beginning shall not waive the CONTRACTOR'S obligation to provide them. The COUNTY reserves the right to require complete, certified copies of all required insurance policies, including endorsements required by these specifications, at any time.

Contractor shall pass down the insurance obligations contained herein to all tiers of Subcontractors working under this Agreement. Contractor shall require and verify that all Subcontractors maintain insurance meeting all the requirements stated herein, and shall ensure the County of Riverside is an additional insured on insurance required from Subcontractors.

5-3.3.2. DEDUCTIBLES AND SELF-INSURED RETENTIONS.

The Contractor shall disclose to the County any deductible or self-insured retentions applicable to any insurance required to be provided by the Contractor. All deductibles and self-insured retentions must be identified in the certificates. Any deductible or self-insured retention in excess of $50,000 must be declared to and approved in writing by the County prior to execution of the Agreement. The deductibles and retentions shall be considered a form of self-insurance.

5-3.3.3. SELF-INSURANCE.

No Contractor shall provide self-insurance for any required coverage without the express written authorization of the County.

5-3.3.4. ADDITIONAL INSURED OBLIGATIONS.

To the fullest extent permitted by law, the Contractor shall cause the Commercial General Liability coverage and excess or Umbrella Liability policy or policies to include (1) the **County of Riverside, the Board of Supervisors and each member thereof**, and their respective officials, employees, commission members, officers, directors, agents, employees, volunteers and representatives, as additional insureds for Claims caused in whole or in part by the Contractor's negligent acts or omissions during the Contractor's operations; and (2) the **County of Riverside, the Board of Supervisors and each member thereof**, and their respective officials, employees, commission members, officers, directors, agents, employees, volunteers and representatives, as an additional insured for Claims caused in whole or in part by the Contractor's negligent acts or omissions for which loss occurs during completed operations. The additional insured coverage shall be primary and non-contributory to any of the County's General Liability Insurance policies and shall apply to both ongoing and completed operations. To the extent commercially available, the additional insured coverage shall be no less than that provided by Insurance Services Office, Inc. (ISO) forms:

1. CG 20 10 (11/85); or

2. CG 20 10 (04/13) for ongoing operations and CG 20 37 (04-13) for completed operations; or

3. substitute endorsements providing equivalent coverage, approved in writing by the County.

The coverage shall contain no special limitations on the scope of protection afforded to such additional insureds. Coverage must not be limited to the vicarious or supervisory role of any additional insured. Coverage afforded to additional insureds must be at least as broad as coverage afforded to the Contractor/first Named Insured. If the Contractor/Named Insured maintains higher policy limits of coverage than the limits specified herein, or has broader coverage, or has both, then the insurer shall make available the higher limits and broader coverage to such additional insureds. Any additional insured shall have the right, but not the obligation, to pay any deductible, self-insured retention, premium or other charge due under or required by the policy. Coverage for such additional insureds does not extend to liability to the extent prohibited by Insurance Code Section 11580.4.

5-3.3.5. CONTRACTOR'S REQUIRED INSURANCE COVERAGE.

The Contractor shall purchase and maintain the following types and limits of insurance from an insurance company or insurance companies lawfully authorized to issue insurance in the jurisdiction where the Project is located, so as to protect County and claimants under the state insolvency or guarantee fund, or otherwise under such forms and limits satisfactory to the County with a company or companies approved by County, following County's examination of the company's financial, reinsurance, Claims procedures and other data requested by the County. The Contractor shall maintain the required insurance until the expiration of the period for correction of Work, unless a different duration is stated below:

5-3.3.5.1. COMMERCIAL GENERAL LIABILITY.

A. Commercial General Liability insurance for the Project written on an occurrence form for products-completed operations hazard, providing coverage for Claims that may arise out of, pertain to, or relate to Contractor's operations and completed operations under the Contract, whether such operations are by the Contractor, its Subcontractors, or anyone directly or indirectly employed by any of them, or by anyone for whose acts any of them may be liable, including:

   1. damages because of bodily injury, sickness or disease, including occupational sickness or disease, and death of any person;

   2. personal injury and advertising injury;

   3. damages because of physical damage to or destruction of tangible property, including the loss of use of such property;

   4. bodily injury or property damage arising out of completed operations; and

   5. the Contractor's indemnity obligations under Article 9 of these General Provisions.

B. The Contractor's Commercial General Liability policy under this Section shall not contain an exclusion or restriction of coverage for the following:

1. Claims by one insured against another insured, if the exclusion or restriction is based solely on the fact that the claimant is an insured, and there would otherwise be coverage for the Claim.

2. Claims for property damage to the Contractor's Work arising out of the products-completed operations hazard where the damaged Work or the Work out of which the damage arises was performed by a Subcontractor.

3. Claims for bodily injury other than to employees of the insured.

4. Claims for indemnity under Article 9 of these General Provisions arising out of injury to employees of the insured.

5. Claims or loss excluded under a prior Work endorsement or other similar exclusionary language.

6. Claims or loss due to physical damage under a prior injury endorsement or similar exclusionary language.

7. Claims related to residential, multi-family, or other habitational projects, if the Work is to be performed on such a project.

8. Claims related to roofing, if the Work involves roofing.

9. Claims related to exterior insulation finish systems (EIFS), synthetic stucco or similar exterior coatings or surfaces, if the Work involves such coatings or surfaces.

10. Claims related to earth subsidence or movement, where the Work involves such hazards.

11. Claims related to explosion, collapse and underground hazards, where the Work involves such hazards.

C. **Minimum Limits of Insurance**. Contractor shall maintain limits of Commercial General Liability and Excess/Umbrella Liability Insurance no less than as follows:

Total Bid	For Each Occurrence[1]	Aggregate for Products/Completed Operations	General Aggregate[2]	Umbrella or Excess Liability[3]
≤$1,000,000	$1,000,000	$2,000,000	$2,000,000	$2,000,000
>$1,000,000 ≤$5,000,000	$1,000,000	$2,000,000	$2,000,000	$10,000,000
>$5,000,000 ≤$25,000,000	$2,000,000	$2,000,000	$4,000,000	$15,000,000
>$25,000,000	$2,000,000	$2,000,000	$4,000,000	$25,000,000

1. Combined single limit for bodily injury and property damage.
2. This limit shall apply separately to the Contractor's Work under this Contract.
3. The Umbrella or Excess policy shall contain a clause stating that it takes effect (drops down) in the event the primary limits are impaired or exhausted.

Commercial General Liability insurance coverage, including but not limited to, Premises Liability, Unmodified Contractual Liability, Products and Completed Operations Liability, Personal and Advertising Injury, and Cross Liability Coverage, covering Claims which may arise from or out of Contractor's performance of its obligations hereunder. Policy shall name County of Riverside as Additional Insured. Policy's limit of liability shall not be less than $2,000,000 per occurrence combined single limit. If such insurance contains a General Aggregate limit, it shall apply separately to this Agreement or be no less than two (2) times the occurrence limit.

5-3.3.5.2. COMPREHENSIVE AUTOMOBILE LIABILITY.

Comprehensive Automobile Liability covering vehicles owned, hired, leased, and non-owned vehicles used, whether scheduled or not, written on Insurance Services Office (ISO) Form CA 00 01 (12/93 or later edition) or a substitute form providing equivalent coverage, by the Contractor, with policy limits of not less than $1,000,000 per accident, for bodily injury, death of any person, and property damage arising out of the ownership, maintenance and use of those motor vehicles along with any other statutorily required automobile coverage. If such insurance contains a general Aggregate Limit, it shall apply separately to this Agreement or be no less than two (2) times the occurrence limit. Policy shall name County of Riverside as Additional Insured.

A. The Contractor may achieve the required limits and coverage for Commercial General Liability and Automobile Liability through a combination of primary and excess or Umbrella Liability Insurance, provided such primary and excess or Umbrella Insurance policies result in the same or greater coverage as the coverages required under Section 5-3.3.5.1 and this Section 5-3.3.5.2, and in no event shall any excess or Umbrella Liability Insurance provide narrower coverage than the primary policy. The excess policy shall not require the

exhaustion of the underlying limits only through the actual payment by the underlying insurers.

5-3.3.5.3. EXCESS OR UMBRELLA LIABILITY INSURANCE.

Excess or Umbrella Liability Insurance shall be at least as broad as any underlying coverage. Umbrella or excess liability coverage must apply on a primary, non-contributory basis for the benefit of Contractor before the Umbrella or excess insurer calls upon Contractor's primary insurance policy, or Umbrella or excess liability insurance, or any combination of these insurance policies. Coverage shall be provided on a "pay on behalf" basis, with defense costs payable in addition to policy limits. There shall be no cross-liability exclusion and no Contractor's limitation endorsement. The policy shall have starting and ending dates concurrent with the underlying coverages. The Named Insured may determine the layering of primary and excess liability insurance provided that if such layering differs from that described here, the actual coverage program meets the minimum total required limits and complies with all other requirements listed in this Section. Contractor's excess or umbrella liability coverage shall be maintained continuously for a minimum of **ten (10) years** after **Final Completion.**

5-3.3.5.4. WORKERS' COMPENSATION AT STATUTORY LIMITS.

All California employers must provide workers' compensation benefits to their employees under California Labor Code Section 3700. If a business employs one or more employees, then it must satisfy the requirement of the law. Policy shall include Employers' Liability coverage as defined in Section **5-3.3.5.5** below.

5-3.3.5.5. EMPLOYERS' LIABILITY.

Employers' Liability with policy limits not less than $1,000,000 each accident, $1,000,000 each employee, and $1,000,000 policy limit. Contractor shall comply with the applicable sections of the California Labor Code concerning workers' compensation for injuries on the job. Compliance is accomplished in one of the following manners:

1) Provide copy of permissive self-insurance certificate approved by the State of California; or

2) Secure and maintain in force a policy of workers' compensation insurance with statutory limits and Employer's Liability Insurance with a minimal limit of $1,000,000 per accident; or

3) Provide a "waiver" form certifying that no employees subject to the Labor Code's Workers' Compensation provision will be used in performance of this Contract.

Contractor hereby grants to County a waiver of subrogation which any insurer may acquire against the County, its officers, officials, employees, and volunteers, from

Contractor by virtue of the payment of any loss. Contractor agrees to obtain any endorsement that may be necessary to affect this waiver of subrogation but this provision applies regardless of whether or not the County has received a waiver of subrogation endorsement from the insurer.

5-3.3.5.6. JONES ACT.

Jones Act, and the Longshore & Harbor Workers' Compensation Act coverage, as required, if the Work involves hazards arising from work on or near navigable waterways, including vessels and docks.

5-3.3.5.7. PROFESSIONAL LIABILITY INSURANCE.

If the Contractor is required to furnish professional services as part of the Work, the Contractor shall procure Professional Liability insurance covering performance of the professional services, with policy limits of not less than one million $1,000,000 per Claim and $2,000,000 in the aggregate.

5-3.3.5.8. POLLUTION LIABILITY INSURANCE.

Contractor shall procure Pollution Liability insurance, with policy limits of not less than $1,000,000 per Claim and $2,000,000 in the aggregate, providing coverage on a form acceptable to County for liability caused by pollution conditions arising out of the operations of Contractor. Coverage shall apply to bodily injury, property damage (including loss of use of damaged property or of property that has not been physically injured), cleanup costs, and defense (including costs and expenses incurred in the investigation, defense, or settlement of Claims). All activities contemplated in this Contract shall be specifically scheduled on the policy as "covered operations." The policy shall provide coverage for the hauling of waste from the Project Site to the final disposal location, including non-owned disposal sites. Coverage shall be included on behalf of the insured for covered Claims arising out of the actions of independent Contractors. If the insured is using Subcontractors, the policy must include Work performed "by or on behalf" of the insured. The policy shall specifically provide for a duty to defend on the part of the insurer. Such insurance shall include coverage for all operations, including completed operations and professional services. Coverage afforded to **County of Riverside**, **the County Department of Waste Resources, the Board of Supervisors and each member thereof,** and their respective officials, employees, commission members, officers, directors, agents, employees, volunteers and representatives shall be at least as broad as coverage provided to the first Named Insured. Such insurance shall not contain any exclusion for asbestos or lead. Contractor's pollution liability coverage shall be maintained continuously for a minimum of **ten (10) years** after **Final Completion.**

5-3.3.5.9. COMBINED PROFESSIONAL LIABILITY AND POLLUTION LIABILITY INSURANCE.

Coverage under Sections 5-3.3.5.7 and 5-3.3.5.8 may be procured through a Combined Professional Liability and Pollution Liability insurance policy, with combined policy limits of not less than $2,000,000 per Claim and $4,000,000 in the aggregate.

5-3.3.5.10. MARITIME LIABILITY INSURANCE.

Insurance for maritime liability risks associated with the operation of a vessel, if the Work requires such activities, with policy limits of not less than $2,000,000 per Claim and $4,000,000 in the aggregate.

5-3.3.5.11. MANNED OR UNMANNED AIRCRAFT INSURANCE.

Insurance for the use or operation of manned or unmanned aircraft, if the Work requires such activities, with policy limits of not less than$2,000,000 per Claim and $4,000,000 in the aggregate.

5-3.3.5.12. PROPERTY INSURANCE.

Property insurance on an "all-risks" completed value form, covering property owned by the Contractor and its Subcontractors of every tier and used on the Project, including any tools, Contractor's (or Subcontractors') employee owned tools, machinery, or motor vehicles owned or rented by the Contractor, or the Contractor's agents, suppliers or Subcontractors as well as to any temporary structures, protective fences, scaffolding, and other equipment.

5-3.4. CONTRACTOR'S INSURANCE TERMS AND CONDITIONS

5-3.4.1. PRIMARY COVERAGE.

All policies and endorsements shall stipulate that the Contractor's (and the Subcontractors') insurance coverage shall be primary insurance as respects to **County of Riverside**, **the County Department of Waste Resources, the Board of Supervisors and each member thereof** and their directors, commissioners, officers, employees, agents and volunteers. Any insurance maintained by the **County of Riverside**, **the Board of Supervisors and each member thereof** and their directors, commissioners, officers, employees, agents, and volunteers shall be excess of the Contractor's (and its Subcontractors') insurance and shall not contribute with it.

5-3.4.2. COVERAGE APPLIES SEPARATELY TO EACH INSURED AND ADDITIONAL INSURED.

Coverage shall state that the Contractor's (and its Subcontractors') insurance shall apply separately to each insured or additional insured against whom Claim is made or suit is brought, except with respect to the limits of the insurer's liability. Coverage shall apply to any Claim or suit brought by an additional insured against a Named Insured

or other insured. Nothing in the policy(ies) shall be construed to preclude coverage of a Claim by one insured under the policy(ies) against another insured under the policy(ies). All such Claims shall be covered as third-party Claims, i.e., in the same manner as if separate policies had been issued to each insured. Nothing contained in this provision shall operate to increase or replicate the limits of liability as provided under the policy(ies).

5-3.4.3. ACCEPTANCE OF COVERAGE.

All insurance policies, certificates, endorsements and binders shall be subject to the approval of the County's risk manager as to form and content. The insurance requirements are subject to amendment or waiver only if approved in writing by the County's risk manager. Insurance shall be placed with insurers with an A.M. Best Guide rating of no less than **A:VIII**.

5-3.4.4. CONTINUATION COVERAGE.

For completed operations and other insurance coverages that are required to remain in force after Final Completion, a sworn statement attaching a certificate and endorsements evidencing continuation of such coverage shall be submitted with the final Application for Payment as required by Section 7-3.2 of these General Provisions. The County-approved Certificates of Insurance and endorsements for Contractor and its listed Subcontractors shall be attached to the Agreement.

5-3.4.5. CONTRACTOR'S FAILURE TO PROVIDE REQUIRED INSURANCE.

Failure to maintain required insurance at all times shall constitute a default and material breach. In such event, Contractor shall immediately notify County and cease all performance under this Contract until further directed by the County. In the absence of satisfactory insurance coverage, County may, at its discretion and sole option: (a) procure insurance with collection rights for premiums, attorneys' fees and costs against Contractor by way of set-off or recoupment from sums due Contractor; (b) immediately terminate or suspend Contractor's performance of the Contract; (c) pay Contractor's premiums for renewal of Contractor's coverage; or (d) self-insure the risk, with all damages and costs incurred, by judgment, settlement or otherwise, including attorneys' fees and costs, being collectible from Contractor, by way of set-off or recoupment from any sums due Contractor. Upon demand, Contractor shall repay County for all sums that County paid to obtain, renew, reinstate or replace the insurance, or County may offset the cost against any monies that the County may owe Contractor.

5-3.4.6. VERIFICATION OF COVERAGE.

Upon request of County, Contractor shall provide complete copies of Contractor's and Subcontractor's insurance policies (including, but not limited to, the declarations page, form list and riders), endorsements or certificates required under the Contract Documents, and premium invoices.

5-3.4.7. REASSESSMENT OF INSURANCE REQUIREMENTS.

At any time during the duration of this Contract, the County may require that Contractor obtain, pay for, and maintain more or less insurance depending on the County's assessment of any one or more of the following factors: (1) the County's risk of liability or exposure arising out of, or in any way connected with, Contractor's services under this Contract; (2) the nature or number of accidents, Claims, or lawsuits arising out of, or in any way connected with, Contractor's services under this Contract; or (3) the availability, or affordability, or both, of increased liability insurance coverage.

5-3.4.8. NO LIMITATION.

Contractor's maintenance of insurance as required by the Contract Documents shall not be construed to limit the liability of the Contractor or its Subcontractors of any tier to the coverage provided by such insurance, or otherwise limit the County's recourse to any remedy available at law or in equity.

5-3.4.9. ADDITIONAL CONTRACTOR INSURANCE RESPONSIBILITIES.

5-3.4.9.1. CLAIM FOR RECOVERY.

In the event that the Contractor wishes to make any Claim for recovery under any insurance policy hereunder, it shall, as a pre-condition thereto, give timely notification to County of the event causing the Claim, cooperate with the County, and do all things required of it as an insured under such policy, so as to permit the policy to be complied with and a Claim be made there under. Contractor further agrees that to the extent required under such policy, it shall permit and authorize full subrogation in favor of the insurers of any rights as against any other person, firm or corporation; Contractor further agrees that it shall defend, indemnify and save harmless the County, from any and all costs, charges, expenses and liabilities incurred by County in making any Claim on behalf of Contractor under such insurance policy or policies.

5-3.4.9.2. SUBCONTRACTOR INSURANCE.

A. The Contractor shall include in all subcontracts a requirement that Subcontractors of every Tier shall obtain and maintain, at a minimum, all types of insurance required of Contractor in this Section, but the limits of liability and deductibles shall be in amounts determined by the Contractor, based on the degree of hazardous exposure according to the Work performed by each Subcontractor and the size of each subcontract. The **County of Riverside, the Board of Supervisors and each member thereof**, and their respective officials, employees, commission members, officers, directors, employees, volunteers, agents and representatives shall be named as additional insureds under each policy.

B. Certificates of Insurance and endorsements acceptable to the Contractor for each Subcontractor shall be filed with the County prior to the Subcontractor's commencement of Work. The certificates shall contain a provision that

coverage affordable under the policies will not be canceled unless at least thirty (30) days' prior written notice has been given to the Contractor. The County may, at any time, require that the Contractor provide the County with copies of said policies.

5-3.4.9.3. CONTRACTOR'S RESPONSIBILITY.

It shall be the responsibility of Contractor not to violate nor knowingly permit to be violated any condition of the policies required hereunder, and it shall be Contractor's duty and responsibility to impose upon each Subcontractor and have each Subcontractor impose upon each Sub-subcontractor the same responsibilities and obligations imposed upon Contractor under the insurance provisions provided for herein.

5-3.5. MISCELLANEOUS.

5-3.5.1. COVERAGE.

County makes no representations that the insurance it specified is sufficient to cover all potential Claims.

5-3.5.2. FAILURE TO COMPLY.

Contractor's failure to comply with an insurance provision in this Contract constitutes a material breach upon which County may immediately terminate or suspend Contractor's performance of this Contract or invoke another remedy that this Contract or the law allows. At its discretion, County may obtain or renew the insurance, and County may pay all or part of the premiums. Upon demand, Contractor shall repay County for all sums or monies that County paid to obtain, renew, or reinstate the insurance, or County may offset the cost of the premium against any sums or monies that County may owe Contractor.

5-3.5.3. MODIFICATIONS.

County reserves the right to modify these insurance requirements, including limits, based on the nature of the risk, prior experience, insurer, coverage, or other special circumstances.

5-4 PATENT FEES OR ROYALTIES

The Contractor shall assume all costs arising from the use of patented materials, equipment, devices, or processes used on or incorporated in the Work in the Bid prices and Contract Price, and agrees to indemnify and save harmless the County and its duly authorized representative, from all suits at law, or actions of every nature for, or on account of, the use of any patented materials, equipment, devices, or processes.

5-5 SAFETY

5-5.1. GENERAL.

Security and protective devices shall consist of fencing, steel plates, or other devices as specified in the Contract Documents to protect open excavations.

5-5.1.1. ACCIDENT PREVENTION.

Particular attention shall be given to relevant Division of Industrial Safety Construction and Electrical Safety Orders. Said Orders are contained in Title 8 of the California Code of Regulations, Chapter 4, Subchapters 4 and 5. Specific attention shall be taken of the California Occupational Safety and Health Act of 1973 (commencing with Section 6300 of the Labor Code) and the Federal Occupational Safety and Health Act of 1970 (P.L. 91-596) and rules and regulations issued pursuant to said Acts. Specific reference is made to Article 6 of said Construction Safety Orders. The Contractor shall impose these requirements on all Subcontractors involved and enforce compliance therewith. The duties here set forth are nondelegable by Contractor.

5-5.1.2. CONTRACTOR'S RESPONSIBILITY.

Contractor is under the absolute duty in fulfilling his contractual obligations under the Contract to proceed, and cause his Subcontractors to proceed, in a safe, workmanlike manner, with adequate safeguards for the protection of the public, the workmen and persons from time to time inspecting the Work. If, at any time, the Contractor finds any of its Subcontractors are allowing the Work to proceed in an unsafe manner or contrary to the terms of the Contract Documents, the Contractor shall immediately cause such action to stop and immediately take all action necessary to protect workmen, inspectors and the general public and cause the Work to proceed in a safe manner or in accordance with the terms of the Contract Documents.

5-5.1.3. CONTRACTOR'S RESPONSIBILITY FOR WORK.

Until the formal Final Acceptance of the completed Work by the County, the Contractor shall have the charge and care of the Work and shall bear the risk of injury or damage to any part of the Work by the action of the weather or from any other cause, whether or not arising from the execution of the Work. The Contractor shall rebuild, repair, restore, and make good all injuries or damages to any portion of the Work. Contractor shall not be entitled to a time extension arising from Contractor's failure to protect the Work from weather damage, including but not limited to damage from water and/or wind.

5-5.1.4. PERMITS AND LICENSES.

Unless otherwise specified in the Special Provisions and/or Detailed Provisions, all permits and licenses shall be obtained by the Contractor.

5-5.1.5. SANITARY PROVISIONS.

Necessary conveniences, properly secluded from public observation, shall be provided by the Contractor where needed for the use of laborers on the Work. Their location, construction and maintenance shall be subject to the approval of the County. The Contractor shall obey and enforce such sanitary regulations as may be prescribed by the California Department of Health or other authorities having jurisdiction.

5-5.2. SHORING PLAN.

Before excavating any trench five (5) feet (1.5 m) or more in depth, the Contractor shall submit a detailed Working Drawing (shoring plan) showing the design of the shoring, bracing, sloping, or other provisions used for the workers' protection. If the shoring plan varies from the shoring system standards, the shoring plan shall be prepared by a registered Structural or Civil Engineer. The shoring plan shall accommodate existing underground utilities. No excavation shall start until the Engineer has accepted the shoring plan and the Contractor has obtained a permit from the State Division of Industrial Safety. A copy of this permit shall be submitted to the Engineer. If the Contractor fails to submit a shoring plan or fails to comply with an accepted shoring plan, the Contractor shall suspend Work at the affected location(s). Such suspended Work shall not be the basis of a Claim for Extra Work and the Contractor shall not receive additional compensation or Contract time.

5-5.2.1. DIGGING TRENCHES OR OTHER EXCAVATIONS.

In accordance with Public Contract Code § 7104, any Work that involves digging trenches or other excavations extending deeper than four (4) feet below the surface shall comply with the following terms:

1) Contractor shall submit to County, in advance of excavation, a detailed plan showing the design of shoring, bracing, sloping, or other provisions to be made for worker protection from the hazard of caving ground during the excavation of such trench or trenches. No excavation covered under this Section may commence without the County's approval of said plan. If such plan varies from the shoring system standards, the plan shall be prepared by a registered Civil or Structural Engineer.

5-5.3. USE OF EXPLOSIVES.

Explosives may be used only when specified in the Contract Documents. Explosives shall be handled, used, and stored in accordance with all applicable regulations. Prior to blasting, the Contractor shall comply with the following requirements:

a. The jurisdictional law enforcement agency shall be notified 24 hours in advance of blasting.

b. The jurisdictional fire department shall be notified 24 hours in advance of blasting.

c. Blasting activities and schedule milestones shall be included in the Contractor's construction schedule per Section **6-1** of these General Provisions.

The Engineer's approval of the use of explosives shall not relieve the Contractor from liability for Claims caused by blasting operations.

When the use of explosives is necessary for the prosecution of the Work, the Contractor shall use the utmost care not to endanger life or property. All explosives shall be stored in accordance with the provisions of Division 11 Part I, Chapter 3, of the Health and Safety Code of the State of California and other Applicable Laws or regulations.

5-5.4. SECURITY AND PROTECTIVE DEVICES.

5-5.4.1. SECURITY FENCING.

The Contractor shall completely fence open excavations. Security fencing shall remain in place unless workers are present and construction operations are in progress during which time the Contractor shall provide equivalent security.

5-5.4.2. PUBLIC SAFETY.

The Contractor, at its own expense, shall furnish, erect, and maintain such fences, barriers, lights, and signs as are necessary to give adequate warning to the public at all times that the Work is under construction; and the Contractor shall erect such warning and directional signs and employ such flagmen as are required and shall maintain same throughout the construction period. Full compensation for the Work involved in carrying out the precautionary measures above specified shall be considered as included in the prices paid for the various Bid Items of Work and no additional payment will be made thereof.

5-5.5. STEEL PLATE COVERS.

5-5.5.1. GENERAL.

The Contractor shall provide, install, and maintain steel plate covers as necessary to protect from accidental entry into openings, trenches, and excavations.

Surfaces exposed to pedestrian or vehicular traffic shall be non-skid.

5-5.5.2. THICKNESS.

Steel plate covers shall conform to Table 5-5.5.2 below.

TABLE 5-5.5.2

Trench Width	Steel Plate Cover Thickness
Less than 10" (250 mm)	1/2" (12.5 mm)
10" (250 mm) to 1'-11" (580 mm)	3/4" (19 mm)
2' (600 mm) to 2'-7" (790 mm)	7/8" (22 mm)
2'-8" (820 mm) to 3'-5" (1040 mm)	1" (25 mm)

3’-6” (1070 mm) to 5’-3” (1600 mm)	1-1/4” (32 mm)
More than 5’-3” (1600 mm)	See Note 1

Notes:

1) The Contractor shall submit a Working Drawing and calculations based on AASHTO H20-44 Bridge Loading.

5-5.5.3. INSTALLATION.

Steel plate covers shall:

a) Be secured against movement by use of a holding device;

b) Be installed in such a manner as to minimize noise creation when driven over; and

c) Extend a minimum of one (1) foot beyond trench edges.

Unless otherwise specified in the Contract Documents, steel plate covers shall be installed using either Method 1 or 2 below:

Method 1 - For posted speeds more than 40 miles per hour(mph), the pavement shall be cold milled to a depth equal to the thickness of the plate and to a width and length equal to the dimensions of the plate. Method 1 may also be used for speeds less than 40 mph.

Method 2 - For posted speeds less than 40 mph, the approach plate(s) and ending plate (in longitudinal placement) shall be attached to the roadway by a minimum of two (2) dowels drilled at the corners of the plate and drilled two (2) inches into the pavement. Subsequent plates may be butted next to each other. When the steel plates are removed, the dowel holes shall be backfilled.

When Method 2 is used, temporary asphalt concrete (D2-SC 800) shall be used to construct tapers from the steel plate surface to the surface of the existing roadway as follows:

a) For vehicular traffic, with a 4-inch run for each 1-inch thickness of steel plate.

b) For bike paths or routes, with an 8-inch run for each 1-inch thickness of steel plate.

c) The pedestrian way, including crosswalks, shall be placed with a 12-inch run for each 1-inch thickness of steel plate if the plate is installed per Method 2.

Advance traffic warning signs shall be installed as specified in the Contract Documents or shown on the Traffic Control Plan.

5-5.5.4. PAYMENT.

Unless otherwise specified in the Contract Documents, no separate or additional payment will be made for steel plate covers. Payment shall be included in the Contract

Unit Price or Lump Sum price in the Bid for the various Bid items that require steel plate covers.

5-5.6. PROVISIONS FOR EMERGENCIES.

Unusual conditions may arise on the Work which will require that immediate and unusual provisions be made to protect the public from danger or loss or damage to life or property, and it is part of the service required of the Contractor to make such provisions and to furnish such protection.

The Contractor shall use such foresight and shall take such steps and precautions as its operations make necessary to protect the public from danger or damage, or loss of life or property.

Whenever work is undertaken pursuant to this Section, Contractor shall promptly file with County a verified report setting forth the nature of the emergency and the action taken by the Contractor by reason of the emergency.

Whenever, in the opinion of the County, an emergency exists against which the Contractor has not taken sufficient precaution for the safety of the public or the protection of utilities or of adjacent structures or property which may be injured or damaged because of the Contractor's Work; and, in the opinion of the County, immediate action shall be considered necessary in order to protect public or private, personal or real property interests, or prevent likely loss of human life or damage; then the County may provide suitable protection to said interests by causing such Work to be done and material to be furnished as, in the opinion of the County, may seem reasonable and necessary. The cost and expense of all such emergency work shall be borne by the Contractor, and if it does not pay said cost and expense upon presentation of the bills therefore, duly certified by the County, then said cost and expense will be paid by the County and shall thereafter by deducted from any amounts due or which may become due said Contractor. Failure of the County, however, to take such precautionary measures, shall not relieve the Contractor of its full responsibility for public safety.

5-6 EXISTING PUBLIC UTILITIES

5-6.1. EXISTING UTILITIES: LOCATION, REMOVAL, RELOCATION, AND PROTECTION.

In accordance with California Government Code § 4215, County shall assume the responsibility for the timely removal, relocation, or protection of existing main or trunkline utility facilities located on the Project Site, if such utilities are not indicated on the Contract Documents.

The locations of all pipelines, power lines, communication lines and other utility components known to County to exist within the Project limits, are indicated on the Plans and may be the subject of a specific section in the Detailed Provisions. Size, location and characteristics of such utilities are based upon information made available to County, generally from the owner of the utility in question. The exactness of such information is not guaranteed but may be assumed to have been accomplished with reasonable accuracy.

In addition to the Plans and any such provision regarding utilities, Contractor is under a duty to take into account the location of service laterals or other appurtenances which can be inferred from the presence of facilities such as buildings, meter, junction boxes or similar items in or about the Project limits.

Unless otherwise directed by the Contract Documents, all existing utilities, whether shown or described or not, shall be left in place and Contractor must conduct its operations so that such utilities are protected from damage at all times during the course of the Work; and the Work must be accomplished so as to give such utilities proper protection and support upon completion of the Work by Contractor.

If during the course of the Work, Contractor discovers underground utility components not indicated in the Plans or elsewhere in the Contract Documents, Contractor must immediately notify, in writing, the County and the utility company (public or private) involved, stating with exactness the condition found.

If Contractor encounters a utility not shown or described in the Contract Documents, Contractor shall immediately notify the County in writing, and cease all Work which would disturb such utility and its support until given specific instructions as to how to proceed regarding such utility by County.

All Work needed to protect existing utilities shown or described in the Contract Documents, or which can be reasonably inferred from the presence of other visible facilities, is to be done at Contractor's expense.

Contractor's cost of locating and repairing damage not due to the failure of Contractor to exercise reasonable care and removing or relocating utility components and facilities not indicated in the Plans or elsewhere in the Contract Documents, and for equipment on the Project necessarily idled during such Work, shall be paid to Contractor as Extra Work.

County may direct the Contractor to do such repair or relocation work as required. When such repair or relocation work is not elsewhere provided for in these Contract Documents, or reasonably inferred therefrom, Contractor shall be compensated for such work as Extra Work.

a) The Contractor shall make a minimum of two (2) exploratory excavations of all utilities lying wholly or in part within two (2) feet of the Contractor's proposed excavation limits, whether approximately parallel to or crossing the proposed limits to determine the alignment of utilities. All such exploratory excavations shall be performed as soon as practicable after award of the Contract sufficiently in advance of construction to avoid possible delays to the Work. When such exploratory excavations show a utility location different than indicated on the Plans, the Contractor shall notify the Project Manager. After determining the exact location of such utilities, the Contractor shall backfill the excavations and shall immediately construct either a temporary or permanent resurfacing over the backfill. Temporary resurfacing shall be constructed when the exploratory excavations are made in the area located within the proposed excavations. Permanent resurfacing shall be constructed when the exploratory

excavations are made in an area outside the proposed excavations. The permanent resurfacing shall be of the type and thickness specified for resurfacing over the adjacent area or as field conditions may otherwise require, as determined by the Engineer. In either case, the excavations shall be backfilled in accordance with the Plans and Specifications.

b) All costs for making exploratory excavations (including backfilling and resurfacing as specified herein) shall be absorbed or included in the various Bid Items for the Work. The Contractor shall notify the utility owners of the proposed schedule of the Work sufficiently in advance to allow for the overall coordination of any relocation work to be done, and shall cooperate with utility owners in the performance of their Work.

c) In accordance with California Government Code Section 4216 et seq., when Work is to be conducted in an area which is known, or can be inferred from the presence of other visible facilities on or adjacent to the Project site, to contain underground utilities or subsurface improvements, the Contractor shall contact DigAlert of Southern California at least two (2) Working Days, but not more than fourteen (14) Calendar Days, in advance of any construction activity that will or could damage or affect any underground utility or subsurface improvement, and obtain an inquiry identification number. Caltrans and certain other agencies are not required to become a member of DigAlert. The Contractor shall contact non-member agencies directly and request they locate and mark their subsurface installations. Pursuant to Government Contract Code section 4216.2, when any proposed excavation is within 10 feet of a “high priority subsurface installation” the Contractor shall coordinate with the operator. The Contractor shall delineate with white paint or other suitable markings the area to be excavated. The Contractor shall notify DigAlert in the event of change in the Project limits or change in original Work previously shown on the Plans or indicated in the Specifications. When all Work is completed, the Contractor shall remove all markings for underground utilities.

d) Subsurface installations are any underground pipeline, conduit, duct, wire, or other structure, except nonpressurized sewer lines, nonpressurized storm drains, or other nonpressurized drain lines. "Approximate location of subsurface installations" means a strip of land not more than 24- inches on either side of the exterior surface of the subsurface installation. "Approximate location" does not mean depth. When the subsurface installation markings are no longer reasonably visible, the Contractor shall notify DigAlert to remark those subsurface installations that may be affected by excavation to the extent necessary (Government Code Section 4216.3(c)).

5-7 PROTECTION OF EXISTING STREET FACILITIES

The Contractor shall be responsible for the protection of existing signs, fences, concrete curbs, gutters and other facilities or structures. The Contractor shall be responsible to repair or replace any such items which are damaged.

Excavation within the street right of way shall be conducted in a manner to cause the least interruption to traffic. Where traffic must cross open trenches, the Contractor shall provide suitable bridges at street intersections and driveways. Hydrants under pressure, valve pipe covers, valve boxes, curb stop boxes, fire or police call boxes, or other utility controls shall be left unobstructed and accessible during construction.

5-8 DIVERSION AND CONTROL OF WATER

Unless otherwise provided in the Agreement, no separate or additional payment will be made for diversion or control of surface or groundwater. All costs incidental to maintaining dry working areas shall be the responsibility of the Contractor and shall be included in the Unit Prices paid for other items of Work.

ARTICLE 6 - PROSECUTION AND PROGRESS OF THE WORK

6-1 CONSTRUCTION SCHEDULE AND COMMENCEMENT OF THE WORK

6-1.1. CONSTRUCTION SCHEDULE.

As required by the Special Provisions, Detailed Provisions, and this Section, the Contractor shall submit to the County and update at least monthly, or at such times as may be requested by the County, a schedule, which shall show the order and dates in which the Contractor proposes to carry on the various parts of the Work. The County's receipt of such schedule and updates shall not indicate any concurrence by the County in the items or dates described in the schedule or updates.

6-1.2. COMMENCEMENT OF THE WORK.

The Contractor shall begin the Work within ten (10) calendar days after the date of receipt by Contractor of Notice to Proceed from the County ("Date of Commencement") and shall diligently and continuously prosecute the same to completion within the time limit provided in the Agreement.

The Date of Commencement shall not be postponed by the failure of Contractor or of persons or entities for whom Contractor is responsible to perform an obligation. Contractor shall not knowingly, except by agreement or instruction of the County in writing, commence operations on the Project or elsewhere prior to receipt of a Notice to Proceed. Contractor shall not commence any Work at the Project prior to obtaining the insurance required by Section **5-3** of these General Provisions and the Performance Bond and Payment Bond required by the Contract Documents. The Date of Commencement of the Work shall not be changed by the effective date of such insurance or bonds.

6-2 PROSECUTION OF THE WORK

To minimize public inconvenience and possible hazard and to restore street and other work areas to their original condition and state of usefulness as soon as practicable, the Contractor shall diligently prosecute the Work to completion. If the Engineer determines that the Contractor is failing to prosecute the Work to the proper extent, the Contractor shall, upon orders from the Engineer, immediately take steps to remedy the situation. Should the Contractor fail to take the necessary steps to fully accomplish said purposes, after orders of the Engineer, the Engineer may suspend the Work in whole or part, until the Contractor takes said steps.

If Work is suspended through no fault of the Agency, all expenses and losses incurred by the Contractor during such suspensions shall be borne by the Contractor. If the Contractor fails to properly provide for public safety, traffic, and protection of the Work during periods of suspension, the Agency may elect to do so, and deduct the cost thereof from monies due the Contractor. Such actions will not relieve the Contractor from liability.

6-2.1. ACCELERATION OF THE WORK.

1) Due to Unexcused Delay.

If County makes a Good Faith Determination based on County's observations of progress in performance of the Work by Contractor that Contractor will not achieve Final Completion of the Work within the Contract Time as adjusted, then Contractor shall, following receipt of a written request by County to accelerate, immediately respond in writing setting forth a detailed plan for accelerating the Work. All measures necessary, including working overtime, additional shifts, Saturdays, Sundays and holidays, to accelerate performance to ensure that the Work is performed within the Contract Time shall be taken by Contractor and the cost thereof shall be paid for by Contractor at Contractor's own expense. County may also take all other necessary measures to ensure no further delays affect achievement of Final Completion of the Work within the Contract Time and the Contractor shall reimburse County, or County may withhold from payment due to Contractor, for losses incurred by County in taking such measures.

2) Due to Excusable Delay.

Contractor shall have the right, exercised in its sole discretion, to accelerate performance of the Work to overcome time lost due to Excusable Delay. Such acceleration, if performed other than at the written direction of County, shall be deemed a voluntary acceleration and the cost of such accelerated performance shall be paid for by Contractor at Contractor's own expense. If County directs in writing that the Work be accelerated to overcome an Excusable Delay that is not concurrent with an Unexcused Delay, then Contractor shall be entitled to a Contract Adjustment to the Contract Price for such acceleration.

3) Delay Claims.

Claims by Contractor relating to disputed Contract Adjustments due to Delay shall be made in accordance with applicable provisions of the Contract Documents.

6-2.2. EXERCISE OF COUNTY RIGHTS.

Notwithstanding any other provision of the Contract Documents to the contrary, County's exercise in accordance with the Contract Documents of any of its rights or remedies permitted by Applicable Laws or the Contract Documents in response to a failure by Contractor or any Subcontractor to comply with the Contract Documents shall not, under any circumstances, entitle Contractor to a Contract.

6-3 TIME OF COMPLETION

6-3.1. GENERAL.

Contractor shall proceed expeditiously with adequate forces and shall achieve Final Completion within the Contract Time, as adjusted for extensions of time duly permitted, authorized and noticed pursuant to this Section.

6-3.1.1. ADJUSTMENTS TO CONTRACT TIME.

Subject to the limitations set forth in this Section and elsewhere in the Contract Documents, the Contract Time shall be extended for Excusable Delays and shall, where appropriate, be shortened for Deleted Work.

6-3.1.2. EARLY COMPLETION.

Nothing stated in these General Provisions or elsewhere in the Contract Documents shall be interpreted as creating any contractual right, express or implied, on the part of Contractor to finish the Work earlier than the Contract Time. Contractor has included in its Contract Price the costs of all Contractor's and its Subcontractors' direct and indirect overhead, including, but not limited to: all staff, temporary facilities, temporary utilities and home office overhead for the entire duration of the Contract Time. These costs have been included in the Contract Price notwithstanding Contractor's anticipation of possibly completing the Work in fewer Working Days than established by the Contract Time. Under no circumstances (including, without limitation, circumstances in which the County has approved in writing of Contractor completing early) shall the County be liable to Contractor for any losses, of any kind, due to the inability of Contractor to complete the Work earlier than the Contract Time, regardless of the cause, including, without limitation, delays due to acts or omissions (intentional or negligent) of the County, Inspectors of Record, County consultants, separate Contractors or others. If the Contractor anticipates completing early, it must obtain in advance County's approval in writing of such early completion. Approval by County of such early completion may be granted or withheld in the County's sole and absolute discretion.

6-3.2. OVERTIME WORK AND WORK AT NIGHT.

The Contractor shall conduct the Work on a five (5) day, forty (40) hour work week with no work on Legal Holidays (as further described in the Agreement). If the Contractor feels it is necessary to work more than the normal forty (40) hour work week, it will make a written request for permission from the County, outlining the reasons for such request. The decision of granting permission for overtime work shall be in the sole discretion of the County; and the decision of the County shall be final. If granted, a condition will be imposed requiring the Contractor to pay the County the cost incurred at overtime rates for additional inspection and engineering time required in connection with the overtime work.

When any Work is performed at night, only such classes of Work shall be done as can be properly inspected. Adequate light must be provided for the safety of the workers and for proper inspection.

6-4 DELAYS AND EXTENSION OF TIME

6-4.1. GENERAL.

If delays are caused by unforeseen causes beyond the control of either the Contractor or the County, such as war, strikes, fire, floods, or other action of the elements that are unreasonable under the circumstances involved and not within the contemplation of the

parties, such delays will entitle the Contractor to an equivalent extension of time for the completion of the Contract but not damages or additional payments over the Contract Price. Furthermore, if the Contractor suffers any delay caused by the failure of the County to furnish the necessary right of way or materials agreed to be furnished by it, or by failure to supply necessary plans or instructions concerning the Work to be done after written request therefore has been made, the Contractor shall be entitled to an extension of time equivalent to the time lost for any of the above-mentioned reasons herein this Section but shall not be entitled to any damages for such delay.

6-4.2. ADJUSTMENTS TO CONTRACT TIME.

6-4.2.1. EXTENSIONS.

Provided that Contractor has complied with the provisions of this Section (including, without limitation, the requirements pertaining to timely delivery of a Notice of Delay and Request for Extension), if, as a result of Excusable Delay to the actual, as-built critical path of activities leading to achievement of Final Completion, Contractor is unable to achieve Final Completion within the Contract Time for Final Completion, then the Contract Time for Final Completion shall be extended, by Change Order, for the length of the proven, resulting delay to Contractor's ability to so complete the Work. The Contract Time shall not be adjusted for Unexcused Delays.

6-4.2.2. REDUCTION.

Contractor shall within ten (10) days after receiving notice of Deleted Work prepare and deliver to County, a time impact analysis of the impact of the Deleted Work upon the Critical Path to determine if the Contract Time should be shortened thereby and if so the duration of the reduction to the Contract Time. If the County and Contractor are unable to agree upon the duration of the shortening, then County shall make a good faith determination of the reasonable amount of time that the Contract Time shall be reduced on account of such Deleted Work.

6-4.2.3. PRESCRIBED CALCULATIONS FOR ADJUSTMENTS TO THE CONTRACT TIME.

6-4.2.3.1. WORK DAY LOST CALCULATIONS.

Contractor may claim an Excusable Delay for a full Working Day only if all Work on a critical path activity is stopped for more than six (6) hours of a normal eight (8) hour Working Day, and for a half-Working Day only if all Work on a critical path activity is stopped for three (3) to six (6) hours of such a normal Working Day. No Excusable Delay may be claimed if all Work on a critical path activity is stopped for less than three (3) hours of such a normal Working Day. Similarly, where Deleted Work results in the projected avoidance of the need to perform more than six (6), or between three (3) and six (6) hours of all Work on a critical path activity on such a normal Working Day, the Contract Time shall be contracted by a full Working Day or half-Working Day, respectively.

6-4.2.4. NOTICE OF DELAY.

1) Submission.

   Contractor shall submit written Notice of Delay to County, if any instruction, request, drawing, specification, action, condition, omission, default or other circumstance occurs that constitutes an Excusable Delay or other matter that may involve or require a Contract Adjustment extending the Contract Time. Such notice shall be provided prior to performance of the Work affected or involved and no later than seven (7) days after the discovery date of such circumstance.

2) Form.

   Notices of Delay shall be provided using forms furnished by County or, if requested by County, using forms furnished by Contractor that are approved by County. Failure by County to request or approve a particular form shall not relieve Contractor of its obligation to provide Notice of Delay in a written form that complies with the requirements herein.

3) Content.

   Each Notice of Delay to be considered complete shall include:

   a) A general statement of the circumstances giving rise to the Notice of Delay (including, without limitation, identification of any related Construction Change Directive);

   b) A Reasonable Order of Magnitude Estimate by Contractor of any related Contract Adjustments extending the Contract Time.

4) Waiver by Contractor.

   Failure by Contractor to provide a complete and timely Notice of Delay under circumstances where a Notice of Delay involving a delay is required shall constitute a waiver by the Contractor of the right to a Contract Adjustment on account of such circumstances and a waiver of any right to further recourse or recovery by reason of or related to such delay.

5) No County Notice.

   Failure by the Contractor to submit a timely or proper Notice of Delay under circumstances in which a Notice of Delay is required shall in no way affect the County's right to a Contract Adjustment shortening the Contract Time on account of such circumstances.

6-4.2.5. REQUEST FOR EXTENSION.

1) Submission.

With respect to any matter that may involve or require an adjustment extending the Contract Time, Contractor shall, within fourteen (14) days after receipt by County of a Notice of Delay, submit to County a written Request for Extension.

2) Form.

Requests for Extension shall be provided using forms furnished by County or, if requested by County, using forms furnished by Contractor that are approved by County. Failure by County to request or approve a particular form shall not relieve Contractor of its obligation to provide Requests for Extension in a written form that complies with the requirements herein.

3) Content.

Each Request for Extension to be considered complete shall include:

a) A detailed description of the circumstances giving rise to the request for Contract Adjustment to the Contract Time and a time impact analysis (a Request for Extension that seeks an extension for more than one (1) delay shall be supported by a separate Time Impact Analysis for each separate delay).

4) Waiver by Contractor.

Failure by Contractor to provide a complete and timely Request for Extension under circumstances where a Request for Extension involving a delay is required shall constitute a waiver by Contractor of the right to a Contract Adjustment on account of such circumstances and a waiver of any right to further recourse or recovery be reason of or related to such delay.

5) Adjustments Shortening Time.

Failure by Contractor to submit a timely or proper Request for Extension under circumstances in which a Request for Extension is required shall in no way affect County's right to a Contract Adjustment shortening the Contract Time on account of such circumstances.

6-4.2.6. RESPONSE BY COUNTY.

After receipt of a timely and complete Request for Extension, County shall investigate the facts concerning the cause and extent of such delay and, depending on whether the Request for Extension is justified, will notify Contractor of its approval or disapproval of all or a portion of Contractor's request. Extensions of time approved by County shall apply only to that portion of the Work affected by the delay, and shall not apply to other portions of Work not so affected.

6-4.2.7. FORMAL NOTICE OF ESSENCE.

Contractor recognizes and acknowledges that timely submission of a formal Notice of Delay and a formal Request for Extension, whether or not the circumstances of a delay

may be known to the County or available to the County through other means, are not mere formalities but are of crucial importance to the ability of the County to promptly identify, prioritize, evaluate and mitigate the potential effects of delay. Any forms of informal notice, whether verbal or written (including, without limitation, statements at regular job meetings or entries in monthly reports, daily logs, job meeting minutes, updated construction schedules or look-ahead schedules), that do not strictly comply with the formal requirements of the Contract Documents, shall accordingly be deemed insufficient to satisfy the notice requirements of this Section.

6-4.3. PAYMENT FOR DELAYS.

Pursuant to Section 7102 of the Public Contract Code, the Contractor will be compensated for damages incurred due to delays for which the Agency is responsible. Such actual costs will be determined by the Engineer. The Agency will not be liable for damages which the Contractor could have avoided by any reasonable means, such as judicious handling of forces, equipment, or plant. The determination of what damages the Contractor could have avoided will be made by the Engineer.

6-4.3.1. ADJUSTMENTS TO CONTRACTOR'S COMPENSATION FOR DELETED WORK.

A. Deleted Work.

The Contract Time and Contract Price shall be reduced by Contract Adjustment for Deleted Work (including, without limitation, Deleted Work associated with a termination by County of a portion of the Contract or a deletion of portion of Work for the convenience of the County or due to a Contractor default) that results in a shortening of the Contract Time.

B. Contract Time.

The Contract Adjustment shortening the Contract Time for Final Completion shall be the number of Working Days that Contractor at the time of contracting would have reasonably expected to expend in performance of the Deleted Work and that, based on the Contractor's original construction schedule prepared on or about the time of contracting, were reasonably expected by Contractor to be critical to Final Completion of the Work within the Contract Time for Final Completion.

C. Contract Price.

The Contract Adjustment reducing the Contract Price shall be the product of the number of Working Days that the Contract Time for Final Completion is shortened pursuant to the preceding Section multiplied times the amount of liquidated damages set forth in Contract Documents, without any additional credit to the County for Allowable Markups.

6-5 SUSPENSION OF THE WORK

6-5.1. GENERAL.

The Work may be suspended in whole or in part when determined by the Engineer that the suspension is necessary in the interest of the Agency. The Contractor shall comply immediately with any written order of the Engineer. Such suspension shall be without liability to the Contractor on the part of the Agency except as otherwise specified in Section **6-4.3**.

6-5.1.1. TEMPORARY SUSPENSION OF THE WORK.

The County shall have the authority to suspend the Work wholly or in part, for such period as the County may deem necessary, due to unsuitable weather, or to such other conditions as are considered unfavorable for the suitable prosecution of the Work, or for such time as the County may deem necessary due to the failure on the part of the Contractor to properly perform the Work. The Contractor shall immediately comply with the order of the County to suspend the Work wholly or in part. The Work shall be resumed when conditions are favorable or methods are corrected, as ordered or approved by the County.

6-6 TERMINATION OF THE CONTRACT FOR DEFAULT

6-6.1. GENERAL.

If, prior to the acceptance of the Work, the Contractor:

a) becomes insolvent, assigns its assets for the benefit of its creditors, is unable to pay its debts as they become due, or is otherwise financially unable to complete the Work,

b) abandons the Work by failing to report to the Work site and diligently prosecute the Work to completion,

c) disregards written instruction from the Engineer or materially violates provisions of the Contract Documents,

d) fails to prosecute the Work according to the schedule approved by the Engineer,

e) disregard laws or regulations of any public body having jurisdiction, or

f) commits continuous or repeated violations of regulatory or statutory safety requirements, then the Agency will consider the Contractor in default of the Contract.

Notices, and other written communications regarding default between the Contractor, the Agency, and the Surety shall be submitted.

6-6.2. NOTICE TO CURE.

The Agency will issue a written Notice to Cure the default to the Contractor and its Surety. The Contractor shall commence satisfactory corrective actions within five (5) Working Days after receipt.

6-6.3. NOTICE OF TERMINATION FOR DEFAULT.

If the Contractor fails to commence satisfactory corrective actions within five (5) Working Days after receipt of the Notice to Cure, or to diligently continue satisfactory and timely correction of the default thereafter, then the Agency will recommend to the Board that the Contractor be found in default of the Contract and upon such finding by the Board:

a) will terminate the Contractor's right to perform under the Contract by issuing a written Notice of Termination for default to the Contractor and its Surety,

b) may use any materials, equipment, tools or other facilities furnished by the Contractor to secure and maintain the Work site, and

c) may furnish labor, equipment, and materials the Agency deems necessary to secure and maintain the Work site.

The provisions of this subsection shall be in addition to all other legal rights and remedies available to the Agency.

6-6.4. RESPONSIBILITIES OF THE SURETY.

Upon receipt of the written Notice of Termination for default, the Surety shall immediately assume all rights, obligations and liabilities of the Contractor under the Contract. If the Surety fails to protect and maintain the Work site, the Agency may do so, and may recover all costs incurred. The Surety shall notify the Agency that it is assuming all rights, obligations and liabilities of the Contractor under the Contract and all money that is due, or would become due, to the Contractor shall be payable to the Surety as the Work progresses, subject to the terms of the Contract.

Within fifteen (15) Working Days of receipt of the written Notice of Termination for default, the Surety shall submit to the Agency a written plan detailing the course of action it intends to take to remedy the default. The Agency will review the plan and notify the Surety if the plan is satisfactory. If the Surety fails to submit a satisfactory plan, or if the Surety fails to maintain progress according to the plan accepted by the Agency, the Agency may, upon forty-eight (48) hours written notice, exclude the Surety from the premises, take possession of all material and equipment, and complete the Work in any way the Agency deems to be expedient. The cost of completing the Work by the Agency shall be charged against the Surety and may be deducted from any monies due, or which would become due, the Surety. If the amounts due under the Contract are insufficient for completion, the Surety shall pay the Agency, within thirty (30) Calendar Days after the Agency submits an invoice, all costs in excess of the remaining Contract Price.

6-6.5. PAYMENT.

The Surety will be paid for completion of the Work in accordance with Section **7-3** less the value of damages caused to the Agency by acts of the Contractor.

6-6.6. COUNTY'S RIGHTS UPON TERMINATION OF CONTRACT.

When any of the reasons specified in the preceding Section exists, the County may, in addition to and without prejudice to any other rights or remedies of the County, notify the Contractor not to resume or to discontinue all Work, or any part thereof, by written Notice of Default. The County shall advise the Performance Bond Surety of the Notice of Default and that they will be given fifteen (15) Calendar Days to arrange for completion of the Work in accordance with the Contract Documents by another Contractor or Contractors satisfactory to the County. Should the Surety fail to effect satisfactory arrangements within said fifteen (15) Calendar Day period, the County shall have the right to issue a Notice of Termination and to:

A. Exclude the Contractor from the Project site;

B. Take possession of the Project site and of all materials, equipment, tools, and construction equipment, and machinery thereon owned by the Contractor;

C. Suspend any further payments to Contractor;

D. Accept assignment of subcontracts pursuant; and

E. Finish the Work by whatever reasonable method the County may deem expedient.

6-7 TERMINATION OF THE CONTRACT FOR CONVENIENCE

6-7.1. GROUNDS.

The County may, at any time, terminate the Contractor's performance of the Work, in whole or in part, for the County's convenience without regard to Contractor's fault or breach, and without prejudice to any other right or remedy of County, upon fourteen (14) Calendar Days written notice to the Contractor.

6-7.2. IMMEDIATE CONTRACTOR ACTION.

Upon receipt of written notice from the County of such termination for the County's convenience, the Contractor shall, unless the notice directs otherwise, do the following:

A. Cease performance of the Work to the extent specified in the notice;

B. Cooperate with the County to secure the site and demobilize in a safe and orderly fashion;

C. Take actions necessary, or that the County may direct, for the protection and preservation of the Work;

D. Except for Work directed to be performed in the notice, incur no further costs and enter into no further subcontracts and purchase orders;

E. If requested by the County, assign to the County, in the manner and to the extent directed, all of the right, title and interest to the Contractor under the subcontracts, and the County shall have no liability for acts, omissions, or causes of action resulting therefrom which accrued prior to the date of termination and assignment, which liability shall remain with the Contractor; and

F. Turn over to the County, as soon as possible, but not later than thirty (30) Calendar Days after receipt of such termination notice, the originals of all of the Contractor's records, files, documents, drawings, and any other items relating to the Project, whether located on the Project site, at the Contractor's office, or elsewhere.

6-7.3. CONTRACTOR WAIVER OF CLAIMS.

In the event that the County terminates Contractor's performance of the Work for convenience, Contractor agrees it shall not be entitled to and waives any Claims for damages, including, but not limited to, unabsorbed home office overhead, corporate overhead, loss of anticipated profits on account thereof, lost opportunity costs, or overhead on Work not performed, or any consequential damages and, as the sole right and remedy of Contractor, the County shall pay Contractor in accordance with Section **6-7.4** below. The provisions of the Agreement, which by their nature survive Final Acceptance of the Work, shall remain in full force and effect after such termination to the extent provided in such provisions.

6-7.4. COMPENSATION.

Upon termination for convenience, Contractor shall be entitled to be paid the full cost of all Work properly done by Contractor prior to the date of termination not previously paid for, less sums already received by Contractor on account of the portion of the Work satisfactorily performed, but in no event shall the amounts paid hereunder exceed the portion of Work completed in accordance with the Contract Documents. In no event shall Contractor be entitled to recover any damages or Claims waived pursuant to Section **6-7.3** above.

6-8 LIQUIDATED DAMAGES

The Contractor shall complete the Work called for under the Contract in all parts and requirements within the number of Working Days specified in the Agreement. Liquidated damages shall apply as stated in the Agreement.

The County will furnish the Contractor a weekly statement showing the number of Working Days charged to the Contract for the preceding week, the number of Working Days specified for completion of the Contract, and the number of Working Days remaining to complete the Contract. The Contractor will be allowed one (1) week in which to file a written protest setting forth in what respects the weekly statement is incorrect, otherwise the statement shall be deemed to have been accepted by the Contractor as correct.

Contractor to refer to specific Legal Holiday dates listed in the Agreement.

ARTICLE 7 - MEASUREMENT AND PAYMENT

7-1 MEASUREMENT OF QUANTITIES FOR UNIT PRICE OF WORK

7-1.1. GENERAL.

All days referred to in this Section are Calendar Days, unless otherwise specified. The compensation described in the Agreement shall be complete and full payment to the Contractor for furnishing all materials, labor, tools, equipment and related items necessary to complete the Work; and for all obligations imposed upon the Contractor pursuant to the Contract Documents. Neither the payment of any estimate nor of any retained percentage shall relieve the Contractor of any obligation to make good any defective Work or material.

The amount of Work to be done or materials to be furnished by the Contractor as stated in the Bid Proposal (except for Lump Sum items) are only estimates and are not to be taken as an expressed or implied statement that the actual amount of Work or materials will correspond to the estimate. The County reserves the right to increase or decrease or to entirely eliminate certain items from the Work or materials if found desirable or expedient. The County is not to be held responsible for the accuracy of the estimate of quantities. The Contractor shall judge for itself, after considering all circumstances and conditions, the costs and quantities of materials involved in the Work. The Contractor will be allowed no Claims for anticipated profits, loss of profits or for any damages of any sort because of any difference between the estimated and the actual amounts of Work done, or materials furnished or used in the completed Project. The Contractor shall not be entitled to any compensation for bid items which the County, in its sole discretion, elects to eliminate during the Work. If an item of the Work exceeds the quantity of the bid estimate, Contractor shall not be entitled to Extra Work.

The Contractor shall not at any time assert that there was any misunderstanding in regard to the nature of the Work or the kind or amount of materials to be furnished for the Work. The Contractor shall not ask, demand, sue for, or seek to recover compensation in excess of the costs or charges for the Work as stated in the Agreement.

7-1.2. METHODS OF MEASUREMENT.

Materials and items of Work which are to be paid for on basis of measurement shall be measured in accordance with methods stipulated in the particular Sections involved.

7-1.2.1. CERTIFIED WEIGHTS.

When payment is to be made on the basis of weight, the weighing shall be done on certified platform scales or, when approved by the Engineer, on a completely automated weighing and recording system. The Contractor shall furnish the Engineer with duplicate licensed weighmaster's certificates showing actual net weights. The Agency will accept the certificates as evidence of weights delivered.

7-1.2.2. MEASUREMENT AND COMPUTATION OF QUANTITIES.

Unless otherwise stated, all items of the Work to be paid for at a Unit Price, per unit of measurement will be measured by the County in accordance with United States Standard Measures. A ton shall mean 2,000 pounds, avoirdupois. Except as otherwise expressly provided in the Specifications, the methods of measurement and computation of quantities will be determined by the County.

The weights of metalwork, and other metal parts to be paid for by weight will be determined by the County on the basis of handbook weights, scale weights, or manufacturer's catalog weights, or in the absence of any of the foregoing, on the basis of estimated weights; provided, that weights of nonmetallic coatings will be excluded.

7-2 LUMP SUM WORK

Items for which quantities are indicated "Lump Sum", "LS", or "Job", shall be paid for at the price indicated in the Bid. Such payment shall be full compensation for the items of Work and all Work appurtenant thereto.

When required by the Contract Documents or requested by the Engineer, the Contractor shall submit to the Engineer within fourteen (14) days after issuance by County to Bidder of the Notice of Intent to Award and prior to commencement of the Work, a detailed schedule, to be used only as a basis for determining progress payments on a Lump Sum contract or designated Lump Sum Bid item. This schedule shall equal the Lump Sum Contract Price or Bid item price and shall be in such form and sufficiently detailed as to satisfy the Engineer that it correctly represents a reasonable apportionment of the Lump Sum.

7-3 PAYMENT

7-3.1. GENERAL.

The unit and Lump Sum prices to be paid shall be full compensation for the items of Work and all appurtenant Work, including furnishing all materials, labor, equipment, tools, and incidentals.

Payment will not be made for materials wasted or disposed of in a manner not called for under the Contract. This includes rejected material not unloaded from vehicles, material rejected after it has been placed, and material placed outside of the Plan lines. No compensation will be allowed for disposing of rejected or excess material.

Payment for Work performed or materials furnished under an Assessment Act Contract will be made as provided in the particular proceedings or legislative act under which such Contract was awarded.

Whenever any portion of the Work is performed by the Agency at the Contractor's request, the cost thereof shall be charged against the Contractor, and may be deducted from any amount due or becoming due from the Agency.

Whenever immediate action is required to prevent injury, death, or property damage, and precautions which are the Contractor's responsibility have not been taken and are not reasonably expected to be taken, the Agency may, after reasonable attempt to notify the Contractor, cause such precautions to be taken and shall charge the cost thereof against the Contractor, or may deduct such cost from any amount due or becoming due from the Agency. Agency action or inaction under such circumstances shall not be construed as relieving the Contractor or its Surety from liability.

Payment shall not relieve the Contractor from its obligations under the Contract; nor shall such payment be construed to be accepted of any of the Work. Payment shall not be construed as the transfer of ownership of any equipment or materials to the Agency. Responsibility of ownership shall remain with the Contractor who shall be obligated to store any fully or partially completed Work or structure for which payment has been made; or replace any materials or equipment required to be provided under the Contract which may be damaged, lost, stolen or otherwise degraded in any way prior to completion of the Work, except as otherwise specified in Section **6-6**.

Warranty periods shall not be affected by any payment.

In the event that a stop payment notice is filed with the County in an amount equal to one hundred and twenty-five percent (125%) of the total of the amount claimed, the stop payment notice will be withheld by the County until the stop payment notice has been released. Alternatively, the Contractor may file with the County a bond, on a form approved by the County, executed by one or more corporate California Admitted Surety Insurers, in an amount equal to one hundred and twenty-five percent (125%) of the Claim stated in the stop payment notice conditioned for the payment of any sum which the stop payment notice claimant may recover on the Claim together with its costs of suit in the action. Upon the County's acceptance of such bond, the County shall not withhold money from the Contractor on account of the stop payment notice. The Surety(ies) upon the stop payment notice release bond shall be different than, and jointly and severally liable to the stop payment notice claimant with, the Payment Bond Surety(ies).

Not later than thirty-five (35) Calendar Days from the date of Final Acceptance, the five percent (5%) deducted and retained from each progress estimate (see Section **7-3.3**) by the County will be paid to the Contractor, except such amounts as are required by law to be withheld by properly executed and filed notices to stop payment or as may be authorized by the Contract or required by Applicable Law to be further retained.

7-3.2. PAYMENT TERMS AND PAYMENT METHODS

The County's payment system issues payments on scheduled pay dates based on payment terms. The County's standard payment terms are Net 30. If prompt payment discount terms or other proposed payment terms are not agreed to in writing, the County Auditor-Controller's Office (ACO) requires the scheduled pay date be set to thirty (30) Calendar Days from the invoice date for all payment methods except E-Payables. For Progress Payments, the invoice date is the day after the last day of work for the period being paid. The County considers payment as being made on the day a check is dated or the date of an

electronic funds transfer. Any applicable prompt payment discounts are automatically deducted from the full payment amount.

California Public Construction Prompt Payment Regulations do not require the County to pay interest penalties if payment delays are due to a due date falling on a Saturday, Sunday or Legal Holiday, disagreement between the County and the Contractor over the payment amount or other issues involving contract compliance, or on amounts temporarily withheld or retained in accordance with the terms of the Contract. The County and the Contractor shall resolve Claims involving disputes, and any interest that may be payable in accordance with Section **8-1**.

Awarded Contractors may choose to sign up for any combination of the payment methods described below, and specify which one they want utilized for each payment.

Manual Warrant [Check]. This is the default delivery method in which a physical check is printed on the scheduled pay date, or the prior business day if that falls on a weekend or holiday, and is placed in the mail the following business day. With this method, the Contractor has the option to request the check be held at our office for pick up.

ACH/EFT. Automated Clearing House (ACH) is an Electronic Funds-Transfer (EFT) network for processing transactions directly from one account to another. If a vendor requests this payment delivery method they must initially complete an ACH Enrollment Form and prenoting process that can take up to 8 weeks before the first ACH payment. Once set up—two (2) days prior to the scheduled pay date, EFT instructions are sent by the County to its bank after which the funds are direct deposited into the vendor's bank account on the scheduled pay date. Email ACOVendorProcessing@rivco.org for set up instructions.

E-Payables. E-Payables are electronic MasterCards for which credit card information is transmitted to the vendor via secure email or fax, which the vendor processes through their credit card terminal or Accounts Receivable system to receive the funds similar to a point of sale transaction. E-Payables do not have a scheduled pay date, and are instead set to pay in the next pay cycle as soon as approved for payment by the County ACO. E-Payables have a pay cycle that runs every morning at 7:00 AM that transmits payment information to the County's bank, which in turn sends the secure emails containing the credit card details to vendors the same day by 8:00 AM. This payment method can be set up and ready for use within 24-hours by emailing ACO_epayables@rivco.org.

Vendors should refer to their bank or credit card terminal provider to inquire about any merchant fees that may be assessed on ACH/EFT transactions or E-Payables credit card transactions. The County does not charge additional fees to the vendor for accepting payment electronically.

7-3.3. PROGRESS PAYMENTS AND FINAL PAYMENT.

7-3.3.1. PROGRESS PAYMENTS.

On or about the last day of each month, the County shall make an estimate in writing of the total amount of Work done by the Contractor to the time of such estimate and the value thereof. The County shall retain five percent (5%) of such estimated value of the Work or Progress Payment for the fulfillment of the Contract by the Contractor.

For project durations of less than two (2) months, the Contractor will be given the option to receive full payment in one Lump Sum. If Lump Sum payment is not requested and Work extends beyond one (1) month, on or about the last day of each month, the County shall make an estimate in writing of the total amount of Work done by the Contractor to the time of such estimate and the value thereof. In accordance with Public Contract Code section 7201(b)(1), the County shall retain 5 percent (5%) from any progress payment for the fulfillment of the Contract by the Contractor.

In accordance with Public Contract Code Section 22300 and other Applicable Law, the Contractor may substitute securities for any monies retained to ensure performance under the Contract. Such substitution shall be made only upon a separate Agreement between the County Board of Supervisors and the Contractor which contains terms and conditions in compliance with all laws applicable to monies withheld under the Contract.

After deducting all previous payments and all sums to be kept or retained under the provisions of the Contract or Applicable Law, the County shall make monthly progress payments to the Contractor. No such estimate or payment shall be required to be made when, in the judgment of the County, the Work is not proceeding properly. No payment shall be required to be made by the County unless and until all required submittals have been delivered to the County, including but not limited to the following: certified payroll information (at a frequency specified in Section **5-2.3**, if Project is a Prevailing Wage Contract), construction schedule updates as listed in Section **6-1.1**, and National Pollution Discharge and Elimination System permit requirements and frequencies as stated in the Special Provisions and Detailed Provisions, if applicable.

7-3.3.2. FINAL PAYMENT.

The County, after completion of the Work and submittal of any final documents or reports required by the Contract Documents, shall make a final estimate in writing to the County Board of Supervisors of the amount of Work done and the value of such Work; and pursuant to order of the Board of Supervisors the County shall pay the sum found to be due after deducting therefrom all previous payments and all amounts to be kept and retained under the provisions of the Contract or Applicable Law. All prior partial estimates and payments shall be subject to correction in the final estimate and payment. The withheld retention funds shall not be due and payable to the Contractor until the expiration of thirty-five (35) Calendar Days after the date of Final Acceptance of a completed Contract by the Board of Supervisors and recordation of the Notice of Completion.

The Contractor agrees that no certificate given or payments made under the Contract except the final payment and approval by the Board of Supervisors shall be conclusive evidence of the performance of the Contract. No payment shall be construed to be an acceptance of any defective Work or improper materials.

The Contractor agrees that payment of the final amount due under the Contract will be withheld until the Warranty Bond guarantee of Contractor's correction obligations for the Work is accepted by the County in approved form.

The Contractor's acceptance of final payment shall release the County, including its officers, employees, agents and Contractors, from any and all Claims from the Contractor for further or additional compensation related to the Work, except disputed Contract Claims in stated amounts made in writing accordance with the requirements of the Contract Documents and identified by the Contractor as unsettled prior to acceptance of final payment.

7-3.3.3. DELAYED PAYMENTS.

Subject to Applicable Law, all the monies due the Contractor under the Contract will be paid by the Treasurer of the County of Riverside, prepared and approved as required by law; and it is understood that any delay in the preparation, approval and payment of these demands will not constitute a breach of the County's obligations under this Contract.

Per Public Contract Code Section 20104.50 any local agency which fails to make any progress payment within thirty (30) days after receipt of an undisputed and properly submitted payment request from a Contractor on a Construction Contract shall pay interest to the Contractor equivalent to the legal rate–currently ten percent (10%) per annum. Refer to Section **7-3.2** for Payment Terms.

7-3.4. DELIVERED MATERIALS.

Unless included in the Bid Item List, or unless otherwise called for in the Special Provisions and/or Detailed Provisions, no payment will be made for materials or equipment delivered but not incorporated in the Work.

7-3.5. PAYMENT AND COMPENSATION FOR ALTERED QUANTITIES

When alterations in plans or quantities of Work are ordered and performed, the Contractor agrees to accept payment in full at the Contract Unit Price for the actual quantities of Work done; and no additional payment will be made for anticipated profits.

7-4 PAYMENT FOR EXTRA WORK

7-4.1. GENERAL.

Payment for completed extra work up to the Contract amount shall be added to the monthly progress payment made in accordance with Section 7-3 of these General Provisions.

Only an executed Contract Change Order changes the Contract amount.

County will prepare a Contract Change Order based on any alterations or approved extra work.

It is understood that multiple requests for extra work may be approved and later combined on one (1) Contract Change Order when payments reach approximately eighty percent (80%) of the current Contract amount.

If the Contract amount will be exceeded, progress payments will be temporarily suspended until a Contract Change Order is fully executed.

The General Manager – Chief Engineer shall have the authority to approve changes or additions in the work in accordance with Public Contract Code 20142. Contract Change Orders above that limit will require Board of Supervisors' approval.

7-4.2. COUNTY REQUESTED EXTRA WORK

The County reserves and shall have the right to revise the details of the contemplated Work, or to add Work of a different character or function, and have the Contractor perform such revised or added Work as "Extra Work", when such Extra Work is considered by the County to be appurtenant to the satisfactory completion of the Project. "Extra Work" is defined as added Work of a different character or function and for which no basis for payment is prescribed; or that Work which is indeterminate at the time of advertising and is specifically designated as Extra Work. The signing of the Contract by the Contractor will be deemed to be an Agreement on his part to perform Extra Work, as and when ordered by the County. If required Extra Work results in delay to the Work, the Contractor will be given an appropriate extension of time.

7-4.3. PROCEDURE FOR CONTRACTOR REQUESTED EXTRA WORK

Extra work may not be done by the Contractor without prior request and proper written approval by the County. Upon decision of the County to have Extra Work performed, the County will so inform the Contractor, acquainting it with the details of the new work. The Contractor shall thereupon present in writing a price for said Work to the County, whose written approval shall be secured before Work is started; except that the County may order the Contractor to proceed with Extra Work in advance of the submission of such prices provided that preliminary estimates show that the cost will not exceed $1,000.

Prices for Extra Work shall be prepared by the Contractor using one (1) or both of the following methods, as requested by the County, and submitted to the County for approval:

1) For a stated Unit Price or Lump Sum amount based upon current prevailing fair prices for materials, labor, plant, overhead and profit.

2) On a cost plus fifteen percent (15%) basis (force account by the Contractor). The cost of all Work done by the Contractor on a cost plus fifteen percent (15%) basis will be

computed in the manner described in Section 7-4.5, and the compensation thus provided shall be full payment to the Contractor related to the Extra Work.

Upon receipt of the Contractor's price, the County will make an analysis thereof and, in its discretion, adopt one (1) of the following procedures:

1) Accept the Contractor's price for Lump Sum or Unit Price amount in the original or amended form and direct it to proceed with the Work; or direct it to perform the Work on a cost plus fifteen percent (15%) basis.

2) Have the Work performed by County's forces or by separate Contract.

3) Direct the Contractor to proceed with the Work and accept payment therefore in the amount as adjudicated later in a court of law.

The price agreed to by the Contractor for the Extra Work shall be full compensation to the Contractor for all labor, materials, equipment or other costs related to the Extra Work.

7-4.4. CHANGES.

County is authorized to make changes in the Work in accordance with the provisions of this Section.

7-4.4.1. CONTRACT ADJUSTMENTS

Contract Adjustments shall only be permitted as follows: (1) the Contract Price shall only be adjusted by means of a Change Order or Unilateral Change Order for Extra or Deleted Work; and (2) the Contract Time shall be adjusted by means of a Change Order or Unilateral Change Order for Excusable Delay or Extra or Deleted Work. All Contract Adjustments to the Contract Price shall conform, without limitation, to the requirements of this Section. All Contract Adjustments to the Contract Time shall conform, without limitation, to the applicable requirements of Section 8-1 (relating to Claims).

A. Exclusive Rights.

The rights expressly set forth in the Contract Documents for Contract Adjustments constitute Contractor’s exclusive rights for additional compensation or extensions of time and are intended to be in lieu of and wholly replace any other such rights and remedies that the Contractor has under Applicable Laws for recovery or relief on account of loss or delay in connection with performance of the Work, it being the intent of the County and Contractor that if circumstances arise for which the Contract Documents do not provide to the Contractor an express right to a Contract Adjustment, then such omission of an express right shall conclusively be deemed to mean that no right to a Contract Adjustment was intended; and, consistent with that intent, no right to a Contract Adjustment on account of such circumstances shall by any means, legal or equitable, of interpretation, construction, inference, implication or application be considered, found or adjudged to exist.

B. Written Authorization.

Any Change performed by Contractor pursuant to any direction other than a duly authorized and executed Change Order, Unilateral Change Order or Construction Change Directive shall be at Contractor's own expense.

C. Prompt Performance.

Subject to the procedures set forth in this Section and elsewhere in the Contract Documents, all Changes shall be performed promptly and without delay.

7-4.4.2. SIGNATURES AND AUTHORIZATIONS.

A. Parties.

A Change Order shall be executed by the County and the Contractor. A Unilateral Change Order shall be executed by the County. Construction Change Directives shall be executed in accordance with Section 7-4.4.5 below.

B. Form.

Change Orders, Unilateral Change Orders and Construction Change Directives shall be executed using forms furnished by County or, if requested by the County, using forms furnished by the Contractor that are approved by the County.

C. Authorization.

1) Writing of Essence.

It is of the essence to the Contract between Contractor and County that all changes must be authorized in advance, in writing, as required by this Section. Accordingly, no verbal directions, course of conduct between the parties, express or implied acceptance of changes or of the Work, or Claim that the County has been unjustly enriched (whether or not there has been such enrichment) shall be the basis for a Contract Adjustment if Contractor has not obtained advance written authorization in the manner required by this Section.

7-4.4.3. CHANGE ORDERS.

A. Purpose.

The purpose of a Change Order is to establish the terms of the County's and Contractor's mutual agreement to a Contract Adjustment.

B. Content.

A Change Order is a written instrument, prepared by the County, stating:

1. Extra or Deleted Work;

2. Excusable Delay;

3. the amount of the Contract Adjustment, if any, to the Contract Price; and/or

4. the extent of the Contract Adjustment, if any, to the Contract Time.

7-4.4.4. UNILATERAL CHANGE ORDERS.

A. Purpose.

The purpose of a Unilateral Change Order is to adjust the Contract Sum and/or Contract Time if the County and Contractor cannot agree on the adjustment only in the following instances: 1) to recover costs to Owner for Contractor defaults: 2) for withholds and deductions allowed under the Contract Documents; 3) final quantity adjustments for Unit Price Work that reconciles original estimated quantities in the Bid Item List, with final actual quantities used; or 4) an increase or decrease in the Contract Time, consistent with the Contract Documents.

B. Good Faith Determination.

The County's determination in a Unilateral Change Order of a Contract Adjustment shall be based upon a good faith determination by County of the Contract Adjustment that is appropriate under the circumstances and consistent with the terms of the Contract Documents.

C. Claim by Contractor.

If Contractor disputes any portion of the County's good faith determination of a Contract Adjustment that is set forth in a Unilateral Change Order, Contractor shall file, within thirty (30) Calendar Days after issuance of the Unilateral Change Order by County, a Claim pursuant to Section 8-1. The amount of the Contract Adjustment requested in the Claim shall not exceed the difference between the amount (either in terms of dollar amount or number of Working Days) of the Contract Adjustment requested by Contractor and the amount (either in terms of dollar amount or number of Working Days) of the Contract Adjustment granted in the Unilateral Change Order. Except as expressly provided in the Contract, Contractor shall have no reserved right, and hereby waives any such right that may exist under Applicable Laws, to seek in such Claim a Contract Adjustment or recovery that is based upon any amount (either in terms of dollar amount or number of Working Days) that is in excess of such difference.

D. Waiver by Contractor.

Failure by the Contractor to submit a Claim pursuant to Section 8-1, within thirty (30) Calendar Days after issuance of a Unilateral Change Order by County shall, in accordance with the Contract Documents, constitute a waiver by Contractor of the right to further recourse or recovery based on an assertion that the amount of the Contract Adjustment on account of the change or delay described in such Unilateral

Change Order should be different than the amount of the County's Good Faith Determination of the Contract Adjustment as set forth in such Unilateral Change Order.

7-4.4.5. CONSTRUCTION CHANGE DIRECTIVES.

A. Purpose.

The purpose of a Construction Change Directive is to: (1) direct the performance of a Change that does not involve a Contract Adjustment; or (2) direct performance of Work or a Change with respect to which there exists a dispute or question regarding the terms of a Contract Adjustment.

B. No Contract Adjustment.

A Construction Change Directive that directs the performance of Work or a Change that does not involve a Contract Adjustment to the Contract Price or Contract Time may be authorized by either the Engineer or the County's Project Manager and shall be promptly performed by Contractor so as to not cause delay to any other portion of the Work. A Construction Change Directive directing performance of a Change that does not contain any statement indicating that a Contract Adjustment is requested or required shall be conclusively presumed to be a Change and no Contract Adjustment increasing the Contract Price or Contract Time will be made on account thereof.

C. Agreed Basis for Compensation for a Contract Adjustment.

A Construction Change Directive that contains a complete or partial Agreement by the County and Contractor with respect to the Contractor's right to, or the basis for compensation for a Contract Adjustment shall be authorized in accordance with, conform to the requirements of and be binding upon County and Contractor as provided for herein.

1. Complete Agreement.

Each Construction Change Directive involving Extra or Deleted Work with respect to which there is complete Agreement on the terms of the Contract Adjustment shall include:

a. Statement of Agreement.

A statement that the County and Contractor are in agreement on all of the terms of the Contract Adjustment related to performance of such Change and set forth a full description of the terms of the Contract Adjustment, including, without limitation, its effect on the Contract Price and Contract Time.

b. Legal Effect.

i. Upon Contractor.

The agreed terms of the Contract Adjustment with respect to which there is a statement of full agreement on the terms of the Contract Adjustment for a change in Work shall be final and binding upon Contractor. Any right or Claim by Contractor for any additional compensation or extension of time relating directly or indirectly to such change shall be conclusively deemed waived by Contractor, even if the circumstances giving rise to such additional compensation or extension of time were not suspected by or known to the Contractor at the time of execution of the Construction Change Directive and if suspected or known would have been considered by Contractor to have been material to Contractor's Agreement to the Contract Adjustment set forth in the Construction Change Directive.

ii. Upon County.

In recognition of the fact that Construction Change Directives may be issued under circumstances in which the County may not have had the access to pertinent information required for the County to fully evaluate the circumstances giving rise to the Change, it is agreed that neither the issuance nor execution of, nor any statement contained in, nor any course of conduct in connection with, a Construction Change Directive (including, without limitation, a Construction Change Directive that constitutes a full agreement by County and Contractor on the basis for compensation for a Contract Adjustment) shall be interpreted as a waiver, release or settlement of any of County's rights relating to the subject matter of the Construction Change Directive, or as creating or implying any right of Contractor to a Contract Adjustment, if it is found by County upon further investigation that circumstances existed, not known to County at the time of executing the Construction Change Directive, demonstrating that the Contractor was not in fact entitled to a Contract Adjustment or was entitled to a Contract Adjustment on different terms than those agreed to in the Construction Change Directive.

D. Partial Agreement.

Each Construction Change Directive involving Extra or Deleted Work with respect to which there is only agreement on a portion of the terms of a Contract Adjustment shall comply with the following:

1. Agreed Terms.

The Construction Change Directive shall state those terms of the Contract Adjustment as to which there is agreement.

a. Legal Effect.

Except to the extent of any additional open (i.e., non-agreed) terms stated or reserved in the Construction Change Directive, such agreement shall have the same legal effect set forth herein.

b. Time and Materials.

In the event that County and Contractor agree in the Construction Change Directive to the "time and materials" method of calculation set forth herein, but do not agree upon a maximum price, then the total cost to County for the Work covered by the Construction Change Directive shall under no circumstances exceed a price that is reasonable, competitive and fair to County given the amount and type of Work involved.

2. Open Terms.

The Construction Change Directive shall state those terms of the Contract Adjustment that are "open" or "disputed"; meaning those terms as to which the County and Contractor did not reach agreement.

a. Legal Effect.

A Reasonable Order of Magnitude Estimate constitutes neither (i) a guarantee by Contractor that the amount of the Contract Adjustment to the Contract Price or Contract Time that may be associated with the Extra or Deleted Work covered by such Construction Change Directive may not exceed the Reasonable Order of Magnitude Estimate nor (ii) authorization or agreement by County to a Contract Adjustment based on the amounts set forth in such Reasonable Order of Magnitude Estimate.

E. Disputed Contract Adjustment.

Each Construction Change Directive involving a Contract Adjustment with respect to which there is a dispute or partial agreement shall, if Contractor is ordered to do so in a Construction Change Directive signed by the Engineer, be performed by Contractor without delay. Except as otherwise provided elsewhere in this Section, with respect to any open terms as to which the County and Contractor have not reached agreement, both County and Contractor shall be deemed to have reserved their respective rights and defenses.

F. Other Notices.

With respect to any Contract Adjustment or portion of a Contract Adjustment that is not fully resolved in a Construction Change Directive, neither issuance nor execution of such Construction Change Directive shall be interpreted as relieving Contractor of its obligation to comply with the requirements of these General Provisions relative to timely submission of notices required by the Contract Documents, including, without limitation, Notice of Change, Change Order Request, Notice of Delay or Request for Extension.

7-4.4.6. PROCEDURES.

A. Notice of Change.

1. Submission.

   Contractor shall submit a written Notice of Change to County, if any instruction, request, drawing, specification, action, condition, omission, default or other circumstance occurs that constitutes Extra or Deleted Work or other matter that may involve or require a Contract Adjustment (additive or deductive). Such notice shall be provided prior to commencement of performance of the Work affected and no later than three (3) days after the discovery date of such circumstance.

2. Form.

   Notices of Change shall be provided using forms furnished by County or, if requested by County, using forms furnished by Contractor that are approved by County. Failure by County to request or approve a particular form shall not relieve Contractor of its obligation to provide a Notice of Change in a written form that complies with the requirements specified herein.

3. Content.

   Each Notice of Change in order to be considered complete shall include:

   a. a general statement of the circumstances giving rise to the Notice of Change (including, without limitation, identification of any related Construction Change Directive);

   b. a Reasonable Order of Magnitude Estimate by Contractor of any related Contract Adjustments (additive and deductive) to the Contract Price; and

   c. if such circumstances involve a right to adjustment of the Contract Time due to Excusable Delay that has not been waived, Contractor shall include, if not previously provided, a complete and timely Notice of Delay.

4. Waiver by Contractor.

   Failure by Contractor to provide a complete and timely Notice of Change under circumstances where a Notice of Change involving a change is required shall constitute a waiver by Contractor of the right to a Contract Adjustment on account of such circumstances and a waiver of any right to further recourse or recovery by reason of or related to such change.

5. Deductive Adjustments.

Failure by Contractor to submit a timely or proper Notice of Change under circumstances in which a Notice of Change is required shall in no way affect County's right to any deductive Contract Adjustment on account of such circumstances.

B. Change Order Request.

1. Submission.

With respect to any matter that may involve or require a Contract Adjustment (additive or deductive) of the Contract Price, Contractor shall, within fourteen (14) days after receipt by the County of a Notice of Change, submit to the County a written Change Order Request.

2. Form.

Change Order Requests shall be provided using forms furnished by County or, if requested by County, using forms furnished by Contractor that are approved by County. Failure by County to request or approve a particular form shall not relieve Contractor of its obligation to provide a Change Order Request in a written form that complies with the requirements stated herein.

3. Content.

Content of Each Change Order Request to be considered complete shall include:

a. a detailed description of the circumstances for Extra or Deleted Work;

b. a complete, itemized cost breakdown (additive and deductive) of the Allowable Costs that form the basis for the Contractor's request for Contract Adjustment, including: (a) if the pricing is based on time and materials charges, all of Contractor's and each Subcontractor's Allowable Costs (including, without limitation, quantities, hours, Unit Prices, and rates) and Allowable Markups, and (b) if the pricing is in the form of a Lump Sum price a detailed breakdown of the Lump Sum price into its component and individual items of Allowable Costs and Allowable Markup; and

c. if such circumstances involve a right to a Contract Adjustment of the Contract Time due to Excusable Delay that has not been waived, Contractor shall include, if not previously provided, a complete and timely Request for Extension.

4. Waiver by Contractor.

Failure by Contractor to provide a complete and timely Change Order Request under circumstances where a Change Order Request involving a change is required shall constitute a waiver by Contractor of the right to a Contract

Adjustment on account of such circumstances and a waiver of any right to further recourse or recovery by reason of or related to such change.

5. Deductive Adjustments.

   Failure by Contractor to submit a timely or proper Change Order Request under circumstances in which a Change Order Request is required shall in no way affect County's right to any deductive Contract Adjustment on account of such circumstances.

7-4.4.7. FORMAL NOTICE OF ESSENCE.

Contractor recognizes and acknowledges that timely submission of a formal Notice of Change and Change Order Request, whether or not the circumstances of the Change may be known to the County or available to the County through other means, is not a mere formality but is of crucial importance to the ability of County to promptly identify, prioritize, evaluate and mitigate the potential effects of Changes. Any form of informal notice, whether verbal or written (including, without limitation, statements in Requests for Information, statements at regular job meetings or entries on monthly reports, daily logs or job meeting minutes), that does not strictly comply with the formal requirements herein, shall therefore be insufficient.

7-4.5. BASIS FOR ESTABLISHING COSTS.

7-4.5.1. BASIS OF CALCULATION.

A. Changes Not Involving Time.

   Contract Adjustments to the Contract Price on account of Extra or Deleted Work shall be calculated according to one of the following methods:

   1. Lump Sum.

      By mutual acceptance of a Lump Sum proposal from Contractor based solely on Allowable Costs and Allowable Markups that is properly itemized and supported by sufficient substantiating data to permit evaluation.

   2. Unit Prices.

      By the Contract Unit Prices set forth in the Bid, the Stipulated Unit Prices established by the County in the Contract Documents or such other Unit Prices as are subsequently and mutually agreed to in writing between the County and Contractor, with no amount added thereto for Allowable Markups.

   3. Estimating Guides.

      For Changes with respect to which County elects to make a unilateral and final determination by the sum of all the following:

a. Materials.

The reasonable value of materials and equipment documented as having been actually incorporated into the Work, which reasonable value may be less but shall never be more than Contractor's actual Allowable Costs therefor.

b. Labor.

An estimate of the reasonable costs of labor, installation and other services using the lower of the estimated prices for the locale of the Project (or if prices are not reported for the locale of the Project, the estimated prices that are reported for the region in which the Project is located) as reported in following recognized estimating guides: (i) R. S. Means Company, Inc. Building Construction Cost Data, Western Region - Latest Edition; or (ii) Saylor Communications Current Construction Costs - Latest Edition,2121 N. California Blvd, #620, Walnut Creek, CA 94596, www.saylor.com.

c. Allowable Markup.

The amount that results when the applicable Allowable Markup is applied to the sum of the amounts derived from preceding Clauses (a) and (b) of this Subsection.

4. Time and Materials.

a. Deleted Work.

With respect to Deleted Work, if none of the methods provided for in Subparagraphs (1) through (3), above, is applicable, then, in addition to the reduction, if any, that may be due to Owner (pertaining to Contract Adjustments shortening the Contract Time due to Deleted Work) and any additional reductions or credits to which County may be entitled, the Contract Price shall be reduced by the greater of either:

i. the value assigned to the Deleted Work in the Schedule of Values attached to the Contract or provided in accordance with the Detailed Provisions, inclusive of all estimated markups by Contractor and any Subcontractor for overhead and profit set forth in the Schedule of Values (or, if insufficient detailed information on costs, overhead and profit for the Deleted Work is explicitly assigned in the Schedule of Values, as derived from the cost, bidding and/or estimating information that formed the basis for the establishment of the values set forth in such Schedule of Values); or

ii. a reasonable estimate of the value of the Deleted Work (inclusive of all costs, overhead and profit) as of the date that the Construction Contract was executed by County and Contractor.

B. Changes Involving Time.

Contract Adjustments that are based on an extension of the Contract Time for a shortening of the Contract Time due to Deleted Work shall be calculated in the manner stated in these Contract Documents.

7-4.5.2. TIME AND MATERIALS DOCUMENTATION.

Without limitation to any other provisions of the Contract Documents, Contractor's right to reimbursement of Allowable Costs incurred by Contractor or Subcontractors in the performance of a Change for which the Contract Adjustment is calculated, shall be conditioned on Contractor's compliance with the following conditions with respect to documentation of the Extra Work that is involved in the performance of the Change:

A. Labor.

At the close of each day on which such Extra Work is performed, Contractor shall submit to County, and, if requested, to the Inspector of Record, an Extra Work report, on forms provided by County, that sets forth with respect to each and all of the actual hours spent in performance of the Extra Work on the Working Day that the Extra Work was performed with the following: the names of the workers, their classifications, hours worked and hourly rates. Such forms shall include a written certification by Contractor's Project Manager or Superintendent at the time of submission that the information contained therein is complete and accurate.

B. Materials, Equipment.

At the close of each Working Day on which such Extra Work is performed, Contractor shall submit to County, and, if requested, to the Inspector of Record, an Extra Work report, on forms provided by County, that sets forth with respect to each and all of the materials and equipment used or consumed in the performance of the Extra Work on the Working Day that the Extra Work was performed, the following: a list of the materials and equipment, prices or rates charged, in the case of equipment a description of the type of equipment, identification number, and hours of operation (including loading and transportation), and copies of delivery tickets, invoices or other documentation confirmatory of the foregoing.

C. Other Expenditures.

At the close of each Working Day on which such Extra Work is performed, Contractor shall submit to County, and, if requested, to the Inspector of Record, an Extra Work report, on forms provided by County, that sets forth a list of other expenditures constituting Allowable Costs incurred in performance of the Extra Work on the Working Day that the Extra Work was performed, along with documentation verifying the amounts thereof in such detail as County may require.

D. Subsequent Documentation.

Documentation not available on any Working Day that a portion of the Extra Work is performed shall be submitted to the County as soon as they are available but not later than twenty-one (21) days after the earlier of the day of delivery or incorporation of the particular item of Extra Work at the Project.

E. Subcontractor Costs.

Extra Work performed by Subcontractors on a time and materials basis shall be documented in the same manner as required of the Contractor. If the County approves of a Lump Sum price for a Subcontractor's performance of Extra Work, then Contractor shall submit in lieu of the documentation otherwise required, such documentation as may be requested by the County confirming the Extra Work performed on any given Working Day.

F. Authentication.

In addition to the foregoing, County may require that Contractor comply with other reasonable requirements pertaining to observation and verification of time and materials work and authentication of time and materials tickets and invoices by persons designated by County for such purpose.

G. Waiver by Contractor.

The failure of Contractor to submit authentication of costs in the manner required shall, if County elects in its reasonable discretion to treat it as such, constitute a waiver by Contractor of any right to a Contract Adjustment for the Allowable Costs incurred for performance of that portion of the Extra Work for which Contractor has failed to provide such authentication.

7-4.5.3. ALLOWABLE COSTS.

The term "Allowable Costs" (1) means the costs that are listed in this Section; and (2) excludes costs that do not constitute Allowable Costs under Section 7-4.5.4, below:

A. Labor.

Straight-time wages and, if specifically authorized by County in writing, overtime wages for employees employed at the Project, including wages for employees of Subcontractors performing engineering or fabrication detailing at locations other than at the Project. The use of a labor classification which would increase the Allowable Costs for Extra Work will not be permitted unless Contractor establishes the necessity for the use of such labor classification. Overtime wages and salaries shall only constitute an Allowable Cost to the extent permitted by the Contract Documents and only as specifically authorized by County in writing setting forth the amount of overtime anticipated, which amount shall be deemed the maximum amount of overtime reimbursable as an Allowable Cost. As part of the Allowable Costs permitted, Contractor shall be entitled to be reimbursed wages paid to a "time and materials clerk" employed by Contractor to track and document Changes that

are authorized or permitted to be performed on a time and materials basis, provided that the time expended by such employee is verified by contemporaneously maintained time sheets maintained by such clerk showing the actual time spent tracking and documenting the performance of Changes separately from other tasks or functions performed by such clerk.

B. Benefits.

To the extent based on wages reimbursable herein, net actual employer costs of payroll taxes (FICA, Medicare, SUTA, FUTA), insurance (as adjusted for experience modifiers, premium discounts, dividends, rebates, expense constants, assigned risk pool costs, net cost reductions due to policies with deductibles for self-insured losses, assigned risk rebates, or the like), health and welfare, pension, vacation, apprenticeship funds and benefits required by lawful collective bargaining agreements.

C. Materials.

Costs of materials used or consumed in the Work. Such costs for Extra Work shall be at a price that is competitive to the price charged for similar materials delivered within the general vicinity of the Project by other Subcontractors, suppliers, manufacturers and distributors. The cost for any such item that is not new shall mean "fair market value" based on the estimated price a reasonable purchaser would pay to purchase the used material at the time it was used or consumed for the Work, which fair market value must be declared by Contractor and approved by County prior to such use or consumption.

D. Taxes.

Sales taxes on the costs of the materials described herein.

E. Equipment Rental.

Rental charges for necessary machinery and equipment, exclusive of hand tools, whether rented from the Contractor or others. No charge shall be allowed or credit required for items which have a replacement value of Two Hundred and Fifty Dollars ($250) or less. The allowable rental rates shall include the cost of fuel, oil, lubrication, supplies, small tools, necessary attachments, loading, transportation, repairs and maintenance of any kind, depreciation, storage, insurance and all incidentals. If equipment used for Extra Work is used intermittently and, when not in use, could be returned to its rental source at less expense to County than holding it at the Project, it shall be returned, unless Contractor elects to keep it at the Project at no expense to County. Under no circumstances shall the aggregate rentals chargeable for any item of equipment exceed the following percentages of the fair market value of the item at the time of its first use for the Work, which fair market value must be declared by Contractor and approved by County prior to the first use of such item in or for the Work: (1) if the item is owned by the Contractor or any company affiliated with Contractor, the aggregate rentals shall not exceed seventy-

five percent (75%) of such fair market value; and (2) if the item is not owned by the Contractor or any company affiliated with Contractor, the aggregate rentals shall not exceed one hundred percent (100%) of such fair market value. All equipment shall be acceptable to County, in good working condition, and suitable for the purpose for which it is to be used. Manufacturer's ratings and manufacturer's approved modifications shall be used to classify equipment, and it shall be powered by a unit of at least the minimum rating recommended by the manufacturer. The cost of major repairs or overhauls of rented equipment or machinery shall be deemed a cost of business of the lessor of such equipment or machinery and shall not be reimbursable as an Allowable Cost.

F. Subcontractors.

Payments made by Contractor to Subcontractors; provided, however, that: (1) such payments are not otherwise precluded from reimbursement by the terms of the Contract Documents; (2) such payments are for Work performed in accordance with the requirements of the Contract Documents; (3) such payments are for amounts properly due and owing by Contractor under the terms of the governing Contract between Contractor and such Subcontractor; and (4) in the case of payments for Extra Work performed by a Subcontractor pursuant to a Change Order executed between Contractor and a Subcontractor the Change Order was executed under circumstances in which the Subcontractor was entitled under the terms of its Contract with Contractor to receive the amount of additional compensation agreed to in the Change Order.

G. Bonds.

Costs of bonds required to be furnished by Contractor (not Subcontractors) under the terms of the Contract Documents; provided, however, that such additional costs chargeable for Extra Work or credited for Deleted Work shall not exceed two percent (2%) of the costs described herein.

7-4.5.4. COSTS NOT ALLOWED.

Allowable Costs shall not include any of the costs associated with any of the following (whether incurred by Contractor or a Subcontractor):

1) superintendent(s);

2) assistant superintendent(s);

3) project engineer(s);

4) project manager(s);

5) scheduler(s);

6) estimator(s);

7) drafting or detailing (except as otherwise permitted herein);

8) vehicles not dedicated solely to the performance of the Work;

9) small tools with a replacement value not exceeding two hundred and fifty dollars ($250);

10) office expenses, including staff, materials and supplies;

11) on-Project and off-Project trailer and storage rental and expenses;

12) site fencing not added solely due to the performance of Extra Work;

13) utilities, including gas, electric, sewer, water, telephone, telefax and copier equipment;

14) computer and data-processing personnel, equipment and software;

15) federal, state or local business, income and franchise taxes;

16) insurance (including, without limitation, General Liability, Automobile and Worker's Compensation);

17) without limitation to Contractor's right to liquidated damages, losses, of any kind, incurred by Contractor or a Subcontractor, of any tier, that arise from or relate to delay (including Excusable Delay or Unexcused Delay) or acceleration to overcome the effects of such delay; and

18) costs and expenses of any kind or item not specifically and expressly included herein.

7-4.6. MARKUP.

7-4.6.1. ALLOWABLE MARKUPS.

Allowable Markups consist of the percentages set forth provided for by this Section. Allowable Markups are deemed to cover, without limitation, the following: (1) direct and indirect overhead (including, without limitation, consumables, small tools, and cleanup) and profit of the Contractor; (2) direct and indirect overhead (including, without limitation, consumables, small tools, and cleanup) and profit of the Subcontractors, of every Tier; and (3) all costs that are not reimbursable to Contractor, above. Subject to the exclusions and limitations set forth elsewhere in the Contract Documents, Allowable Markups include and are limited to the following:

A. Self-Performed Work.

1. Deleted Work.

With respect to all or that portion of Deleted Work involving self- performed Work, County shall be entitled to a credit equal to five percent (5%) of the amount of the credit for the savings to Contractor for the self-performed Work as calculated herein.

B. Installation Subcontractors (First-Tier).

1. Deleted Work.

With respect to all or that portion of Deleted Work that was to have been performed by a first-Tier Installation Subcontractor, the Contract Price shall be reduced. In addition, a credit shall be due from Contractor of five percent (5%) of the amount of the total credit due.

C. Installation Subcontractors (Second-Tier).

1. Deleted Work.

With respect to all or that portion of Deleted Work that was to have been performed by a second-Tier Installation Subcontractor, the Contract Price shall be reduced. In addition, a credit shall be due from Contractor of five percent (5%) of the amount of the total credit due.

D. Other Subcontractors.

1. Deleted Work.

With respect to all or that portion of Deleted Work that was to have been performed by such other Subcontractor who is not an Installation Subcontractor or who is an Installation Subcontractor below the second-Tier, the Contract Price shall be reduced. In addition, a credit shall be due from Contractor of five percent (5%) of the amount of the total credit due.

7-4.6.2. REVIEW OF MARKUPS.

It is Contractor's responsibility to review information submitted by Subcontractors to ensure that all markups comply with the requirements of the Contract Documents. Payment by the County of markups that exceed Allowable Markups shall not be considered as a waiver by County of the right to require repayment by Contractor of any markup charged that is in excess of Allowable Markups and such excess amounts shall be promptly paid by Contractor to County.

7-4.6.3. EXCLUSIONS AND LIMITATIONS.

Allowable Markups are not permitted:

1) on agreed Unit Prices;

2) on materials, products or equipment furnished by County;

3) on damages, at the Established Daily Rate if any, payable to Contractor;

4) to a Subcontractor who contracts to perform a Change that is in fact wholly performed by another Subcontractor ("wholly performed" means that all of the Change, other than supervision or minor labor or materials, are furnished by such other Subcontractor); or

5) on any cost or compensation with respect to which the Contract Documents state that there shall be "no Allowable Markup", "no markup for overhead and profit" or words of similar meaning.

7-5 PAYMENT FOR CHANGES REQUESTED BY THE CONTRACTOR

If such changes are approved by the Engineer pursuant to Section 7-4.4, approval will only be made based upon a reduction in cost or no additional cost to the Agency.

7-6 NET CALCULATIONS

If any single Change or collection of Changes in the same or related portions of the Work, or in multiple portions of Work covered by a single bulletin or instruction by County, involve both Change and Extra or Deleted Work, and if the added Allowable Costs resulting from the Change exceed the reduction calculated (excluding any Allowable Markup to the Contractor), then the calculation of Allowable Markups to Contractor shall be based on and limited to the resulting net increase in the Allowable Costs.

7-7 UNIT PRICES

Unless otherwise stated in the Contract Documents, Unit Prices stated in the Contract Documents or subsequently agreed upon by County and Contractor shall be deemed to include and encompass all costs of performance, overhead and profit, including, without limitation, all Allowable Costs and Allowable Markups.

7-8 DISCOUNTS

For purposes of determining Allowable Costs of a Change, all trade discounts, rebates, refunds, and returns from the sale of surplus materials and equipment shall accrue and be credited to County, and Contractor shall take all necessary steps to ensure that such discounts, rebates, refunds, and returns are secured.

7-9 PROMPT PRICING

It is fundamental to the County's objective of controlling costs that performance of Changes on a time and materials basis of compensation and without a not-to-exceed price be curtailed. Contractor recognizes that prompt pricing by Contractor is critical to this objective. Accordingly, in addition to and without limitation on any of the County's other rights or remedies, including, without limitation, its right to enforce a waiver, it is agreed that if Contractor fails to timely submit a complete Change Order Request, with respect to any circumstance, event or occurrence constituting a Change then: (1) any delay to the performance of the Work associated with the performance, delayed performance or nonperformance of such Change shall be conclusively

deemed to be an Unexcused Delay; and (2) the County shall have the option, exercised in its sole discretion, to unilaterally fix and determine the amount of the Contract Adjustment to the Contract Price for such Change based on the "estimating guide" method set forth herein, which determination shall be conclusively final and binding upon Contractor.

7-10 FULL RESOLUTION

Except as otherwise stated in the Contract Documents, the signing of a Change Order by Contractor and the County shall be conclusively deemed to be a full resolution, settlement and accord and satisfaction with respect to any and all loss and delay, whether known or unknown at the time of execution of the Change Order, related to the subject matter of the Change Order, including, without limitation, all rights to recovery of costs, expenses or damages for delay, disruption, hindrance, interference, extended or extraordinary (direct and indirect) overhead, multiplicity of changes, loss of productivity, labor, wage or material cost escalations, inefficiency, legal expenses, consultant costs, interest, lost profits or revenue, bond and insurance costs, changes in taxes and other similar and related losses. The foregoing provisions shall, whether or not they are expressly stated or referenced on the face of a Change Order, be deemed to be part of the terms of the Change Order and shall be deemed to supersede and govern over any other provision contained in any proposal, estimate or other documents attached to or referenced in such Change Order that conflicts.

Any right or Claim by Contractor for any additional compensation or extension of time relating directly or indirectly to a Change described in a fully executed Change Order shall be conclusively deemed waived by Contractor, even if the circumstances giving rise to such additional compensation or extension of time were not suspected by or known to the Contractor at the time of execution of the Construction Change Directive and if suspected or known would have been considered by Contractor to have been material to Contractor's Agreement to the Contract Adjustment set forth in the Change Order.

7-11 RESERVED RIGHTS

Change Orders shall be executed by Contractor without any express reservation of rights by Contractor to reserve for the future the assertion of any right of recovery from the County for loss or delay arising out of or relating to the subject matter of the Change Order. Execution of a Change Order, Unilateral Change Order or Construction Change Directive shall not be interpreted as a waiver, release or settlement of any rights or Claims that the County may have for any of the following: (1) Defective Work; (2) liquidated damages or actual losses for Delay; or (3) recoupment by County (by way of withholding of funds, set off or recovery from Contractor) of amounts paid by County for costs or markups on costs that the County discovers, following payment of such amounts to Contractor, do not constitute proper charges to County, or that constitute charges that are not properly substantiated, under the terms of the Contract Documents.

7-12 NO "TOTAL COST" CALCULATIONS

Contractor represents and warrants that it has the ability to generate and maintain complete and accurate cost accounting records that, if required, will reflect the actual costs of the Work incurred or avoided for multiple Changes and, on an event-by-event basis, the effect of multiple and concurrently occurring or caused Delays on the progress of the Work. Accordingly, Contractor

agrees that all Change Order Requests and Claims shall be itemized in a manner that, with reasonable mathematical certainty and without reliance upon probabilities or inferences, segregates on a discrete, event-by-event basis the direct, actual Allowable Costs associated with each individual Change or Delay. Unless otherwise agreed to by County in writing in the exercise of its sole discretion, Change Order Requests and Claims shall not be based, in whole or in part, upon any methodology (such as "total cost" or "modified total cost" methodologies) that purports to establish Contractor's entitlement to additional compensation inferentially based, solely or principally, on the difference between Contractor's total costs for the Work or a portion of the Work and its original Bid.

7-13 MULTIPLE CHANGES

The County reserves the absolute right to make whatever Changes, including, without limitation, Deleted Work, that it determines, in its sole discretion, are necessary or otherwise desirable. Under no circumstances shall the individual or cumulative number, value or scope of such Changes, or their individual and cumulative impact on the Work, become a basis for Contractor to assert any Claim for breach of Contract, abandonment, rescission, termination, cardinal change or reformation of the Agreement, nor shall such circumstances be the basis for Contractor, or any of the Subcontractors, of any Tier, to assert a right of recovery of any loss if such right is not permitted by, or is in excess of that allowed under, the Contract Documents.

7-14 CONTINUOUS PERFORMANCE

Subject to Contractor's rights, no dispute or disagreement with respect to any Changes or delay, including, without limitation, disputes over Contractor's right to or the terms of a Contract Adjustment, shall relieve or excuse Contractor from the obligation to proceed with and maintain continuous, expeditious and uninterrupted performance of the Work, including performance of any disputed Changes.

ARTICLE 8 - CLAIMS

8-1 CLAIMS

8-1.1. SUBMISSION OF CLAIMS.

All Claims by Contractor shall be submitted to the County in accordance with the procedures set forth in the Contract Documents. This Article **8** is intended to comply with the provisions of Public Contract Code Section 9204.

Click the following link for the full text of Public Contract Code Section 9204:

http://leginfo.legislature.ca.gov/faces/codes_displaySection.xhtml?lawCode=PCC&sectionNum=9204

8-1.2. ACCRUAL OF CLAIM.

A. Changes.

A Claim by Contractor involving a Contract Adjustment due to Changes or Extra or Deleted Work arises upon issuance of a written decision denying, in whole or in part, Contractor's Change Order Request. Such Claim shall be prepared and submitted in accordance with the requirements of this Article **8**.

B. Other Claims.

Claims by Contractor, other than those described in this Article **8**, that arise at the time that County receives written notice by Contractor of Contractor's intent to file the Claim. Such notice of intent shall be given no later than five (5) Days after the discovery date relative to such circumstances (even if Contractor has not yet experienced a loss or delay due to such circumstances) and shall state the event or condition giving rise to the Claim and its probable effect, if any, upon the Contract Price and Contract Time.

Failure by Contractor to submit a Notice of Intent to file Claim in accordance with this subsection shall constitute a waiver by Contractor of the right to further recourse or recovery upon such Claim.

8-1.3. CONTENT OF CLAIMS.

A Claim must include the following:

1) a statement that it is a Claim and a request for a decision on the Claim;

2) a detailed description of the act, error, omission, unforeseen condition, event or other circumstance giving rise to the Claim;

3) supporting documentation as follows: (a) if the Claim involves a Contract Adjustment due to Changes or Extra or Deleted Work, documentation demonstrating that a

complete Notice of Change and Change Order Request were timely and properly submitted as required by Section **7-4.4.6**; (b) if the Claim involves an adjustment to the Contract Time, documentation demonstrating that a complete Notice of Delay and Request for Extension were timely and properly submitted as required by Section **6-4.2**; (c) if the Claim does not involve a Contract Adjustment on the basis of Changes or Extra or Deleted Work, documentation demonstrating that a Notice of Intent to file the Claim was timely and properly submitted as required;

4) a detailed justification for any remedy or relief sought by the Claim, including, without limitation, all of the following: (a) a detailed cost breakdown in the form required for submittal of Change Order Requests, which complies with the prohibition on "total cost" calculations; and (b) job cost records substantiating the actual costs that have been incurred; and

5) a written certification, signed by a responsible managing officer or principal of Contractor's organization who has the authority to sign contracts on behalf of Contractor and who has personally investigated the matters alleged in the Claim, in the following form:

   "I hereby certify under penalty of perjury that I am a managing officer or principal of (Contractor) and that I have reviewed the Claim presented herewith on Contractor's behalf and/or on behalf of (Subcontractor(s)) and that the following statements are, to the best of my knowledge after diligent inquiry into the circumstances of such Claim, true and correct:

   a. the facts alleged in or that form the basis for the Claim are true and accurate;

   b. I do not know of any facts or circumstances, not alleged in the Claim, that by reason of their not being alleged render any fact or statement alleged in the Claim materially misleading;

   c. I have, with respect to any request for money or damages alleged in or that forms the basis for the Claim, reviewed the job cost records (including those maintained by Contractor and by any Subcontractor, of any Tier, that is asserting all or any portion of the Claim) and confirmed with reasonable certainty that the losses or damages alleged to have been suffered by Contractor and/or such Subcontractor were in fact suffered in the amounts and for the reasons alleged in the Claim;

   d. I have, with respect to any request for extension of time or claim of delay, disruption, hindrance or interference alleged in or that forms the basis for the Claim, reviewed the job schedules (including those maintained by Contractor and by any Subcontractor, of any Tier, that is asserting all or any portion of the Claim) and confirmed that the delays or disruption alleged to have been suffered by Contractor and/or such Subcontractor were in fact experienced for the durations, in the manner, and with the consequent effects on the time and/or sequence of performance of the Work, as alleged in the Claim; and,

e. Contractor has not received payment from County for, nor has Contractor previously released County from, any portion of the Claim.

8-1.4. NONCOMPLIANCE.

Failure by Contractor to comply with the statement above, shall give County the right, without obligation, to deny the Claim or return the Claim without any response.

8-1.5. SUBMISSION OF CLAIMS.

A. Time for Filing.

All Claims and supporting documentation and certifications required to be submitted by Contractor must be submitted to the County within thirty (30) days after the Claim arises (as "arises" is defined above). No Claims by Contractor are permitted after Final Payment.

B. Condition Precedent.

Contractor's strict compliance with the requirements of this Article 8 as to a Claim shall be considered a condition precedent to Contractor's right to initiate or seek determination of its rights in any legal proceedings with respect to such Claim.

8-1.6. RESPONSE TO CLAIMS BY CONTRACTOR.

A. Claims under $50,000.

Claims by Contractor that are less than Fifty Thousand Dollars ($50,000) shall be responded to by County by issuance of a good faith determination of the Claim in writing within forty-five (45) days of receipt of the Claim, unless County requests additional information or documentation of the Claim within thirty (30) days of receipt of the Claim, in which case County shall respond to the Claim after receipt of the further information or documentation by issuing its good faith determination of the Claim within the longer of either (1) fifteen (15) days, or (2) the period of time taken by Contractor in producing the additional information or documentation. Provided, however, that if the County requires approval from the Board of Supervisors prior to the issuance of its good faith determination, and the Board of Supervisors does not meet within forty-five (45) days of the date of Contractor's Claim, the County's response will be due three (3) days following the next duly noticed meeting of the Board of Supervisors after the forty-five (45) period has expired.

B. Claims over $50,000.

Claims by Contractor that are over Fifty Thousand Dollars ($50,000) shall be responded to by County by issuance of a good faith determination of the Claim in writing within forty-five (45) days of receipt of the Claim, unless County requests additional information or documentation of the Claim within thirty (30) days of receipt of the Claim, in which case County shall respond to the Claim after receipt of the further information or documentation by issuing its good faith determination within the longer

of either (1) thirty (30) days, or (2) the period of time taken by Contractor in producing the additional information or documentation. Provided, however, that if the County requires approval from the Board of Supervisors prior to the issuance of its good faith determination, and the Board of Supervisors does not meet within forty-five (45) days of the date of Contractor's Claim, the County's response will be due three (3) days following the next duly noticed meeting of the Board of Supervisors after the forty-five (45) period has expired.

8-1.7. MEET AND CONFER.

If Contractor disputes County's good faith determination of a Claim by Contractor, or if County fails to respond within the prescribed time set forth above, Contractor may so notify County, in writing, within fifteen (15) days of Contractor's receipt of County's good faith determination, or within fifteen (15) days of County's response due date in the event of a failure to respond, and demand an informal conference to meet and confer for settlement of the issues in dispute. Upon demand, County shall schedule a meet and confer conference within thirty (30) days of such demand for discussion of settlement of the dispute. If either County or Contractor determines that the meet and confer process has not been successful, it shall have the right to declare the meet and confer process closed by written notice to the other party so stating. Any unresolved disputes shall be collectively submitted to nonbinding mediation after the completion of the Work.

8-1.8. CLAIMS BASED ON DIFFERING SITE CONDITIONS.

A. Contractor Responsibility.

Save and except as hereinafter provided for Contract Adjustments due to Differing Site Conditions, Contractor agrees at Contractor's own expense to assume the risk and costs of Extra Work and delay due to concealed or unknown conditions, surface or subsurface, at the Project.

B. Differing Site Conditions.

Differing Site Conditions are those conditions at the Project which are not otherwise reasonably ascertainable by Contractor in the performance of its obligations under the Contract Documents (including, without limitation, conditions not reasonably ascertainable by Contractor from documents or information described and available to Contractor for its review prior to the Bid) that constitute: (1) hazardous materials that constitute hazardous waste, as defined in California Health and Safety Code §25117, that is required to be removed to a Class I, Class II, or Class III disposal site in accordance with provisions of Applicable Laws; (2) subsurface or concealed conditions at the Project or concealed conditions at the Project which differ materially from those indicated by the Contract Documents or other information that was either reviewed by Contractor or that Contractor was given the opportunity to review prior to the Bid; or (3) unknown physical conditions at the Project or concealed conditions at the Project of an unusual nature, differing materially from those ordinarily encountered and generally recognized as inherent in work of the character provided for in the Contract Documents.

C. Notice of Change.

If Contractor encounters conditions it believes constitute Differing Site Conditions, then Contractor shall, before such conditions are disturbed, give Notice of Change as required below, stating, without limitation, a detailed description and precise location of the conditions encountered.

D. Investigation by County.

Upon receipt of notice from Contractor as required, County shall promptly investigate Contractor's report of Differing Site Conditions.

E. Change Order Request.

If Contractor intends to seek a Contract Adjustment based upon Differing Site Conditions, it shall submit a complete and timely Change Order Request, setting forth its request for a Contract Adjustment.

F. Contract Adjustments.

If, following Contractor's compliance with its obligations, County finds that Differing Site Conditions exist, then, unless the Contractor's right to Contract Adjustment has been waived, a Contract Adjustment shall be made for the resulting Change and Delay, in such amount and duration as County determines by issuance of a good faith determination are reasonable and permitted by the Contract Documents.

G. Waiver by Contractor.

Failure by Contractor to strictly comply with the requirements herein pertaining to Contract Adjustment based on a Claim for Differing Site Conditions shall constitute a waiver by Contractor of the right to further recourse or recovery upon such Claim.

H. Final Completion.

No Claim by Contractor for additional compensation for Differing Site Conditions shall be allowed if asserted more than five (5) days after the Contractor discovered or should have discovered the Differing Site Condition.

8-1.9. CONTINUOUS WORK.

Contractor shall, notwithstanding the existence of a Claim by Contractor that is disputed by County, maintain continuous performance, without interruption, suspension or slowing, of the Work and its other obligations (1) pending issuance by County of a good faith determination of the Claim and (2) thereafter in compliance with the terms of such good faith determination.

8-2 NOTICE OF THIRD-PARTY CLAIMS

County shall provide notification to Contractor within a reasonable time after receipt of any third-party Claim relating to the Contract. County shall be entitled to recover from Contractor its reasonable costs of providing such notification.

8-3 GOVERNMENT CODE CLAIMS

Nothing in the Contract, including this Section, waives or modifies Contractor's obligation to present a timely Claim under Government Code Section 900 et seq. Notwithstanding Contractor's participation in dispute resolution proceedings or other Claims procedures under the Contract, such proceedings are in addition to Contractor's obligation to present a written Government Code Claim, which is a prerequisite to filing a lawsuit for money or damages against County

8-4 WAIVERS OF RIGHTS BY CONTRACTOR

County and Contractor acknowledge that it is in the interest of both parties that changes, delays, and Claims be identified, quantified, evaluated, and finally resolved promptly, contemporaneously with the circumstances from which they arise, and that there be certainty with respect to the finality of any resolution of related disputes. On those premises, and in further recognition of the fact that it would be extremely difficult or impossible to quantify, demonstrate, or prove the harm to County if any of the foregoing premises is not achieved due to failure by Contractor to comply with the requirements of the Contract Documents concerning Timely Notice or Submission of Notices and Claims relating to Changes, Delay, and Contract Adjustments, County and Contractor agree that failure by Contractor to conform to such requirements of the Contract Documents shall, in and of itself, constitute sufficient cause and grounds, without the necessity of County demonstrating and actual harm or prejudice, for imposing upon Contractor a full and unconditional waiver by Contractor of its right to a Contract Adjustment and of its rights and recourse for recovery of any related loss by any legal process otherwise provided for under Applicable Laws.

8-5 GOOD FAITH DETERMINATIONS

Wherever in the Contract Documents it is provided that the County may or shall make a determination or decision in the exercise of good faith (including, without limitation, provisions for a good faith determination by County), any such determination or decision that the person exercising such right on behalf of County believes in good faith to be a proper exercise of County's rights and has a reasonable basis in fact, whether or not such determination is in fact proper, reasonable or correct or adjudged to be so, shall be complied with by Contractor without Delay to Contractor's performance of the Work. However, unless the Contract Documents expressly provides otherwise, neither such good faith determination or decision nor Contractor's compliance therewith shall be interpreted as precluding the Contractor from exercising its rights to seek adjudication of its rights in the manner permitted by the Contract Documents or Applicable Laws.

8-6 ESCROW BID DOCUMENTS

If the Contract Documents obligate Contractor to submit escrow bid documents, then submission by Contractor of its escrow bid documents shall constitute a warranty and representation by Contractor that it has no other written documents or electronic files containing any information that Contractor was required to include, but failed to include, as part of its performing such

obligation and Contractor agrees it shall have no right to submit for consideration by County, or offer into evidence in legal proceedings, in support of a request for Contract Adjustment or a Claim any such documentation or electronic files that Contractor so failed to include in its escrow bid documents.

ARTICLE 9 - CONTRACTOR'S INDEMNITY OBLIGATIONS

9-1 GENERAL

To the fullest extent permitted by law, the Contractor assumes liability for and agrees, at the Contractor's sole cost and expense, to promptly and fully indemnify, protect, hold harmless and defend (even if the allegations are false, fraudulent, or groundless), the County of Riverside, the Riverside County Department of Waste Resources and all of their respective officials, officers, directors, employees, commission members, representatives and agents ("Indemnitees"), from and against any and all Claims, allegations, actions, suits, arbitrations, administrative proceedings, regulatory proceedings, or other legal proceeds, causes of action, demands, costs, judgments, liens, stop notices, penalties, liabilities, damages, losses, anticipated losses of revenues, and expenses (including, but not limited to, any fees of accountants, attorneys, experts or other professionals, or investigation expenses), or losses of any kind or nature whatsoever, whether actual, threatened or alleged, arising out of, resulting from, or in any way (either directly or indirectly), related to the Work, the Project or any breach of the Contract by Contractor or any of its officers, agents, employees, Subcontractors, Sub-subcontractors, or any person performing any of the Work, pursuant to a direct or indirect contract with the Contractor ("Indemnity Claims"). Such Indemnity Claims include, but are not limited to, Claims for:

A. Any activity on or use of the County's premises or facilities;

B. Any liability incurred due to Contractor acting outside the scope of its authority pursuant to the Contract, whether or not caused in part by an Indemnified Party;

C. The failure of Contractor or the Work to comply with any Applicable Law, permit or orders;

D. Any misrepresentation, misstatement or omission with respect to any statement made in the Contract Documents or any document furnished by the Contractor in connection therewith;

E. Any breach of any duty, obligation or requirement under the Contract Documents, including, but not limited to any breach of Contractor's warranties, representations or agreements set forth in the Contract Documents;

F. Any failure to coordinate the Work with County's Separate Contractors;

G. Any failure to provide notice to any party as required under the Contract Documents;

H. Any failure to act in such a manner as to protect the Project from loss, cost, expense or liability;

I. Bodily or personal injury, emotional injury, sickness or disease, or death at any time to any persons including without limitation employees of Contractor;

J. Damage or injury to real property or personal property, equipment and materials (including, but without limitation, property under the care and custody of the Contractor or the County) sustained by any person or persons (including, but not limited to, companies, corporations, utility company or property owner, Contractor and its employees or agents, and members of the general public);

K. Any liability imposed by Applicable Law including, but not limited to criminal or civil fines or penalties;

L. Any dangerous, hazardous, unsafe or defective condition of, in or on the Site, of any nature whatsoever, which may exist by reason of any act, omission, neglect, or any use or occupation of the Site by Contractor, its officers, agents, employees, or Subcontractors;

M. Any operation conducted upon or any use or occupation of the Site by Contractor, its officers, agents, employees, or Subcontractors under or pursuant to the provisions of the Contract or otherwise;

N. Any acts, errors, omission or negligence of Contractor, its officers, agents, employees, or Subcontractors;

O. Infringement of any patent rights, licenses, copyrights or intellectual property which may be brought against the Contractor or County arising out of Contractor's Work, for which the Contractor is responsible; and

P. Any and all Claims against the County seeking compensation for labor performed or materials used or furnished to be used in the Work or alleged to have been furnished on the Project, including all incidental or consequential damages resulting to the County from such Claims.

9-2 EFFECT OF INDEMNITEES' ACTIVE NEGLIGENCE

Contractor's obligations to indemnify and hold the Indemnitees harmless **exclude** only such portion of any Indemnity Claim which is attributable to the active negligence or willful misconduct of the Indemnitee, provided such active negligence or willful misconduct is determined by agreement of the parties or by findings of a court of competent jurisdiction. In instances where an Indemnitee's active negligence accounts for only a percentage of the liability for the Indemnity Claim involved, the obligation of Contractor will be for that entire percentage of liability for the Indemnity Claim not attributable to the active negligence or willful misconduct of the Indemnitee(s). Such obligation shall not be construed to negate, abridge or otherwise reduce any other right or obligation of indemnity which would otherwise exist as to any party or person described in this Article **9**. Subject to the limits set forth herein, the Contractor, at its own expense, shall satisfy any resulting judgment that may be rendered against any Indemnitee resulting from an Indemnity Claim. The Indemnitees shall be consulted with regard to any proposed settlement.

9-3 INDEPENDENT DEFENSE OBLIGATION

The duty of the Contractor to indemnify and hold harmless the Indemnitees includes the separate and independent duty to defend the Indemnitees, which duty arises immediately upon receipt by Contractor of the tender of any Indemnity Claim from an Indemnitee. The Contractor's obligation to defend the Indemnitee(s) shall be at Contractor's sole expense, and not be excused because of the Contractor's inability to evaluate liability or because the Contractor evaluates liability and determines that the Contractor is not liable. This duty to defend shall apply whether or not an Indemnity Claim has merit or is meritless, or which involves Claims or allegations that any or all of the Indemnitees were actively, passively, or concurrently negligent, or which otherwise asserts that the Indemnitees are responsible, in whole or in part, for any Indemnity Claim. The Contractor

shall respond within thirty (30) Calendar Days to the tender of any Indemnity Claim for defense and/or indemnity by an Indemnitee, unless the Indemnitee agrees in writing to an extension of this time. The defense provided to the Indemnitees by Contractor shall be by well qualified, adequately insured and experienced legal counsel acceptable to the County.

9-4 INTENT OF PARTIES REGARDING SCOPE OF INDEMNITY

It is the intent of the parties that the Contractor and its Subcontractors of all tiers shall provide the Indemnitees with the broadest defense and indemnity permitted by Applicable Law. In the event that any of the defense, indemnity or hold harmless provisions in the Contract Documents are found to be ambiguous, or in conflict with one another, it is the parties' intent that the broadest and most expansive interpretation in favor of providing defense and/or indemnity to the Indemnitees be given effect.

9-5 WAIVER OF INDEMNITY RIGHTS AGAINST INDEMNITIES

With respect to third party Claims against the Contractor, to the fullest extent permitted by law, the Contractor waives any and all rights to any type of express or implied indemnity against the Indemnitees.

9-6 SUBCONTRACTOR REQUIREMENTS

In addition to the requirements set forth hereinabove, Contractor shall ensure, by written subcontract agreement, that each of Contractor's Subcontractors of every tier shall protect, defend, indemnify and hold harmless the Indemnitees with respect to Indemnity Claims arising out of, in connection with, or in any way related to each such Subcontractors' Work on the Project in the same manner in which Contractor is required to protect, defend, indemnify and hold the Indemnitees harmless. In the event Contractor fails to obtain such defense and indemnity obligations from others as required herein, Contractor agrees to be fully responsible to the Indemnitees according to the terms of this Article 9.

9-7 NO LIMITATIONS OR WAIVER OF RIGHTS

Contractor's obligations under this Article 9 are in addition to any other rights or remedies which the Indemnitees may have under the law or under the Contract Documents. Contractor's indemnification and defense obligations set forth in this Article 9 are separate and independent from the insurance provisions set forth in the Contract Documents, and do not limit, in any way, the applicability, scope, or obligations set forth in such insurance provisions. The purchase of insurance by the Contractor with respect to the obligations required herein shall in no event be construed as fulfillment or discharge of such obligations. In any and all Claims against the Indemnitees by any employee of the Contractor, any Subcontractor, any supplier of the Contractor or Subcontractors, anyone directly or indirectly employed by any of them, or anyone for whose acts any of them may be liable, the obligations under this Article 9 shall not be limited in any way by any limitation on the amount or type of damages, compensation or benefits payable by or for the Contractor or any Subcontractor or any supplier of either of them, under workers' or workmen's compensation acts, disability benefit acts or other employee benefit acts. Failure of the County to monitor compliance with these requirements imposes no additional obligations on the County and will in no way act as a waiver of any rights hereunder.

9-8 WITHHOLDING TO SECURE OBLIGATIONS

In the event an Indemnity Claim arises prior to final payment to Contractor, the County may, in its sole discretion, reserve, retain or apply any monies due Contractor for the purpose of resolving such Indemnity Claims; provided, however, the County may release such funds if the Contractor provides the County with reasonable assurances of protection of the Indemnitees' interests. The County shall, in its sole discretion, determine whether such assurances are reasonable.

9-9 SURVIVAL OF INDEMNITY OBLIGATIONS

Contractor's obligations under this Article 9 are binding on Contractor's and its Subcontractors' successors, heirs and assigns and shall survive the completion of the Work or termination of the Contractor's performance of the Work.

ARTICLE 10 - WATERING

10-1 DESCRIPTION

The Work shall include providing a water supply for all water required for the Work. The application of the water shall be subject to the approval of the County at all times and shall be applied in the necessary amounts and at the necessary locations subject to the approval of the County.

At least one mobile unit of at least 1,000-gallon capacity for applying water shall be available on the Project at all times.

Water for compacting embankment material and for dust control shall be applied by means of pressure-type distributors or pipelines equipped with a spray system or hoses with nozzles that will ensure a uniform application of water.

ARTICLE 11 - PUBLIC CONVENIENCE, TRAFFIC CONTROL, AND DETOURS

11-1 GENERAL.

The Contractor shall so conduct its operations as to offer the least possible obstruction and inconvenience to the public and it shall have under construction no greater length or amount of Work than it can prosecute properly with due regard to the rights of the public.

Unless otherwise provided in the Contract Documents, all public traffic shall be permitted to pass through or near the Work with as little inconvenience and delay as possible.

Spillage resulting from hauling operations along or across any public traveled way shall be removed immediately at the Contractor's expense.

Construction operations shall be conducted in such a manner as to cause as little inconvenience and annoyance as possible to abutting and nearby property owners.

Convenient access to driveways, houses and buildings along or near the Work shall be maintained and temporary approaches to crossings or intersecting highways shall be provided and kept in good condition.

11-2 MATERIALS STORAGE

Storing or stockpiling of excavated material, imported backfill material or construction materials on any street or highway will not be permitted except as approved in advance in writing by the County.



SPECIAL PROVISIONS

FOR

THE ON-CALL CONSTRUCTION OF

GAS COLLECTION SYSTEMS

AT

BADLANDS AND LAMB CANYON LANDFILLS

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SECTION 1 - GENERAL

1.1 INTRODUCTION

A. These Special Provisions are for the (Project) which shall consist of, but are not limited to, the following: installation of header pipes, laterals, condensate drain pipes, well assemblies, valves, vertical gas collection wells, horizontal collection wells and gas monitoring probes.

B. The bid items reflect the work that is currently expected to be done during the entire duration of the on-call contract, in separate and distinct County issued Work Orders. There will be several mobilizations required during the contract duration for each site. It is possible that there will be more or less work required of the Contractor for the contract duration than what is stated in the bid items. Regardless of the actual work done during the contract duration, the Contractor will be paid at the bid item prices specified in each Work Order issued. There will be a separate Work Order issued by the County for each mobilization.

C. The Projects will be constructed at the Badlands and Lamb Canyon Landfills, located at 31125 Ironwood Ave, Moreno Valley, CA 92555 and 16411 Lamb Canyon Road (Highway 79), Beaumont, CA 92223, respectively. The site locations and vicinity maps are included in the Project Drawings.

D. All Work to be implemented under this Contract shall consist of furnishing equipment, superintendence, labor, skills, materials, and all other items necessary for the execution of the Project and shall conform to the Contract Documents for this Project.

E. The County shall provide select materials to the Contractor to be utilized to fulfill the work specified in this Contract, as specified in the Detailed Provisions.

F. The Contractor shall be aware that the Badlands and Lamb Canyon Landfills are active landfill sites. The Contractor's Work relating to the Project shall not impede or interrupt daily landfill operations. Full cooperation of the Contractor and its forces is required to assure safe working conditions. Therefore, it is necessary to emphasize that the County will have full authority to remove any of the Contractor's employees or Subcontractors who do not immediately abide by the landfill site rules (See Appendix A – Landfill Site Safety Rules) or the directions of the County.

1.2 INTENT AND INTERPRETATION OF THE CONTRACT DOCUMENTS

A. The Contract Documents constitute the entire and integrated Agreement between the parties hereto and supersede all prior negotiations, representations, or Agreements, either written or oral.

B. The Contract Documents shall not be construed to create a contractual relationship between any parties other than the County and the Contractor. No Contract between the County and a Third Party shall be construed to create any duty on the part of the County or such Third Party to the Contractor. The Contractor is not an intended or incidental beneficiary of any promises made in the County's Contract with a Third Party, if any.

C. The Contract Documents are intended to be complementary. What is required by one part of the Contract shall be as binding as if required by all. Should any conflict or inconsistency be found in the Contract Documents, the County shall resolve any such conflict or inconsistency in accordance with Section **1.3** – Order of Precedence of Contract Documents of these Special Provisions.

D. Where the words "similar", "typical" (or their equivalents) are used in the Contract, they shall mean nearly corresponding or having a likeness. Such words shall not be construed to mean that all parts of the Work referred to are identical or substantially identical, or that such elements of the Work are connected identically or substantially identically to the rest of the Work. The Contractor has the responsibility to determine all details of the Work in relation to their location and connection to other parts of the Work. Words importing the singular number may also be applied to the plural of persons and things; words importing the plural may be applied to the singular; and words importing the male gender may be extended to females also.

E. The organization of the Detailed Provisions into divisions and provisions and the organization of the Project Drawings shall not control the Contractor in dividing the Work among Subcontractors or in establishing the extent of Work to be performed by any trade.

1.3 ORDER OF PRECEDENCE OF CONTRACT DOCUMENTS

A. Precedence of Contract Documents requirements are set forth under Detailed Provisions Section 01 4300 – Quality Assurance and Control incorporated herein as if set forth in full.

1.4 CLARIFICATION OF DRAWINGS AND DETAIL DRAWINGS

A. Where, on any drawing, a portion of the Work is drawn out and the remainder is indicated in outline, the drawn-out parts shall apply also to other similar portions of the Work. Where ornament or other detail is indicated by starting only, such detail shall be continued throughout the courses of parts in which it occurs and shall apply to all other similar parts of the Work, unless otherwise indicated.

B. With regard to drawings, the following shall apply:

1. Written dimensions shall be followed; drawings may not be to scale.

2. Figure dimensions on drawings shall govern over scale dimensions; and detail drawings shall govern over general drawings

SECTION 2 - COUNTY

2.1 AUTHORITY

A. Unless the County, in writing, indicates otherwise, the authority to (1) commit to or bind the County to any Change Orders or change in Contract Work, Contract Price and/or Contract Time; or (2) sign the Contract or Change Orders rests solely with the County Board of Supervisors or their designee.

B. The County Board of Supervisors or their designee shall assign a Project Manager who shall have the authority to administer the Contract including, but not limited to:

1. Receiving all correspondence and information from the Contractor;
2. Issuing Field Directives;
3. Issuing request for Change Proposals;
4. Responding to Requests for Information;
5. Reviewing the Work Order, Notice to Proceed, project schedules, submittals, testing and inspection reports, substitution requests, and other documentation submitted by the Contractor;
6. Negotiating Change Proposals and Change Orders;
7. Recommending Change Orders for approval by the County Board of Supervisors or their designee;
8. Issuing decisions with respect to Requests for Change Orders and Claims;
9. Processing payment requests submitted by the Contractor, and recommending payment;
10. Monitoring the quality of the Work, rejecting noncompliant Work, and recommending acceptance of the Work;
11. Transmitting executed Change Orders, amendments, and other Contract correspondence to the Contractor, and
12. Performing all other Contract administrative functions.

C. All correspondence, questions, and/or documentation shall be submitted to the Project Manager.

D. The Project Manager may designate technical representatives to perform functions under the Contract, such as review and/or inspection and acceptance of supplies and services, including construction, and other functions of a technical or administrative nature.

2.2 INFORMATION SUPPLIED BY COUNTY

A. Unless otherwise specifically provided in the Contract, surveys and site information provided by the County are intended to describe the general physical characteristics of the Project Site. The County does not represent that this information is complete or sufficient for the Contractor's performance of the Work.

B. At the Pre-Construction Meeting, the County shall furnish the Contractor with two (2) complete copies of the Work Order (including any Work Order specific drawings). The cost of additional requested copies shall be deducted from payment to the Contractor.

C. All drawings, models, and specifications furnished by the County are solely for use on this Contract and are not to be used by the Contractor on any other work or project.

2.3 WORK BY COUNTY OR SEPARATE CONTRACTORS

A. The County reserves the right to perform Work not included in the Contract or to produce other Contracts in connection with this Project.

2.4 SUSPENSION AND RESUMPTION OF OPERATIONS

A. The Contractor shall suspend construction operations when, in the County's sole and absolute discretion, the conditions for such operations are unsatisfactory due to rain, wind, or any other condition the County deems unsatisfactory. The Contractor shall not be compensated monetarily for any such delays caused by the suspension of operations. Working Days shall be charged as appropriate, as stated in Article 6 of the General Provisions.

B. Whenever operations have been suspended, the effect of rain, wind, or other adverse conditions shall be assessed by the County before approval to resume construction is given. Equipment will not be allowed to travel on the landfill site until the ground has dried sufficiently to prevent excessive rutting and to allow the equipment to be operated satisfactorily. If rutting occurs, the Contractor shall re-level, scarify, and re-compact the materials to whatever depth is required to repair the damage to pre-existing conditions as directed by the County at the Contractor's expense. If temporary access and internal haul roads need repair, the Contractor shall repair them as required at the Contractor's expense.

2.5 TESTS AND INSPECTIONS

A. General:

1. The Contractor shall comply with requests by the County and the Testing/Inspection Provider's staff to alter the Work sequence or uncover materials to facilitate testing, inspection, or observation, or for the collection of samples or data. The Contractor shall provide the County and the Testing/Inspection Provider's staff with safe and suitable access to the work area for testing, inspection, or observation.

2. It is understood that observation and testing of a material at the time of its incorporation into the Work shall in no way be considered as a guarantee of continued acceptance of material presumed to be similar to that upon which observations and tests have been made, and that observation and testing performed by the County and the Testing/Inspection Provider's staff shall not relieve the Contractor or its suppliers of the responsibility for quality control or to fully comply with the requirements of the Contract Documents.

B. Earthwork Testing:

1. Earthwork testing shall be performed by the County and/or the Testing/Inspection Provider in accordance with the Contract Documents. If testing indicates that any area of a completed layer does not meet the requirements of the Detailed Provisions, the Contractor shall perform corrective action, followed by re-testing of the same area by the County and/or the Testing/Inspection Provider in accordance with the Contract Documents. The Contractor shall remove, re-work, and bring into compliance any area that the County considers to be unsatisfactory. The area shall be restored to the complete satisfaction of the County. The Contractor shall be solely responsible for any and all costs, including re-testing, and all delays associated with and resulting from any required re-working of a soil layer due to non-compliance. See Detailed Provisions Section 31 2300 – Earthwork.

C. Materials and Installation:

1. Material and installation procedures to be used in the Work shall be subject to observation (including special inspections) and testing by the County and the Testing/Inspection Provider, or by an agency or laboratory approved by the County. The Contractor shall furnish without change, any samples that may be requested or required for testing. Manufacturer's warranties, guarantees, instruction sheets, and parts lists that are furnished with materials used in construction shall be submitted to the County for the review and approval/acceptance before the respective items are incorporated into the Work.

SECTION 3 - CONTRACTOR

3.1 CONTRACTOR REPRESENTATIONS

The Contractor makes the following representations to the County:

A. Before submission of its Bid, the Contractor has:

1. Carefully reviewed the Contract Documents and visited and examined the Project Site. If deemed "mandatory" as indicated in the "Notice to Contractors", attended the pre-bid site review meeting conducted by the County;

2. Become familiar with the general and local conditions in which the Work is to be performed and satisfied itself as to the nature, location, character, quality and quantity of the Contract Work, including, but not limited to: the labor, materials, equipment, goods, supplies, work, services and other items to be furnished and all other requirements of the Contract Documents, as well as the surface and reasonably ascertainable subsurface conditions and other matters that may be encountered at the Project Site or affect performance of the Contract Work or the cost or difficulty thereof;

3. Become familiar with and satisfied itself as to the conditions bearing upon transportation, disposal, handling, and storage of materials; and

4. Become familiar with and satisfied itself as to the availability of labor, water, electric power, roads, and uncertainties of traffic, weather, or similar physical conditions at the Project Site. Any failure of the Contractor to take the action described in this provision or elsewhere in the Contract Documents will not relieve the Contractor from responsibility for estimating properly the difficulty and cost of successfully performing the Work, or for proceeding to successfully perform the Work without additional expense to the County;

B. The Contract Price is reasonable compensation for the Work and the Contract Time is adequate for the performance of the Work as represented by the Contract, site visit, and the general conditions (including but not limited to: weather, project location, and soil) known or reasonably anticipated for the Project. All cost for complying with the Work or other requirements of the Contract Documents are included in the Bid, no additional compensation shall be paid by the County;

C. The Contractor is financially solvent, able to pay its debts as they mature, and possesses sufficient working capital to complete the Work and perform the Contractor's obligations required by the Contract; and

D. The Contractor is able to furnish plants, tools, material, supplies, equipment, and labor required to complete the Work and perform the obligations required by the Contract and has sufficient experience and competence to do so.

3.2 CONTRACTOR'S QUALIFICATIONS

A. In addition to the Bidder's Qualifications that are listed under the "Notice To Contractors" of these Contract Documents, the Contractor shall have, or be able to obtain, all the personnel, equipment, and materials necessary to perform the Work specified in the Scope of Work and be able to keep the needed equipment at the Project Site for the duration of the Work. The Bidder may meet these requirements by using Subcontractors, or forming a partnership, joint venture, or other legal arrangement. If the qualifications are met by the formation of a partnership, joint venture or other legal arrangement; then each separate legal entity shall be required to sign the Contract and accept joint and several liabilities. The Contractor, or the Contractor's personnel shall hold appropriate certificates, licenses, and permits necessary to perform the Work described in the Scope of Work.

B. The Contractor shall present all licenses held, the certificate numbers, and in whose name the license is issued in their bid response. In the Contractor's Proposal, the Contractor shall present specific projects, dates, locations, clients, project costs, a project summary description, and the Contractor's role in the projects. The Contractor shall present a reference list of clients that includes a contact person and phone number. The Contractor shall also possess a **Class A** Contractor's License.

C. The Contractor shall demonstrate that his Project Manager, equipment operators, and other responsible individuals performing Work on site have appropriate experience and capability. The Contractor shall present personal resumes that document education, training, work experience, and licenses and certificates held in the Bid response.

3.3 SPECIALTY ITEMS (NOT APPLICABLE)

3.4 GENERAL DUTIES

A. The Contractor shall give sufficient supervision to the Work, using its best skill and attention. The Contractor is hereby given notice that the County will be relying on the accuracy, competence and completeness of the Contractor's Work. The Contractor shall supervise and be solely responsible for the proper performance of the Work in accordance with the Contract, including the construction means, methods, techniques, sequences, procedures, and for coordination of all portions of the Work.

B. Unless specified elsewhere in the Contract, the Contractor shall provide and pay for all labor, materials, equipment, tools, construction machinery, utilities,

transportation, and other facilities and services (including federal and state tax, industrial insurance, social security liability and all other applicable taxes) necessary for the proper execution and completion of the Work.

C. The Contractor shall also provide sufficient staffing and supervision to process Requests for Information, Change Proposals, Submittals, Change Orders, close-out documentation, and to perform all other requirements of the Contract and all Work.

D. The Contractor shall lay out its Work from baselines and benchmarks indicated in the Contract Documents and shall be responsible for the accuracy of all field measurements used in the layout.

3.5 DUTY TO INSPECT CONTRACT DOCUMENTS

A. The Contractor shall carefully examine the Contract Documents and check the conditions, dimensions, and instructions that may affect the execution of the Work. These conditions include, but are not limited to, the following:

1. Applicable health and safety regulations;
2. Traffic control, transportation and access conditions;
3. Availability of utilities;
4. Surface and subsurface conditions;
5. Location, availability, and condition of construction materials;
6. Climate;
7. On-site soil characteristics of soil to be used in construction including, but not limited to: size and type variation, location of excavation, stockpile areas, etc.;
8. General construction conditions at the Project Site;
9. Work trade coordination: Contractor shall coordinate the work trades and construction items to be supplied, delivered, set in place, and constructed. Such portions of Contractor and Subcontractors Work as all or in part embedded, built-in, attached to, or supported by the Work shall be performed in a manner that shall not hinder construction and Work progress.

B. The Contractor shall immediately notify the County, in writing, of any:

1. Error, inconsistency, or omission in the Contract Documents that a reasonable Contractor knew or, through the exercise of reasonable diligence, should have discovered under the same and similar circumstances;

2. Requirements in the Contract Documents that conflict with any local, state, and federal laws, regulations and/or permits, licenses, and easement conditions that a reasonable Contractor knew or, through the exercise of reasonable diligence, should have discovered under the same and similar circumstances.

C. The Contractor should not proceed with the Work in question until the Contractor receives written direction from the County.

D. If the Contractor proceeds with the Work in question without written direction from the County, the Contractor shall be responsible for any costs or damages associated with:

1. Fines or penalties;
2. Demolition, tear out, removal, cleanup, remediation, or fixing the Work in question; and
3. Delay, disruption, and loss of productivity.

E. The Contractor's failure to timely discover and immediately report such reasonably ascertainable errors, inconsistencies, or omissions and conflicts in regulatory requirements, permits, licenses or easements to the County shall preclude the Contractor's recovery of costs and time resulting from the Contractor's failure to timely discover and/or immediately notify the County of such errors, inconsistencies, or omissions.

3.6 DEVIATION FROM CONTRACT

A. The Contractor shall not make an alteration, variation, addition, deviation, or omission from the requirements of the Contract without the written consent of the County.

B. Any such alteration, variation, addition, deviation, or omission by the Contractor shall not result in any extra compensation or extension of time.

C. The County shall have the right to treat any alteration, variation, addition, deviation, or omission from the requirements of the Contract as a contract breach if prior written consent is not obtained from the County, which may be justification for the County to withhold payment, stop Work, or terminate the Contract for default.

3.7 COMMUNICATIONS

A. The Contractor must designate, in writing, its Contractor's Representative who is responsible for administering the Contract and has the authority to bind and obligate the Contractor in the performance of the Work.

B. Communication with the Contractor shall be through the Contractor's Representative.

C. The Contractor must designate, in writing, the name(s) of the Contractor's supervisory staff (project manager, superintendent, safety officer, etc.) that shall have the authority to conduct and supervise construction operations for this Project, including, but not limited to: supervision, maintenance, traffic control, survey, health and safety, dust control, materials storage, and storm water compliance.

D. The Contractor shall notify the County immediately if the Contractor's Representative and/or Contractor's supervisory staff change and identify the name(s) of the new staff and effective date of the change.

3.8 INSURANCE REQUIREMENTS

A. Contractor and their Subcontractors shall procure and maintain Workers Compensation, Commercial General Liability, Vehicle Liability, and Environmental Impairment insurance in accordance with Section 5-3 of the General Provisions.

3.9 CONTRACTOR'S SUPERVISION AND EMPLOYEES

A. Contractor has an obligation to provide qualified and competent people to administer the Contract and perform all the Work.

B. During the performance of the Work the Contractor shall have supervisory staff on-site and available to administer, manage and coordinate the Work. The County shall not be responsible for the acts or omissions of the supervisory staff or their assistants.

C. The Contractor shall, at all times, enforce good order among all persons furnishing labor or materials on-site and shall only employ workers skilled in the Work assigned. If requested by the County, Contractor shall provide the County with copies of licenses, registrations, and certifications.

1. The County shall have the right to require the Contractor to remove staff from the Project Site who (1) do not have the appropriate qualifications and experience to meet or uphold the requirements of the Contract or (2) do not comply with the Contractor's Health and Safety Plan and/or the safety rules for the Project Site. The County shall also have the right to order the Contractor to replace staff who demonstrate unprofessional behavior.

2. Failure by the County to require removal of any of the Contractor's staff shall not be deemed an admission that any such staff are satisfactory, nor shall such failure relieve the Contractor from any contractual responsibility.

3.10 CONTRACTOR'S DUTY WHEN COUNTY PERFORMS WORK ON PROJECT

A. The Contractor shall coordinate its Work with the County and other County Contractors and, at the County's request, participate in meetings for the purpose of coordinating the Contractor's Construction Schedule with those of other Contractors at no additional cost to the County. To the extent a direct conflict exists with regard to access to the Project Site, if the Contractors cannot work out a resolution that has no impact on Contract Price, Contract Time, the County shall issue written direction to resolve the conflict.

B. The Contractor shall not cut, excavate, alter, impair, or otherwise engage in work activity that inhibits the Work of any other Contractors without the prior written consent of the County.

C. If any part of the Contractor's Work depends, for proper execution or results, upon the prior Work of the County or any other Contractor, the Contractor shall, before performing the affected Work, inspect and give prompt written notice of any apparent discrepancies of defects in the prior Work that renders it unsuitable for the reception of Contractor's Work. Contractor's failure to so inspect and to give such prompt notice shall constitute acceptance of the prior Work as fit for reception of its Work, except as to defects not then reasonably discovered.

3.11 MATERIALS AND EQUIPMENT FURNISHED BY COUNTY

A. Unless otherwise specifically provided in the Contract Documents, if the Contract requires that the Contractor install materials and equipment provided by the County, in the absence of a reasonably apparent defect, such materials and equipment shall be considered compliant with the Contract Documents.

1. If the Contractor discovers defects in the County-furnished material or equipment the Contractor shall immediately notify the County in writing.
2. After such discovery, the Contractor shall not proceed with Work involving such County materials and equipment unless otherwise authorized in writing by the County.
3. Contractor's failure to provide immediate written notice of any defects in material or equipment shall constitute acceptance of such materials and equipment as fit for incorporation into the Work.
4. Contractor shall be responsible for any damages or delays resulting from Contractor's failure to provide timely written notice or Contractor's improper incorporation of such defective materials or equipment into the Work.

3.12 PROJECT RECORD DOCUMENTS

A. The Contractor shall keep a copy of the Contract Documents at the Project Site.

B. The Contractor shall keep at the Project Site an accurate, readable, and orderly set of drawings and specifications, updated as the job progresses to show all approved changes, addenda, options, submittals, correspondence, directives, alternates, and all actual deviations from the original Contract Documents.

C. Project Record Documents shall be maintained by Contractor in hard copy and electronic format meeting the requirements specified in Detailed Provisions Section 01 7700 – Closeout Procedures.

D. In addition to all approved changes, submittals, options, alternates, and all actual deviations from the original Contract Documents, the Project Record Documents shall be marked as follows:

1. Record all materials used where options, alternates and/or Change Orders were indicated, specified and/or authorized.
2. Accurate measurements referenced to two (2) permanent structures shall be recorded to show the exact location and changes in direction of all underground services and utilities, as well as their approximate depth below finished grade;
3. Update the Project Record Documents with information about each item of capital equipment or other fixed asset installed, including type of equipment, make, model, serial number, and acquisition cost;
4. Update the Project Record Documents identifying each item of capital equipment or other fixed asset removed from the Project, including type of equipment or fixed asset, make, model, serial number and description of location from which it was removed.
5. Record all other requirements as specified in the Detailed Provisions.

E. The Project Record Documents shall be kept up-to-date and be available for review by the County at all times, including but not limited to: at each Weekly Progress Meeting. Failure to have records up-to-date shall be sufficient reason for the County to withhold payments to the Contractor until all such information is recorded.

3.13 PROTECTION OF ADJACENT LANDFILL OPERATIONS, STRUCTURES, UTILITIES, AND IMPROVEMENTS

A. The Badlands and Lamb Canyon Landfills are active facilities, thus, all construction Work relating to this Project shall not impede or interrupt daily landfill business and operations.

B. Contractor shall protect from damage all existing structures, equipment, improvements, utilities, trees and vegetation not shown in the Contract Documents to be removed or modified at or near the Project Site. Contractor shall repair, at no cost to the County, any such damage resulting from failure to comply with the requirements of the Contract or failure to exercise reasonable care in performing the Work. If Contractor fails or refuses to repair the damage promptly, the County may have the necessary Work performed and deduct or charge the cost to Contractor or exercise its rights under the Performance and Payment Bond. In the event there are insufficient funds remaining, excluding retention, the Contractor shall pay the County for the costs associated with protection and repairing the damages.

C. At a minimum, the Contractor shall furnish, install, and maintain four (4) foot tall construction/safety fencing as necessary along the limits of the Project Site or portions thereof as directed by the County, to limit access to the construction zone and to prevent debris, rocks, and equipment from interfering with the access roads and landfill operations adjacent to the Project Site. See Detailed Provisions Section 01 5000 – Temporary Facilities and Controls for fencing requirements.

3.14 PERMITS, LAWS AND REGULATIONS

A. Except those permits, easements, and variances specified in the Contract as having been previously obtained by the County, all permits, licenses, easements and variances necessary for the execution of the Work shall be secured and paid for by the Contractor. The Contractor shall identify and apply for such permits and licenses at the earliest possible time so as to avoid any delay to the Contract Work arising from the permitting and/or licensing process. No actions taken by the County to aid the Contractor in securing any permit or license shall relieve the Contractor of any obligations to secure any such permit or license.

B. The Contractor shall maintain all stamped permit sets of documents at the Project Site during construction, in good condition and as required by local ordinances.

C. Required permits and compliance requirements may include, but are not limited to:

1. Compliance with South Coast Air Quality Management District (SCAQMD) Permits to Construct/Operate for Gas Collection Systems. The subject permits relevant to the Work and landfills are provided in the Contract Documents as Appendix B.

2. Compliance with South Coast Air Quality Management District (SCAQMD) Rule 403, Fugitive Dust Control: The Contractor is responsible for implementing the necessary mitigation measures to

ensure compliance with regulatory thresholds relating to air quality including, but not limited to: SCAQMD Rule 403 Fugitive Dust Control Requirements. The County shall have the authority to immediately suspend all construction operations if, in the County's opinion, the Contractor fails to adequately provide for dust control. See Detailed Provisions Section 01 5600 – Project Environmental Controls.

3. State Water Resources Control Board's (SWRCB) National Pollution Discharge and Elimination System (NPDES) Permit: The County complies with the SWRCB General Industrial Activities NPDES permit through regular inspections, monitoring and implementation of Best Management Practices (BMPs) as described in the Badlands Landfill Storm Water Pollution Prevention Plan (Bl SWPPP) and Lamb Canyon Landfill Storm Water Pollution Prevention Plan (LCL SWPPP). Contractor shall be responsible for compliance with the Bl SWPPP and LCL SWPPP for the Project Site. After notification of award and prior to start of any Work, the Contractor shall prepare and submit to the County a project-specific Storm Water Pollution Prevention Plan (SWPPP) outlining procedures to reduce pollutants (directly or indirectly related to the Contractor's activities) in storm water runoff. The project-specific SWPPP will be included as part of the Bl SWPPP and LCL SWPPP in compliance with the County's NPDES permit. See Detailed Provisions Section 01 5600 – Project Environmental Controls.

D. The Contractor shall perform all Work hereunder in full compliance with local, state and federal laws, ordinances, resolutions and regulations, and with permit, license, easement, and variance conditions pertaining to the conduct of the Work. The Contractor shall defend, indemnify, and hold the County harmless from any assessment of fines, penalties, or damages arising from violations of the same by the Contractor or Subcontractors. The Contractor shall pay and provide proof of payment for any assessments of fines, penalties or damages. The Contractor shall cooperate with all governmental entities regarding inspection of the Work and compliance with such requirements.

E. Taxes. The Contractor is required to pay all applicable taxes. No adjustment will be made in the amount to be paid by the County under the Contract because of any change in law or regulations covering any applicable taxes, or because of any misunderstanding by the Contractor as to its liability for or the amount of any taxes.

3.15 CONTRACTOR'S OVERALL RESPONSIBILITY FOR PROTECTION OF WORK, PROPERTY, AND PERSONS

A. The Contractor shall be responsible for conditions of the Project Site, including safety of all persons and property, during performance of the Work. The Contractor shall maintain the Project Site and perform the Work in a

manner which meets all statutory and common law requirements or other specific contractual requirements for the provision of a safe place to work and which adequately protects the safety of all persons and property on or near the Project Site. This obligation shall apply continuously and shall not be limited to normal working hours. The County's inspection of the Work or presence at the Project Site does not and shall not be construed to include review of the adequacy of the Contractor's safety measures in, on or near the location of the Work.

B. The Contractor shall be responsible for initiating, maintaining and supervising all safety precautions and programs, including adequate safety training, in connection with the Work. The Contractor shall comply with all applicable laws, ordinances, rules, regulations and lawful orders of any public authority bearing on the safety of persons or property or their protection from damage, injury or loss.

C. Unless otherwise required in the Contract Documents the Contractor shall protect and be responsible for any damage of loss to the Work or to the materials and equipment associated with the Work until the date of Substantial Completion. The Contractor remains responsible for any damage or loss caused directly or indirectly by the acts or omissions of the Contractor, Subcontractors, Suppliers, or third parties authorized or allowed on the Project Site by the Contractor until Final Acceptance.

D. The Contractor shall also be solely and completely responsible for damages arising from the Work that affect areas adjacent to the Project Site.

E. The Contractor shall repair or replace without cost to the County any damage or loss that may occur, except damages or loss caused by the acts or omissions of the County.

F. The Contractor shall erect and maintain adequate signs, fencing, barricades, lights or other measures and persons to protect the Work until Final Acceptance.

3.16 PROTECTION OF PERSONS

A. The Contractor shall take all reasonable precautions for the safety of all employees working on this Contract and all other persons who may be affected by such Work. The Contractor shall designate a responsible member of its organization at the Project Site whose duty shall be to manage and coordinate the safety programs and to prevent accidents of the Contractor and Subcontractors.

B. Except as otherwise stated in the Contract, if the Contractor encounters, at the Project Site, material reasonably believed to be Hazardous Material including but not limited to asbestos, lead, or polychlorinated biphenyl (PCB), that

Contractor shall immediately stop Work in the area affected and give Notice of the condition to the County. Work in the affected area shall not be resumed without written direction by the County.

C. The Contractor shall maintain in a reasonable number of conspicuous and accessible places at the Project Site all materials necessary for giving first aid to the injured. The Contractor shall establish, publish and make known to all employees procedures for ensuring immediate transport to a hospital or a doctor's care, of persons who may have been injured at the Project Site. Employees shall not be permitted to work on the Project Site before the Contractor has: (1) provided all materials necessary for giving first aid at the Project Site; and (2) established and made known procedures for transport of injured persons to a hospital or doctor's care. The Contractor shall ensure that at least one of its employees on site has adequate training in first aid.

D. In order to protect the lives and health of persons performing Work under this Contract, the Contractor shall comply with all CalOSHA rules and regulations and any violation of these safety requirements applicable to the Work may be considered a breach of this Contract.

3.17 HEALTH AND SAFETY PLAN

A. The Contractor shall prepare and provide to the County a written site-specific "Health and Safety Program" demonstrating the methods by which all applicable safety requirements of this Contract will be met. The Contractor shall ensure its Subcontractors and Suppliers have a written Health and Safety Plan/Program or formally adopt the Contractor's site-specific "Health and Safety Plan". The Contractor shall designate a Safety Officer who shall be responsible for proper implementation of the "Health and Safety Plan". The Contractor shall submit a copy of its "Health and Safety Plan" and the Subcontractor's Health and Safety Plan/Program to the County within fourteen (14) Calendar Days following issuance of the Notice of Intent to Award per Administrative Provisions, Section **3.2**. The County's review of such plans shall not be deemed to constitute approval or acceptance thereof and shall not relieve or diminish the Contractor's sole responsibility for the Project Site's safety. See Detailed Provisions Section 01 3500 – Health and Safety.

3.18 STORAGE OF CONTRACTOR'S PROPERTY

A. The Contractor's tools and equipment and building materials to be incorporated into the Project may be stored at the Project Site, but all such storage shall be subject to the requirements of the Contract. Any repairs, patching or cleaning of the Project Site that may be necessary to restore the Project Site to its previous condition due to storage of the Contractor's materials, tools or equipment, or other aspects of the Contractor's Work, shall

be the responsibility of the Contractor. See Detailed Provisions Section 01 1400 – Work Restrictions.

SECTION 4 - ADMINISTRATION OF CONTRACT

4.1 TIME OF ESSENCE

A. All time requirements set forth in the Contract Documents are of the essence.

4.2 TIME OF COMPLETION AND LIQUIDATED DAMAGES

Contract Time for Completion and Liquidated Damages requirements are set forth under **Section 5** of the Construction Agreement and incorporated herein as if set forth in full.

A. The Contractor shall diligently and continuously prosecute the Project to Substantial Completion before the expiration of June 30, 2029. The Contractor shall diligently and continuously prosecute individual Work Orders from the date of the Contractor's receipt of individual Notices to Proceed, which shall include individual completion dates. Upon Contractor's receipt of the Certificate of Substantial Completion, a contractual time period of **Sixty (60) Working Days** shall begin to allow the Contractor to complete remaining Punch List Work to achieve Final Completion/Final Acceptance of the Project.

B. The Liquated Damage amounts, set forth in this Section, will be assessed for Contractor's failure to achieve completion for the following Project milestones (See Detailed Provisions Section 01 2000 – Payment Procedures):

1. Project Substantial Completion - The Liquidated Damages reduction to the Contract Price for failure to reach Substantial Completion for the Project is **One Thousand Dollars ($1,000) per day** for each additional Working Day required to properly complete the Work in excess of the established contractual date for achieving Project Substantial Completion.
2. Final Acceptance – The Liquated Damages reduction to the Contract Price for failure to reach Final Acceptance for the Project is **Five Hundred Dollars ($500) per day** for each additional Working Day required to properly complete the Work in excess of the established contractual date for achieving Project Final Acceptance.

4.3 WORK PROGRESS

A. The Contractor shall be required to:

1. Prosecute the Work diligently with adequate forces;
2. Plan, coordinate, and layout the Work in advance so as to avoid delay;
3. Achieve Substantial Completion of the Work and Final Acceptance in accordance with the requirements of Contract Documents; and,

4. Complete all Contract closeout requirements in accordance with all applicable Contract requirements within the time period established by the County in the Certificate of Substantial Completion.

4.4 PROJECT SCHEDULE

A. Unless otherwise specified, within seven (7) Calendar Days after issuance of a Work Order, Section 3.2, the Contractor shall submit to the County a Project Schedule. Contractor shall not be allowed to mobilize at the Project Site until the aforementioned project schedule has been submitted by the Contractor and accepted by the County.

B. By reviewing project schedules and providing written comments, the County is not approving or adopting the Contractor's plan, schedule, means, methods, techniques, sequences, or procedures required to perform the Work. Review and comment by the County of project schedules prepared by the Contractor shall not relieve the Contractor from the sole responsibility for the accuracy of a project schedule, and its compliance with all Contract requirements, and its responsibility to meet all required Contract completion dates. Failure by the County to indicate items on the project schedule that do not conform with the Contract requirements shall not alter or waive the Contract requirements or relieve the Contractor from complying with all Contract requirements.

C. The County shall issue a Notice to Proceed, corresponding to a specific County issued Work Order. The Notice to Proceed shall include the Contractor's Project Schedule and will serve as the basis of determining the Work Order completion date.

D. The Contractor shall not be entitled to, nor shall the County be required to make payment for any Contract Work until the Project Schedule complies with all Contract requirements.

E. The Contractor shall schedule the Contract Work so that the Contract Work is completed within the Contract Time. Float in the Project Schedule shall be defined as the period of time measured by the number of Working Days each non-critical path activity may be delayed before it and its succeeding activities become part of the Critical Path.

F. The Contractor shall regularly enter the actual progress of the Work and Contract Time extensions approved by the County on the Project Schedule. Updated Project Schedules shall reflect actual progress and completion within the Contract Time and shall be provided to the County with each Application for Payment in format(s) as required by the Contract. Applications for Progress Payments will be considered by the County and the Contractor will not be paid until the Contractor complies with these requirements. The updated Project Schedule shall be used to assist the County in verifying the appropriate payment.

G. If, in the opinion of the County, the Contractor falls behind in its progress of the Work due to acts or omissions of the Contractor, Subcontractors, and/or Suppliers, the Contractor shall take all necessary steps to improve its progress and bring its progress back in-line with the accepted Project Baseline Schedule, without additional cost to the County. In this circumstance the Contractor shall, as necessary, increase the number of shifts, overtime operations, and/or days of Work, both on and off the Project Site, and submit for acceptance any supplementary schedule updates as the County deems necessary to demonstrate how the accepted rate of progress will be regained. Failure of the Contractor to comply with the requirements under these provisions shall be grounds for a determination by the County that the Contractor is not prosecuting the Work with sufficient diligence to ensure completion within the time specified in the Contract. Upon making this determination, the County may pursue any right it has under the law or the Contract, including but not limited to default termination.

4.5 PRE-CONSTRUCTION MEETING

A. A pre-construction meeting will be scheduled upon the issuance of a Notice to Proceed for each mobilization that takes place.

B. The meeting shall take place within a week of the construction start date. This meeting will be attended by representatives from various sections within the Riverside County Department of Waste Resources and the Contractor's superintendent for the project.

C. The current site conditions, scope of work, landfill rules, and any other pertinent project specific details will be discussed at this meeting.

4.6 SUBMITTALS

A. Submittals include shop drawings, setting and erection drawings, schedules of materials, product data, samples, certificates and other information prepared for the Work by the Contractor or a Subcontractor as set forth in Detailed Provisions Section 01 3300 – Submittal Procedures ("Submittals"). The Contractor shall perform no portion of the Work requiring Submittals until the Submittals have been reviewed and returned by the County with one of the following annotations: (1) "no exceptions taken", (2) "exceptions as noted", (3) "revise and resubmit", or (4) "rejected".

B. Prior to furnishing the Submittals to the County, the Contractor shall: (1) review all Contractor and Subcontractor Submittals for accuracy, completeness, and compliance with the Contract; (2) coordinate all Submittals with all Contract Work by other trades and with field measurements; and (3) indicate approval on the Submittals as a representation that it has complied with its obligation to review and coordinate Submittals. Where required by

law or by the Contract. Submittals shall be stamped by an appropriate licensed professional. Submittals lacking required stamps or evidence of Contractor review and approval will be returned without review by the County for resubmission. Submittals shall be sequentially numbered.

C. When submitting information, the Contractor shall identify and state reasons for any alteration, variation, addition, deviation, or omission from the Contract. The Contractor shall not perform Work that alters, varies, adds, deviates, or omits Work without prior specific written acceptance by the County.

D. The Contractor shall provide Submittals with reasonable promptness and in such sequence as to facilitate the timely completion of the Contract. The Contractor shall prepare and keep current, for review by the County, a schedule of Submittals which is coordinated with the Contractor's Project Schedule and allows the County the specified time for review.

E. The County shall review the Contractor's Submittals and respond in writing with reasonable promptness within the review timeframes specified in Detailed Provisions Section 01 3300 – Submittal Procedures so as not to unreasonably delay the progress of the Work. Unless otherwise agreed, no delay to the Contractor's Work shall be attributable to the failure by the County to respond to a Submittal until twenty (20) days after the Submittal is received by the County, and then only if failure by the County to respond is unreasonable and affects the Contract completion date.

F. If the Contractor is required to resubmit a Submittal, any revisions on resubmittals shall be specifically identified in writing and the resubmitted Submittal shall be sequentially alpha denoted and note revisions in numerical order. The cost of the review of the initial Submittal and the first revised Submittals shall be borne by the County. The costs for all additional revised Submittals shall be charged to the Contractor. The cost of review shall include, without limitation, administrative, design, and engineering activities directly related to review of Submittals. The County may deduct these costs from any amounts due to the Contractor.

G. The County shall review the Contractor's Submittals only for conformance with the design of the Work and compliance with the Contract. Review of the Submittals are not conducted to verify the accuracy of dimensions, quantities, or calculations, the performance of materials, systems, or equipment, or construction means, methods, techniques, sequences, or procedures, all of which remain the Contractor's responsibility. Failure by the County to take exception to a Submittal shall not relieve the Contractor from any duty, including its responsibility for errors or omissions in Submittals, its duty to make Submittals and duty to perform the Work according to the requirements of the Contract. The County's review of a Submittal shall not alter or waive

the requirements of the Contract unless the County has issued prior written approval of such change or alteration of the Contract requirements.

H. The Contractor's failure to identify any error, deviation, or omission and subsequent acceptance of the Submittal by the County shall not relieve the Contractor from complying with the Contract requirements.

4.7 REQUESTS FOR INFORMATION

A. If the Contractor determines that some portions of the drawings, specifications or other Contract Documents require clarification or interpretation by the County because of an apparent error, inconsistency, omission, or lack of clarity in the Contract, the Contractor shall promptly submit a Request for Information (RFI) and, unless otherwise directed, shall not proceed with the affected Work until the County has responded to the RFI. The Contractor shall plan its Work in an efficient manner so as to allow for timely responses to RFIs.

B. RFIs shall only be submitted by the Contractor on an RFI form provided by the County or in a form acceptable to the County (See Detailed Provisions Section 01 3100 – Project Management and Coordination). The Contractor shall clearly and concisely set forth the issue for which clarification or interpretation is sought and why a response is needed by the County. In the RFI, the Contractor shall set forth its own interpretation or understanding of the requirement along with reasons why it reached such an understanding.

C. The County will review RFIs to determine whether they meet the requirements identified above in Paragraph B to qualify as an RFI. If the County determines that the document is not an RFI it will be returned to the Contractor unreviewed as to content. When appropriate the Contractor may resubmit the RFI on the proper form, with all required information and in the proper manner.

D. The County shall respond in writing within seven (7) working days to Contractor's RFI in accordance with Detailed Provisions Section 01 3100 Project Management and Coordination.

1. At the request of the County, the Contractor shall prioritize its RFIs, identify a date by which the Contractor prefers the RFI be answered, and reasons for such priority.

2. If the Contractor submits a RFI on an activity less than thirty (30) days prior to the commencement of that activity, the Contractor shall not be entitled to any time extension or adjustment in Contract Price due to the time it takes the County to respond to the RFI provided that the County responds within thirty (30) days. No delay to the Contractor's Work or damages to the Contractor shall be attributable to the failure by the

County to respond to the RFI until thirty (30) days after the County's receipt of the RFI, and then only if failure by the County to respond is unreasonable and affects the Contract completion date.

E. The County's response to an RFI shall not be considered a change to the Contract requirements. To the extent the Contractor believes that the County's response to the RFI constitutes changed Work impacting Contract Price or Contract Time, the Contractor shall submit a Contractor's Request for Change Order to the County (See Detailed Provisions Section 01 3100 – Project Management and Coordination).

4.8 TESTS, INSPECTIONS, AND ACCESS TO THE WORK

A. The Contractor shall document and maintain an adequate testing and inspection program and perform such tests and inspections as are necessary or required to ensure that the Work conforms to the requirements of the Contract. The Contractor shall maintain all documentation related to testing and inspection and make such documentation available to the County at its request. Contractor shall be responsible for inspection and quality assurance of all its Work and all Work performed by any Subcontractor. Unless otherwise provided, Contractor shall make arrangements for such tests, inspections, and approvals with an independent testing laboratory or entity acceptable to the County, or with the appropriate authority. If any governmental, regulatory, or permitting authority requires any portion of the Work to be inspected, tested, or approved, the Contractor shall make all arrangements for and cooperate with such inspections, tests, and approvals so as not to delay completion of the Contract Work. Unless otherwise noted, the Contractor shall bear all related costs of tests, inspections, and approvals. The Contractor shall give the County at least two (2) days Notice of: (1) when the Work is ready to be tested and inspected and (2) when and where tests and inspections are to be made. Contractor shall maintain complete inspection records and make them available to the County upon request.

B. The Contractor shall cooperate with the County in the performance of any tests and inspections of the Work. The Contractor has the duty to coordinate all tests and inspections in a manner, which does not negatively impact Contractor's compliance with the Contract.

C. If any Work required to be inspected, tested, or approved is covered without such inspection, testing or approval being obtained, it must, if requested by the County, be uncovered for observation, and such uncovering shall be at Contractor's expense.

D. Upon request by the County any Work, not otherwise required to be inspected or tested, shall be uncovered by the Contractor. If the Work is found to comply with the Contract or if any non-compliance was not caused by the Contractor,

Subcontractor, or Supplier, the County will (1) pay the costs of testing and inspection; (2) pay the costs associated with the uncovering and recovering of the Work; and (3) adjust the Contract Time to the extent the inspection and repair impacted the Project Schedule and delayed completion of the Work, otherwise the Contractor shall bear such costs as well as all costs or correction and the Contractor shall not be entitled to an adjustment in Contract Time.

E. The County may, at any reasonable time and at its own cost, conduct inspections and tests as it deems necessary to ensure that the Work is in accordance with the Contract. The County shall promptly notify Contractor if an inspection or test reveals that the Work is not in accordance with the Contract. The County inspection and tests are for the sole benefit of the County and do not:

1. Constitute or imply acceptance;
2. Relieve Contractor of responsibility for providing adequate quality control measures;
3. Relieve Contractor of responsibility for risk of loss or damage to the Work, materials, or equipment;
4. Relieve Contractor of its responsibility to comply with the requirements of the Contract; or,
5. Impair the County's right to reject defective or nonconforming items, or to avail itself of any other remedy to which it may be entitled.

F. Neither observations by an inspector retained by the County or part of County staff, the presence or absence of such inspector at the Project Site, nor inspections, tests, or approvals by others, shall relieve the Contractor from any requirement of the Contract. Inspectors are not authorized to change any term or condition of the Contract.

G. Contractor shall promptly furnish, without additional charge, all facilities, labor, material, and equipment reasonably needed for performing such safe and convenient inspections and tests as may be required by the County. The County may charge Contractor any additional cost of inspection or testing, or when prior rejection makes re-inspection or retest necessary. The County shall perform its inspections and tests in a manner that will cause no undue delay in the Work.

4.9 CORRECTION OF WORK OR DAMAGED PROPERTY

A. If material, equipment, workmanship, or Work proposed for, or incorporated into the Work, does not meet the Contract requirements or fails to perform satisfactorily, the County shall have the right to reject such Work by giving the Contractor written Notice that such Work is either defective or non-conforming.

1. The County, at its option, shall require the Contractor, within a designated time period as set forth by the County, to either:

a. Promptly repair, replace or correct all Work not performed in accordance with the Contract at no cost to the County; or
b. Provide a suitable corrective action plan at no cost to the County.

2. Once the corrective action plan is reviewed and returned by the County with the annotation "no exception taken" or "exceptions as noted" by the County, the Contractor shall implement a corrective action plan. Review and providing comments on the corrective action plan is not an acknowledgement by the County that such plan is adequate to remedy the defective or non-conforming Work. If the corrective action plan does not remedy the defective or non-conforming Work, the Contractor shall remain responsible for remedying of the defective or non-conforming Work to the County's satisfaction.

3. The Contractor shall also be responsible for all repairs to any property and Work damaged by the Contractor.

4. Under no circumstances shall the Contractor be entitled to additional time or money for the correction of defective or non-conforming Work or for the repair of damaged property. The County shall not be responsible for any costs to prepare corrective action plans, correct Work or repair damaged property.

B. If the Contractor does not repair, replace or correct and/or remove defective or non-conforming Work or repair damaged property as required by the County, the County or County's designee may repair, replace or correct and/or remove it and deduct the cost of such effort from any payment due to the Contractor. Under this provision, the County reserves the right to make use of the Contractor's plant and equipment for this repair, replacement, correction or removed Work. If the remaining payments due to the Contractor are not sufficient to cover the County's cost of remedying the defective or non-conforming Work, the Contractor shall pay the difference to the County.

C. The County may elect to retain Work if the County determines that such defective or non-conforming Work is not of sufficient magnitude or importance to make the Work dangerous or undesirable or that removal of such Work is impractical or will create conditions, which are dangerous or undesirable. Just and reasonable value for such defective or non-conforming Work will be determined by the County and appropriate deductions will be made in the payments due or to become due to the Contractor. The County's exercise of the rights under this provision shall be without prejudice to any other remedy the County may have and shall not constitute a termination of the Contract.

D. The Contractor shall be liable for all damages and costs incurred by the County caused by the Contractor's or its Subcontractors' and Suppliers' defective or non-conforming Work or workmanship, including, but not limited to: all special, incidental, or consequential damages incurred by the County. The Contractor agrees to indemnify and hold the County harmless from any personal injury or property damage caused by the Contractor or its Subcontractors defective or non-conforming Work or workmanship.

4.10 SUBSTITUTION OF PRODUCTS AND PROCESSES

A. Substitutions requested by the Contractor will be subject to the County's prior written acceptance and at the County's sole discretion.

B. Requests for substitution must specifically identify:

1. Material, equipment, and labor costs included in the Contractor's Bid associated with the original item to be substituted;
2. All costs for material, equipment, labor associated with the proposed substitution, including any impact costs;
3. Proposed change to the Contract Price and/or Contract Time; and,
4. Compatibility with or modification to other systems, parts, equipment or components of the Project and Contract Work.

C. Contractor shall provide all documentation supporting its request as requested by the County.

D. All costs of any redesign or modification to other systems, parts, equipment or components of the Project or Contract Work, which result from the substitution, shall be borne by the Contractor.

E. When the County approves a substitution proposed by the Contractor, the Contractor shall guarantee the substituted article or materials to be equal to, or better than, those originally specified and shall be compatible with all other systems, parts, equipment or components of the Project and Contract Work. The County has the right to order an unaccepted, substituted article removed and replaced without additional cost to the County.

F. The County has a right to a deductive Change Order if the substituted product or process is less costly than the contractually required product or process.

G. If the County does not accept the substitution proposal the Contractor shall proceed, without delay or cost to the County, with the Contract Work as originally specified.

H. See Detailed Provisions Section 01 6000 – Product Requirements.

4.11 LABOR SURCHARGE

A. The labor surcharge percentage to be applied to the regular and overtime hourly wages paid shall be the percentages that are in effect at the time of the award of the Contract, as published by the California Department of Transportation (Caltrans). A copy of said labor surcharge rates are available on Caltrans' website.

4.12 EQUIPMENT RENTAL

A. The equipment rental rates to be applied shall be the rates that are in effect at the time of the award of the contract, as published by the California Department of Transportation (Caltrans). A copy of said equipment rental rates are available on Caltrans' website.

END OF SECTION



DETAILED PROVISIONS

FOR

THE CONSTRUCTION OF

LANDFILL GAS COLLECTION SYSTEMS

AT

BADLANDS AND LAMB CANYON LANDFILLS

2026-2029

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SECTION 01 1100
SUMMARY OF WORK

PART 1 GENERAL

1.01 SUMMARY

A. Section includes:

1. Project Information.
2. Project Description.
3. Definitions
4. Work by County and Others
5. Project Signs
6. Warranty
7. Available Information
8. Project Utility Sources

1.02 PROJECT INFORMATION

A. Project Title:

1. **GAS COLLECTION SYSTEMS**
   a. **Badlands Landfill**
   b. **Lamb Canyon Landfill**

B. Site Addresses:

1. Badlands Sanitary Landfill: 31125 Ironwood Avenue, Moreno Valley, CA 92555
2. Lamb Canyon Sanitary Landfill: 16411 State Highway 79 (aka Lamb Canyon Road), Beaumont, CA 92223 (located within unincorporated Riverside County).

C. Owner: County of Riverside.

D. Operator: Riverside County Department of Waste Resources.

1.03 PROJECT DESCRIPTION

A. General:

1. The descriptions in this Section are not intended to provide or be construed as a complete summary of the Contract Documents. The following only identifies in broad terms the general nature of the Work to be performed by the Contractor and its Subcontractors.
2. Contractor shall perform and complete all Work in accordance with the requirements set forth in the Contract Documents.

3. This Section should read as if "Provide and Install" were included at the front of sentences, as applicable.
    a. Responsibility for the providing and the installing of every element of the Work is borne by the Contractor, unless otherwise noted.

B. Outline of Work:

The work to be performed by Contractor shall conform to the requirements of the General Provisions, Special Provisions, Detailed Provisions, Drawings, and other related documents, and include the furnishing of all labor, materials, tools, equipment, plant, and services necessary therefore and incidental thereto to complete the Project. The work shall consist of new construction of gas collection system components. The major features of the work to be performed shall include, but are not limited to:

1) Installing Horizontal Wells.
2) Installing Aggregate Pits
3) Drilling and Installing Vertical Wells
4) Installing and/or relocating different size HDPE Piping
5) Installing Butterfly Valves on existing segments of HDPE Piping
6) Installing and/or relocating Well Assemblies
7) Installing Probe Monuments
8) Provide environmental controls to mitigate against soil erosion and sediment, dust, odor, contaminated surface water runoff, pest, and noise.
9) Mobilize and stage construction equipment.
10) Clean-up site and demobilize equipment.

1.04 DEFINITIONS

A. Throughout these Detailed Provisions, certain terms are capitalized. Capitalized terms have the definitions assigned to them in the Detailed Provisions. Definitions of terms will be found throughout these Detailed Provisions. There is no central location for defined terms.

1. "**Addendum**" or "**Addenda**" means alteration or clarification of the plans or specifications provided to bidders by the County prior to bid time, which becomes part of the Contract Documents when the Contract is executed.
2. "**ASTM Specifications**" the latest revised specifications or tentative specifications of the American Society for Testing and Materials.
3. "**Basis of Design**" indicates project is based on specified equipment and equipment from other manufacturers may require, at a minimum, revisions to the Project Drawings and/or Detailed Provisions for surrounding infrastructure.
4. "**Claim**" means a separate demand by the Contractor sent by registered mail or certified mail with return receipt requested for one or more of the following: (a) a

time extension, including, without limitation, for relief from damages or penalties for delay assessed by the County under the Contract; (b) payment by the County of money or damages arising from work done by or on behalf of the Contractor and payment for which is not otherwise expressly provided or to which the Contractor is not otherwise entitled; (c) payment of an amount that is disputed by the County; (d) that Contractor's performance is excused, or (d) other relief.

5. "**Change Order**" means a written instrument, signed in accordance with the requirements of the General Provisions, setting forth the agreement of the County and the Contractor on the terms of a Contract Adjustment.
6. "**Change Proposal**" means a document prepared by the Contractor at the request of the County, which proposes changes to the Work and/or changes to the Contract Price and/or Contract Time. County initiates all requests for Change Proposals.
7. "**Contract**" means the Agreement included in the Administrative Provisions covering the Work signed by County and Contractor, which includes all Contract Documents.
8. "**Contract Documents**" The "Contract Documents" for the Project are enumerated in the Agreement.
9. "**Contract Award**" or "**Contract Execution**" occurs when the County Board of Supervisors or their designee signs the Contract, which shall only occur after the Contractor signs the Contract.
10. "**Contract Price**" shall mean either the total aggregate amount of the lump sum, Unit Price, or Unit Prices named in the Agreement awarded by the County, subject to adjustment for variances in quantities and Change Orders or Unilateral Change Orders, or the total of all payments under the Contract at the lump sum, Unit Price, or Unit Prices based on the Engineer's approvals of installed quantities of Work, as the case may be.
11. "**Contractor's Representative**" is the individual who has authority to obligate the Contractor and is identified in the Agreement.
12. "**Contract Time**" means the total number of Working Days stated in the Agreement within which Contractor must complete the Work, as may be modified by a Change Order or Unilateral Change Order.
13. "**Contract Work**" or "**Work**" means all the resources, activities, construction work and other services specified, indicated, shown or reasonably inferable from the Contract Documents including labor, materials, equipment and services to fulfill the Contractor's obligations.
14. "**Contractor**" means the person or persons, entity, including but not limited to, limited liability corporation, co-partnership, or corporation, private or municipal, who have entered into the Agreement with the County, or his or their legal representatives.
15. "**Contractor's Surveyor**" is responsible to perform horizontal and vertical control of the actual construction, based on benchmarks established by County's Surveyor.

16. "**County of Riverside**" or "Riverside County Department of Waste Resources" or "County" or "Owner" may be used interchangeably.
17. "**County's Surveyor**" representing the County shall establish reference benchmarks for construction. County's Surveyor shall also perform surveys to check line, grade, and calculate volumes, as required.
18. "**Critical Path**" is the longest continuous chain of activities for the Work that has the least amount of total float of all chains. In general, a delay on the critical path extends the scheduled completion date of the Work.
19. "**Cubic Yard**" – Unless otherwise specified in these Detailed Provisions, where the term cubic yard appears it shall mean bank(bulk) volume in the case of excavation; and compacted volume yielding the specified relative compaction, moisture content, and hydraulic conductivity, if required, in the case of engineered fill.
20. "**Day**" means calendar day, unless otherwise specified.
21. "**Facilities**" or **"RCDFM"** refers to Riverside County Department of Facilities Management
22. "**Field Directive**" is a document prepared by the County directing the Contractor to proceed promptly with specific work and shall not, in and of itself, constitute a Change Order of entitlement to an adjustment in Contract Time and/or Contract Price.
23. "**Final Acceptance**" of the Work occurs when the Engineer determines that Final Completion of the Work has been achieved, the Board issues a written acceptance of a completed Contract, and, a Notice of Completion has been recorded with the County of Riverside by the County. The date of Final Acceptance is the date the Notice of Completion is recorded by the County of Riverside Recorder.
24. "**Final Completion**" is the stage of performance of the Work when:
    a. All Work required by the Contract Documents has been fully completed in compliance with the Contract Documents and all Applicable Laws including, but not limited to, correction or completion of all punch list items noted upon Final Completion and final cleaning;
    b. Contractor has delivered to County all closeout documentation required by the Contract Documents;
    c. Final inspection and approval by the Inspector of Record and all applicable governmental agencies has occurred and a final certificate of occupancy (or equivalent inspection sign-off by applicable governing agency) has been issued by covering the entire Project site without exception or condition; and
    d. The County accepts the Work as complete and, in its discretion, records a Notice of Completion and Acceptance.
    e. "**Force Majeure**" means any of the following unanticipated events not caused by County or Contractor, which materially and adversely affect Contractor's obligations under the Contract: Acts of God as defined in Public Contract Code §7105, embargo, rebellion, war, terrorism, riot, act of sabotage, civil

commotion, discovery of any archeological, paleontological or cultural resources, spill of hazardous substances by a third party not under the control of Contractor at or near the Project site which is required to be reported to the California Environmental Protection Agency, Department of Toxic Substances Control, discovery at, near or on the site of any species listed as "threatened" or "endangered" under the Federal or State Endangered Species Act, fire, flood, landslide. Force Majeure does not include epidemic, pandemic, virus, infection or other disease.

25. "**Hazardous Material**" means any pollutant, contaminant, toxic or hazardous waste, dangerous substance, potentially dangerous substance, noxious substance, toxic substance, flammable material, explosive material, radioactive material, urea formaldehyde foam insulation, asbestos, PCBs, or any other substances the removal of which is required, or the manufacture, preparation, production, generation, use, maintenance, treatment, storage, transfer, handling, or shipment of which is restricted, prohibited, regulated, or penalized by any and all federal, state, county, or municipal statues or laws and regulations promulgated thereunder, now or at any time hereafter in effect, including, but not limited to, the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), the Hazardous Materials Transportation Act, the Resource Conservation and Recovery Act (RCRA), the Federal Water Pollution Control Act, the Toxic Substances Control Act, the Occupational Safety and Health Act, and the Model Toxics Control Act, or similar state or local statue, as the laws have been amended and supplemented.
26. "**Notice**" means a written document issued by the County or Contractor which is submitted to the other party and delivered by:
    a. Depositing in the U.S. Mail (or other method of commercial express mail), which notice shall be effective on the date of receipt;
    b. Service on the Parties' representative or at the Contractor's home office or field office, which notice shall be effective on the date of service; or,
    c. Facsimile to the Parties' representative or Contractor's home office or field office, which notice shall be effective upon receipt.
27. "**Notice to Proceed**" is a written directive issued by the County authorizing the Contractor to perform some or all of the Work.
28. "**Parties**" refers to the Contractor and County of Riverside.
29. "**Plans**" or "**Project Drawings**" means the official plans, profiles, typical cross sections, general cross sections, working drawings, and supplemental drawings, or exact reproductions thereof, approved by the County, which show the location, character, dimension and details of the Work, and which are to be considered a part of the Contract Documents.
30. "**Project**" means the total construction of the Project identified in the Notice Inviting Bids of which the Work performed under the Contract Documents may be the whole or a part and which may include construction by other contractors and the County's own forces.

31. "**Project Manager**" is the designated representative of the County responsible for the project.

32. "**Request for Change**" means a document, designated as a Request for a Change, prepared by the Contractor requesting either (1) a change in Contract Price; (2) a change in Contract Time; (3) a change in Contract Work; (4) a payment of money or damages; and/or, (5) any other relief arising out of or relating to this Contract.

33. "**Request for Information**" is a request from the Contractor to the County seeking an interpretation of a clarification of some requirement of the Contract Documents.

34. "**Resident Engineer**" will serve as the Project Manager's on-site representative. All coordination, reporting, and issues related to non-compliance will be directed to the Project Manager through the Resident Engineer. In addition, the Resident Engineer will participate with the Project Manager in all decisions related to design issues which arise during the course of construction.

35. "**Riverside County**" or "**Riverside County Department of Waste Resources**" or "**County**" or "**Owner**" may be used interchangeably and refers to the County of Riverside, organized as a General Law County under the provision of the California Government Code.

36. "**Site**" or "**Project Site**" shall be understood to refer to the location at which construction, equipment or services furnished by the Contractor under the Contract will be performed, completed and/or delivered.

37. "**Standard Drawings**" unless otherwise noted, the Standard Drawings shall be those of the Riverside County Flood Control and Water Conservation District, Riverside County Transportation Department and Standard Plans of the State Department of Transportation (Caltrans).

38. "**Standard Specifications**" is a direct reference to the publication "Standard Specifications for Public Works Construction", latest edition, written and promulgated by the Joint Cooperative Committee of the Southern California Chapter American Public Works Association and Southern California Departments Associated General Contractors of California. This publication is also known as the "Green Book".

39. "**State Standard Specifications**" are the Standard Specifications of the State of California, Department of Transportation, latest edition.

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

41. "**Supplier(s)**" The term Supplier(s) shall mean any person or firm who is not performing work or supplying labor on Site and is engaged in the business of supplying a manufactured product or resource to the County, Contractor, or Subcontractors. The term Supplier(s) includes materialmen, manufacturers, and fabricators.

42. "**Substantial Completion**" means that stage in the progress of the Work where:

a. The County has full and unrestricted use and benefit of the Project for the purpose intended;

b. All the systems and parts of the Contract Work are functional;

c. Utilities are connected and operate normally;

d. Only minor incidental work or correction or repair remains to complete all Contract requirements; and,

e. At the County's option, the Contractor has provided all required permits and certificates.

43. "**Testing/Inspection Provider**" to be hired by the County to perform field and laboratory soil and materials testing and structural inspection services.

1.05 WORK BY COUNTY AND OTHERS

A. Permits:

1. Work is to be done in-house so permits from other agencies are not required to be obtained for this contract.

a. Testing and inspections are at the discretion of the County.

B. County's Testing and Inspection Services:

1. As specified in the Contract Documents, the County shall use in-house inspection/testing services to ensure the Contractor is in compliance with the Contract Documents.

2. The County's testing and inspection agencies provide services for the County exclusively, except as indicated in this Section and in Section 01 4300 – Quality Assurance and Control.

3. Contractor Responsibilities:

a. The Contractor is required to perform, at no additional cost to the County, their own quality control program, including testing, inspection, and special inspections, as necessary to verify compliance with Contract Documents including source quality control testing as specified in Section 01 4300 – Quality Assurance and Control.

1) The Contractor is prohibited from employing the same testing and inspection agency or agencies employed by the County.

b. The Contractor shall be responsible for costs for testing of Work that is subject to corrective action or that was otherwise untested, not observed or other problems attributable to the Contractor's performance of the Work.

c. The Contractor shall pay for additional testing above and beyond that required by the Contract Documents to facilitate the performance of its means and methods.

1.06 WARRANTY

A. The Work shall be warranted in accordance with the General Provisions and Detailed Provisions Section 01 7700 – Closeout Procedures.

B. In addition, certain elements of the Work require extended warranties as defined within the Detailed Provisions sections in Divisions 02 through 41.

C. Warranty bond will be required from the Contractor.

1.07 AVAILABLE INFORMATION

A. The following documents are designated Available Information:

1. Storm Water Pollution Prevention Plans:

a. National Pollutant Discharge Elimination System (NPDES) Storm Water Pollution Prevention Plan (SWPPP) for the Badlands Sanitary Landfill, December 2025.

b. National Pollutant Discharge Elimination System (NPDES) Storm Water Pollution Prevention Plan (SWPPP) for the Lamb Canyon Sanitary Landfill, Updated October 2025.

B. Other Information:

1. County may be able to provide other information related to the work to be done, if necessary, provided written notice by the Contractor.

1.08 PROJECT UTILITY SOURCES

A. Water Supply:

1. The Contractor shall make arrangements for obtaining a water supply for the Project and provide all labor and equipment to collect, load, transport, apply, and dispose water as necessary for dust control, excavation, grading, and other Project purposes.

a. There is no potable water at any of the landfills. The nearest fire hydrant to the Badlands landfill is located near the intersection of Ironwood Ave. and Theodore and is approximately one mile from the landfill site. The nearest fire hydrant at the Lamb Canyon landfill is located at East 1st St., located approximately 3.3 miles from the landfill. The Contractor may draw water from these hydrants at no cost through the County's meter for the exclusive use of this project. At the County's option, and time permitting, water may at times be provided by the County's water truck to the Contractors tank on-site. Any other source of water shall be approved by the County.

B. Fire Protection Service:

1. Contractor shall make provisions for fire protection for its operations utilizing portable firefighting equipment.

C. Electrical Power:

1. Contractor shall provide power during construction operations using engine generators certified for use by the California Air Resources Board (CARB).

PART 2 PRODUCTS – NOT USED

PART 3 EXECUTION

3.01 ON-CALL WORK ORDERS

A. Construction work to be completed for this project shall be issued in an on-call basis. Proposed Work Orders, as specified in the Bid Proposal, are estimated for Fiscal Years 2026/27, 2027/28 and 2028/29.

B. The Proposed Work Orders are estimates only and the actual quantities will be based on the County's needs when the actual Work Orders are issued to the Contractor. The Contractor will not be compensated in any way for Bid Items that are not issued work orders or for reduced quantity estimates for individual Work Orders or for total Contract quantities.

C. The County shall provide Work Orders as written advance notice for the intent to begin construction of authorized on-call work, using all or a part of the quantities listed in Exhibit A of the Construction Agreement or as shown in the Project Drawings. The County shall provide a minimum of 7 calendar days written advance notice for the intent to begin construction via a Work Order. The scope of work, the project cost and maximum number of working days shall be included in the written Work Order notice.

D. The Contractor shall submit a Construction Schedule to the County, within 7 calendar days, that accounts for the scope of work specified in the County issued Work Order.

E. Following the County's receipt of the Contractor's Construction Schedule, the County will issue the Contractor a Notice to Proceed.

F. The Contractor shall begin work on the date specified in the County's Notice to Proceed, which shall be no later than ten (10) calendar days from the date of the Contractor's receipt of the Notice to Proceed. The construction start date shall only be extended if mutually agreed upon by the County and Contractor in writing.

G. The County may schedule Bid Items to be constructed at both landfill sites simultaneously.

H. The Contractor shall be aware that the Badlands and Lamb Canyon Landfills are active landfill sites. The Contractor's Work relating to the Project shall not impede or interrupt daily landfill operations. Additionally, the Contractor shall be aware that other landfill construction projects may be constructed concurrently with this contract. Full cooperation of the Contractor and its forces is required to assure safe working conditions. Therefore, it is necessary to emphasize that the County will have full authority to eject any of the Contractor's employees or Subcontractors who do not immediately abide by the landfill site rules (See the Contract Documents Appendix for this reference) or the directions of the County at all times throughout the duration of the Project.

3.02 TIME AND MATERIALS ESTIMATES

A. Additional on-call work, that is not specified in the Proposed Work Orders or the Schedule of Values, may be requested at the sole discretion of the County on a Time and Materials (T&M) basis.

B. The County will make a T&M work request to the Contractor, with a detailed scope of work.

C. The Contractor shall provide a written cost estimate to the County. At the County's discretion, the County may issue Work Order to the Contractor based on the Contractor's written cost estimate.

D. The Contractor is not authorized to perform any T&M work until provided written authorization for the work by the County in the form of a Work Order.

END OF SECTION 01 1100

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SPECIFICATIONS – DETAILED PROVISIONS

SECTION 01 1400: WORK RESTRICTIONS

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SECTION 01 1400
WORK RESTRICTIONS

PART 1 GENERAL

1.01 SUMMARY

A. Section includes:

1. Access and use of site.
2. Allowed working days and hours.
3. Equipment staging and material storage areas.
4. Protection of existing facilities and landfill operations.

1.02 DEFINITIONS

A. Limits of Construction:

1. The boundary beyond which no construction is allowed.

B. Staging Areas:

1. Those areas where the Contractor and its Subcontractors and suppliers shall store and stage all equipment, offices, parking, materials and supplies to perform and complete the Work under this Contract.

1.03 ACCESS AND USE OF SITE

A. General:

1. Contractor shall have full use of Project Location, defined as the Limits of Construction, for construction operations during the construction period. County will inform the Contractor of areas that are essential for County operations which shall not be disturbed, blocked, or impacted by the construction efforts.

    a. The Contractor shall be aware that the Badlands and Lamb Canyon Landfills are active landfill sites. The Contractor's Work relating to the Project shall not impede or interrupt daily landfill operations in any way. Full cooperation of the Contractor and its forces is required to assure safe working conditions. Therefore, it is necessary to emphasize that the County will have full authority to eject any of the Contractor's employees or Subcontractors employees who do not immediately abide by the landfill site rules (See Appendix A – Landfill Site Safety Rules) or the directions of the County.

B. Access to the Site:

1. The Contractor shall only enter and exit the Project Location as directed by the County.
2. The Contractor shall mobilize all equipment and trucks only through construction access routes approved by the County.

3. Observe all landfill safety rules (See Appendix A – Landfill Site Safety Rules). Contractor shall adhere to the posted speed limits within the landfill site.
4. Contractor vehicles and equipment shall yield right of way to all County staff and landfill customer traffic.

C. Use of Site:

1. Limit use of Project Site to work in areas indicated. Do not disturb portions of Project Site beyond areas in which Work is indicated:
   a. Roadways and Entrances: Keep roadways and entrances serving premises clear and available to the County and emergency vehicles at all times. Do not use these areas for parking or storage of materials.
2. The Contractor shall coordinate Contractor Entrance gate security with the County, including Contractor provision for adding locks and chains.

1.04 WORK DAYS AND HOURS

A. Work days hours may be between 6:30 AM to 5:00 PM, Monday through Friday, unless otherwise approved in writing by the County.

1. Eight (8) hours shall constitute a standard work day. Five days, Monday through Friday, shall constitute a standard work week. Standard shift workday shall be worked between the hours of 7:00 AM to 3:30 PM Monday through Friday with one-half hour unpaid lunch period. The Contractor may vary the start time to take advantage of daylight hours, weather conditions or shifts, to permit an even and manageable workflow. Nothing herein shall be construed as guaranteeing any employee eight (8) hours per day or forty (40) hours per week.
2. Contractor may elect to work a four ten-hour day schedule ("4/10"), Monday through Thursday. Ten (10) hours, between 6:30 AM and 5:00 PM, shall constitute a workday on a 4/10 schedule. Any 4/10 schedule must be worked for a minimum of two (2) weeks and must be approved by the County prior to start of schedule.
3. The Contractor and their Subcontractors will schedule an unpaid meal period of not more than one-half hour duration at the Project Location approximately at the midpoint of the scheduled work shift.
4. Work activities that require inspection by the Riverside County Department of Facilities Management (RCDFM), Riverside County Fire Department (RCFD), Southern California Edison (SCE) and any other agencies other than the County, shall be scheduled and coordinated by the Contractor for the hours between 8:00 AM to 4:00 PM on weekdays, unless prior approval from the affected agency is obtained in advance.
5. Work outside the daily hours of 6:30 AM to 5:00 PM weekdays and work on Saturday and Sunday shall be subject to the County's approval. County approval shall be contingent upon Contractor agreeing to reimburse the County for costs to provide construction management, observation, inspection, and testing services outside the allowable work days and hours.

B. The following days have been designated by the County as holidays:

1. January 1st – New Year's Day
2. Third Monday in January – Martin Luther King, Jr
3. February 12th – Lincoln's Birthday
4. Third Monday in February – President's Day and Washington's Birthday
5. Last Monday in May – Memorial Day
6. June 19th - Juneteenth
7. July 4th – Independence Day
8. First Monday in September – Labor Day
9. Second Monday in October – Columbus Day
10. November 11th – Veterans Day
11. Last Thursday in November – Thanksgiving Day
12. Day after Thanksgiving
13. December 25th – Christmas Day
14. For a holiday that falls on a Saturday, both the Saturday and the preceding Friday shall be considered legal holidays. For a holiday that falls on a Sunday, both the Sunday and following Monday shall be considered legal holidays.
15. The Contractor shall not be permitted to work on days designated by the County as holidays unless the Contractor submits a written request to work and the request is approved in writing by the County. All Contractor requests to work on designated holidays shall be submitted at least seven (7) days prior to the requested date(s).

1.05 EQUIPMENT STAGING AND MATERIAL STORAGE AREAS

A. Locations:

1. The County shall inform the Contractor where the staging and material storage areas will be.
2. Staging areas are for the Contractor's own use in staging equipment, trucks, work trailers, materials and other work.

B. Contractor's use of the staging and storage areas shall not disrupt or interfere with the operation of the landfill.

C. Do not utilize the landfill entrance road or scale facility area for unloading, staging and storage of any items, materials, and equipment.

D. Staging areas shall be accessible to the County so that it may verify the presence and condition of equipment being stored. The Contractor shall confine equipment and maintain construction operations within limits indicated by Applicable Laws, ordinances, permits, and as outlined by the County.

E. The maximum allowable time equipment units shall remain on site, in a condition that makes it incapable of performing its designed function, shall be five (5) working days. Any equipment needing further maintenance shall be moved off site for repairs, at the full expense of the Contractor. Equipment no longer needed shall also be removed within five (5) working days of its last use.

F. All imported materials shall be stored in the designated area, unless the Contractor obtains the County's written approval for an additional area. All imported materials to be used in construction shall be unloaded, stored, and handled in accordance with manufacturer and supplier recommendations to prevent damage to the materials.

G. When delivery of a material occurs, the Contractor shall promptly observe shipments to assure that the material complies with requirements, that quantities are correct, and that the material is undamaged. The Contractor shall take full responsibility for any delay caused by a supplier or manufacturer.

H. The storage area shall be accessible to the County, so that it may observe, verify, and document the presence and condition of materials being stored.

I. Contractor shall protect materials from sun, rain, mud, soil, and debris and as stated by the manufacturer(s). Care shall be taken to protect manufactured materials against damage from misuse, mishandling, or accident. The Contractor shall store materials and maintain construction operations within limits indicated by Applicable Laws, ordinances, and permits as outlined by the County. Care shall be exercised to avoid blocking roads, interfering with County operations, or presenting a hazard to County personnel and equipment, or to the public.

J. Contractor shall assume full responsibility for any theft or vandalism occurring to the Contractor's equipment, tools, materials, supplies, and construction (prior to final acceptance of the entire Project by the County), and shall take appropriate measures necessary to eliminate their occurrences. It is highly recommended to obtain security services for equipment and materials to prevent theft and vandalism while the site is unattended.

1.06 PROTECTION OF EXISTING FACILITIES AND ADJACENT LANDFILL OPERATIONS

A. Badlands and Lamb Canyon Sanitary Landfills are active facilities; thus, all construction Work relating to the Project shall not impede or disrupt daily landfill business and operations. Contractor shall take all necessary steps to plan and execute Work so as not to damage or disrupt existing facilities, operations, and utilities.

B. Report any damage to existing facilities and utilities caused by Contractor's operations immediately to the County.

C. Repair, restore or replace any facilities damaged by Contractor's operations to the satisfaction of the County at no cost to the County.

PART 2 PRODUCTS – NOT USED

PART 3 EXECUTION – NOT USED

END OF SECTION 01 1400

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SPECIFICATIONS – DETAILED PROVISIONS

SECTION 01 2900: PAYMENT PROCEDURES

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SECTION 01 2900
PAYMENT PROCEDURES

PART 1 GENERAL

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2. Liquidated Damages (1.05)
3. Progress Payments (1.06)
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5. Resubmittal of progress payment applications (1.06 D)
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7. Example Schedule of Values (3.01)

1.02 DEFINITIONS

A. Cubic Yard – Unless otherwise specified in these Detailed Provisions, where the term cubic yard appears it shall mean bank (bulk) volume in the case of excavation; and compacted volume yielding the specified relative compaction, moisture content, and hydraulic conductivity, if required, in the case of engineered fill.

B. Linear Feet (LF) - shall be measured along the horizontal length of the centerline of the installed material, unless otherwise specified. Pipe/conduit shall be measured along the length of the completed pipeline/conduit, regardless of the type of joint required, without deduction for the length of valves or fittings. Pipe/conduit included within the limits of Lump Sum items will not be measured.

C. Lump Sum (LS) – A fixed Contract price for completion of defined Scope of Work.

D. Schedule of Values - Establishes Unit Prices for individual items of Work. Will be the basis for payment of County issued Work Orders and will be used to establish payment for any "extra Work" i.e., Work requested which is beyond the scope of the original Contract.

E. Square Feet (SF) –Area of a square with sides of one (1) foot. Quantities shall be calculated to the nearest square foot of true (i.e. including slope surface area) area.

1.03 SCHEDULE OF VALUES

A. Submit the Schedule of Values with the Bid Proposal.

B. Upon request, support prices with data which will substantiate their correctness.

C. The County reserves the right to delete any item included in Schedule of Values. Not all items specified in the Schedule of Values will be included in any particular County issued Work Order.

D. The County reserves the right to increase or decrease quantities of any item included in the Schedule of Values.

E. Software: Microsoft Excel 2010 or more recent; no other software will be permitted.

F. Format:

1. Develop a Schedule of Values format acceptable to the County, and that provides an effective tool for establishing monthly progress amounts, calculating earned value by the County and issuing Work Orders.

2. In general, indicate Work in the same Work Breakdown Structure used for the Project Baseline Schedule and further divided among the Project milestones.

3. An example Schedule of Values format is included with the Bid Proposal and is a starting point for development of a practical and efficient Schedule of Values. The County may request additional detail as necessary to adequately represent the Work. The Contractor may provide an additional breakdown of any items listed in the example. The Contractor shall verify and revise, if necessary, all quantities and items of Work prior to submittal.

4. Allocate costs to the Schedule of Values items consistent with the Scope of Work associated with the line item.

   a. Breakdown costs, itemized by Detailed Provisions Section and trade, and distribute cost to individual applicable cost items.

   b. Where structures, units, equipment or other components are identified by a specific series or identification number, utilize said designation throughout the Schedule of Values.

G. Prorate overhead and profit to the activities.

1. Each item in the Schedule of Values, and Applications for Payment, are to be complete, including its proportional share of supervision, overhead and profit margin.

H. Updates of the Schedule of Values:

1. County will provide coordinated Schedule of Values accompanying each Application for Payment, including approved Changes, for review and approval by the Contractor.

2. Change Orders arising from additional Work will be listed as individual items in the schedule. Alterations to items originally included in the Contract will be tracked in the original lines with the quantity of the Change Order(s) noted and any deletions of such items crossed out.

1.04 BASIS AND MEASUREMENT OF PAYMENT QUANTITIES

A. Although the County will keep track of and update the official Work completed quantities in the Schedule of Values, it is the Contractor's responsibility to measure and compute the quantities of Work completed under the terms of the Contract, subject to verification by the County. In computing quantities, the length, area, solid contents,

number, weight, or time as specified in the Contract or the Schedule of Values must be used.

B. The Contract Price shall cover the Work required by the Contract Documents. All costs in connection with the successful completion of the Work, including furnishing all materials, equipment, supplies, and appurtenances; providing all construction, equipment, and tools; and performing all necessary labor and supervision to fully complete the Work, shall be included in the Contractor's Bid Proposal and broken down into further detail in the approved Schedule of Values.

C. All estimated quantities stipulated in the Contract Documents (Contractor's Proposal, example of Schedule of Values, etc.) are approximate and are to be used only for the purpose of comparing the Bids submitted for the Work and as a basis for determining an initial Contract Price. The actual amounts of Work completed and materials furnished under unit cost items may differ from the estimated quantities. The County does not expressly or by implication represent that the actual quantities involved will correspond exactly to the quantities provided by the County in the Contractor's Proposal or example of Schedule of Values; nor shall the Contractor plead misunderstanding or deception because of such estimate or quantities or of the character, location or other conditions pertaining to the Work. Payment to the Contractor will be made only for the actual quantities of Work performed or material furnished for unit cost bid items, in accordance with the Project Drawings and Detailed Provisions, and it is understood that the quantities may be increased or decreased as provided in Section 2.6 of the General Provisions. The Contractor agrees that it will make no Claim for damages, anticipated profits, or otherwise because of any difference between the amounts of Work actually performed and materials actually furnished and the estimated amounts therefore.

D. Methods of Measurement:

1. Units of measurement shall be defined in general terms as follows:
    a. Linear Feet (LF)
    b. Square Feet (SF)
    c. Square Yards (SY)
    d. Cubic Yards (CY)
    e. Each (EA)
    f. Lump Sum (LS)
    g. Acres
    h. Tons
2. Unit Cost Items:
    a. Linear Feet (LF) shall be measured along the horizontal length of the centerline of the installed material, unless otherwise specified. Pipe/conduit shall be measured along the length of the completed pipeline/conduit, regardless of the

type of joint required, without deduction for the length of valves or fittings. Pipe included within the limits of Lump Sum items will not be measured.

b. Square Feet (SF), Square Yards (SY), Cubic Yards (CY), Each (EA), Acres and Tons shall be measured as the amount of the unit of measure installed and compacted within the limits specified and shown in the Project Drawings and Detailed Provisions. True area shall be determined by using surveying methods to measure slope angles and elevations. Contractor shall provide supporting documentation (i.e. drawings, delivery tickets, invoices, survey calculations, etc.) to verify actual installed quantities. Unless otherwise specified in these Detailed Provisions, where the term Cubic Yard appears it shall mean bank (bulk) volume in the case of excavation; and compacted volume yielding the specified relative compaction, moisture content, and hydraulic conductivity, if required, in the case of engineered fill.

c. Payment for Work will be based on the approved Schedule of Values per unit of measurement based upon the actual quantities of Work measured upon completion. Estimated quantities provided in the Contract Documents are for bidding purposes only, and the County does not express or imply that the actual amount of the Work or materials will correspond to the estimated quantities.

d. Unit costs shall include all services, obligations, responsibilities, labor, materials, devices, equipment, royalties and license fees, supervision, temporary facilities, clean up, traffic control, survey, field offices, close out, overhead and profit, connections, appurtenances and any other incidental items of any kind or nature, as are necessary to complete the Work in accordance with the Contract Documents.

3. Lump Sum Items:

a. The County reserves the right to delete any item included in the Schedule of Values and decrease the Contract Price by the scheduled amount for the item deleted.

b. Adjustments to Lump Sum costs provided in the accepted Schedule of Values may be made only by Change Order.

c. Progress payments for each individual lump sum item will be processed on a percentage of completion basis as estimated by the Contractor and approved by the County. In instances where the line item must be performed over the life of the Project (such as Dust Control, SWPPP Implementation, Traffic Control, etc.), the line item payment made will be based on the percentage completion of the project multiplied by the item Lump Sum. Percentage completion of the Project will be based on the percentage of the construction price approved to date.

d. Lump Sum items shall include all services, obligations, responsibilities, labor, materials, devices, equipment, royalties and license fees, supervision, temporary facilities, clean up, traffic control, survey, field offices, close out, overhead and profit, connections, appurtenances and any other incidental items

of any kind or nature, as are necessary to complete the Work in accordance with the Contract Documents.

4. Specific Cost Items:
    a. Earthwork:
        1) Unless otherwise stated, the final measurement of all earthwork quantities shall be calculated to the nearest cubic yard (CY) based upon comparison of pre-construction and post-construction surveyed surfaces of the project Work. These surfaces may be established by a combination of conventional ground surveying and photogrammetry of the Project Work areas performed by the County. Unless otherwise stated, the surface for any layer which will be covered by subsequent layers shall be established by ground surveying. Final volumetric calculation of earthwork quantities for payment purposes shall be performed by the County based upon the resulting Digital Terrain Models (DTM) using the grid volume method with a grid interval of five (5) feet by five (5) feet. It should be noted that different methods may be used by the County for determining quantities for progress payments. However, the earthwork quantities used for progress payments will be adjusted at the completion of the Work based upon the final measurement method stated in this paragraph.
    b. Mobilization and Demobilization:
        1) General Mobilization - For the purposes of this Contract, mobilization shall mean Contractor has received a Work Order and a Notice to Proceed, provided necessary bonds and insurance, installed temporary structures and storage areas, has moved its primary construction equipment on site and is ready to proceed with construction operations. This contract item shall consist of expenditures for all preparatory work and operations, including but not limited to: those costs necessary for the movement of personnel, equipment, supplies, and incidentals to the project site for each Work Order; and for all other work and operations which must be performed or costs incurred prior to beginning work for the Work Order.
        2) General Demobilization - For the purposes of this Contract, demobilization shall mean the Contractor has received the Certificate of Substantial Completion, has removed temporary structures and storage areas, has removed its primary construction equipment, performed final clean-up of each Project Location, and no longer has physical presence on the Site. Demobilization shall include but not be limited to cleaning installations and the removal of temporary structures as required by the County. Throughout all phases of construction, including suspension of work and until final acceptance of the project, the Contractor shall keep the work areas clean and free of refuse generated as a result of the

Contractor's operations. Any such refuse shall be disposed of in the designated disposal area or as directed by the County.

3) Execution - Upon receipt of each Work Order, the Contractor shall furnish, mobilize, and install such temporary works, materials, equipment, supplies, and personnel, as necessary for the successful completion of the work. The Contractor shall also operate and maintain temporary works and equipment, throughout the duration of construction. All temporary works, such as sanitation facilities, shall fully comply with applicable rules and regulations of governing authorities. The Contractor shall remove and properly dispose of all refuse from the project site. Any hydrocarbon-impacted soils found at the site as a result of the construction operation, such as equipment maintenance, shall be removed and properly disposed of at the Contractor's expense. The Contractor shall obtain all necessary permits and permission to utilize public roads for mobilization, demobilization, and access to the site. The Contractor shall provide traffic control plans in accordance with Detailed Provision 01 5526 Traffic Control. Access to the site is available through existing public roads during the workday hours specified in Detailed Provision 01 1400 Work Restrictions.

4) Measurement and Payment - Payment for mobilization and demobilization shall be determined for each individual Work Order and shall be executed as stated in section 1.3.E "Authorized Time and Materials" of this detailed provision. Contractor shall submit invoices for each and every instance of mobilization and demobilization. The Contractor shall inform the County in writing and obtain written authorization and approval by the County prior to mobilizing or demobilizing any equipment that requires a haul distance of 150 miles or more to or from the respective landfill sites. Any equipment mobilized or demobilized with a travel distance of 150 miles or more without written authorization and approval by the County shall not be compensated by the County. Contractor shall submit invoices for all aspects of "Authorized Time and Materials" work including but not limited to material receipts, equipment rental invoices, and subcontractor and vendor invoices.

1.05 AUTHORIZED TIME & MATERIAL WORK

A. Authorized Time and Materials may be used by the County for extra work that has been negotiated in writing between the County and the Contractor. Use of Authorized Time and Material allocation will be at the sole discretion of the County. All or any portion of the allocation amount may be deleted from the Contract. The County shall have the right to add work of a different character or function, and have the Contractor perform such added work when such work is considered by the County to be appurtenant to the satisfactory completion of the project.

B. The Contractor shall provide a rate schedule for all labor and equipment that may reasonably be anticipated for use during the project. Labor rates shall be consistent with those required by the prevailing wage rate requirements of the Contract and as set forth by the California Department of Industrial Relations "General Prevailing Wage Determinations" and shall reflect all benefits and employer costs. Once the labor and equipment rates have been approved by the County, they will become the basis for compensation for any Time and Material work requested by the County.

C. The equipment rental rates to be applied shall be the rates that are in effect at the time of the award of the contract, as published by the California Department of Transportation (Caltrans).

D. The signing of the contract by the Contractor will be deemed to be an agreement on their part to perform the added work, as and when ordered by the County. If the required added work results in delay to the project, the Contractor will be given an appropriate extension of time.

E. Payment for "Authorized Time and Materials" shall be made when prior written authorization and approval has been provided to the Contractor by the County. Contractor shall submit invoices for all aspects of "Authorized Time and Materials" work including but not limited to material receipts, equipment rental invoices, and subcontractor and vendor invoices.

F. Unless otherwise negotiated by the County and Contractor, the cost of all work performed by the Contractor on an "Authorized Time and Material" basis will be computed in the manner described in Section 7.3. of the General Provisions in the Contract Documents, and the compensation thus provided shall be full payment to the Contractor related to the authorized time and material work.

1.06 LIQUATED DAMAGES

A. The Liquated Damage amounts, set forth in this Section, will be assessed for Contractor's failure to achieve completion for the following Project milestones:

1. Project Substantial Completion - The Liquidated Damages reduction to the Contract Price for failure to reach Substantial Completion for the Project is One Thousand Dollars ($1,000) per day for each additional Working Day required to properly complete the Work in excess of the established contractual date for achieving Project Substantial Completion.

2. Final Acceptance – The Liquated Damages reduction to the Contract Price for failure to reach Final Acceptance for the Project is Five Hundred Dollars ($500) per day for each additional Working Day required to properly complete the Work in excess of the established contractual date for achieving Project Final Acceptance.

1.07 PROGRESS PAYMENT SUBMITTAL

A. No Progress Payment will be made when, in the judgement of the County, the Work is not proceeding in accordance with the provisions of the Contract, or when the total Work done since the last Progress Payment amounts to less than one thousand dollars

($1,000). Unless otherwise agreed to at the Pre-Construction meeting or identified in the Special Provisions, on or about the last day of each month, the County shall make an estimate in writing of the total amount of Work done by the Contractor, and the acceptable materials furnished and incorporated in the Work, including that done under approved Change Orders, through the end of the month for Contractor's review. Contractor shall notify the County within seven (7) days if they dispute the County's estimate. County will then use the approved Schedule of Values to prepare a Progress Payment request for the items, or portions of items, of the Work completed during the monthly progress period. After deducting all previous payments, the retention as described in Section 1.08 of this Detailed Provisions Section and Section 7-3.3.1 of the General Provisions, and other withholdings or deductions specified in Section 1.07 of this Detailed Provisions Section, the County will pay the Contractor the balance.

B. The payment of a Progress Payment or the acceptance of payment by the Contractor does not constitute acceptance of any portion of the Work, and does not reduce the Contractor's liability to replace unsatisfactory Work, material, or equipment. An inadvertence or error in an approved Progress Payment request will not release the Contractor or the Contractor's Surety from damages arising from the Work covered by the approved payment request or from enforcement of every provision of the Contract. The County has the right to correct any error made in any Progress Payment.

C. Progress Payment Supporting Materials - the following items are required upon request by the County to be included with any request for Progress Payment:

   1. Monthly Update Schedule identified in Detailed Provisions Section 01 3200 – Construction Progress Documentation.
   2. Paid receipts to support payment for materials on hand.
   3. Materials orders.
   4. Paid equipment lists and rental agreements.
   5. Work purchased but not installed:
      a. Provide separate line items on the Application for Payment.
      b. Identify the location, and disposition of materials, products, fabrications, and equipment as of the date of the Application for Payment.
      c. Provide invoices and receipts.
      d. Provide an Insurance Certificate or a copy of the bond from the bonded warehouse storing the material.
      e. Provide photograph documentation.
      f. Identify exact material; include quantity and measurement unit.

D. Resubmittal of Progress Payment Applications

   1. Should the County determine the information to prepare an Application for Payment is incomplete, improperly executed, or incorrect, County will provide notice to the Contractor as soon as practicable, but no later than seven (7) days after

becoming aware of such inconsistency. Such notice shall be accompanied by a document setting forth in writing the reasons why the payment request is not proper.

2. Contractor shall revise and resubmit any such information in accordance with the provisions of this Detailed Provisions Section.
3. Processing of the resubmittal will begin when required revisions have been submitted, and are deemed fully documented for review by the County.
4. Comply with instructions provided by the County identifying required revisions.

1.08 WITHHOLDING/DENIAL OF PROGRESS PAYMENT REQUEST

A. Failure to comply with the requirements of this Section will be cause for delay in review and acceptance of the Application for Payment as defined in the Contract.

B. The Monthly Update Schedule identified in Detailed Provisions Section 01 3200 – Construction Progress Documentation, and is required to accompany Applications for Payment as a condition of receiving payment for Work accomplished each payment period.

C. Record Drawings: Maintaining Record Drawings up to date.

D. The County may deny a Progress Payment request and/or withhold money from any Progress Payment to:

1. Cover any unpaid Claims filed pursuant to Civil Code Section 9000 et seq;
2. Protect the County's interest; and/or
3. Pay any fines levied against the Work by the County or other entities.

E. The County may also deny a Progress Payment request and/or withhold money or modify any previous Progress Payment as necessary to protect the County from loss due to or resulting from:

1. Defective Work not remedied.
2. Stop notices filed. The County may, at its discretion, accept a bond in lieu of withholding funds for properly filed stop notices. However, the bond must be issued by a different Surety than the one that issued the Contractor's Payment Bond for the project. The amount withheld for stop notices will one-hundred and twenty-five percent (125%) of the stop notice amount.
3. Failure of the Contractor to make prompt payments properly to Subcontractors for labor, materials, or equipment as required by Business and Professions Code Section 7108.5.
4. Evidence that the Work cannot be completed for the unpaid balance of the Contract sum.
5. Evidence that the Work will not be completed within the Contract time.
6. Damage to the County or another Contractor.
7. Failure to carry out the Work in accordance with the Contract.

8. Any violation or non-compliance with Contractor's legal responsibilities, including withholds for wages adjustments in accordance with California Labor Code Section 1727 and any fines incurred by the County as a result of the Contractor's actions.

F. When, under the provisions of the Contract, the County charges any sum of money against the Contractor, the County will deduct and retain the amount of such charge from a Progress or Final Payment. If, on completion or termination of the Contract, sums due the Contractor are insufficient to pay the County charges against the Contractor, the County has the right to recover the balance from the Contractor or the Contractor's Surety.

1.09 RETENTION

A. As stated in Section 7-3.3.1 of the General Provisions and in accordance with Public Contract Code section 7201(b)(1), five percent (5%) of each Progress Payment will be retained until the Work has been completed.

B. Substitution of Securities – At the request and expense of the Contractor, in accordance with California Public Contract Code Section 22300, in lieu of the County withholding the five percent (5%) retention defined within this Detailed Provisions Section, the Contractor may: 1) substitute a deposit of securities at least equivalent to the retention to be paid, or 2) request the County pay retention directly to an escrow agent. The Contractor and County shall enter an escrow agreement in the exact form set forth in Public Contract Code Section 22300. Such an agreement will need to be approved by the County Board of Supervisors.

PART 2 – PRODUCTS – NOT USED

PART 3 – EXECUTION

3.01 ESTIMATE OF QUANTITIES

A. It is understood that the quantities listed (except for those shown as "Final" or "Lump Sum") are but estimates only and final payment will be based on actual quantities for the work whatever they may be, subject to such adjustments and alterations as elsewhere provided for in the Contract Documents. The County is not to be held responsible for the accuracy of the estimate of quantities. The Contractor shall judge for himself, after considering all circumstances and conditions, the costs and quantities of materials involved in the work.

B. The Contractor shall not at any time assert that there was any misunderstanding in regard to the nature of the work or the kind or amount of materials to be furnished for the work. The Contractor shall not ask, demand, sue for, or seek to recover compensation in excess of the costs or charges for the work as stated in the Agreement.

3.02 SCOPE OF PAYMENTS

A. The compensation described in the Agreement shall be complete and full payment to the Contractor for furnishing all materials, labor, tools, equipment and related items

necessary to complete the work; and for all obligations imposed upon the Contractor pursuant to the Contract Documents. Neither the payment of any estimate nor of any retained percentage shall relieve the Contractor of any obligation to make good any defective work or material.

3.03 MEASUREMENT AND COMPUTATION OF QUANTITIES

A. Unless otherwise stated, all items of the work to be paid for at a contract price per unit of measurement (as specified in the Bid Proposal) will be measured by the County in accordance with United States Standard Measures. Except as otherwise expressly provided in the specifications, the methods of measurement and computation of quantities will be determined by the County.

B. The weights of metalwork, and other metal parts to be paid for by weight will be determined by the County on the basis of handbook weights, scale weights, or manufacturer's catalog weights, or in the absence of any of the foregoing, on the basis of estimated weights; provided, that weights of nonmetallic coatings will be excluded.

3.04 WORK ORDER PAYMENT AT CONTRACT PRICES

A. The contract price for an item of the work shall include full compensation for all costs of that item, including the costs of any work, materials and equipment incidental to the item but not specifically shown or described in the Contract Documents.

B. The contract prices shall include full compensation for all costs of any work, materials, and equipment required by the Contract Documents, but not covered by a contract price or otherwise expressly made the subject of direct payment.

C. Work Order cost estimates and the subsequent Work Order payments will be based upon the Schedule of Values provided with the Bid Proposal.

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BADLANDS AND LAMB CANYON LANDFILL GAS COLLECTION SYSTEM COMPONENTS – EXAMPLE SCHEDULE OF VALUES FORM

DATE: _____

DO NOT SUBMIT THE SCHEDULE OF VALUES WITH BID PROPOSAL.

INSTRUCTIONS FOR CONTRACTOR'S SCHEDULE OF VALUES:

1. FILL OUT FORM COMPLETELY
2. LEAVE NO "VALUE" EMPTY.
3. ZERO ("0") IS NOT A "VALUE".
4. INSERT A "VALUE" INTO EVERY SPACE A "$" SYMBOL IS INDICATED.
5. DO NOT ADD "LINE ITEMS" BELOW THE "TOTAL" VALUE.
6. DO NOT INCLUDE VALUES FOR BID ALTERNATES THAT ARE REQUIRED ON THE BID FORM.
7. DO NOT INCLUDE VALUES FOR ALLOWANCES.
8. COMPLETE THE ACKNOWLEDGEMENT, THEN SIGN, AND DATE WHERE INDICATED BELOW.

Item No.	Item Description	Contract Document Reference	Unit	Unit Cost	Quantity	Total Cost
ADMINISTRATIVE BID ITEMS						
BID ITEM NO. 1 - MOBILIZATION (Max 5% of Contract Price)						
1	Performance and Payment Bonds	Instructions to Bidders	LS	$	1	$
2	Certificates of Insurance – Workers' Compensation, General and Professional Liability, and Motor Vehicle Insurance.	General Provisions, Special Provisions	LS	$		$
3	Builder's Risk Insurance	Special Provisions	LS	$	1	$
4	Schedule of Values Form Preparation and Maintenance	01 2000 - Payment Procedures	LS	$	1	$
5	Project Baseline Schedule Preparation and Maintenance	01 3200 - Construction Progress Documentation	LS	$	1	$
6	Health and Safety Plan Preparation and Implementation	01 3500 - Health and Safety	LS	$	1	$

Item No.	Item Description	Contract Document Reference	Unit	Unit Cost	Quantity	Total Cost
7	Provide Temporary Facilities (structures) and Controls (construction fencing, barricades, signage, storage, utilities, security, etc.)	01 5000 - Temporary Facilities and Controls	LS	$	1	$
8	Contractor's SWPPP Preparation and Implementation	01 5600 - Project Environmental Controls	LS	$	1	$
9	HMBEP (if applicable) Preparation and Implementation	01 5600 - Project Environmental Controls	LS	$	1	$
10	Preparation of Dust Control Plan	01 5600 - Project Environmental Controls	LS	$	1	$
11	Preparation of Construction Waste Recycling Plan (WRP)	01 7419 - Construction Waste Management	LS	$	1	$
					Bid Item No. 1 - Mobilization (Max 5% of Contract Price) (Total Cost Must Equal Contractor's Proposal)	**$**
BID ITEM NO. 2 - DEMOBILIZATION (Min. 1/2% of Contract Price)						
12	Prepare and submit for County Acceptance all required O&M Manuals	01 7823 Operation and Maintenance (O&M) Manuals	LS	$	1	$
13	Perform all required closeout procedures including, but not limited to: Project Record Documents, Warranties, Repair Work, Work Verification Survey, Final Cleaning and Removal of all Equipment.	01 7700 Closeout Procedures	LS	$	1	$
					Bid Item No. 2 - Demobilization (Min. 1/2% of Contract Price) (Total Cost Must Equal Contractor's Proposal)	**$**
FACILITY A - FLEET MAINTENANCE FACILITY (FMF) BID ITEMS						
BID ITEM NO. A1 - DEMOLITION AND RETROFIT/RELOCATION OF EXISTING CARGO CONTAINERS						
A1	Saw-cut and remove existing 15- inch thick reinforced concrete pad.	02 4100 - Demolition	SF	$	270	$
A2	Demolish and remove existing CMU wall and footing.	02 4100 - Demolition	LF	$	100	$

Item No.	Item Description	Contract Document Reference	Unit	Unit Cost	Quantity	Total Cost
A3	Utility pipe/conduit abandonment	02 4100 - Demolition	LS	$	1	$
A4	Relocate existing concrete sump and modify/reconnect piping	02 4100 - Demolition	LS	$	1	$
A5	Retrofit existing cargo container with two (2) steel rolling overhead doors and relocate as shown on Project Drawings	08 3323 - Steel Rolling Overhead Doors	EA	$	6	$
Bid Item No. A1 - Demolition and Retrofit/Relocation of Existing Cargo Containers (Total Cost Must Equal Contractor's Proposal)						**$**
BID ITEM NO. A2 - SITE GRADING AND DRAINAGE IMPROVEMENTS						
A6	Perform Clearing and Grubbing for Project Site.	31 1000 – Site Clearing	LS	$	1	$
A7	Protect Existing Structures and Utilities	31 1000 – Site Clearing	LS	$	1	$
A8	Structure Foundation Over-Excavation	31 2300 - Earthwork	CY	$	1200	$
A9	Structure Foundation Engineered Fill/Re-compaction at 95% relative compaction	31 2300 - Earthwork	CY	$	925	$
A10	Site Grading Excavation (Excavation, Unsuitable Material Removal and Stockpiling)	“	CY	$	55	$
A11	Site Grading Engineered Fill at 90% Relative Compaction	“	CY	$	955	$
A12	Finish Grading of Site	“	LS	$	1	$
A13	Earthwork Surveying	01 4320 - Surveying	LS	$	1	$
A14	Furnish and Install 3-inch Thick Class II Aggregate Base	31 2300 - Earthwork	SF	$	7200	$
A15	Furnish and Install 6-inch Thick Class II Aggregate Base Layer	“	SF	$	1320	$
A16	Furnish and Install 3-inch Thick Class II Aggregate Base over 6-inch Thick Crushed Aggregate Base	“	SF	$	5525	$

Item No.	Item Description	Contract Document Reference	Unit	Unit Cost	Quantity	Total Cost
A17	Furnish and Install 6-inch Thick Class II Aggregate Base over 12-inch Thick Layer (2" max rock)	"	SF	$	3110	$
A18	Furnish and Install Geogrid Reinforcement	31 2300 - Earthwork	SF	$	6220	$
A19	Furnish and Install Rip-Rap Splash Pad per detail 5/C3	"	SF	$	48	$
				Bid Item No. A2 - Site Grading and Drainage Improvements (Total Cost Must Equal Contractor's Proposal)		**$**
BID ITEM NO. A3 - ELECTRICAL SITE IMPROVEMENTS AND POWER/COMMUNICATION FEEDER TO FLEET MAINTENANCE FACILITY						
A20	Coordinate with SCE on Installation of New 480 V Service and Reconnection of Existing 120 V Services.	26 0500 – Basic Electrical Requirements	LS	$	1	$
A21	Furnish and Install New NEMA 3R 600 A, 277/480V Switchboard as Approved for Use by SCE.	26 2413 – Switchboards; Facility A Plan Sheets E2 and E5	LS	$	1	$
A22	Furnish and Install 50 kVA 480-120/240V Transformer and Connect Existing 120V Services	26 2213 – Dry Type Transformers; Facility A Plan Sheets E2 and E5	LS	$	1	$
A23	Furnish and Install NEMA 3R Enclosure with Disconnect Switch and Terminal Block for Future Water Booster Pump Installation	26 2816 – Safety Switches; Facility A Plan Sheet E2	LS	$	1	$
A24	Intercept Existing Feeder, Furnish and Install Manual Transfer Switch and Receptacle for Bulk Diesel Tank Fuel Pump	26 3613 – Manual Transfer Switches; Facility A Plan Sheet E2	LS	$	1	$
A25	Furnish and Install 30 kVA 480 -120/240V Transformer for Fleet Maintenance Facility 120V Service	26 2213 – Dry Type Transformers; Facility A Plan Sheets E2 and E5	LS	$	1	$
A26	Furnish and Install 4" PVC Sch. 40 Power Conduit with 4#600 KCMIL and 1#4/0 Ground, Encased in Red-Dyed Concrete with Warning Tape	26 0519 – Wire and Cable: 600 Volt and Below; 26 0533 – Raceways and Boxes; 26 0543 – Electrical: Exterior Underground; Facility A Plan Sheet E2	LF	$	600	$

Item No.	Item Description	Contract Document Reference	Unit	Unit Cost	Quantity	Total Cost
A27	Furnish and Install 4" PVC Sch. 40 Conduit (BLANK) Encased in Red-Dyed Concrete with Warning Tape.	"	LF	$	2420	$
A28	Furnish and Install 2-1/2" PVC Sch. 40 Power Feeder Conduit with 4#4/0 KCMIL and 1#4/Ground, Encased in Red-Dyed Concrete with Warning Tape.	"	LF	$	10	$
A29	Furnish and Install 2" PVC Sch. 40 Power Feeder Conduit with 3#1/0 and 1#6 Ground, Encased in Red-Dyed Concrete with Warning Tape.	"	LF	$	10	$
A30	Furnish and Install 2" PVC Sch. 40 Power Feeder Conduit with 3#3/0 and 1#6 Ground, Encased in Red-Dyed Concrete with Warning Tape.	"	LF	$	10	$
A31	Furnish and Install 2" PVC Sch. 40 Power Feeder Conduit with 4#1/0 and 1#6 Ground, Encased in Red-Dyed Concrete with Warning Tape.	"	LF	$	10	$
A32	Furnish and Install 1" PVC Sch. 40 Power Feeder Conduit with 3#6 and 1#8 Ground, Encased in Red-Dyed Concrete and Warning Tape.	"	LF	$	20	$
A33	Furnish and Install 1" PVC Sch. 40 Power Feeder Conduit with 3#10 and 1#12 Ground, Encased in Red-Dyed Concrete and Warning Tape.	"	LF	$	10	$
A34	Furnish and Install 2" PVC Sch. 40 Communication Conduit with 2 – CAT 6 Cables, Encased in Red-Dyed Concrete and Warning Tape.	"	LF	$	600	$

Item No.	Item Description	Contract Document Reference	Unit	Unit Cost	Quantity	Total Cost
A35	Furnish and Install 2” PVC Sch. 40 Communication Conduit (BLANK), Encased in Red-Dyed Concrete and Warning Tape.	“	LF	$	2210	$
A36	Furnish and Install NEMA 3R Communication Panel for Fleet Maintenance Facility	26 2416 – Panelboards; Facility A Plan Sheet E2	EA	$	1	$
A37	Furnish and Install NEMA 3R Power Panels with Circuit Breakers for Fleet Maintenance Facility	26 2416 – Panelboards; Facility A Plan Sheets E2 and E5	EA	$	2	$
A38	Furnish and Install Grounding Rods with Conduit and Cable Connections.	26 0526 – Grounding and Bonding for Electrical Systems; Facility A Plan Sheet E5	EA	$	4	$
A39	Furnish and Install 24” W x 36”L x 36” H Electrical Pull Box	26 0543 – Electrical: Exterior Underground; Facility A Plan Sheet E2	EA	$	11	$
A40	Furnish and Install 11” x 17” Communication Pull Box	“	EA	$	12	$
A41	Prepare Electrical Short Circuit/Coordination Study and Arc Flash Hazard Study for New Electrical System	26 0573 – Electrical Short Circuit/Coordination Study, Arc Flash Hazard Study, and Field Testing of Electrical Equipment	LS	$	1	$
A42	Procure Services of an Independent Firm to Prepare and Implement Electrical Equipment and Connections Testing Program	26 0813 – Electrical Acceptance Testing	LS	$	1	$
Bid Item No. A3 - Electrical Site Improvements and Power/Communication Feeder to Fleet Maintenance Facility (Total Cost Must Equal Contractor's Proposal)						**$**
BID ITEM NO. A4 - FLEET MAINTENANCE FACILITY REINFORCED CONCRETE FOUNDATION SYSTEM						
A43	Reinforced Concrete Column Footing F1 (6’ x 4’ x 1’-6”)	Division 03 - Concrete	EA	$	2	$
A44	Reinforced Concrete Column Footing F2 (6’ x 6’ x 1’-6”)	“	EA	$	8	$

Item No.	Item Description	Contract Document Reference	Unit	Unit Cost	Quantity	Total Cost
A45	Reinforced Concrete Grade Beam GB1 (3' x 3')	"	LF	$	115	$
A46	Reinforced Concrete Grade Beam GB2 (1'-6" x 1'-6")	"	LF	$	190	$
A47	Reinforced Concrete Floor Slab (15-inch thick)	"	SF	$	4350	$
A48	Reinforced Concrete Equipment Pad (12-inch thick)	"	SF	$	170	$
A49	Furnish and Install Sheet Vapor Retarder for Floor Slab	"	SF	$	4350	$
A50	Seal all Floor Slab Joints with Filler and/or Sealant	09 9656 - Epoxy Floor Coatings	LS	$	1	$
A51	Furnish and Install Epoxy Floor Coating	"	SF	$	5280	$
Bid Item No. A4 - Fleet Maintenance Facility Reinforced Concrete Foundation System (Total Cost Must Equal Contractor's Proposal)						**$**
BID ITEM NO. A5 - FLEET MAINTENANCE FACILITY STRUCTURAL STEEL, METAL WALL AND ROOF PANEL, CMU/POLYCARBONATE WALL, AND BIRD CONTROL SYSTEMS						
A52	Furnish and Install CMU Wall and Footing	04 2200 - Concrete Masonry; Facility A Plan Sheet S8	LF	$	85	$
A53	Furnish and Install Structural Aluminum Frame Components for Polycarbonate Panels	05 1400 - Structural Aluminum; Facility A Plan Sheet S8	LF	$	84	$
A54	Furnish and Install 4'-6" Tall Polycarbonate Panels	08 8400 - Polycarbonate Glazing; Facility A Plan Sheet S8	LF	$	84	$
A55	Furnish and Install Structural Steel Frame Components for Fleet Maintenance Facility.	05 1200 - Structural Steel; Facility A Plan Sheets S8 through S14	LS	$	1	$
A56	Furnish and Install Steel Roof Deck for Fleet Maintenance Facility.	05 3000 - Metal Deck; Facility A Plan Sheet S9	SF	$	5500	$
A57	Furnish and Install pre-finished, pre-fabricated, double-lock standing seam metal roof system and accessories	07 4113 - Metal Roof Panels; Facility A Plan Sheet S9	SF	$	5500	$

Item No.	Item Description	Contract Document Reference	Unit	Unit Cost	Quantity	Total Cost
A58	Furnish and Install pre-finished, pre-fabricated, concealed fastener metal wall panel system and accessories	07 4213 - Metal Wall Panels; Facility A Plan Sheets S11 and S12	SF	$	6080	$
A59	Furnish and Install 4”-dia. steel pipe bollards	05 1200 - Structural Steel & Division 03 - Concrete; Facility A Plan Sheet C3 - Detail 6	EA	$	4	$
A60	Furnish and Install 4”-dia. ball valve floor drain assembly	21 4000 – Fire Suppression Water Storage and Distribution; Facility A Plan Sheet C3 - Detail 8	LS	$	1	$
A61	Furnish and Install Roof Trim, Flashing, Gutters and Downspouts	07 4113 – Metal Roof Panels; Facility A Plan Sheet S9	LS	$	1	$
A62	Furnish and Install 5’x10’x1” Steel Plates	05 1200 - Structural Steel; Facility A Plan Sheet S8 and Plan Sheet S16 - Details 7 and 8	EA	$	36	$
A63	Furnish and Install Bird Control System	10 8113 - Bird Control System	LS	$	1	$
Bid Item No. A5 - Fleet Maintenance Facility Structural Steel, Metal Wall and Roof Panel, CMU/Polycarbonate Wall, and Bird Control Systems (Total Cost Must Equal Contractor's Proposal)						**$**
BID ITEM NO. A6 - FLEET MAINTENANCE FACILITY ELECTRICAL AND LIGHTING SYSTEMS						
A64	Furnish and Install Electrical Conduit, Boxes, and Cables Within Fleet Maintenance Facility, including: raceways, panels, boxes, cable, circuit breakers, grounding, supports, nameplates, and testing	26 0519 – Wire and Cable: 600 Volt and Below; 26 0529 – Hangers and Supports for Electrical Systems; 26 0533 – Raceways and Boxes; Facility A Plan Sheets E3 through E5	LS	$	1	$
A65	Furnish and Install Electrical Wiring Devices Within Fleet Maintenance Facility, including: devices, boxes, wall plates, safety switches, nameplates, and testing	26 2726 – Wiring Devices; Facility A Plan Sheets E3 through E5	LS	$	1	$

Item No.	Item Description	Contract Document Reference	Unit	Unit Cost	Quantity	Total Cost
A66	Furnish and Install Interior Lighting System Within Fleet Maintenance Facility, including but not limited to: LED fixtures, lamps, drivers, lighting control system, emergency lighting, raceways, boxes, panels, cable, circuit breakers, supports, testing, and nameplates	26 0916 – Control Equipment Accessories; 26 0943 – Low Voltage Lighting Control System; 26 0500 – Interior and Exterior Lighting; Facility A Plan Sheets E4 and E5	LS	$	1	$
A67	Furnish and Install Exterior Lighting System for Fleet Maintenance Facility, including but not limited to: LED fixtures, lamps, drivers, lighting control system, raceways, boxes, panels, cable, circuit breakers, supports, testing, and nameplates	"	LS	$	1	$
A68	Furnish and Install Structure Grounding and Lightning Protection System for Fleet Maintenance Facility.	26 0526 – Grounding and Bonding for Electrical Systems; 26 4113 – Lightning Protection System	LS	$	1	$
A69	Provide minimum 4-hour manufacturer operation and maintenance training to County staff for Lighting Control System	26 0943 – Low Voltage Lighting Control System	LS	$	1	$
				Bid Item No. A6 - Fleet Maintenance Facility Electrical and Lighting Systems (Total Cost Must Equal Contractor's Proposal)		**$**
BID ITEM NO. A7 - FLEET MAINTENANCE FACILITY COMPRESSED AIR SYSTEM						
A70	Furnish and Install Rotary-Screw Air Compressor (47 ACFM at 150 psig) with 120 gallon Receiver Tank, Control Panel, Automatic Drain Valve, Integrated Air Treatment System (Refrigerated Air Dryer, Coalescing and Particulate Filters).	11 0505 – Equipment: Basic Requirements; 11 1113 – Compressed-Air System; Facility A Plan Sheet E3	EA	$	1	$

Item No.	Item Description	Contract Document Reference	Unit	Unit Cost	Quantity	Total Cost
A71	Furnish and Install Compressed Air Piping System including: Extruded Aluminum Piping, Supports, Valves, Gauges, Regulators, Air Outlet/Manifolds, Quick Connects, Oil/Water Separators, and Appurtenances.	"	LS	$	1	$
A72	Furnish and Install Column-Mounted Hose Reels with 75-ft x 1/2 –inch Diameter Air Hose	"	EA	$	7	$
A73	Provide functional and performance testing of the compressed air system. Provide manufacturer certification.	"	LS	$	1	$
A74	Provide minimum 4-hour manufacturer operation and maintenance training to County staff.	"	LS	$	1	$
				Bid Item No. A7 - Fleet Maintenance Facility Compressed Air System (Total Cost Must Equal Contractor's Proposal)		**$**
BID ITEM NO. A8 - FLEET MAINTENANCE FACILITY HEATED, HIGH-PRESSURE WASH SYSTEM						
A75	Furnish and Install Electric-Powered, Electric-Heated, Hot Water/Steam High-Pressure Washer Unit (3.5 GPM/3,000 PSI) including: unit, control panel, wireless remotes with wall-mount bracket, and fatigue-free trigger guns Stainless Steel, Dual Lance Variable Pressure Spray Wand.	11 0505 – Equipment: Basic Requirements; 11 1113 – Heated, High-Pressure Wash System; Facility A Plan Sheet E3	EA	$	1	$
A76	Furnish and Install High-Pressure Piping, Valves, Supports, Wall-Mounted Automatic Detergent Water Mixing System and Injector System, Piping Labels	"	LS	$	1	$

Item No.	Item Description	Contract Document Reference	Unit	Unit Cost	Quantity	Total Cost
A77	High-Pressure Hoses (100-ft. x 3/8-inch diameter) Including But Not limited to: Hose, Wall-Mounted Hose Reel and Wand Holster.	"	EA	$	1	$
A78	Provide 55-gallon drum of biodegradable pressure washer detergent.	"	EA	$	1	$
A79	Provide drum dolly sized to match detergent drum.	"	EA	$	1	$
A80	Provide functional and performance testing of the pressure piping system. Provide manufacturer certification.	"	LS	$	1	$
A81	Provide minimum 4-hour manufacturer operation and maintenance training to County staff.	"	LS	$	1	$
				Bid Item No. A8 - Fleet Maintenance Facility Heated, High-Pressure Wash System (Total Cost Must Equal Contractor's Proposal)		**$**
BID ITEM NO. A9 - FLEET MAINTENANCE FACILITY 10-TON TOP-RUNNING, SINGLE-GIRDER BRIDGE CRANE SYSTEM						
A82	Furnish and Install 10-Ton Top-Running, Single-Girder Bridge Crane System Including But Not Limited To: crane bridge and trolley assembly, hoist, electrical components, structural components, VFDs, motors, pendant pushbutton station, control panel, warning devices, overload protection, gear reducers, hook and wire rope, and all other appurtenances	11 0505 – Equipment: Basic Requirements; 41 2213 – Bridge Crane: Single Girder, Top-Running; Facility A Plan Sheets S10 and E5	LS	$	1	$
A83	Provide all necessary inspection and testing services and obtain Manufacturer and CalOSHA certificates.	"	LS	$	1	$

Item No.	Item Description	Contract Document Reference	Unit	Unit Cost	Quantity	Total Cost
A84	Provide minimum 8-hour Manufacturer operation and maintenance training for County staff.	"	LS	$	1	$
					Bid Item No. A9 - Fleet Maintenance Facility 10-Ton Top-Running, Single-Girder Bridge Crane System (Total Cost Must Equal Contractor's Proposal)	**$**
BID ITEM NO. A10 - FLEET MAINTENANCE FACILITY FIRE SUPPRESSION WATER STORAGE AND DISTRIBUTION SYSTEM						
A85	Provide design calculations and construction plans/details for fire suppression water storage tank, reinforced concrete foundation, tank accessories, distribution piping and appurtenances	21 4000 – Fire Suppression Water Storage and Distribution; Facility A Plan Sheet C4	LS	$	1	$
A86	Furnish and Install Reinforced Concrete Foundation for Fire Suppression Water Storage Tank	"	LS	$	1	$
A87	Furnish and Install Above-Grade Steel Water Storage Tank with Minimum Fire Protection Capacity of 30,000 Gallon including Tank Accessories	"	LS	$	1	$
A88	Furnish and Install Piping, Fittings, Valves and Appurtenances for Fire Suppression Distribution System.	"	LS	$	1	$
					Bid Item No. A10 - Fleet Maintenance Facility Fire Suppression Water Storage and Distribution System (Total Cost Must Equal Contractor's Proposal)	**$**
FACILITY B - PERMANENT HOUSEHOLD HAZARDOUS WASTE COLLECTION FACILITY (PHHWCF) BID ITEMS						
BID ITEM NO. B1 - SUBGRADE PREPARATION						
B1	Saw-Cut and Remove Existing RC Driveway (6-inch thk.)	Facility B Plan Sheet C7 - Detail X; 02 4100 - Demolition	SF	$	130	$
B2	Perform Clearing and Grubbing	31 1000 - Site Clearing	LS	$	1	$
B3	Perform Surveying	01 4320 - Surveying	LS	$	1	$

Item No.	Item Description	Contract Document Reference	Unit	Unit Cost	Quantity	Total Cost
B4	Excavate, Overexcavate, Load, and Transport Soil/Base/Rock Material to Designated Stockpile Locations Per Plan	Facility B Plan Sheets C3-1 to C3-7; 31 1000 - Site Clearing	CY	$	6215	$
B5	Scarify upper 6" below Top of Subgrade and Recompact to 95% RC	Facility B Plan Sheets C3-1, C3-4, and C3-5; 31 2300 - Earthwork	CY	$	2250	$
B6	Place and Compact Engineered Fill to 95% RC	Facility B Plan Sheets C3-1, C3-4, and C3-5; 31 2300 - Earthwork	CY	$	620	$
B7	Perform Finish Grading - Subgrade Surface	Sheets C3-5, C3-6, and C5	LS	$	1	$
B8	Supply and Install Class II Aggregate Base	Facility B Plan Sheets C2, C3-1, C3-2, C3-3, and C3-4; 31 2300 - Earthwork; 32 1123 - Aggregate Base Course	Ton	$	1125	$
B9	Supply and Install 2" Diameter Rock Material	Facility B Plan Sheets C2, C3-1, C3-2, C3-3, and C3-4; 31 2300 - Earthwork; 32 1123 - Aggregate Base Course	Ton	$	1415	$
B10	Supply and Install Crushed Misc. Base Per Plan	Facility B Plan Sheets C2 and C3-5; 31 2300 - Earthwork; 32 1123 - Aggregate Base Course	Ton	$	535	$
B11	Supply and Install 2"-4" Diameter Rock Material Per Plan	Facility B Plan Sheets C2 and C3-5; 31 2300 - Earthwork; 32 1123 - Aggregate Base Course	Ton	$	945	$
B12	Supply and Install Biaxial Geogrid Reinforcement (Single Layer)	Facility B Plan Sheets C2, C7 - Detail Z, and C10 - Detail BB	SF	$	1900	$
					Bid Item No. B1 - Subgrade Preparation (Total Cost Must Equal Contractor's Proposal)	**$**
BID ITEM NO. B2 - ELECTRICAL SITE IMPROVEMENTS						
B13	Supply and Install 30KVA Transformer 480V-120/208V 3P	Facility B Plan Sheet E3; Division 26	LS	$	1	$
B14	Supply and Install NEMA 3R Power Panel for PHHWCF	Facility B Plan Sheet E3; Division 26	EA	$	1	$
B15	Supply and Install Grounding Rod with Conduit and Cable Connections.	Facility B Plan Sheet E5; Division 26	EA	$	1	$

Item No.	Item Description	Contract Document Reference	Unit	Unit Cost	Quantity	Total Cost
B16	Supply and Install (3)#1 CU, (1)#8 CU Ground	Facility B Plan Sheet E2-2; Division 26	LF	$	480	$
B17	Supply and Install 2 1/2" PVC, (3)#1 CU, (1)#8 CU Ground	Facility B Plan Sheet E2-2; Division 26	LF	$	200	$
B18	Supply and Install 4" PVC	Facility B Plan Sheet E2-2; Division 26	LF	$	600	$
B19	Supply and Install (4)#1 CU, (1)#6CU Ground	Facility B Plan Sheet E2-2; Division 26	LF	$	10	$
B20	Supply and Install 2" PVC	Facility B Plan Sheet E2-2; Division 26	LF	$	450	$
B21	Supply and Install (3) #10 CU	Facility B Plan Sheet E2-2; Division 26	LF	$	675	$
B22	Supply and Install Site Lighting (including, but not limited to: LED Lamps, Light Pole with Security Camera Housing, and Base)	Facility B Plan Sheets E2-2 and E6; Division 26	EA	$	5	$
				Bid Item No. B2 - Electrical Site Improvements (Total Cost Must Equal Contractor's Proposal)		**$**
BID ITEM NO. B3 - PHHWCF REINFORCED CONCRETE FOUNDATION SYSTEM						
B23	Construct RC Slab-On-Grade (5-inch thk.)	Facility B Plan Sheets S4 and S8; Division 03	SF	$	5790	$
B24	Construct RC Slab-On-Grade (12-inch thk.)	Facility B Plan Sheets S4 and S8; Division 03	SF	$	1015	$
B25	Construct RC CIDH Pile (2-3' Diameter/6.5-7.5' Depth Per Plan)	Facility B Plan Sheets S4 and S11; 31 6300 - Bored Piles	LF	$	60	$
				Bid Item No. B3 - PHHWCF Reinforced Concrete Foundation System (Total Cost Must Equal Contractor's Proposal)		**$**
BID ITEM NO. B4 - PHHWCF ASPHALT PAVEMENT AND STRIPING						
B26	Construct Asphalt Pavement Roadway (6-inch thk.)	Facility B Plan Sheets C2 and C3-4; 32 1216 - Asphalt Paving	SF	$	10385	$
B27	Construct New PHHWCF Asphalt Pavement (4-inch thk.)	Facility B Plan Sheets C2, C3-1, C3-2 and C3-3; 32 1216 - Asphalt Paving	SF	$	78995	$

Item No.	Item Description	Contract Document Reference	Unit	Unit Cost	Quantity	Total Cost
B28	Apply Thermoplastic Striping to Asphalt Pavement Per Plan	Facility B Plan Sheet C11; 32 1723 - Pavement Markings	LS	$	1	$
				Bid Item No. B4 - PHHWCF Asphalt Pavement and Striping (Total Cost Must Equal Contractor's Proposal)		**$**
BID ITEM NO. B5 - PHHWCF SITE DRAINAGE IMPROVEMENTS						
B29	Construct Asphalt Drainage Swale (4-inch thk.)	Facility B Plan Sheet C7 - Detail Y; 32 1216 - Asphalt Paving	SF	$	2160	$
B30	Construct RC Driveway & Bench Crossing (6-inch thk.)	Facility B Plan Sheet C7 - Details W and X; 32 1600 - Curbs, Gutters, Sidewalks, and Driveways	SF	$	3075	$
B31	Construct Reinforced Concrete V-Ditch Outlet Structure (6-inch thk.)	Facility B Plan Sheet C7 - Detail W; Division 03	SF	$	105	$
B32	Scarify upper 6" below Asphalt Drainage Swale and V-Ditch Outlet and Recompact to 90% RC	Facility B Plan Sheet C3-6; 31 2300 - Earthwork	SF	$	2265	$
B33	Scarify upper 6" below RC Driveway & Bench Crossing and Recompact to 95% RC	Facility B Plan Sheets C3-4 and C3-6; 31 2300 - Earthwork	SF	$	3075	$
B34	Construct Concrete Caltrans Type A-2 Curb	Facility B Plan Sheet C7 - Detail AA; 32 1600 - Curbs, Gutters, Sidewalks, and Driveways	LF	$	52	$
				Bid Item No. B5 - PHHWCF Site Drainage Improvements (Total Cost Must Equal Contractor's Proposal)		**$**
BID ITEM NO. B6 - PHHWCF STRUCTURAL STEEL AND ROOF PANEL						
B35	Supply and Install Structural Steel Framing for Shade Structure	Facility B Plan Sheets S4, S5, and S6; 05 1200 - Structural Steel	LS	$	1	$
B36	Supply and Install Steel Roof Deck	Facility B Plan Sheets S5 and S10; 05 3000 - Metal Decking	SF	$	2800	$
B37	Supply and Install Metal Roof Panels	Facility B Plan Sheets S5 and S10; 07 4113 - Metal Roof Panels	SF	$	2800	$

Item No.	Item Description	Contract Document Reference	Unit	Unit Cost	Quantity	Total Cost
B38	Supply and Install 4" Dia. Steel Pipe Bollards	Facility B Plan Sheet C10 - Detail DD; 32 3913 - Manufactured Metal Bollards	EA	$	7	$
B39	Supply and Install Roof Trim, Flashing, Gutters, & Downspouts	Facility B Plan Sheets S5 and S6	LS	$	1	$
				Bid Item No. B6 - PHHWCF Structural Steel and Roof Panel (Total Cost Must Equal Contractor's Proposal)		**$**
BID ITEM NO. B7 - PHHWCF ELECTRICAL AND LIGHTING SYSTEMS						
B40	Furnish and Install Electrical Wiring Devices Within Permanent Household Hazardous Waste Collection Facility, including: devices, boxes, wall plates, safety switches, nameplates, and testing	Facility B Plan Sheets E3 and E4; 26 2726 – Wiring Devices	LS	$	1	$
B41	Furnish and Install Interior Lighting System Within Permanent Household Hazardous Waste Collection Facility, including but not limited to: LED fixtures, lamps, drivers, lighting control system, raceways, boxes, panels, cable, circuit breakers, supports, testing, and nameplates	Facility B Plan Sheet E4; 26 0916 – Control Equipment Accessories; 26 0943 – Low Voltage Lighting Control System; 26 0500 – Interior and Exterior Lighting	LS	$	1	$
B42	Furnish and Install Structure Grounding and Lightning Protection System for Permanent Household Hazardous Waste Collection Facility.	Facility B Plan Sheet E3; 26 0526 – Grounding and Bonding for Electrical Systems; 26 4113 – Lightning Protection System	LS	$	1	$
B43	Provide manufacturer operation and maintenance training to County staff for Lighting Control System	26 0943 – Low Voltage Lighting Control System	LS	$	1	$
				Bid Item No. B7 - PHHWCF Electrical and Lighting Systems (Total Cost Must Equal Contractor's Proposal)		**$**
BID ITEM NO. B8 - PHHWCF FENCING AND GATES						
B44	Supply and Install 6'H Perimeter Fencing & Related Accessories	Facility B Plan Sheets A1 and C10; 32 3100 - Fences and Gates	LF	$	235	$

Item No.	Item Description	Contract Document Reference	Unit	Unit Cost	Quantity	Total Cost
B45	Supply and Install 14'W Rolling Gates & Related Accessories	Facility B Plan Sheets A1 and C10; 32 3100 - Fences and Gates	EA	$	2	$
B46	Supply and Install 20'W Rolling Gate & Related Accessories	Facility B Plan Sheets A1 and C10; 32 3100 - Fences and Gates	EA	$	1	$
B47	Supply and Install 4'W Emergency Exit Swinging Gates & Related Accessories	Facility B Plan Sheets A1 and C10; 32 3100 - Fences and Gates	EA	$	2	$
				Bid Item No. B8 - PHHWCF Fencing and Gates (Total Cost Must Equal Contractor's Proposal)		**$**
BID ITEM NO. B9 - PHHWCF ACCESSORY STRUCTURES						
B48	Structural Design and Report for Chemical Storage Module	Facility B Plan Sheet A3; 13 4200 - Building Modules	LS	$	1	$
B49	Supply and Install Chemical Storage Module w/ Dry Chem Fire Suppression System and Electrical Wiring (24.5'Lx8.5'Wx10'H)	Facility B Plan Sheet A3; 13 4200 - Building Modules	EA	$	2	$
B50	Supply and Install Steel Loading Ramp	Facility B Plan Sheet A3; 13 4200 - Building Modules	EA	$	4	$
B51	Provide manufacturer operation and maintenance training to County staff for Chemical Storage Module Dry Chem Fire Suppression System	Facility B Plan Sheet A3; 13 4200 - Building Modules	LS	$	1	$
B52	Supply and Install Office/Breakroom Conex Box w/ Electrical Upgrades (20'Lx8'Wx8.5'H)	Facility B Plan Sheet A4; 13 2200 - Office Shelters and Booths	EA	$	1	$
B53	Supply and Install Supply Storage Conex Box w/ Two (2) 6' Wide Corrugated Steel Roll-Up Doors (20'Lx8'Wx8.5'H)	Facility B Plan Sheet A4; 13 3423 - Fabricated Structures	EA	$	1	$
B54	Structural Design and Report for Pre-Engineered Metal Canopy Structure	Facility B Plan Sheet A4; 13 2200 - Office Shelters and Booths	LS	$	1	$
B55	Supply and Install Pre-Engineered Metal Canopy Structure (20'Lx20'Wx16'H)	Facility B Plan Sheet A5; 10 7316 - Canopies	EA	$	1	$

Item No.	Item Description	Contract Document Reference	Unit	Unit Cost	Quantity	Total Cost
					Bid Item No. B9 - PHHWCF Accessory Structures (Total Cost Must Equal Contractor's Proposal)	**$**
					PROJECT TOTAL COST (SUM OF ADMINISTRATIVE BID ITEMS, FACILITY A - FMF BID ITEMS, AND FACILITY B - PHHWCF BID ITEMS) (TOTAL COST MUST EQUAL CONTRACTOR'S PROPOSAL)	**$**

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Contractor's Signature
Date

END OF SECTION 01 2900

SPECIFICATIONS – DETAILED PROVISIONS

SECTION 01 3100: PROJECT MANAGEMENT AND COORDINATION

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SECTION 01 3100
PROJECT MANAGEMENT AND COORDINATION

PART 1 GENERAL

1.01 SUMMARY

A. Section includes the following:

1. Project coordination.
2. Coordination drawings.
3. Informational submittals.
4. Pre-construction meeting.
5. Pre-installation meetings.
6. Weekly progress meetings.
7. Requests for Information (RFI).
8. Requests for Change (RFC).
9. Schedule for forms.

1.02 PROJECT COORDINATION

A. General: Contractor shall coordinate construction activities to assure efficient and orderly performance of the Work and avoidance of interference with County landfill operations and customers. Coordinate construction activities included in different Sections of the Detailed Provisions that depend on each other for proper installation, connection, and operation.

1. Schedule construction operations in sequence required to obtain the best results where installation of one part of the Work depends on installation of other components, before or after its own installation.
2. Coordinate installation of different components to ensure maximum performance and accessibility for required maintenance, service, and repair.
3. Make adequate provisions to accommodate items scheduled for later installation.

B. Lost Time Avoidance:

1. Coordinate with crews and work areas to reduce and eliminate lost time.

C. Utilities:

1. Coordinate construction activities with utility service providers required for performance of the Work.

D. Administrative Procedures: Contractor shall coordinate scheduling and timing of required administrative procedures with other construction activities to avoid conflicts and to ensure orderly progress of the Work. Such administrative activities include, but are not limited to, the following:

1. Preparation and maintenance of Contractor's Construction Schedule.
2. Preparation of the Schedule of Values.
3. Installation and removal of temporary facilities and controls.
4. Delivery and processing of submittals.
5. Progress meetings.
6. Pre-construction, pre-installation, and weekly project meetings.
7. Startup and adjustment of systems.
8. Project closeout activities.

E. Contractor shall be responsible for completion, and administration of required forms.
   1. The County will provide required and suggested forms and formats during and after the Pre-Construction Meeting.

F. Formats not prescribed by the County may be of the Contractor's own design, subject to the following:
   1. Contractor-designed forms shall use Arial typeface, eleven (11) point type size, and shall be double-sided printed.
   2. Submit draft forms for review and approval by the County.

1.03 COORDINATION DRAWINGS

A. General: Prepare coordination drawings according to requirements in individual Detailed Provisions Sections, where installation is not completely shown on Shop Drawings, where limited space availability necessitates coordination, or if coordination is required to facilitate integration of products and materials fabricated or installed by more than one (1) entity.
   1. Content: Project-specific information, drawn accurately to a scale large enough to indicate and resolve conflicts. Do not base coordination drawings on standard printed data. Include the following information, as applicable:
      a. Indicate functional and spatial relationships of components of architectural, structural, civil, mechanical, and electrical systems.
      b. Indicate dimensions shown on the Drawings. Specifically, note dimensions that appear to be in conflict with submitted equipment and minimum clearance requirements. Provide alternate sketches to County indicating proposed resolution of such conflicts. Minor dimension changes and difficult installations will not be considered changes to the Contract.

B. Coordination Drawings Shall Depict:
   1. Equipment: Lighting, electrical panels, and any other equipment with particular clearance requirements or subject to interferences with other equipment or features of the adjacent mechanical, electrical, civil, structural or architectural systems.

2. Utility Ducts and Lines: Mechanical ductwork, electrical conduits and junction boxes, water lines, sewer lines, telecommunications lines, storm drain lines, fire protections systems, alarm system lines, hydraulic lines, low voltage system lines, building process system lines, pneumatic pressure lines and other ducts, lines, pipes, and conduits connecting components of utility systems.
3. Building and Site Features: Civil, structural and architectural features including all doors that affect the routing, placement or mounting of utility equipment, ducts, or lines.
4. Structural Penetrations: Indicate penetrations and openings required for all disciplines.
5. Slab Edge and Embedded Items: Indicate slab edge locations and sizes and locations of embedded items for metal fabrications, sleeves, anchor bolts, bearing plates, angles, door floor closers, slab depressions for floor finishes, curbs and housekeeping pads, and similar items.
6. Review: County will review coordination drawings to confirm that the Work is being coordinated, but not for the details of the coordination, which are the Contractor's responsibility.

1.04 PRE-CONSTRUCTION MEETING

A. Schedule:
   1. The County will schedule the Pre-Construction Meeting upon the issuance of a Notice to Proceed for each mobilization that takes place.
   2. The meeting shall take place within a week of the construction start date. The current site conditions, scope of work, landfill rules, and any other pertinent project specific details will be discussed at this meeting. This is discussed further in the following section.

B. Purpose and Agenda: Discuss items of significance that could affect progress, including, but not limited to the following:
   1. Establish lines of communication at the Project working level. Designate key personnel and their duties.
   2. Discuss and review administrative requirements of the Contract.
   3. Review forms required to be used by the Contractor in administration of the Work.
   4. Review and discuss design intent, user and concurrent operations issues, and permitting issues including requirements of authorities having jurisdiction.
   5. Definition of and interpretation of roles, and responsibilities in performance of the Contract. County to provide project management organizational chart.
   6. Review and discuss Contract Documents including Project Drawings and Detailed Provisions.
   7. Review and discuss site access, security and procedural issues.

8. Coordinate safety activities, including performance of the required Contractor's Health and Safety Plan.
9. Coordinate mobilization activities.
10. Tentative construction schedule and phasing of Work.
11. Critical Work sequencing and long-lead items.
12. Submittal procedures.
13. Procedures for processing field decisions, RFIs, and Change Orders.
14. Procedures for inspection, testing, and start-up.
15. Procedures for processing Applications for Payment.
16. Contractor shall be issued four (4) complete copies of the Contract Documents (which includes four (4) full-sized sets of Project Drawings and four (4) half-sized sets of Project Drawings).
17. Preparation of record documents.
18. Work restrictions and working hours.
19. Procedures for disruptions and shutdowns.
20. Construction waste management and recycling.
21. Staging and material storage areas.
22. Equipment and material deliveries.

C. Notification:
   1. The County will notify the Contractor and required attendees not less than three (3) Calendar Days in advance of the proposed meeting time.

D. Required Attendees:
   1. County – Project Manager, Resident Engineer and Safety Representative.
   2. Contractor – Contractor's Representative, project manager, superintendent, safety officer, major Subcontractors, and other individuals involved in the execution of the Work.

E. Meeting Minutes:
   1. County will prepare and distribute the minutes from the Pre-Construction Meeting. Minutes will record significant meeting discussions, agreements, and disagreements, including required corrective measures and actions. Minutes shall be distributed to each party present.

F. Authorities having jurisdiction may require their own pre-construction meeting with the Contractor and the County.
   1. Refer to individual permits for preconstruction meeting requirements.
   2. Contractor is responsible for arranging for these meetings.

1.05 PRE-INSTALLATION MEETINGS

A. Pre-installation meetings will be scheduled for various portions of the Work as the Work progresses.

B. The agenda of each pre-installation meeting shall include the following:

1. Project conditions, including anticipated temperature and weather conditions, readiness of the substrate for installation; and project-specific issues affecting the Work.
2. Installation schedule, sequencing, and coordination with Work of other trades.
3. Installation, inspection, and testing procedures.
4. Quality assurance procedures; specifically Contractor accommodation of inspections of the Work of the relevant Detailed Provisions Section and other quality expectations.
5. Required performance results.
6. Warranty requirements.
7. The following is a partial list of systems, assemblies and products for which pre-installation meetings are required:
    a. Earthwork (multiple meetings as necessary).
    a. Cast-in-place concrete work (multiple meetings as necessary).
    b. Others as determined by the County.

C. Required Attendees:

1. County –Resident Engineer and inspection staff.
2. Contractor – Project manager, superintendent, safety officer, major Subcontractors, and other individuals involved in the execution of the Work.

D. Meeting Minutes:

1. County will prepare and distribute the minutes from the Pre-Installation Meeting. Minutes will record significant meeting discussions, agreements, and disagreements, including required corrective measures and actions. Minutes shall be distributed to each party present.

E. Do not proceed with installation if the meeting cannot be successfully concluded. Initiate whatever actions are necessary to resolve impediments to performance of the Work and reconvene the meeting at earliest feasible date.

F. If needed and schedule allows, installation meetings will be scheduled to occur immediately following Weekly Project Meetings.

1.06 WEEKLY PROGRESS MEETINGS

A. Weekly Progress Meetings will be directed, and led by the County.

B. The County will prepare agenda, coordinate, convene, and arrange Weekly Progress Meetings.

C. Purpose:

1. Maintain and improve lines of communication.
2. Demonstrate performance of administrative requirements of the Contract.
3. Complete and maintain forms required to be used by the Contractor in administration of the Work.
4. Review and discuss project schedule, work progress, and work scheduled for next week.
5. Review and discuss design intent, user and concurrent operations issues, work quality issues, and permitting issues including requirements of Authorities Having Jurisdiction.
6. Review and discuss specific Contract Documents including Project Drawings and Detailed Provisions.
7. Maintain and improve site access, security and procedural issues.
8. Review and improve ongoing safety activities including performance of the required Contractor's Health and Safety Plan.

D. Contractor to attend weekly project meetings; be prepared to discuss the agenda items identified in this Section.

E. Contractor to follow the direction of the County in preparation for weekly meetings, including, but not limited to:

1. Ensure the Contractor's project manager, superintendent, safety officer, representatives of Subcontractors, and others are present in accordance with provisions of this Section.
2. Ensure required attendees are prepared, and familiar with the Project and the Project Schedule.
3. Coordinate the time and place of the weekly meetings with the County. All weekly meetings will take place using County offices.
4. Ensure the County has been consulted in advance of the meeting with respect to the proposed attendees, and their relationship to the Project.
5. Submit Project Schedule updates to reflect Work progress.
6. Submit Weekly Reports:
    a. Include a narrative describing the Work accomplished the preceding week.
    a. Identify the completion of project milestones and Work activities.
    b. Indicate problems and resolution of problems occurring during the week.

F. Required Attendees:

1. County – Project manager and Resident Engineer.

2. Contractor – Project manager, superintendent, safety officer, and others as requested by the County.
3. Subcontractors and suppliers pertinent to the agenda.
4. Representatives of authorities having jurisdiction, as needed.

G. Agenda for Weekly Progress Meetings: Review and correct or approve minutes of previous progress meeting. Review other items of significance that could affect progress. Include topics for discussion as appropriate to status of each Work item.

1. Contractor's Construction Schedule: Review progress since the last meeting. Determine whether each activity is on time, ahead of schedule, or behind schedule, in relation to Contractor's construction schedule. Determine how construction behind schedule will be expedited; secure commitments from parties involved to do so. Discuss whether schedule revisions are required to ensure that current and subsequent activities will be completed within the Contract Time.
    a. Review schedule for next period.
2. Contractor shall prepare three-week look ahead schedules for review at each progress meeting. The three-week look ahead schedules are not an acceptable substitute for CPM schedule updates that must be submitted with Contractor's monthly partial payment requests.
3. Be prepared to discuss the following, to the extent deemed appropriate by the County:
    a. Status of submittals and scheduled equipment/material deliveries.
    b. Safety Report by the Contractor designated safety representative.
    c. Weekend or extended hours work request, if any is requested by the Contractor for the coming week.
    d. Review and approve minutes or record of previous meeting.
    e. Review work progress during the preceding week.
    f. Note field observations, problems and decisions.
    g. Identify problems that impede planned progress.
    h. Coordinate activities to the County's satisfaction, to permit the Project Schedule to be maintained, or improved.
    i. Review off-site fabrication processes, and status.
    j. Develop corrective measures, and procedures to maintain or improve the Project Schedule.
    k. Discuss progress of preparation and maintenance of administrative documents required in accordance with the Contract Documents.
    l. Discuss updates to the Project Schedule in accordance with Detailed Provisions Section 01 3200 – Construction Progress Documentation.

m. Review planned Work identified in the Weekly Look Ahead Schedule in accordance with Detailed Provisions Section 01 3200 – Construction Progress Documentation.

n. Review impacts of Changes on the Project Schedule.

o. Discuss status, and action related to Changes.

p. Discuss additional scope, costs, schedule impacts, deviations, substitutions and other Changes.

q. Review safety measures, including compliance with the required Contractor's Health and Safety Plan, and cooperation with governmental agencies, and authorities having jurisdiction.

r. Maintenance and improvement of quality, work standards, and competence.

s. Resolution of construction non-conformities.

t. Review of status logs of submittals, RFIs, and RFCs.

H. Meeting Minutes:

1. County will prepare and distribute minutes from each Weekly Project Meeting. Minutes shall record significant discussions and agreements achieved during the meeting.

I. It is noted that inspection will not be provided during scheduled progress meetings. Contractor is not permitted to perform work that requires inspection (as determined by County) during the progress meetings. Contractor shall adjust their schedule to accommodate progress meetings and no additional compensation will be provided for same. Contractor's bid shall consider County's requirements for weekly progress meetings. County, at its sole discretion, may decrease the frequency of progress meetings if deemed appropriate.

1.07 REQUEST FOR INFORMATION (RFI)

A. Immediately on discovery of the need for additional information of interpretation of the Contract Documents, Contractor shall prepare and submit an RFI in the form specified. A sample RFI form is included at the end of this Detailed Provisions Section.

1. County will return RFIs submitted to the County by other entities controlled by Contractor with no response.

2. Coordinate and submit RFIs in a prompt manner so as to avoid delays in Contractor's Work or Work of Subcontractors.

3. County will not review the Contractor's RFIs that in fact Requests for Changes (RFCs), as determined by the County. In such cases, Contractor will be required to resubmit on the appropriate RFC form.

B. Content of the RFI: Include a detailed, legible description of item needing information or interpretation and the following:

1. Project Name.

2. Date.
3. Name of Contractor
4. RFI number, numbered sequentially for the project.
5. RFI subject.
6. Detailed Provisions Section number and title and related paragraphs, as appropriate.
7. Drawing number and detail references, as appropriate.
8. Field dimensions and conditions, as appropriate.
9. Contractor's suggested resolution. If Contractor's solution(s) impacts the Contract Time or the Contract Price, Contractor shall state impact in the RFI.
10. Contractor's signature.
11. Attachments: Include sketches, descriptions, measurements, photos, Product Data, Shop Drawings, and other information necessary to fully describe items needing interpretation.

C. RFI Forms:

1. Software-generated form with substantially the same content as indicated above, acceptable to the County.

D. County's Action:

1. County will review each RFI, determine action required, and respond. Allow seven (7) Working Days for County response for each RFI. RFIs received by the County after 1:00 p.m. PST will be considered as received the following Working Day.
2. The following RFIs will be returned without action:
    a. Requests for approval of submittals.
    a. Requests for approval of substitutions.
    b. Requests for coordination information already indicated in the Contract Documents.
    c. Requests for adjustments in the Contract Time or the Contract Price.
    d. Requests for interpretation of County's actions on submittals.
    e. Incomplete RFIs or inaccurately prepared RFIs.
3. County's action may include a request for additional information, in which case County's time for response will date from time of receipt of additional information.
4. County's action on RFIs that may result in a change to the Contract Time or the Contract Price may be eligible for Contractor to submit a Change Proposal.
    a. If Contractor believes the RFI response warrants change in the Contract Time or the Contract Price, notify County in writing within ten (10) days of receipt of the RFI response.

E. RFI Log: Contractor shall prepare, maintain, and submit a tabular log of RFIs organized by the RFI number. Submit log weekly, if updates have occurred during the previous week. Software log shall not contain less than the following:

1. Project name.
2. Name and address of Contractor.
3. Name and address of County.
4. RFI number including RFIs that were dropped and not submitted.
5. RFI description.
6. Date the RFI was submitted.
7. Date County's response was received.

F. Upon receipt of County's action, Contractor shall update the RFI log and immediately distribute the RFI response to affected parties. Review response and notify County within seven (7) Calendar Days if Contractor disagrees with response.

1.08 RFI MEETINGS

A. RFI Meetings will be directed, and led by the County.

1. RFI responses are prepared by the County in writing and are binding.
2. Verbal responses and discussions about RFIs are unofficial, non-final, and non-binding on the parties.
3. If needed, RFI meetings will be scheduled to occur immediately following the Weekly Project Meeting.

B. Purpose:

1. Maintain and improve lines of communication about Contractor-initiated questions, and questions from Subcontractors.
2. Prioritize RFI responses to the Contractor.
3. Review and discuss specific Contract Documents including Project Drawings and Detailed Provisions.

C. Attend RFI meetings; be prepared to discuss agenda items identified in this Detailed Provisions Section.

D. Follow the direction of the County in preparation for RFI meetings, including but not limited to:

1. Ensure that the persons responsible for preparation of RFIs are present.
2. Ensure that required attendees are prepared to discuss the RFIs with the County and the County's representatives, in detail.

E. Required Attendees:

1. County –

a. Project Manager,

b. Resident Engineer, and

c. Other individuals or entities involved in the execution of the Work.

2. Contractor –

a. Contractor's Representative,

b. Project Manager,

c. Superintendent,

d. Safety Officer,

e. Major Subcontractors, and

f. Other individuals involved in the execution of the Work.

F. Agenda for RFI Meetings:

1. Review of previous RFI responses, and actions taken.

2. Review and discussion of current RFIs, and proposed responses by the County, when available.

3. Discussion of forthcoming RFIs anticipated by the Contractor, when available.

G. Meeting Minutes:

1. The County will prepare and distribute minutes for each RFI Meeting if such minutes are deemed necessary by the County.

1.09 REQUEST FOR CHANGE (RFC)

A. Contractor shall submit a Request for Change (RFC) when Contractor proposes a change in the Contract requirements. All change requests shall be submitted on the RFC form included at the end of this Detailed Provisions Section. As shown therein, Contractor is required to fully describe the benefit(s) to the County, benefit(s) to the Contractor, the cost and/or schedule impact(s) associated with the requested change, along with whether or not Contractor proposes or requires a Contract Change Order for implementing the change.

B. As noted on the RFC form, it is understood that certain RFCs can be responded to promptly, with minimal expenditures required by County. It is also understood that other RFCs require significant expenditures by County in order to properly evaluate and respond to Contractor's RFC. For those RFCs that fall in the latter category, County will provide an estimate (time and cost) to Contractor as an initial response to RFC. Contractor may then elect to have County proceed with evaluating Contractor's RFC (with estimated value deducted from Contractor's Contract with the County), or elect to withdraw Contractor's RFC.

1.10 DOCUMENT FORMATS

A. The County requires an original signed copy of every piece of written communication and submittals used in the Project.

1. Electronic submittals of documents must be followed up with the submittal of the original signed hardcopy to the County.

B. For documents created by the Contractor and/or its Subcontractors:

1. Text: Submit electronically in Microsoft Word, current version.
2. Tables: Submit electronically in Microsoft Excel, current version.
3. Schedules: Submit electronically in Microsoft Project, or approved equal along with an Adobe Portable Document Format (PDF) version.
4. Coordination Drawings: Submit electronically in AutoCAD, or approved equal along with an Adobe PDF version.
5. Figures and pictures: Submit as PDF or JPG files.
6. Cut sheets from catalogs, and similar items: Submit as PDF files.
7. Drawings: Submit as PDF files, except:
    a. Provide AutoCAD version of files when requested by the County.
8. For electronic files larger than ten (10) MB, supply the electronic version on a CD-ROM along with the hard copies.
9. Obtain prior approval from the County to submit an electronic version in a format other than those specified herein.

1.11 SUBMITTALS

A. Submittal Procedures: See Detailed Provisions Section 01 3300 for requirements for the mechanics and administration of the submittal process.

B. Contractor Staffing and Organization Chart:

1. Submit an Organization Chart showing the Contractor personnel and key points of contact with the County within two (2) weeks following the Contract Award.

C. Submit a list of Contractor's personnel and Subcontractors, to include their responsibilities and contact information within two (2) weeks following the Contract Award.

1. Include the Project Manager, Project Superintendent, and Safety Officer.
2. Provide telephone numbers with voice mail service, and e-mail addresses monitored daily for each designee of the Contractor.
3. Indicate emergency and after-hours contacts, and the means of reaching these people.
4. Update the list as approved by the County whenever changes in staffing may occur.

D. Subcontract List: Contractor shall prepare a written summary identifying individuals or firms proposed for each portion of the Work, including those who are to furnish

products or equipment fabricated to a special design. Include the following information in tabular form:

1. Name, address, e-mail and telephone number of entity performing subcontract or supplying products.
2. Number and title of related Detailed Provisions Section(s) covered by subcontract.
3. Drawing number and detail references, as appropriate, covered by subcontract.

E. Coordination Drawings:

1. Provide in accordance with the requirements of this Detailed Provisions Section.
2. Submit at least thirty (30) calendar days prior to start of any utility system Work and not later than one (1) week before the Pre-Installation Meeting.
3. County's review of the drawings will be to verify that coordination of the Work is being fully addressed and does not relieve the Contractor of the obligation to coordinate the Work and to anticipate and resolve conflicts and interferences.

PART 2 PRODUCTS – NOT USED

PART 3 EXECUTION – NOT USED

SAMPLE
CONTRACTOR'S REQUEST FOR INFORMATION (RFI) #_____

To (County):	
From (Contractor):	
Subject:	
Reference: Construction Drawing:	Detailed Provisions (Section and Page):
REQUEST	
Information is requested as follows:	
Information Requested By (Name):	**Date:**
Response Requested By (Date):	
Received by County (Date):	
RESPONSE	
Response to Information Request:	
Response By (Name):	**Date:**

SAMPLE
CONTRACTOR'S REQUEST FOR CHANGE (RFC) #_____

To (County):	
From (Contractor):	
Subject:	
Reference: Construction Drawing:	Detailed Provisions (Section and Page):
REQUEST	
The following change is requested:	
Change Requested By (Name):	**Date:**
Response Requested By (Date):	
Received by County (Date):	
Benefit to County:	
Benefit to Contractor:	
Cost and/or Schedule Impact:	
Change Order Required or Proposed? _____YES _____NO	
RESPONSE	
Response to Change Request (1) :	
Response By (Name):	**Date:**

(1) It is understood that certain RFCs can be responded to promptly, with minimal expenditures required by County. It is also understood that other RFCs require significant expenditures by County in order to properly evaluate and respond to Contractor's RFC. For those RFCs that fall in the latter category, County will provide an estimate (time and cost) to Contractor as an initial response to RFC. Contractor may then elect to have County proceed with evaluating Contractor's RFC (with estimated value deducted from Contractor's Contract with County), or elect to withdraw Contractor's RFC.

END OF SECTION 01 3100

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SPECIFICATIONS – DETAILED PROVISIONS

SECTION 01 3200: CONSTRUCTION PROGRESS DOCUMENTATION

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3.01 CONTRACTOR'S CONSTRUCTION SCHEDULE 7

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SECTION 01 3200
CONSTRUCTION PROGRESS DOCUMENTATION

PART 1 GENERAL

1.01 SUMMARY

A. Section includes administrative and procedural requirements for documenting the progress of construction during performance of the Work, including, but not limited to the following:

1. Contractor's construction schedule.
2. Construction schedule updating reports.

1.02 DEFINITIONS

A. Project Baseline Schedule:

1. A complete Project Baseline Schedule will be reviewed and commented on by the County, to ensure that there is sufficient detailed information and work planning activities in accordance with this Detailed Provisions Section.
2. The Project Baseline Schedule is required to be cost-loaded, resource-loaded, and Smart Activity ID – coded (Smart Activity IDs with a maximum of ten characters). The resource loading shall be accomplished by creating resource definitions of how many crews the Contractor and subcontractors will have working on specific activities. A narrative of the crew size and make up shall be submitted along with the Project Baseline Schedule.

B. Activity: A discrete part of a project that can be identified for planning, scheduling, monitoring, and controlling the construction project. Activities included in a construction schedule consume time and resources.

1. Critical Activity: An activity on the critical path that must start and finish on the planned early start and finish times.
2. Predecessor Activity: An activity that precedes another activity in the network.
3. Successor Activity: An activity that follows another activity in the network.

C. Critical Path: The longest connected chain of interdependent activities through the network schedule that establishes the minimum overall Project duration and contains no float.

D. Critical Path Method (CPM): A method of planning and scheduling a construction project where activities are arranged based on activity relationships. Network calculations determine when activities can be performed and the critical path of the Project.

E. Total Float: Time between the earliest start date, and the latest start date of an activity, or succession of dependent activities.

1. Float time is not for the exclusive use or benefit of either County or Contractor, but is a jointly owned, expiring Project resource available to both parties as needed to meet schedule milestones and Contract completion date.

F. Monthly Update Schedule: Actual current Project Schedule reflecting actual progress to date, changes to the Baseline Schedule, and Changes to the Work.

G. Project Schedule: The Project Baseline Schedule, inclusive of any subsequent schedule updates.

H. Weekly Look Ahead Schedule: Annotated, detailed version of the Monthly Update Schedule. Weekly Look Ahead Schedules shall be produced using the designated scheduling program from the Project Baseline Schedule. If the Contractor believes that additional detail is needed to show progress, then those activities shall be incorporated into the Monthly Update Schedule and described in the monthly narrative. The addition of activities during the course of the project shall not increase the existing contract duration unless approved by a Change Order.

I. Working Day: Schedules shall be developed using a five (5) day, eight (8) hour per day work week. Schedules shall use the level of effort counter for the activity type to track the total Calendar Days allowed in the contract. Submittals and other items of work that are required to sue Calendar Days will use an appropriate calendar.

1.03 COORDINATION

A. Coordinate Contractor's construction schedule with the Schedule of Values, submittal schedule, progress reports, payment requests, and other required schedules and reports.

1. Secure time commitments for performing critical elements of the Work from entities involved.

2. Coordinate each construction activity in the network with other activities and schedule them in proper sequence.

1.04 SUBMITTALS

A. Format for Submittals: Submit required submittals in the following format:

1. Working electronic copy of schedule file, where indicated.

2. Adobe Portable Document Format (PDF).

3. Four (4) color paper copies.

B. Startup Network Diagram: Of size required to display entire network for entire construction period. Show logic ties for activities.

C. Contractor's Project Baseline Schedule: Baseline schedule, of size required to display entire schedule for entire construction period.

1. Submit a working electronic copy of scheduled labeled to comply with requirements for submittals. Include type of schedule (baseline, updated, look ahead) and date on label.

2. Submit within fourteen (14) Calendar Days after Contract Award.

D. CPM Reports: Concurrent with CPM schedule, submit each of the following reports. Format for each activity in reports shall contain activity number, activity description, original duration, remaining duration, early start date, early finish date, late start date, late finish date, and total float in calendar days.

1. Activity Report: List of all activities sorted by activity number and then early start date, or actual start date if known.
2. Logic Report: List of preceding and succeeding activities for all activities, sorted in ascending order by activity number and early start date, or actual start date if known.
3. Total Float Report: List of activities sorted in ascending order of total float.
4. Earnings Report: Compilation of Contractor's total earnings from the Notice to Proceed until most recent Application for Payment.

E. Construction Schedule Updating Reports: Submit Monthly Update Schedule and Narrative with Applications for Payment.

F. Weekly Look Ahead Schedule and Narrative:

1. Submit an electronic version twenty-four (24) hours in advance of Weekly Progress Meeting in accordance with Detailed Provisions Section 01 3100 – Project Management and Coordination.

PART 2 PRODUCTS

2.01 CONTRACTOR'S CONSTRUCTION SCHEDULE – GENERAL

A. Time Frame: Extend schedule from date established for the Notice to Proceed to date of final completion.

1. Contract completion date shall not be changed by submission of a schedule that shows an early completion date, unless specifically authorized by Change Order.

B. Activities: Treat each separate area as a separate numbered activity for each main element of the Work. Comply with the following:

1. Activity Duration: Define activities so no construction activity is longer than twenty (20) days, unless specifically allowed by the County. Durations that are longer maybe used for the submittal development and review period, procurement of items, and fabrication activities.
2. Procurement Activities: Include procurement process activities for the long lead items and major items requiring a cycle of more than forty-five (45) days, as separate activities in schedule. Procurement cycle activities include, but are not limited to, submittals, approvals, purchasing, fabrication, inspection, testing, and delivery.
3. Submittal Review Time: Include review and resubmittal times in schedule as indicated in Detailed Provisions Section 01 3300 – Submittal Procedures.

Coordinate submittal review times in Contractor's construction schedule with submittal schedule.

4. Startup and Testing Time: Include no fewer than fifteen (15) days for startup and testing.
5. Substantial Completion: Allow time for County and Contractor to complete administrative procedures necessary for certification of Substantial Completion.
6. Punch List and Final Completion: Include not more than thirty (30) days for completion of punch list items and final completion.

C. Constraints: Include constraints and work restrictions indicated in the Contract Documents and as follows in schedule, and show how the sequence of the Work is affected.

1. Phasing: Arrange list of activities on schedule by phase.
2. Work Restrictions: Show the effect of the following items on the schedule:
   a. Coordination with utility company for electrical service.
   b. Use of site restrictions
   c. Seasonal variations
   d. Uninterruptible services.
3. Work Stages: Indicate important stages of construction for each major portion of the Work.

D. Milestones: Include milestones indicated in the Contract Documents in schedule, including, but not limited to, the Notice to Proceed, Substantial Completion, and final completion.

E. Upcoming Work Summary: Prepare summary report indicating activities scheduled to occur or commence prior to submittal of next schedule update. Summarize the following issues:

1. Unresolved issues.
2. Unanswered Requests for Information.
3. Rejected or unreturned submittals.
4. Notations on returned submittals.
5. Pending modifications affecting the Work and Contract Time.

F. Recovery Schedule: When periodic update indicates the Work is fourteen (14) or more Calendar Days behind the current approved schedule, submit a separate recovery schedule indicating means by which Contractor intends to regain compliance with the schedule.

G. Computer Scheduling Software: Prepare schedules using current version of Microsoft Project of software approved by the County that has been developed specifically to manage construction schedules.

2.02 CONTRACTOR'S CONSTRUCTION SCHEDULE (GANTT CHART)

A. Gantt-Chart Schedule: Submit a comprehensive, fully developed, horizontal, Gantt-chart type, Contractor's construction schedule within fourteen (14) Calendar Days of issuance of the Notice to Proceed.

B. Preparation: Indicate each significant construction activity separately. Identify first workday of each week with a continuous vertical line.

2.03 CONTRACTOR'S CONSTRUCTION SCHEDULE (CPM SCHEDULE)

A. General: Prepare network diagrams using AON (activity-on-node) format.

B. Startup Network Diagram: Submit diagram within fourteen (14) Calendar Days of issuance of the Notice to Proceed. Outline significant construction activities for the first sixty (60) days of construction. Include skeleton diagram for the remainder of the Work and a cash requirement prediction based on indicated activities.

C. CPM Schedule: Prepare Contractor's construction schedule using a time-scaled CPM network analysis diagram for the Work.

1. Develop network diagram in sufficient time to submit CPM schedule so it can be accepted for use no later than thirty (30) days after issuance of the Notice to Proceed.

    a. Failure to include any work item required for performance of this Contract shall not excuse Contractor from completing all work within applicable completion dates, regardless of County's approval of the schedule.

2. Establish procedures for monitoring and updating CPM schedule and for reporting progress. Coordinate procedures with progress meeting and payment request dates.

3. Use "one workday" as the unit of time for individual activities. Indicate nonworking days and holidays incorporated into the schedule in order to coordinate with the Contract Time.

D. CPM Schedule Preparation: Prepare a list of all activities required to complete the Work. Using the startup network diagram, prepare a skeleton network to identify probable critical paths.

1. Activities: Indicate the estimated time duration, sequence requirements, and relationship of each activity in relation to other activities. Include estimated time frames for the following activities:

    a. Preparation and processing of submittals.

    b. Mobilization and demobilization.

    c. Purchase of materials.

    d. Delivery.

    e. Fabrication.

    f. Utility interruptions.

g. Installation.

h. Work by County that may affect or be affected by Contractor's activities.

i. Testing and start-up.

j. Punch list and final completion.

k. Activities occurring following final completion.

2. Critical Path Activities: Identify critical path activities, including those for interim completion dates. Scheduled start and completion dates shall be consistent with Contract milestone dates.

3. Processing: Process data to produce output data on a computer-drawn, time-scaled network. Revise data, reorganize activity sequences, and reproduce as often as necessary to produce the CPM schedule within the limitations of the Contract Time.

4. Format: Mark the critical path. Locate the critical path near center of network; locate paths with most float near the edges. Critical path will be continuous. If Contractor needs to show cure time for concrete or coatings a specific activity shall be added to show that duration with the appropriate calendar.

a. Sub networks on separate sheets are permissible for activities clearly off the critical path.

E. Contract Modifications: For each proposed contract modification and concurrent with its submission, prepare a time-impact analysis using a network fragment to demonstrate the effect of the proposed change on the overall project schedule.

F. Project Baseline Schedule: Prepare baseline network diagram form a sorted activity list indicating straight "early start-total float". Identify critical activities. Prepare tabulated reports showing the following:

1. Contractor or subcontractor and the Work of activity.

2. Description of activity.

3. Main events of activity.

4. Immediate preceding and succeeding activities.

5. Early and late start dates.

6. Early and late finish dates.

7. Activity duration in workdays.

8. Total float or slack time.

9. Average size of workforce.

10. Dollar value of activity (coordinated with the schedule of values).

G. Schedule Updates: Concurrent with making schedule updates, prepare tabulated reports showing the following:

1. Identification of activities that have changed.

2. Changes in early and late start dates.
3. Changes in early and late finish dates.
4. Changes in activity durations in workdays.
5. Changes in the critical path.
6. Changes in total float or slack time.
7. Changes in the Contract Time.

PART 3 EXECUTION

3.01 CONTRACTOR'S CONSTRUCTION SCHEDULE

A. Contractor's Construction Schedule Updating: At monthly intervals, update schedule to reflect actual construction progress and activities. Issue schedule one (1) week before each regularly scheduled progress meeting.

1. Revise schedule immediately after each meeting or other activity where revisions have been recognized or made. Issue updated schedule concurrently with the report of each such meeting.
2. Include a report with updated schedule that indicates every change, including, but not limited to, changes in logic, durations, actual starts and finishes, and activity durations.
3. As Work progresses, indicate final completion percentage for each activity.

B. Weekly Look Ahead Schedule: Annotated version of the Monthly Update Schedule that reflects work activities to be completed in the next three (3) week period, and coordinated with the work results in the preceding two (2) week period.

1. The Contractor shall create the Weekly Look Ahead Schedule from the Project Baseline Schedule scheduling software.
2. Submit weekly narrative describing impacts to and issues affecting the Project Baseline Schedule.
3. Excel spread sheets or bar graphs other than the annotated version of the Monthly Update Schedule will not be accepted.

C. Distribution: Distribute copies of approved schedule to County, subcontractors, testing and inspection firms, and other parties identified by the County with a need-to-know schedule responsibility.

1. When updates and/or revisions are made, distribute updated schedules to the same parties.

END OF SECTION 01 3200

SPECIFICATIONS – DETAILED PROVISIONS

SECTION 01 3300: SUBMITTAL PROCEDURES

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SECTION 01 3300
SUBMITTAL PROCEDURES

PART 1 GENERAL

1.01 SUMMARY

A. Section includes requirements for the submittal schedule and administrative and procedural requirements for submitting Shop Drawings, Product Data, Samples, and other submittals. The documenting the progress of construction during performance of the Work, including, but not limited to the following:

1. Contractor's construction schedule.
2. Construction schedule updating reports.

B. Related Contract Document Sections include, but are not limited to:

1. General Provisions.
2. Detailed Provisions Section 01 3200 – Construction Progress Documentation.
3. Detailed Provisions Section 01 7700 – Closeout Procedures.
4. Detailed Provisions Section 01 7823 – Operation and Maintenance Manuals.

1.02 DEFINITIONS

A. Action Submittals: Written and graphic information and physical samples that require County's responsive action.

B. Informational Submittals: Written and graphic information and physical samples that do not require County's responsive action. Submittals may be rejected for not complying with requirements.

1.03 ACTION SUBMITTALS

A. Submittal Schedule: Contractor shall submit a schedule of submittals, arranged in chronological order by dates required by construction schedule. Include time required for review, ordering, manufacturing, fabrication, and delivery when establishing dates. Include additional time required for making corrections or revisions to submittals noted by County and additional time for handling and reviewing submittals required by those corrections.

B. Construction Schedule: Within fourteen (14) calendar days after the Notice to Proceed notice, the Contractor shall submit a construction schedule providing the starting and completion dates of the various stages of the Work. The Contractor shall be prepared to discuss the construction schedule at the Pre-Construction Meeting. See Detailed Provisions Section 01 3200 – Construction Progress Documentation.

C. Schedule of Values or Lump Sum price breakdown: Within fourteen (14) calendar days after Contract Award, the Contractor shall submit a set of Schedule of Values or Lump

Sum price breakdown for progress payment purposes. See Detailed Provisions Section 01 2900 – Payment Procedures.

1.04 SUBMITTAL ADMINISTRATIVE REQUIREMENTS

A. County's Digital Data Files: Electronic copies of digital data files of the Project Drawings will be provided by County for Contractor's use in preparing submittals.

1. Upon request, County will furnish Contractor with digital data drawing files of the Project Drawings for use in preparing Shop Drawings.

a. County makes no representations as to the accuracy or completeness of digital data drawing files as they relate to the Project Drawings.

b. Contractor shall execute a data licensing agreement in the form of Agreement acceptable to the County.

B. Coordination: Coordinate preparation and processing of submittals with performance of construction activities.

1. Coordinate each submittal with fabrication, purchasing, testing, delivery, other submittals, and related activities that require sequential activity.

2. Coordinate transmittal of different types of submittals for related parts of the Work so processing will not be delayed because of need to review submittals concurrently for coordination.

a. The County reserves the right to withhold action on a submittal requiring coordination with other submittals until related submittals are received.

C. Processing Time: Allow time for submittal review, including time for resubmittals, as follows. Time for review shall commence on County's receipt of submittal. No extension of the Contract Time will be authorized because of failure to transmit submittals enough in advance of the Work to permit processing, including resubmittals.

1. Initial Review: Allow fourteen (14) calendar days for initial review of each submittal. Allow additional time if coordination with subsequent submittals is required. County will advise Contractor when a submittal being processed must be delayed for coordination.

2. Intermediate Review: If intermediate submittal is necessary, process it in same manner as initial submittal.

3. Resubmittal Review: Allow seven (7) calendar days for review of each resubmittal.

D. Paper Submittals: Place a permanent label or title block on each submittal item for identification.

1. Indicate name of firm or entity that prepared each submittal on label or title block.

2. Include the following information for processing and recording action taken:

a. Project name.

b. Date.

c. Name of County.

d. Name of Contractor.

e. Name of Subcontractor.

f. Name of supplier.

g. Name of manufacturer.

h. Submittal number or other unique identifier, including revision identifier.

1) Submittal number shall use Detailed Provisions Section number followed by a decimal point and then a sequential number (e.g., 013300.01). Resubmittals shall include an alphabetic suffix after another decimal point (e.g., 013300.01.A).

i. Number and title of appropriate Detailed Provisions Section.

j. Drawing number and detail references, as appropriate.

k. Location(s) where product is to be installed, as appropriate.

l. Other necessary identification.

3. Submittal Copies: Unless additional copies are required for final submittal, and unless County observes noncompliance with provisions in the Contract Documents, initial submittal may serve as final submittal.

4. Transmittal for Paper Submittals: Assemble each submittal individually and appropriately for transmittal and handling. Transmit each submittal using a transmittal form. County will return without review, submittals received from sources other than Contractor.

a. Transmittal Form for Paper Submittals: Provide locations on form for the following information:

1) Project name.

2) Date.

3) Destination (To:).

4) Source (From:).

5) Name and address of County.

6) Name of Contractor.

7) Name of firm or entity that prepared submittal.

8) Names of subcontractor, manufacturer, and supplier.

9) Category and type of submittal.

10) Submittal purpose and description.

11) Detailed Provisions Section number and title.

12) Detailed Provisions paragraph number or drawing designation and generic name for each of multiple items.

13) Drawing number and detail references, as appropriate.

14) Indication of full or partial submittal.

15) Transmittal number.

16) Submittal and transmittal distribution record.

17) Remarks.

18) Signature of transmitter.

E. Electronic Submittals: Identify and incorporate information in each electronic submittal file as follows:

1. Assemble complete submittal package into a single indexed file incorporating submittal requirements of a single Detailed Provisions Section and transmittal form with links enabling navigation to each item.
2. Name file with submittal number or other unique identifier, including revision identifier.
    a. File name shall use project identifier and Detailed Provisions Section number followed by a decimal point and then a sequential number (e.g., LC-013300.01). Resubmittals shall include an alphabetic suffix after another decimal point (e.g., LC-013300.01.A).
3. Provide means for insertion to permanently record Contractor's review and approval markings and action taken by County.
4. Transmittal Form for Electronic Submittals: Use electronic form acceptable to County, containing the following information:
    a. Project name.
    b. Date.
    c. Name and address of County.
    d. Name of Contractor.
    e. Name of firm or entity that prepared submittal.
    f. Names of subcontractor, manufacturer, and supplier.
    g. Category and type of submittal.
    h. Submittal purpose and description.
    i. Detailed Provisions Section number and title.
    j. Detailed Provisions paragraph number or drawing designation and generic name for each of multiple items.
    k. Drawing number and detail references, as appropriate.
    l. Location(s) where product is to be installed, as appropriate.
    m. Related physical samples submitted directly.
    n. Indication of full or partial submittal.

o. Transmittal number.

p. Submittal and transmittal distribution record.

q. Remarks.

r. Other necessary identification.

5. Metadata: Include the following information as keywords in the electronic submittal file metadata:

a. Project name.

b. Number and title of appropriate Detailed Provisions Section.

c. Manufacturer name.

d. Product name.

F. Options: Identify options requiring selection by County.

G. Deviations: Identify deviations from the Contract Documents on submittals.

H. Resubmittals: Make resubmittals in same form and number of copies as initial submittal.

1. Note date and content of previous submittal.

2. Note date and content of revision in label or title block and clearly indicate extent of revision.

3. Resubmit submittals until they receive County's acceptance.

I. Distribution: Furnish copies of final submittals to manufacturers, Subcontractors, suppliers, fabricators, installers, authorities having jurisdiction, and others as necessary for performance of construction activities. Show distribution on transmittal forms.

J. Use for Construction: Retain complete copies of submittals on Project Site. Use only final action submittals that are marked as being accepted by the County.

PART 2 PRODUCTS

2.01 SUBMITTAL PROCEDURES

A. General Submittal Procedure Requirements:

1. Action Submittals: Submit one (1) electronic copy and one (1) hard copy of each submittal unless otherwise indicated by the County.

2. Informational Submittals: Submit one (1) electronic copy and one (1) hard copy of each submittal unless otherwise indicated by the County.

3. Certificates and Certifications Submittals: Provide a statement that includes signature of entity responsible for preparing certification. Certificates and certifications shall be signed by an officer or other individual authorized to sign documents on behalf of that entity.

a. Provide a digital signature with digital certificate on electronically-submitted certificates and certifications where indicated.

b. Provide a notarized statement on original paper copy certificates and certifications where indicated.

B. Product Data: Collect information into a single submittal for each element of construction and type of product or equipment.

1. If information must be specially prepared for submittal because standard published data are not suitable for use, submit as Shop Drawings, not as Product Data.

2. Mark each copy of each submittal to show which products and options are applicable.

3. Include the following information, as applicable:

a. Manufacturer's catalog cuts.

b. Manufacturer's specifications.

c. Manufacturer's standard color charts.

d. Manufacturer statement of compliance with specified referenced standards.

e. Testing by recognized testing agency.

f. Application of testing agency labels and seals.

g. Notation of coordination requirements.

h. Availability and delivery time information.

4. For equipment, include the following in addition to the above, as applicable:

a. Wiring diagrams showing factory-installed wiring.

b. Printed performance curves.

c. Operational range diagrams.

d. Clearances required to other construction, if not indicated on accompanying Shop Drawings.

5. Submit Product Data before or concurrent with Samples.

C. Shop Drawings: Prepare Project-specific information, drawn accurately to scale. Do not use base Shop Drawings on reproductions of the Contract Documents or standard printed data.

1. Preparation: Fully illustrate requirements in the Contract Documents. Include the following information, as applicable:

a. Identification of products.

b. Schedules.

c. Compliance with specified standards.

d. Notation of coordination requirements.

e. Notation of dimensions established by field measurement.

f. Relationship and attachment to adjoining construction clearly indicated.

g. Seal and signature of professional engineer if specified.

2. Sheet Size: Except for templates, patterns, and similar full-size drawings, submit Shop Drawings on sheets at least 8-1/2 by 11 inches, but no larger than 30 by 42 inches.

D. Samples: Submit Samples for review of kind, color, pattern, and texture for a check of these characteristics with other elements and for a comparison of these characteristics between submittal and actual component as delivered and installed.

1. Transmit Samples that contain multiple, related components such as accessories together in one (1) submittal package.

2. Identification: Attach label on unexposed side of Samples that includes the following:

a. Generic description of Sample.

b. Product name and name of manufacturer.

c. Sample source.

d. Number and title of applicable Detailed Provisions Section.

3. Disposition: Maintain sets of approved Samples at the Project Location, available for quality-control comparisons throughout the course of construction activity. Sample sets may be used to determine Final Acceptance of construction associated with each set.

a. Samples that may be incorporated into the Work are indicated in individual Detailed Provisions Sections. Such Samples must be in an undamaged condition at time of use.

b. Samples not incorporated into the Work, or otherwise designated as County's property, are the property of Contractor.

4. Samples for Initial Selection: Submit manufacturer's color charts consisting of units or sections showing full range of colors, textures, and patterns available.

a. Number of Samples: Submit two (2) full sets of available choices where color, pattern, texture, or similar characteristics are required to be selected from manufacturer's product line. County will return submittal with options selected.

5. Samples for Verification: Submit full-size units or Samples of size indicated, prepared from same material to be used for the Work, cured and finish in manner specified, and physically identical with material or product proposed for use, and that show full range of color and texture variations expected. Samples include, but are not limited to, the following: partial sections of manufactured or fabricated components; small cuts or containers of materials; complete units of repetitively used materials; swatches showing color, texture, and pattern; color range sets; and components used for independent testing and inspection.

a. Number of Samples: Submit two (2) sets of Samples. County will retain one (1) Sample set; remainder will be returned. Mark up and retain one returned Sample set as a project record sample.

1) If variation in color, pattern, texture, or other characteristics is inherent in material or product represented by a Sample, submit at least three (3) sets of paired units that show approximate limits of variations.

E. Project Schedule: As required in individual Detailed Provisions Sections, prepare a written summary indicating types of products required for the Work and their intended location. Include the following information in tabular form:

1. Submit product schedule in the following format:

a. Four (4) paper copies of product schedule or list unless otherwise indicated. County will return three (3) copies.

F. Coordination Drawings Submittals: Comply with requirements specified in Detailed Provisions Section 01 3100 – Project Management and Coordination.

G. Contractor's Construction Schedule: Comply with requirements specified in Detailed Provisions Section 01 3200 – Construction Progress Documentation.

H. Test and Inspection Reports and Schedule of Tests and Inspections Submittals: Comply with requirements specified in Detailed Provisions Section 01 4300 – Quality Assurance and Control.

I. Project Closeout Submittals and Maintenance Material Submittals: Comply with requirements specified in Detailed Provisions Section 01 7700 – Closeout Procedures.

J. Operation and Maintenance Manual Submittals – Comply with requirements specified in Detailed Provisions Section 01 7823 – Operation and Maintenance Manuals.

K. Qualification Data: Prepare written information that demonstrates capabilities and experience of firm or person. Include lists of completed projects with project names and addresses, contact information of engineers and owners, and other information specified.

L. Welding Certificates: Prepare written certification that welding procedures and personnel comply with requirements in the Contract Documents. Submit record of Welding Procedure Specification and Procedure Qualification Record on AWS forms. Include names of firms and personnel certified.

M. Installer Certificates: Submit written statements on manufacturer's letterhead certifying that Installer complies with requirements in the Contract Documents and, where required, is authorized by manufacturer for this specific Project.

N. Manufacturer Certificates: Submit written statements on manufacturer's letterhead certifying that manufacturer complies with requirements in the Contract Documents. Include evidence of manufacturing experience where required.

O. Product Certificates: Submit written statements on manufacturer's letterhead certifying that product complies with requirements in the Contract Documents.

P. Material Certificates: Submit written statements on manufacturer's letterhead certifying that material complies with requirements in the Contract Documents.

Q. Material Test Reports: Submit reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting test results of material for compliance with requirements in the Contract Documents.

R. Product Test Reports: Submit written reports indicating that current product produced by manufacturer complies with requirements in the Contract Documents. Base reports on evaluation of tests performed by manufacturer and witnessed by a qualified testing agency, or on comprehensive tests performed by a qualified testing agency.

S. Research Reports: Submit written evidence, from a model code organization acceptable to authorities having jurisdiction, that product complies with building code in effect for the Project.

T. Schedule of Tests Inspections: Comply with requirements specified in Detailed Provisions Section 01 4300 – Quality Assurance and Control.

U. Preconstruction Test Reports: Submit reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of tests performed before installation of product, for compliance with performance requirements in the Contract Documents.

V. Compatibility Test Reports: Submit reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of compatibility tests performed before installation of product. Include written recommendations for primers and substrate preparation needed for adhesion.

W. Field Test Reports: Submit written reports indicating and interpreting results of field tests performed either during installation of product or after product is installed in its final location, for compliance with requirements in the Contract Documents.

X. Design Data: Prepare and submit written and graphic information, including, but not limited to, performance and design criteria, list of applicable codes and regulations, and calculations. Include list of assumptions and other performance and design criteria and a summary of loads. Include load diagrams if applicable. Provide name and version of software, if any, used for calculations. Include page numbers.

2.02 DELEGATED-DESIGN SERVICES

A. Performance and Design Criteria: Where professional design services or certifications by a design professional are specifically required of Contractor by the Contract Documents, provide products and systems complying with specific performance and design criteria indicated.

   1. If criteria indicated are not sufficient to perform services or certification required, submit a written request for additional information to the County.

B. Delegated-Design Services Certification: In addition to Shop Drawings, Product Data, and other required submittals, submit three (3) paper copies of certificate, signed and

sealed by the responsible design professional, for each product and system specifically assigned to Contractor to be designed or certified by a design professional.

1. Indicate that products and systems comply with performance and design criteria in the Contract Documents. Include list of codes, loads, and other factors used in performing these services.

PART 3 EXECUTION

3.01 CONTRACTOR'S REVIEW

A. Action and Informational Submittals: Review each submittal and check for coordination with other Work of the Contract and for compliance with the Contract Documents. Note corrections and field dimensions. Mark with approval stamp before submitting to County.

B. Project Closeout Submittals and Maintenance Material Submittals: Comply with requirements specified in Detailed Provisions Section 01 7700 – Closeout Procedures.

C. Approval Stamp: Stamp each submittal with a uniform, approval stamp. Include Project name and location, submittal number, Detailed Provisions Section title and number, name of reviewer, date of Contractor's approval, and statement certifying that submittal has been reviewed, checked, and approved for compliance with the Contract Documents. In the case of Shop Drawings, each sheet shall be so dated, signed and certified.

3.02 COUNTY'S ACTION

A. General: County will not review submittals that do not bear Contractor's approval stamp and will return them without action.

B. Action Submittals: County will review each submittal, make marks to indicate corrections or revisions required, and return it. County will mark each submittal appropriately to indicate action, as follows:

1. "ACCEPTED AS SUBMITTED" or "APPROVED AS NOTED" will require no formal revision and resubmission.
2. "REVISE AND RESUBMIT" or "REJECTED" will require the Contractor to revise said submittal and shall resubmit the required number of copies of said revised submittal to the County.

C. Informational Submittals: County will review each submittal and will not return it, or will return if it does not comply with requirements. County will forward each submittal to appropriate party.

D. Incomplete submittals are unacceptable, will be considered nonresponsive, and will be returned for resubmittal without review.

E. Submittals not required by the Contract Documents may not be reviewed and may be discarded.

F. Fabrication of an item shall commence only after the County has reviewed the submittal and returned copies to the Contractor marked either "ACCEPTED AS SUBMITTED" or "APPROVED AS NOTED". Corrections indicated on submittals shall be considered as changes necessary to meet the requirements of the Contract Documents and shall not be taken as the basis of claims for extra work.

END OF SECTION 01 3300

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SPECIFICATIONS – DETAILED PROVISIONS

SECTION 01 3500: HEALTH AND SAFETY

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SECTION 01 3500
HEALTH AND SAFETY

PART 1 GENERAL

1.01 SUMMARY

A. Section includes:

1. Contractor responsibilities for health and safety.
2. Governmental safety requirements.
3. Health, safety, and emergency response procedures.
4. Requirements for Contractor's Health and Safety Plan (HASP).

1.02 REFERENCES

A. Comply with requirements of Detailed Provisions Section 01 4200 – Reference Standards and Abbreviations and as listed herein. The following is a list of standards referenced and incorporated into this Section:

1. American Society of Safety Engineers (ASSE/SAFE):
   a. ASSE/SAFE A10.32 – Fall Protection
   b. ASSE/SAFE A10.34 – Protection of the Public on or Adjacent to Construction Sites.
   c. ASSE/SAFE Z359.1 – Safety Requirements for Personal Fall Arrest Systems, Subsystems and Components
2. American Society of Mechanical Engineers (ASME):
   a. ASME B30.22 – Articulating Boom Cranes
   b. ASME B30.3 – Tower Cranes
   c. ASME B30.5 – Mobile and Locomotive Cranes
   d. ASME B30.8 – Floating Cranes and Floating Derricks
3. California Code of Regulations (CCR): CCR Title 8 – Industrial Relations.
4. California Labor Code
5. Code of Federal Regulations:
   a. 10 CFR 20 – Standards for Protection against Radiation
   b. 29 CFR 1910 – Occupational Safety and Health Standards
   c. 29 CFR 1910.146 – Permit-required Confined Spaces
   d. 29 CFR 1910.147 – Control of Hazardous Energy (Lock Out/Tag Out)
   e. 29 CFR 1915 – Confined and Enclosed Spaces and Other Dangerous Atmospheres

f. 29 CFR 1919 – Gear Certification

g. 29 CFR 1926 – Safety and Health Regulations for Construction

h. 29 CFR 1926.1400 – Cranes and Derricks in Construction

i. 29 CFR 1926.16 – Rules of Construction.

j. 29 CFR 1926.450 – Scaffolds

k. 29 CFR 1926.500 – Fall Protection

6. Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA).
7. Federal Water Pollution Control Act (FWPCA).
8. HAZWOPER – 29 CFR 1910.120.
9. National Fire Protection Association (NFPA):
   a. NFPA 10 – Standard for Portable Fire Extinguishers
   b. NFPA 241 – Standard for Safeguarding Construction, Alteration, and Demolition Operations
   c. NFPA 306 – Standard for Control of Gas Hazards on Vessels
   d. NFPA 51B – Standard for Fire Prevention during Welding, Cutting, and Other Hot Work.
   e. NFPA 70 – National Electrical Code
   f. NFPA 70E – Standard for Electrical Safety in the Workplace
10. Toxic Substance Control Act.

1.03 DEFINITIONS

A. Competent Person – One who is capable of identifying existing and predictable hazards in surroundings or working conditions which are unsanitary, hazardous, or dangerous to employees, and who has authorization to take prompt corrective measures to eliminate them (OSHA 29 CFR 1926.32(f)).

B. Contactor's Safety Officer – Contractor's representative that shall be responsible for oversight and management of the Contractors project-specific Health and Safety Plan as well as Subcontractor compliance with requirements of the Health and Safety Plan. The representative shall also be responsible for public safety where the County and Contractor have joint use areas.

C. Medical Treatment – Treatment administered by a physician or by registered professional personnel under the standing orders of a physician. Medical treatment does not include first aid treatment even through provided by a physician or registered personnel.

D. Permit-Required Confined Space:

1. It contains or has potential to contain a hazardous atmosphere.

2. It contains material that has potential for engulfing an entrant.
3. It is shaped inside such that someone entering could be trapped or asphyxiated.
4. It contains other recognized serious safety or health hazards.
5. In general, all vaults, tanks, pipes, sumps, and manholes are typically considered permit-required confined spaces.

E. Potential Serious Accidents/Incidents – Accidental occurrences or near misses with the potential to be a serious accident/incident such as major equipment failures, contact with power lines, spills or personal contacts with excessive amounts of toxic or hazardous materials, slides, cave-ins, etc.

F. Recordable Injuries of Illnesses – Any work-related injury or illness that results in

1. Death, regardless of the time between the injury and death, or the length of the illness;
2. Days away from work (any time lost after day of injury/illness onset);
3. Restricted work;
4. Transfer to another job;
5. Medical treatment beyond first aid;
6. Loss of consciousness; or
7. A significant injury or illness diagnosed by a physician or other licensed health care professional, even if it did not result in 1 through 6 above.

G. SDS – Safety Data Sheets.

1.04 PERFORMANCE REQUIREMENTS

A. The Contractor has the responsibility to develop and provide its employees and Subcontractors with a project-specific Health and Safety Plan (HASP) prior to commencement of work on the Site. The Contractor is responsible for ensuring that all activities shall be conducted in such a manner so as to avoid hazards and injury or damage to any persons or properties. The safety provisions of Applicable Laws and of building and construction codes shall be observed. The safety of Contractor's employees, suppliers, manufacturers, Subcontractors, County employees and their representatives shall be the Contractor's responsibility.

B. The Contractor shall develop and maintain, for the duration of the Project, a safety program that will effectively incorporate and implement all required safety provisions. The Contractor shall appoint a Safety Officer who is qualified and authorized to supervise and enforce compliance with the safety program and HASP. At a minimum, the Safety Officer shall perform the following throughout the duration of the Project:

1. Conduct daily safety and health inspections and maintain a written log, which includes: area/operation inspected, date of inspection, identified hazards, recommended corrective actions, and estimated and actual dates of corrections.
2. Conduct mishap investigations and complete required reports. Maintain OSHA

Form 300 (Log of Work-Related Injuries and Illnesses) for Contractor and Subcontractors.

3. Maintain applicable safety reference material and display signage at the Project Location.
4. Attend Pre-Construction Meeting, Pre-Installation Meetings, Weekly Progress Meetings, and mandatory Weekly Safety Meetings.
5. Maintain a safety and health deficiency tracking system that monitors outstanding deficiencies until resolution.
6. Ensure Subcontractor compliance with safety and health requirements.
7. Maintain a list of hazardous materials on-site and their Safety Data Sheets.

Failure to perform the above duties will result in dismissal of the Project Superintendent and/or Safety Officer, and a Project Work stoppage. The Project Work stoppage will remain in effect pending approval of a suitable replacement.

C. The duty of the County to observe the progress of the Work does not include review or approval of the adequacy of the Contractor's HASP, safety program, Safety Officer, or any safety measures taken in, or near the Project Location.

D. The Contractor, as a part of its safety program, shall maintain an updated copy of the HASP at the Project Location. In addition, Contractor shall be responsible for providing all items necessary for health and safety, including, but not limited to: personal protective equipment, fall protection, dust control, wash stations, first-aid equipment, fire protection, decontamination equipment if required, and collection and disposal of rinse waters, in accordance with local, state, and federal regulations.

E. If death or serious injuries, illnesses, or serious damages are caused, the accident shall be reported immediately to the County and to others as directed in the HASP. In addition, the Contractor must promptly report in writing to the County all accidents or near misses whatsoever arising out of, or in connection with, the performance of the Work whether on, or adjacent to the Project Location, giving full details and statements of witnesses.

F. The Contractor shall make all reports as are required by any authority having jurisdiction and shall permit all safety inspections of the Work being performed under this Contract. Before proceeding with any construction Work, the Contractor shall take the necessary action to comply with all provisions for safety and accident prevention.

G. Contractor shall be responsible for conducting mandatory weekly safety meetings at the Project Location. The Contractor shall notify the County of the time of all meetings and allow the County to participate. Meetings shall reiterate all safety measures to be taken and shall discuss any violations committed and preventive measures to avoid subsequent violations. The Contractor shall provide the County with a copy of the meeting minutes showing project title, printed names and signatures of attendees, and list of topics discussed.

H. The Contractor shall be prepared to respond to potential injuries, illnesses or situations of imminent hazard to employees or public health or safety. Personnel from local

medical facilities shall be contacted in case of a medical need, and the quickest route to these facilities shall be determined in advance

I. Where necessary, trenches, pits, and other excavations shall be properly shored, braced and sloped to provide safe and acceptable working conditions. Any damage occurring from earth pressures, slides, cave-ins, or other causes due to failure to provide proper shoring or bracing, or through other negligence of fault of the Contractor, shall be repaired at the Contractor's sole expense. Reference is made to Section 5-5.1.1 "Accident Prevention" of the General Provisions, in which the Contractor is required to submit to the County a detailed plan showing the design or shoring, bracing, sloping of the sides of trenches, or other provisions to be made for protection of personnel during earthwork operations in advance of any such operation.

J. HASP shall include procedures that address the clean-up in the event of a spill of toxic or hazardous materials. Any accidental spills or spills that are produced during routine equipment maintenance shall be cleaned up by removing all contaminants and the contaminated soil, disposing of it at an approved facility, and replacing the removed contaminated soil volume with clean soil material. The County may require documentation showing proper containment and removal of any toxic, hazardous, or contaminated soil that the Contractor has introduced or produced on Site.

K. The County reserves the right to direct removal of any of the Contractor's employees or Subcontractors who are not adhering to or meeting the requirements of the landfill safety rules (See Appendix A – Landfill Site Safety Rules), law, HASP, or applicable regulations.

1.05 SUBMITTALS

A. Health and Safety Plan (HASP):

1. Submit a project-specific Health and Safety Plan (HASP) within fourteen (14) Calendar Days of the Award of Contract by the Riverside County Board of Supervisors, and prior to delivering equipment and commencing work at the Project Location.

2. County acceptance of the HASP does not release the Contractor of liability in the event of an accident or injury, nor does it place any liability on the County or any County employees.

3. HASP must, at a minimum, comply with all federal, state, and local requirements regarding all construction activities.

4. HASP shall address all demolition, earthwork, surveying, electrical, mechanical, building construction, and all other aspects of the Work through all phases of the Work.

5. The HASP shall be specific to the Project and include, at a minimum, the following items:

   a. SDS for chemical materials stored, used, or otherwise required for the Project.

   b. Map and directions to hospitals and urgent care facilities.

c. Personal protective equipment requirements and descriptions.

d. Security and signage requirements.

e. Tool and equipment preventative maintenance.

f. Training for specific work conditions associated with the Project.

g. Coordination with Contractor's Safety Officer regarding the shutdown and safety lockout/tagout of pressurized systems, electrical, mechanical, pneumatic, hydraulic, etc., systems, and other equipment and utilities.

h. Confined space permit requirements and procedures.

i. Hot work permit requirements and procedures.

j. Fall Hazard Protection and Prevention Plan.

k. Crane operation procedures and critical lift plan.

l. Good housekeeping procedures.

m. Safe work practices.

n. Incident investigation procedures.

o. Accident Prevention Program – Outline project-specific anticipated hazards and safety controls necessary to safeguard the Contractor's employees, public, and County staff and representatives.

p. Traffic control procedures for approaching, crossing, or traveling along public roadways or landfill access roads according to the latest edition of the California Manual on Uniform Traffic Control Devices (MUTCD), which prescribes uniform standards and specifications for all official traffic control devices in California. The MUTCD can be viewed from Caltrans website at http://www.dot.ca.gov/hq/traffops/engineering/mutcd/. Signs and traffic control devices along public roadways or landfill access roads shall be removed and stored or covered during periods of time when they are not needed, such as the end of each Working Day, weekends, and any time when no construction activities are being performed.

q. Excavation procedures.

r. Project-specific activity hazard analysis (AHA) performed for Project tasks.

s. Exposure to toxics and hazardous materials procedures.

t. Spill containment and cleanup procedures.

6. The Contractor's Safety Officer shall participate in the development of the HASP and be responsible for adherence to the HASP at all times.

7. Provide a system of informing workers, Subcontractors, and others about the HASP and conditions of the Work.

8. Revisions to the HASP:

   a. Revise the HASP prior to the start of Work as necessary to accommodate

changes requested by the County, regulatory agencies, and jurisdictions having authority.

b. Revise the HASP as necessary to accommodate changes in site conditions.

9. Contractor shall post copies of the HASP and all other applicable documents at the Project Location.

B. Excavation Plan:

1. In accordance with Section 5-5.1.1 – Accident Prevention of the General Provisions, Contractor shall submit to the County a detailed plan showing the design of shoring, bracing, sloping of the sides of trenches, or other provisions to be made for the protection of personnel during earthwork operations.

2. County acceptance of the Excavation Plan does not release the Contractor of liability in the event of an accident or injury, nor does it place any liability on the County or any County employees.

3. See Detailed Provisions Section 31 2300 – Earthwork and 31 2133 – Trenching, Backfilling, and Compacting for Utilities.

C. Permits and Certificates:

1. Confined Space Entry Permit (if applicable).

2. Hot Work Permit (if applicable).

3. Machinery and Mechanized Equipment Certificates – as required by local, state, federal regulations.

D. Contractor Safety Self-Evaluation Inspection.

E. Qualifications:

1. Contractor's Safety Officer – "40 Hour Construction Safety Hazard Awareness Training Course for Contractors".

2. Crane Operators – Provide proof of qualification for operating cranes with rated capacities of 50,000 pounds or greater.

F. Weekly Safety Meetings:

1. Contractor shall submit minutes and the attendance list of all weekly safety meetings.

1.06 QUALIFICATIONS AND MEETINGS

A. Contractor's Safety Officer:

1. A Competent Person shall be provided for all of the hazards identified in the Contractor's HASP and shall be on-site at all times when the work that presents the hazards associated with their professional expertise is being performed.

2. Contractor's Safety Officer shall have successfully completed and received a certificate for "40 Hour Construction Safety Hazard Awareness Training Course for Contractors". At a minimum, course shall include the following OSHA course

subjects:

a. OSHA 510 – Occupational Safety and Health Standards for Construction
b. OSHA 2264 – Permit-Required Confined Space Entry
c. OSHA 3010 – Excavation, Trenching and Soil Mechanics
d. OSHA 3095 – Electrical Standards
e. OSHA 3110 – Fall Arrest Systems
f. OSHA 7115 – Lockout/Tagout
g. Scaffolds in accordance with 29 CFR 1926.450, Subpart L

3. Project Superintendent or other Contractor personnel may act as the Contractor's Safety Officer provided the individual meets the competency level required of the Contractor's Safety Officer position.
4. As part of the HASP submittal, Contractor shall provide current certification to the County of Safety Officer's completion of "40 Hour Construction Safety Hazard Awareness Training".

B. Competent Person for Confined Space Entry:

1. Provide a "Competent Person" to supervise the entry into each confined space. All confined space and enclosed space work shall comply with NFPA 306, OSHA 29 CFR 1915, Subpart B, "Confined and Enclosed Spaces and Other Dangerous Atmospheres in Shipyard Employment" or as applicable , 29 CFR 1910.147 for General Industry.

C. Crane Operators:

1. For mobile cranes with Original Equipment Manufacturer (OEM) rated capacities of 50,000 pounds or greater, designate crane operators as qualified by a source that qualifies crane operators (i.e., union, a government agency, or an organization that tests and qualifies crane operators). Provide proof of current qualifications as part of HASP submittal to the County.

1.07 DISPLAY OF SAFETY INFORMATION

A. Within one (1) Calendar Day after commencement of Work, erect a safety bulletin board at the Project Location. Where size, duration, or logistics of Project do not facilitate a bulletin board, an alternative method, acceptable to the County, that is accessible and includes all mandatory information for employee and visitor review, shall be deemed as meeting the requirement for a bulletin board. Items required to be post include, but are not limited to the following:

1. Confined Space Entry Permit.
2. Hot Work Permit.

1.08 NOTIFICATIONS AND REPORTS

A. Accident Notification:

1. Notify the County as soon as practical, but no more than four (4) hours after any accident or near miss meeting the definition of Recordable Injuries of Illnesses or Potential Serious Accidents/Incidents. Within notification, include: Contractor name; project title; type of Contract; name of activity, installation or location where accident occurred; date and time of accident; names of personnel injured; extent of property damage, if any; extent of injury, if known, and brief description of accident (to include type of equipment used, PPE used, etc.). Preserve the conditions of the accident site until County determines if accident will require a site investigation.

B. Accident Reports:

1. Conduct an accident investigation for recordable injuries and illnesses, for incidents requiring Medical Treatment, property damage accidents resulting in at least $2,500 in damages to establish the root cause(s) of the accident. Submit the completed accident report to the County within five (5) Calendar Days of the accident. If requested by the County, report may be required for Potential Serious Accidents/Incidents.

2. Conduct an accident investigation for any weight handling equipment accident (including rigging gear accidents) to establish the root cause(s) of the accident. Do not proceed with crane operations until cause is determined and corrective actions have been implemented to the satisfactions of the County and Contractor's Safety Officer.

C. Crane Reports:

1. Maintain crane inspection reports as attachments to the Project Location copy of the HASP.

1.09 HOT WORK REQUIREMENTS

A. "Hot Work" (welding, cutting, etc.) or operating other flame-producing/spark producing devices. At a minimum, provide at least two (2) twenty (20) pound 4A:20 BC rated extinguishers for normal "Hot Work". All extinguishers shall be current inspection tagged, approved safety pin and tamper resistant seal.

1.10 CONFINED SPACE ENTRY REQUIREMENTS

A. Contractors entering and working in confined spaces while performing general industry work are required to follow the requirements of OSHA 29 CFR 1926 and comply with the requirements in OSHA 29 CFR 1910, and OSHA 29 CFR 1910.146.

1.11 RADIATION SAFETY REQUIREMENTS

A. License certificates for radiation materials and equipment shall be submitted to the County for all specialized and licensed material and equipment that could cause fatal harm to employees or visitors.

B. Workers shall be protected from radiation exposure in accordance with 10 CFR 20 –

Standards for Protection against Radiation.

C. Loss of radioactive material shall be reported immediately to the County.

D. In instances where radiography is scheduled near or adjacent to buildings or areas having limited access or one-way doors, no assumptions shall be made as to building occupancy. Where necessary, the County will direct the Contractor to conduct an actual building entry, search, and alert. Where removal of personnel from such a building cannot be accomplished and it is otherwise safe to proceed with the radiography, a fully instructed employee shall be positioned inside such building or area to prevent exiting while external radiographic operations are in process.

E. Transportation of Regulated Amounts of Radioactive Material will comply with 49 CFR, Subchapter C, Hazardous Material Regulations.

1.12 SEVERE STORM PLAN

A. In the event of a severe storm warning, the Contractor must:

1. Secure outside equipment and materials and place materials that could be damaged in protected areas.
2. Check surrounding area, including roof, for loose material, equipment debris, and other objects that could be blown away or against existing facilities.
3. Ensure that temporary erosion control measures are in place.

PART 2 PRODUCTS – NOT USED

PART 3 EXECUTION

3.01 CONSTRUCTION AND OTHER WORK

A. Comply with NFPA 70, NFPA 70E, NFPA 241, the HASP, Federal and State OSHA regulations, and other related submittals and activity fire and safety regulations. The most stringent standard prevails. Personal protective equipment (PPE) is governed in all areas by the nature of the Work the employee is performing. Use personal hearing protection at all times in designated noise hazardous areas or when performing noise hazardous tasks. Safety glasses must be carried/available for each person.

3.02 CONTROL OF HAZARDOUS ENERGY (LOCKOUT/TAGOUT)

A. Ensure that each employee is familiar with and complies with lockout/tagout procedures outlined in the HASP.

3.03 FALL HAZARD PROTECTION AND PREVENTION PLAN

A. Establish a Fall Hazard Protection and Prevention Plan, for the protection of all employees exposed to fall hazards. Within the program include company policy, identify responsibilities, education and training requirements, fall hazard identification, prevention and control measures, inspection, storage, care and maintenance of fall

protection equipment and rescue and evacuation procedures in accordance with ASSE/SAFE Z359.1. Plan shall be provided to the County as part of the Contractor's submittal of the HASP.

B. Training:

1. As part of the Fall Hazard Protection and Prevention Program, provide training for each employee who might be exposed to fall hazards. Provide training by a competent person for fall protection.

C. Fall Protection Equipment and Systems:

1. Enforce use of the fall protection equipment and systems designated for each specific Work activity in the fall hazard protection and prevention program and/or activity hazard analysis (AHA) at all times when an employee is exposed to a fall hazard. Personal fall arrest systems are required when working from an articulating or extendable boom, swing stages, or suspended platform. In addition, personal fall arrest systems are required when operating other equipment such as scissor lifts if the work platform is capable of being positioned outside the wheelbase. The need for tying-off in such equipment is to prevent ejection of the employee from the equipment during raising, lowering, or travel. Fall protection must comply with 29 CFR 1926.500 and ASSE/SAFE A10.32.

D. Personal Fall Arrest Equipment:

1. Personal fall arrest equipment, systems, subsystems, and components shall meet ASSE/SAFE Z359.1. Only a full-body harness with a shock-absorbing lanyard of self-retracting lanyard is an acceptable personal fall arrest body support device. Body belts may only be used as a positioning device system (for uses such as steel reinforcing assembly and in addition to an approved fall arrest system). Harnesses shall have a fall arrest attachment affixed to the body support (usually a Dorsal D-ring) and specifically designated for attachment to the rest of the system. Only locking snap hooks and carabiners shall be used. Webbing, straps, and ropes shall be made of synthetic fiber. The maximum free fall distance when using fall arrest equipment shall not exceed 1.8 meters. The total fall distance and any swinging of the worker (pendulum-like motion) that can occur during a fall shall always be taken into consideration when attaching a person to a fall arrest system.

E. Fall Protection for Roofing Work:

1. Implement fall protection controls based on the type of roof being constructed and Work being performed. Evaluate the roof area to be accessed for its structural integrity including weight-bearing capabilities for the projected loading.

a. Low Sloped Roofs:

1) For Work within six (6) feet of an edge, on low-sloped roofs, protect personnel from falling by use of personal fall arrest systems, guardrails, or safety nets. A safety monitoring system is not adequate fall protection and is not allowed.

2) For Work greater than six (6) feet from an edge, erect and install warning lines in accordance with 29 CFR 1926.500

b. Steep-Sloped Roofs:

1) Work on steep-sloped roofs requires a personal fall arrest system, guardrails with toe-boards, or safety nets.

F. Horizontal Lifelines:

1. Design, install, certify and use under the supervision of a qualified person, horizontal lifelines for fall protection as part of a complete fall arrest system which maintains a safety factor of 2 (29 CFR 1926.500).

G. Guardrails and Safety Nets

1. Design, install and use guardrails and safety nets in accordance with 29 CFR 1926 Subpart M.

H. Rescue and Evacuation Procedures

1. When personal fall arrest systems are used, ensure that the mishap victim can self-rescue or can be rescued promptly should a fall occur. Prepare a Rescue and Evacuation Plan and include a detailed discussion of the following: methods of rescue; methods of self-rescue; equipment used; training requirements; specialized training for the rescuers; procedures for requesting rescue and medical assistance; and transportation routes to a medical facility. Include the Rescue and Evacuation Plan in the Fall Hazard Protection and Prevention Plan.

3.04 SCAFFOLDING

A. Provide employees with a safe means of access to the Work area on the scaffold. Climbing of any scaffold braces or supports not specifically designed for access is prohibited. Access scaffold platforms greater than six (6) meter maximum in height by use of a scaffold stair system. Do not use vertical ladders commonly provided by scaffold system manufacturers for accessing scaffold platforms greater than twenty (20) feet maximum in height. The use of an adequate gate is required. Ensure that employees are qualified to perform scaffold erection and dismantling. Do not use scaffold without the capability of supporting at least four (4) times the maximum intended load or without appropriate fall protection as delineated in the accepted Fall Hazard Protection and Prevention Plan. Stationary scaffolds must be attached to structural building components to safeguard against tipping forward or backward. Give special care to ensure scaffold systems are not overloaded. Side brackets used to extend scaffold platforms on self-supported scaffold systems for the storage of material is prohibited. The first tie-in shall be at the height equal to four (4) times the width of the smallest dimension of the scaffold base. Place Work platforms on mud sills. Scaffold or Work platform erectors shall have fall protection during the erection and dismantling of scaffolding or Work platforms that are greater than six (6) feet in height. Delineate fall protection requirements when working above six (6) feet or above dangerous operations in the Fall Hazard Protection and Prevention Plan.

3.05 EQUIPMENT

A. Material Handling Equipment:

1. Material handling equipment such as forklifts shall not be modified with Work platform attachments for supporting employees unless specifically delineated in the manufacturer's printed operating instructions.
2. The use of hooks on equipment for lifting of material must be in accordance with manufacturer's printed instructions.
3. Operators of forklifts or power industrial trucks shall be licensed in accordance with OSHA.

B. Weight Handling Equipment

1. Comply with the crane manufacturer's specifications and limitations for erection and operation of cranes and hoists used in support of the Work. Perform erection under the supervision of a designated person as defined in ASME B30.5. Perform all testing in accordance with the manufacturer's recommended procedures.
2. Comply with ASME B30.5 for mobile and locomotive cranes, ASME B30.22 for articulating boom cranes, ASME B30.3 for construction tower cranes, and ASME B30.8 for floating cranes and floating derricks.
3. Under no circumstances shall a Contractor make a lift at or above ninety percent (90%) of the cranes rated capacity in any configuration.
4. When operating in the vicinity of overhead transmission lines, operators and riggers shall be alert to this special hazard and follow the requirements of ASME B30.5 or ASME B30.22 as applicable.
5. Do not crane suspended personnel work platforms (baskets) unless the Contractor proves that using any other access to the work location would provide a greater hazard to the workers or is impossible. Do not lift personnel with a line hoist or friction crane.
6. Inspect, maintain, and recharge portable fire extinguishers as specified in NFPA 10 – Standard for Portable Fire Extinguishers.
7. All employees must keep clear of loads about to be lifted and of suspended loads.
8. Use cribbing when performing lifts on outriggers.
9. The crane hook/block must be positioned directly over the load. Side loading of the crane is prohibited.
10. A physical barricade must be positioned to prevent personnel from the entering the counterweight swing (tail swing) area of the crane.
11. Certification records which include the date of inspection, signature of the person performing the inspection, and the serial number or other identifier of the crane that was inspected shall always be available for review by the County.
12. Written reports listing the load test procedures used along with any repairs or alterations performed on the crane shall be available for review by the County.
13. Certify that all crane operators have been trained in proper use of all safety devices.

C. Use of Explosives

1. Explosives shall not be used or brought to the Project Site without prior written approval from the County. Such approval shall not relieve the Contractor of responsibility for injury to persons or for damage to property due to blasting operations.
2. Storage of explosives, when permitted on County property, shall be only where directed and in approved storage facilities. These facilities shall be kept locked at all times except for inspection, delivery, and withdrawal of explosives.

3.06 EXCAVATIONS

A. Soil classification must be performed by a competent person in accordance with 29 CFR 1926.

B. Utility Locations:

1. All underground utilities in the Work area must be positively identified by a third party, independent, private utility locating company in addition to any station locating service and coordinated with the station utility department.
2. Physically verify underground utility locations, including utility depth, by hand digging using wood or fiberglass handled tools when any adjacent construction Work is expected to come within five (5) feet of the underground system.
3. See Detailed Provisions Section 31 2300 – Earthwork and 31 2133 – Trenching, Backfilling, and Compacting for Utilities.

3.07 ELECTRICAL

A. Portable Extension Cords:

1. Size portable extension cords in accordance with manufacturer ratings for the tool to be powered and protected from damage. Immediately remove from service all damaged extension cords. Portable extension cords shall meet the requirements of NFPA 70E, and OSHA electrical standards.

3.08 WORK IN CONFINED SPACES

A. Comply with the requirements in OSHA 29 CFR 1910, OSHA 29 CFR 1910.146, OSHA Directive CPL 2.100 and OSHA 29 CFR 1926.

1. Entry Procedures:

a. Prohibit entry into a confined space by personnel for any purpose, including hot work, until the qualified person has conducted appropriate tests to ensure the confined or enclosed space is safe for the work intended and that all potential hazards are controlled or eliminated and documented. All hazards pertaining to the space shall be reviewed with each employee during review of the activity hazard analysis process.

2. Forced air ventilation is required for all confined space entry operations and the minimum air exchange requirements must be maintained to ensure exposure to any hazardous atmosphere is kept below its' action level.
3. Perform required atmosphere monitoring with audible alarm for toxic gas detection.

END OF SECTION 01 3500

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SPECIFICATIONS – DETAILED PROVISIONS

SECTION 01 4200: REFERENCE, STANDARDS AND ABBREVIATIONS

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SECTION 01 4200
REFERENCE STANDARDS AND ABBREVIATIONS

PART 1 GENERAL

1.01 SUMMARY

A. Section includes:

1. Detailed Provisions Format and Content Explanation.
2. Industry Standards.
3. Governing Regulations/Authorities.
4. Abbreviations.

1.02 DETAILED PROVISIONS FORMAT AND CONTENT EXPLANATION

A. Detailed Provisions Format: The Detailed Provisions, Divisions 01 through 33, are generally organized into Divisions and Sections based on the Construction Specifications Institute's 2014 fifty (50) Division format.

B. Detailed Provisions Content: These Detailed Provisions use certain conventions in the use of language and the intended meaning of certain terms, words, and phrases when used in particular situations or circumstances. These conventions are explained as follows:

1. Abbreviated Language: Language used in Detailed Provisions and other Contract Documents are the abbreviated type. Words and meanings shall be interpreted as appropriate. Words that are implied, but not stated, shall be interpolated as the sense required. Singular words will be interpreted as plural and plural words interpreted as singular where applicable and the context of the Contract Documents so indicates.
2. Imperative and streamlined language is used generally in the Detailed Provisions. Requirements expressed in the imperative mood are to be performed by the Contractor. At certain locations in the text, for clarity, subjective language is used to describe responsibilities that must be fulfilled directly by the Contractor or by others when so noted.
    a. The words "shall", "shall be", or "shall comply with", depending on the context, are implied where a colon (:) is used within a sentence or phrase.
3. Detailed Provisions requirements are to be performed by Contractor unless specifically stated otherwise.

C. General Provisions and Special Provisions: Requirements of General Provisions and Special Provisions of the Contract Documents apply to Work of all Sections in the Detailed Provisions.

1.03 DRAWING CONVENTIONS

A. Drawing Coordination: Requirements for materials and products identified on Drawings are described in detail in the Detailed Provisions. One or more of the following are used on Drawings to identify materials and products:

1. Terminology: Materials and products are identified by the typical generic terms used in the individual Detailed Provisions Sections.
2. Abbreviations: Materials and products are identified by abbreviations and scheduled on Drawings.
3. Keynoting: Materials and products are identified by reference keynotes referencing Detailed Provisions Section numbers.

1.04 DEFINITIONS

A. "**Approved**" used to convey County's action on Contractor submittals, applications and requests.

B. "**Directed**" means a command or instruction by County. Other terms including "requested", "authorized", "selected", "required", and "permitted" have the same meaning as "directed".

C. "**Indicated**" are requirements expressed by graphic representations or in written form on Drawings, in Detailed Provisions, and in other Contract Documents. Other terms including "shown", "noted", "scheduled", and "specified" have the same meaning as "indicated".

D. "**Regulations**" are laws, ordinances, statues, and lawful orders issued by authorities having jurisdiction, and rules, conventions, and agreements within the construction industry that control performance of the Work.

E. "**Furnish**" means supply and deliver to Project Site, ready for unloading, unpacking, assembly, installation, and similar operations.

F. "**Install**" means unload, temporarily store, unpack, assemble, erect, place, anchor, apply, work to dimension, finish, cure, protect, clean and similar operations at Project Site.

G. "**Plans**" or "**Project Drawings**" are the contract Project Drawings specifically prepared for the Project.

H. "**Provide**" means furnish and install, complete and ready for intended use.

1.05 INDUSTRY STANDARDS

A. Applicability of Standards: Except where the Contract Documents include more stringent requirements, referenced construction industry standards have the same force and effect as if bound or copied directly into the Contract Documents to the extent referenced. Such standards are made a part of the Contract Documents by reference.

B. Publication Dates: Unless noted otherwise, comply with the standard in effect as of the date of the Bid Proposal.

C. Copies of Standards: Each entity engaged in construction on the Project is required to be familiar with referenced industry standards applicable to that entity's construction activity. Copies of referenced standards are not bound with the Contract Documents.

1. Where copies of standards are needed for performance of a required construction activity, the Contractor shall obtain copies directly form the publication source.

D. All Work specified herein shall conform to or exceed the requirements of the referenced specifications, codes and standards to the extent that the provisions of such documents are not in conflict with the requirements of these Detailed Provisions.

E. References herein to "Building Code" shall mean the California Building Code (CBC) of the International Code Council (ICC).

F. In case of conflict between codes, reference standards, drawings and the other Contract Documents, the most stringent requirements shall govern. All conflicts shall be brought to the attention of the County for clarification and directions prior to ordering or providing any materials or labor. The Contractor' Bid Proposal shall take into account costs for the most stringent requirements.

G. Applicable Standard Specifications: The Contractor shall construct the Work specified herein in accordance with the requirements of the Contract Documents and the referenced portions of those referenced codes, standards and specifications listed herein.

H. Referenced herein to "OSHA Regulations for Construction" shall mean Title 29, Part 1926, Construction Safety and Health Regulations, Code of Federal Regulations (OSHA), including all changes and amendments thereto.

1.06 ABBREVIATIONS AND ACRONYMS

A. Industry Organizations: Where abbreviations and acronyms are used in the Contract Documents, they shall mean the recognized name of the entities indicated in Gale's "Encyclopedia of Associations: National Organizations of the U.S." or in Columbia Books' "National Trade & Professional Associations of the United States". Names

B. Abbreviations and Acronyms: The following abbreviations and acronyms, as referenced in Contract Documents, are defined to mean the associated names. Names and contact information are subject to change and are believed to be, but are not assured to be, accurate and up to date as of the date of the Contract Documents.

AA	Aluminum Association; www.aluminum.org
AABC	Associated Air Balance Council; www.aabc.com
AAMA	American Architectural Manufacturers Association; www.aamanet.org
AASHTO	American Association of State Highway and Transportation Officials; www.transportation.org
ABMA	American Bearing Manufacturers Association; www.americanbearings.org
ACI	American Concrete Institute (formerly: ACI International); www.concrete.org
ACPA	American Concrete Pipe Association; www.concrete-pipe.org
AGA	American Gas Association; www.aga.org

AGC	Associated General Contractors
AGMA	American Gear Manufacturers Association; www.agma.org
AHA	American Hardboard Association; www.domensino.com/AHA/default.htm
AHAM	Association of Home Appliance Manufacturers; www.aham.org
AHRI	Air-Conditioning, Heating, and Refrigeration Institute; www.ahrinet.org
AI	Asphalt Institute; www.asphaltinstitute.org
AIA	American Institute of Architects
AIA	American Insurance Associates; www.americaninsassoc.com
AIHA	American Industrial Hygiene Association; www.aiha.org
AISC	American Institute of Steel Construction; www.aisc.org
AISI	American Iron and Steel Institute; www.steel.org
AITC	American Institute of Timber Construction; www.atic-glulam.org
AMCA	Air Movement and Control Association International, Inc.
ANLA	American Nursery and Landscape Association
ANSI	American National Standards Institute; www.ansi.org
AOSA	Association of Official Seed Analysis; www.aosaseed.com
APA	APA – The Engineered Wood Association
APA	Architectural Precast Association
API	American Petroleum Institute; www.api.org
APWA	American Public Works Association
ASA	Acoustical Society of America
ASAE	American Society of Agriculture Engineers
ASC	Adhesive and Sealant Council; www.ascouncil.org
ASCE	American Society of Civil Engineers; www.asce.org
ASCE/SEI	American Society of Civil Engineers/Structural Engineering Institute
ASHRAE	American Society of Heating, Refrigerating and Air-Conditioning Engineers; www.ashrae.org
ASLE	American Society of Lubricating Engineers
ASME	American Society of Mechanical Engineers; www.asme.org
ASPE	American Society of Plumbing Engineers; www.aspe.org
ASQC	American Society of Quality Control
ASSE	American Society of Safety Engineers
ASSE	American Society of Sanitation Engineering; www.asse-plumbing.org
ASTM	American Society for Testing and Materials International; www.astm.org
ATIS	Alliance for Telecommunications Industry Solutions
AWI	Architectural Wood Institute; www.awinet.org
AWPA	American Wood Protection Association; www.awpa.com
AWPI	American Wood Preservers Institute
AWS	American Welding Society; www.aws.org
AWWA	American Water Works Association; www.awwa.org
BHMA	Builders Hardware Manufacturers Association; http://buildershardware.com/
BIA	Brick Industry Association
BICSI	Building Industry Consulting Service International; www.bicsi.org
BOCA	BOCA (Building Officials and Code Administrators International, Inc.)

CDA	Copper Development Association
CGA	Compressed Gas Association
CI	Chlorine Institute; www.chlorineinstitute.org
CISPI	Cast Iron Soil Pipe Institute; www.cispi.org
CLFMI	Chain Link Fence Manufacturers Institute
CMA	Concrete Masonry Association
CPA	Composite Panel Association
CRSI	Concrete Reinforcing Steel Institute; www.crsi.org
CSQA	California Stormwater Quality Association; www.casqa.org
DASMA	Door and Access Systems Manufacturers Association
DHI	Door and Hardware Institute
EJMA	Expansion Joint Manufacturers Association; www.ejma.org
ETL	Electrical test Laboratories
FM	FM Global Research; www.fmglobal.com
GA	Gypsum Association; www.gypsum.org
GANA	Glass Association of North America; www.glasswebsite.com
GBCI	Green Building Certification Institute; www.gbci.org
GRI	Geosynthetics Research Institute; www.geosynthetics-institute.org
HI	Hydraulic Institute
HMMA	Hollow Metal Manufacturers Association (see NAAMM)
HPVA	Hardwood Plywood & Veneer Association; www.hpva.org
ICBO	International Conference of Building Officials (see ICC)
ICC	International Code Council; www.iccsafe.org
ICEA	International Cable Engineers Association, Inc.; www.icea.net
ICPA	International Cast Polymer Alliance
ICRI	International Concrete Repair Institute, Inc.
IEC	International Electrotechnical Commission; www.iec.ch
IEEE	Institute of Electrical and Electronics Engineers; www.ieee.org
IES	Illuminating Engineering Society of North America; www.iesna.org
IFC	International Firestop Council; www.firestop.org
IGCC	Insulating Glass Certification Council; www.igcc.org
IGMA	Insulating Glass Manufacturers Alliance; www.igmaonline.org
IMSA	International Municipal Signal Association; www.imsasafety.org
IPC	Institute of Printed Circuits
IPCEA	Insulated Power Cable Engineers Association
ISA	International Society of Automation; www.isa.org
ISO	International Organization for Standardization
LEED	Leadership in Energy and Environmental Design
LPI	Lightning Protection Institute; www.lightning.org
MBMA	Metal Building Manufacturers Association
MCA	Metal Construction Association
MHIA	Material Handling Industry of America
MPI	Master Painters Institute
MSS	Manufacturers Standardization Society of the Valve and Fittings Industry Inc.; www.mss-hq.org

NAAMM	National Association of Architectural Metal Manufacturers; www.naamm.org
NACE	NACE International (National Association of Corrosion Engineers International); www.nace.org
NAIMA	North American Insulation Manufacturers Association
NAPA	National Asphalt Pavement Association; www.asphaltpavement.org
NAPF	National Association of Pipe Fabricators; http://napf.com
NBS	National Bureau of Standards
NCMA	National Concrete Masonry Association; www.ncma.org
NEBB	National Environmental Balancing Bureau; www.nebb.org
NEC	National Electrical Code; www.nfpa.org
NECA	National Electrical Contractors Association; www.necanet.org
NEMA	National Electrical Manufacturers Association; www.nema.org
NETA	InterNational Electrical Testing Association; www.netaworld.org
NFPA	NFPA (National Fire Protection Association); www.nfpa.org
NFPA	National Forest Products Association
NFRC	National Fenestration Rating Council
NHLA	National Hardwood Lumber Association
NIST	National Institute of Standards and Technology; www.nist.gov
NLGI	National Lubricating Grease Institute
NPCA	National Paint and Coatings Association; www.paint.org
NRCA	National Roofing Contractors Association; www.nrca.net
NRMCA	National Ready Mixed Concrete Association; www.nrmca.org
NSF	NSF International (National Sanitation Foundation International); www.nsf.org
NSPE	National Society of Professional Engineers
NSSGA	National Stone, Sand & Gravel Association
OSHA	Occupational Safety and Health Administration
PCA	Portland Cement Association; www.cement.org
PCI	Precast/Prestressed Concrete Institute; www.pci.org
PDI	Plumbing & Drainage Institute; www.pdionline.org
PTI	Post Tensioning Institute; www.post-tensioning.org
RCSC	Research Council on Structural Connections; http://boltcouncil.org/
SCTE	Society of Cable Telecommunications Engineers; www.scte.org
SDI	Steel Deck Institute; www.sdi.org
SDI	Steel Door Institute
SEI/ASCE	Structural Engineering Institute/American Society of Civil Engineers
SJI	Steel Joist Institute
SMA	Screen Manufacturers Association
SMACNA	Sheet Metal and Air Conditioning Contractors' National Association
SPFA	Spray Polyurethane Foam Alliance
SPRI	Single Ply Roofing Industry; www.spri.org
SSPC	Society for Protective Coatings; www.sspc.org
SSPC	Steel Structures Painting Council
SSPWC	Standard Specifications for Public Works Construction
SWPA	Submersible Wastewater Pump Association

TCNA	Tile Council of North America; www.tcnatile.com
TIA	Telecommunications Industry Association, www.tiaonline.org
UBC	Uniform Building Code (see ICC)
UL	Underwriters Laboratories, Inc.; www.ul.com
USGBC	United States Green Building Council; www.usgbc.org
WASTEC	Waste Equipment Technology Association
WCRSI	Western Concrete Reinforcing Steel Institute
WDMA	Window & Door Manufacturers Association; www.wdma.com
WRI	Wire Reinforcement Institute, Inc.; www.wirereinforcementinstitute.org
WSC	Water Systems Council; www.watersystemscouncil.org
WWPA	Western Wood Products Association
WWPA	Woven Wire Products Association; www.wovenwire.org

C. Code Agencies: Where abbreviations and acronyms are used in the Contract Documents, they shall mean the recognized name of the entities in the following list:

1. DIN – Deutsches Institut fur Normung e. V.; http://www.din.de/en
2. IAPMO – International Association of Plumbing and Mechanical Officials; www.iapmo.org
3. ICC – International Code Council; www.iccsafe.org
4. ICC-ES-ICC Evaluation Service, LLC; www.icc-es.org

D. Federal Government Agencies: Names and titles of federal government standard or Specification producing agencies are often abbreviated. The following abbreviations and acronyms are used in the Contract Documents indicate names of standard or Specification producing agencies of the federal government. Names and contact information are subject to change and are believed to be, but are not assured, accurate and up to date as of the date of the Contract Documents.

1. CFR – Code of Federal Regulations; www.gpo.gov
2. CPSC – Consumer Product Safety Commission; www.cpsc.gov
3. DOC – Department of Commerce; National Institute of Standards and Technology (NIST); www.nist.gov
4. DOD – Department of Defense; http://www.defense.gov
5. DOE – Department of Energy; www.engergy.gov
6. DOT – Department of Transportation; www.dot.gov
7. EPA – Environmental Protection Agency; www.epa.gov
8. FAA – Federal Aviation Administration; www.faa.gov
9. FG – Federal Government Publications; www.gpo.gov
10. FS – Feral Specification (from GSA); www.gsa.gov
11. GSA – General Services Administration; www.gsa.gov
12. HUD – Department of Housing and Urban Development; www.hud.gov

13. LBL – Lawrence Berkeley National Laboratory; Environmental Energy Technologies Division; www.eetd.lbl.gov
14. OSHA – Occupational Safety & Health Administration; www.osha.gov
15. SD – Department of State; www.state.gov
16. TRB – Transportation Research Board; National Cooperative Highway Research Program; The National Academies; www.trb.org
17. USBLS – United States Bureau of Labor Statistics, www.bls.gov
18. USCOE – Army Corps of Engineers; www.usace.army.mil
19. USDA – Department of Agriculture; Agriculture Research Service; U.S. Salinity Laboratory; www.ars.usda.gov
20. USDA – Department of Agriculture; Rural Utilities Service; www.usda.gov
21. USDJ – Department of Justice, Office of Justice Programs; National Institute of Justice; www.ojp.usdoj.gov
22. USP – U.S. Pharmacopeial Convention; www.usp.org
23. USPS – United States Postal Service; www.usps.com

E. Local Government Agencies: Names and titles of local government standard or Specification producing agencies are often abbreviated. The following abbreviations and acronyms referenced in Contract Documents indicate names of standard or Specification producing agencies of local and state government. Names and contact information are subject to change and are believed to be, but are not assured to be, accurate and up to date as of the date of the Contract Documents.

1. State of California
    a. BPELSG –California Department of Consumer Affairs – Board for Professional Engineers, Land Surveyors, and Geologists; http://www.bpelsg.ca.gov/
    b. BSC – California Building Standards Commission; www.bsc.ca.gov
    c. CALGreen – BSC California Green Building Standards; www.bsc.ca.gov/Home/CALGreen.aspx
    d. CalEPA – California Environmental Protection Agency; www.calepa.ca.gov
    e. CalOSHA – California Department of Industrial Relations – Division of Occupational Safety and Health; http://www.dir.ca.gov/DOSH/dosh1.html
    f. CalRecycle – California Department of Resources Recycling and Recovery; www.calrecycle.ca.gov
    g. Caltrans – California Department of Transportation; www.dot.ca.gov
    h. CARB – California Air Resources Board; www.arb.ca.gov
    i. CCR – California Code of Regulations; www.oal.ca.gov/ccr.htm
    j. CDI – California Department of Insurance; www.insurance.ca.gov
    k. CHSC – California Health and Safety Code
    l. CPUC – California Public Utilities Commission; http://www.cpuc.ca.gov
    m. CSLB – Contractors State Licensing Board; www.cslb.ca.gov
    n. DIR – California Department of Industrial Relations; www.dir.ca.gov

o. DTSC – California Department of Toxic Substances Control; http://www.dtsc.ca.gov/
p. DWR – California Department of Water Resources; www.water.ca.gov
q. DWC - California Department of Industrial Relations – Division of Workers' Compensation; www.dir.ca.gov/dwc
r. LWDA – California Labor and Workforce Development Agency; http://labor.ca.gov/
s. SWRCB – CalEPA: State Water Resources Control Board; www.swrcb.ca.gov

2. Regional Agencies

a. SARWQCB – Santa Ana Regional Water Quality Control Board; http://www.waterboards.ca.gov/santaana/
b. SCAQMD – South Coast Air Quality Management District; www.aqmd.gov

3. County of Riverside

a. BOS – County of Riverside Board of Supervisors; http://www.countyofriverside.us/AboutTheCounty/BoardofSupervisors.aspx
b. DEH – Riverside County Department of Environmental Health; www.rivcoeh.org
c. EPD – County of Riverside Environmental Programs Division; www.rctlma.org/epd
d. RCDFM – Riverside County Department of Facilities Management; https://rivcofm.org/
e. RCDWR – Riverside County Department of Waste Resources; www.rcwaste.org
f. RCFC&WCD – Riverside County Flood Control and Water Conservation District; www.floodcontrol.co.riverside.ca.us
g. RCFD – Riverside County Fire Department; http://www.rvcfire.org
h. RCTD – Riverside County Transportation Department; http://rctlma.org/trans/
i. TLMA – County of Riverside Transportation and Land Management Agency; www.rctlma.org

PART 2 PRODUCTS – NOT USED

PART 3 EXECUTION – NOT USED

END OF SECTION 01 4200

SPECIFICATIONS – DETAILED PROVISIONS

SECTION 01 4300: QUALITY ASSURANCE AND CONTROL

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SECTION 01 4300
QUALITY ASSURANCE AND CONTROL

PART 1 GENERAL

1.01 SUMMARY

A. Section includes the following:

1. Administrative and procedural requirements for quality assurance and quality control.
2. Testing and inspecting services are required to verify compliance with requirements specified or indicated. These services do not relieve Contractor of responsibility for compliance with the Contract Document requirements.
    a. Specified tests, inspections, and related actions do not limit Contractor's other quality-assurance and –control procedures that facilitate compliance with the Contract Document requirements.
    b. Requirements for Contractor to provide quality-assurance and –control services required by County or authorities having jurisdiction are not limited by provisions of this Section.
    c. Specific test and inspection requirements are not specified in this Section.

1.02 REFERENCES

A. American Society for Testing and Materials (ASTM):

1. ASTM E329 – Standard Specification for Agencies Engaged in Construction Inspection, Testing, or Special Inspection.

1.03 DEFINITIONS

A. Quality-Assurance Services – Activities, actions, and procedures performed before and during execution of the Work to guard against defects and deficiencies and substantiate that proposed construction will comply with requirements.

B. Quality-Control Services – Tests, inspections, procedures, and related actions during and after execution of the Work to evaluate that actual products incorporated into the Work and completed construction comply with requirements. Services do not include Contract enforcement activities performed by County.

C. Mockups – Full-sized physical assemblies that are constructed on-site. Mockups are constructed to verify selections made under Sample submittals; to demonstrate aesthetic effects and, where indicated, qualities of materials and execution; to review coordination, testing, or operation; to show interface between dissimilar materials; and to demonstrate compliance with specified installation tolerances. Mockups are not Samples. Unless otherwise indicated, approved mockups establish the standard by which the Work will be judged.

1. Laboratory Mockups – Full-size physical assemblies constructed at testing facility to verify performance characteristics.

D. Preconstruction Testing or Conformance Testing – Tests and inspections performed specifically for the Project before products and materials are incorporated into the Work, to verify performance or compliance with specified criteria.

E. Product Testing – Tests and inspections that are performed by an Nationally Recognized Testing Laboratory (NRTL), an NVLAP (National Institute of Science and Technology (NIST) National Voluntary Laboratory Accreditation Program), or a testing agency qualified to conduct product testing and acceptable to authorities having jurisdiction, to establish product performance and compliance with specified requirements.

F. Source Quality-Control Testing – Tests and inspections that are performed at the source, e.g., plant, mill, factory, or shop.

G. Field Quality-Control Testing – Tests and inspections that are performed on-site for installation of the Work and for completed Work.

H. Testing Agency – An entity engaged to perform specific tests, inspections, or both. Testing laboratory shall mean the same as testing agency.

I. Installer/Applicator/Erector – Contractor or another entity engaged by Contractor as an employee, Subcontractor, or Sub-subcontractor, to perform a particular construction operation, including installation, erection, application, and similar operations.

1. Use of trade-specific terminology in referring to trade or entity does not require that certain construction activities be performed by accredited or unionized individuals, or that requirements specified apply exclusively to specific trade(s).

J. Experienced – Unless noted otherwise, when used with an entity or individual, “experienced” means having successfully completed a minimum of five (5) previous projects similar in nature, size, and extent to the Project; being familiar with special requirements indicated; and having complied with requirements of authorities having jurisdiction.

1.04 CONFLICTING REQUIREMENTS

A. Referenced Standards: If compliance with two or more standards is specified and the standards establish different or conflicting requirements for minimum quantities or quality levels, comply with the most stringent requirement. In case of conflict between the Contract Documents, the following order of governing documents shall be followed (with first listed document controlling):

1. Permits issued by jurisdictional regulatory agencies.
2. Change Orders, Construction Change Directives and/or Supplemental Agreements, or Addenda to any of the Contract Documents; whichever occurs last.
3. Construction Agreement.
4. Detailed Provisions.

5. Project Drawings and Specifications
6. Special Provisions.
7. Administrative Provisions.
8. General Provisions.
9. Standard Drawings
10. Reference Specifications

The Special Provisions, Detailed Provisions, Drawings, and Standards are intended to be complimentary so that any Work exhibited in the Drawings, but not mentioned in the Special and/or Detailed Provisions, or vice versa, shall be executed to the true intent thereof and the same as if both exhibited in Drawings and set forth in the Special Provisions. The Contractor shall consult with the County to obtain interpretations of the Contract Documents. The Contractor shall also assist in resolutions of questions and transmit written interpretations to concerned parties.

B. Minimum Quantity or Quality Levels: The quantity or quality level shown or specified shall be the minimum provided or performed. The actual installation may comply exactly with the minimum quantity or quality specified, or it may exceed the minimum within reasonable limits. To comply with these requirements, indicated numeric values are minimum or maximum, as appropriate, for the context of requirements. Refer uncertainties to the County for a decision before proceeding.

1.05 REPORTS AND DOCUMENTS

A. Test and Inspection Reports (if needed, to be done at the discretion and request of the County in the work order): Prepare and submit certified written reports specified in other Sections. At the minimum, include the following:

1. Date of issue.
2. Project title.
3. Name, address, e-mail, and telephone number of testing agency.
4. Dates and locations of samples and tests or inspections.
5. Names of individuals making tests and inspections.
6. Description of the Work and test and inspection method.
7. Identification of product and Detailed Provisions Section.
8. Complete test or inspection data.
9. Test and inspection results and an interpretation of test results.
10. Record of temperature and weather conditions at time of sample taking and testing and inspecting.
11. Comments or professional opinion on whether tested or inspected Work complies with the Contract Document requirements.

12. Name and signature of laboratory inspector.

13. Recommendations on retesting and re-inspecting.

B. Manufacturer's Field Reports(if needed, to be done at the discretion and request of the County in the work order): Prepare written information documenting tests and inspections specified in other Sections. At the minimum, include the following:

1. Name, address, e-mail, and telephone number of representative making report.
2. Statement on condition of substrates and their acceptability for installation of product.
3. Summary of installation procedures being followed, whether they comply with requirements and, if not, what corrective action was taken.
4. Results of operational and other tests and a statement of whether observed performance complies with requirements.
5. Other required items indicated in individual Detailed Provisions Sections.

C. Permits, Licenses, and Certificates: For County's records, submit copies of permits, licenses, certifications, inspection reports, releases, jurisdictional settlements, notices, receipts for fee payments, judgements, correspondence, records and similar documents, established for compliance with standards and regulations bearing performance of the Work.

1.06 QUALITY ASSURANCE

A. General: Qualifications paragraphs in this article establish the minimum qualification levels required; individual Detailed Provisions Sections specify additional requirements.

B. Manufacturer Qualifications: A firm experienced in manufacturing products or systems similar to those indicated for the Project and with a record of successful in-service performance, as well as sufficient production capacity to produce required units.

C. Fabricator Qualifications: A firm experienced in producing products similar to those indicated for the Project and with a record of successful in-service performance, as well as sufficient production capacity to produce required units.

D. Installer Qualifications: A firm or individual experienced in installing, erecting, or assembling work similar in material, design, and extent to that indicated for the Project, whose work has resulted in construction with a record of successful in-service performance.

E. Professional Engineer Qualifications: A professional engineer who is legally qualified to practice in jurisdiction where the Project is located and who is experienced in providing engineering services of the kind indicated. Engineering services are defined as those performed for installations of the system, assembly, or product that are similar in material, design, and extent to those indicated for the Project.

F. Specialists: Certain Detailed Provisions Sections require that specific construction activities shall be performed by entities who are recognized experts in those operations.

Specialists shall satisfy qualification requirements indicated and shall be engaged for the activities indicated.

1. Requirements of authorities having jurisdiction shall supersede requirements for specialists.

G. Testing Agency Qualifications: An NRTL, and NVLAP, or an independent agency with the experience and capability to conduct testing and inspecting indicated, as documented according to ASTM E329; and with additional qualifications specified in individual Sections; and, where required by authorities having jurisdiction, that is acceptable to authorities.

1. NRTL: A Nationally Recognized Testing Laboratory according to 29 CFR 1910.7
2. NVLAP: A testing agency accredited according to National Institute of Science and Technology (NIST) National Voluntary Laboratory Accreditation Program.

H. Manufacturer's Representative Qualifications: An authorized representative of manufacturer who is trained and approved by manufacturer to observe and inspect installation of manufacturer's products that similar in material, design, and extent to those indicated for the Project.

I. Preconstruction Testing and Conformance Testing: Where testing agency is indicated to perform preconstruction/conformance testing for compliance with specified requirements for performance and test methods, comply with the following:

1. Contractor responsibilities include the following:
   a. Provide test specimens representative of proposed products and construction.
   b. Submit specimens in a timely manner with sufficient time for testing and analyzing results to prevent delaying the Work.
   c. Build laboratory mockups at testing facility using personnel, products, and methods of construction indicated for the completed Work.
   d. When testing is complete, remove test specimens, assemblies, and mockups, and laboratory mockups; do not reuse products.
2. Testing Agency Responsibilities: Submit a certified written report of each test, inspection, and similar quality-assurance service to County, with copy to Contractor. Interpret tests and inspections and state in each report whether tested and inspected Work complies with or deviates from the Contract Documents.

1.07 QUALITY CONTROL

A. County Responsibilities: Where quality-control services are indicated in individual Detailed Provisions Sections as County's responsibility, County will engage a qualified testing agency to perform these services. It is the Contractor's responsibility to schedule the testing provided by such agencies.

1. County will furnish Contractor with names, addresses, e-mail, and telephone numbers of testing agencies engaged and a description of types of testing and inspecting they are engaged to perform.

2. Costs associated with retesting and re-inspecting construction that replaces or is necessitated by work that failed to comply with Contract Documents due to the Contractor's actions, shall be charged to the Contractor.

B. Contractor Responsibilities: Tests and inspections not explicitly assigned to County are Contractor's responsibility. Perform additional quality-control activities required to verify that the Work complies with requirements, whether specified or not.

1. Where services are indicated as Contractor's responsibility, engage a qualified testing agency to perform these quality-control services.

a. Contractor shall not employ same entity engaged by County, unless agreed to in writing by the County.

2. Notify testing agencies at least forty-eight (48) hours in advance of time when Work that requires testing or inspection will be performed.

3. Where quality-control services are indicated as Contractor's responsibility, submit a certified written report, in duplicate, of each quality-control service.

4. Testing and inspecting requested by Contractor and not required by the Contract Documents are Contractor's responsibility.

5. Submit additional copies of each written report directly to authorities having jurisdiction, when they so direct.

C. Manufacturer's Field Services: Where indicated, engage a manufacturer's representative to observe and inspect the Work. Manufacturer's representative's services include examination of substrates and conditions, verification of materials, inspection of completed portions of the Work, and submittal of written reports.

D. Retesting/Re-inspecting: Regardless of whether original tests or inspections were Contractor's responsibility, provide quality-control services, including retesting and re-inspecting, for construction that replaced Work that failed to comply with the Contract Documents.

E. Testing Agency Responsibilities: Cooperate with County and Contractor in performance of duties. Provide qualified personnel to perform required tests and inspections.

1. Notify County and Contractor promptly of irregularities or deficiencies observed in the Work during performance of its services.

2. Determine the location from which test samples will be taken and in which in-situ tests are conducted.

3. Conduct and interpret tests and inspections and state in each report whether tested and inspected work complies with or deviates from requirements.

4. Submit a certified written report, in duplicate, of each test, inspection, and similar quality-control service through Contractor.

5. Do not release, revoke, alter, or increase the Contract Document requirements or approve or accept any portion of the Work.

6. Do not perform any duties of Contractor.

F. Associated Services: Cooperate with agencies performing required tests, inspections, and similar quality-control services, and provide reasonable auxiliary services as requested. Notify agency sufficiently in advance of operations to permit assignment of personnel. Provide the following:

1. Access to the Work.
2. Incidental labor and facilities necessary to facilitate tests and inspections.
3. Adequate quantities of representative samples of materials that require testing and inspecting. Assist agency in obtaining samples.
4. Facilities for storage and field curing of test samples.
5. Preliminary design mix proposed for use for material mixes that require control by testing agency.

G. Coordination: Coordinate sequence of activities to accommodate required quality-assurance and –control services with a minimum of delay and to avoid necessity of removing and replacing construction to accommodate testing and inspecting.

1. Schedule times for tests, inspections, obtaining samples, and similar activities.

1.08 SPECIAL INSPECTIONS AND TESTS

A. Special Inspections and Tests: Conducted by a qualified special inspector as required by California Building Code (CBC), as indicated in individual Detailed Provisions Sections and indicated in the Project Drawings, and as follows:

1. Verifying that manufacturer maintains detailed fabrication and quality-control procedures and reviews the completeness and adequacy of those procedures to perform the Work.
2. Notifying County and Contractor promptly of irregularities and deficiencies observed in the Work during performance of its services.
3. Submitting a certified written report of each test, inspection, and similar quality-control service to County, Contractor, and to authorities having jurisdiction.
4. Submitting a final report of special tests and inspections at Substantial Completion, which includes a list of unresolved deficiencies.
5. Interpreting tests and inspections and stating in each report whether tested and inspected work complies with or deviates from the Contract Documents.
6. Retesting and re-inspecting corrected work.

PART 2 PRODUCTS – NOT USED

PART 3 EXECUTION

3.01 TEST AND INSPECTION LOG

A. Test and Inspection Log: Prepare a record of tests and inspections. At a minimum, include the following:

1. Date of test or inspection was conducted.
2. Description of the Work tested or inspected.
3. Date of test or inspection results were transmitted to County.
4. Identification of testing agency or special inspector conducting test or inspection.

B. Maintain log at Project Location. Post changes and revisions as they occur. Provide access to test and inspection log for County's reference during normal working hours.

3.02 REPAIR AND PROTECTION

A. General: On completion of testing, inspecting, sample taking, and similar services, repair damaged construction and restore substrates and finishes.

1. Provide materials and comply with installation requirements specified in other Detailed Provisions Sections or matching existing substrates and finishes. Restore patched areas and extend restoration into adjoining areas with durable seams that are as invisible as possible.

B. Protect construction exposed by or for quality-control service activities.

C. Repair and protection are Contractor's responsibility, regardless of the assignment of responsibility for quality-control services.

3.03 REMOVAL OF DEFECTIVE AND UNAUTHORIZED WORK

A. If any Work is concealed or performed without the requisite inspection notice, then the Work shall be subject to such tests or exposure as may be necessary to prove to the Engineer that the materials used and the Work performed are in conformity with the Plans and Specifications, or said materials or Work may be removed and installed or performed again at the discretion of the Engineer. All labor, equipment, and materials necessary for exposing, testing or complete removal, and installation or replacement shall be furnished by the Contractor at its own expense. The Contractor shall replace, at its own expense, any materials or Work damaged by exposure or testing.

B. Cost of rework inspection incurred by the County will be deducted from the Contract Price via Change Order. Rework inspection cost is as follows:

1. Contractor's failure to complete the Work within the Contract Time, including any previously authorized extensions thereof.
2. Extra inspections required for Contractor's correction of defective Work.
3. Overtime costs for acceleration of Work done for Contractor's convenience.
4. All associated costs including travel.

C. All Work which has been rejected shall be remedied or removed and replaced by the Contractor in an acceptable manner; and no compensation will be allowed for such removal or replacement. Any Work done beyond the lines and grades as described by

the Contract Documents, or any Extra Work done without proper written authority, will be considered as unauthorized and will not be paid for. Work so done may be ordered removed at the Contractor's expense. Upon failure on the part of the Contractor to comply, the County shall have authority to cause defective or unauthorized Work to be remedied, or removed and replaced, and to deduct the costs for this Work from any monies due or to become due the Contractor.

END OF SECTION 01 4300

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SPECIFICATIONS – DETAILED PROVISIONS

SECTION 01 5000: TEMPORARY FACILITIES AND CONTROLS

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SECTION 01 5000
TEMPORARY FACILITIES AND CONTROLS

PART 1 GENERAL

1.01 SUMMARY

A. Section includes requirements for temporary utilities, support facilities, and security and protection facilities.

B. Related Contract Document Sections include, but are not limited to:

1. General Provisions
2. Detailed Provisions Section 01 1100 – Summary of Work

1.02 REFERENCES

A. Comply with requirements of Detailed Provisions Section 01 4200 – Reference Standards and Abbreviations and as listed herein. The following is a list of standards referenced and incorporated into this Section:

1. American Society of Testing and Materials (ASTM):
   a. ASTM E136 – Standard Test Method for Behavior of Materials in a Vertical Tube Furnace at 750 Deg C.
2. Code of Federal Regulations (CFR):
   a. 29 CFR 1926 – Safety and Health Regulations for Construction.
3. National Fire Protection Association (NFPA):
   a. NFPA 70 – National Electrical Code.
   b. NFPA 241 – Standard for Safeguarding Construction, Alteration, and Demolition Operations.

1.03 QUALITY ASSURANCE

A. Electric Service: Comply with NECA, NEMA, and UL standards and regulations for temporary electric service. Install service to comply with NFPA 70.

B. Permits and Inspections: Arrange for authorities having jurisdiction to test and inspect each temporary utility before use. Obtain all required certifications and permits.

1.04 PROJECT CONDITIONS

A. Temporary Use of Permanent Facilities: Engage Installer of each permanent service/facility to assume responsibility for operation, maintenance, and protection of each permanent service/facility during its use as a construction facility before County's acceptance, regardless of previously assigned responsibilities.

1.05 SUBMITTALS

A. Submittal Procedures: See Detailed Provisions Section 01 3300 for requirements for the mechanics and administration of the submittal process.

B. Site Plan:

1. Submit for County approval drawing showing temporary facilities, utility hookups, staging areas, storage areas and parking areas for construction personnel.

C. Fire-Safety Program:

1. Show compliance with requirements of NFPA 241 and authorities having jurisdiction. Indicate Contractor personnel responsible for management of fire prevention program.

PART 2 PRODUCTS

2.01 MATERIALS

A. Chain-Link Fencing: Minimum 2-inch, 0.148-inch-thick, galvanized steel, chain-link fabric fencing; minimum six (6) feet high with galvanized-steel pipe posts; minimum 2-3/8" OD line posts and 2-7/8" OD corner and pull posts.

B. Portable Chain-Link Fencing: Minimum 2-inch, 0.148-inch-thick, galvanized steel, chain-link fabric fencing; minimum six (6) feet high with galvanized-steel pipe posts; minimum 2-3/8" OD line posts and 2-7/8" OD corner and pull posts, with 1-5/8-inch OD top and bottom rails. Provide galvanized-steel bases for supporting posts.

C. Construction/Safety Fencing:

1. 4-foot tall orange fabric mesh as manufactured by:

a. Tenax Corporation (Beacon Plus or Diamex); www.tenaxus.com;

b. Or approved equal

2. Use metal T-Posts installed up to ten (10) feet apart or as necessary to prevent sagging at all times. Due to safety concerns and potential high wind conditions at the Project Location, rebar, metal u-post, and wooden stakes shall not be allowed as supports for construction/safety fencing.

2.02 TEMPORARY FACILITIES

A. If needed, final location of Contractor's temporary facilities shall be coordinated with the County to ensure that access critical to operations is maintained at all times.

2.03 EQUIPMENT

A. Fire Extinguishers: Portable, UL rated; with class and extinguishing agent as required by locations and classes of fire exposures. The Contractor shall provide fire extinguishers and other fire protection equipment to adequately protect new and existing facilities and temporary facilities against damage by fire. Water casks,

chemical equipment or other sufficient means shall be provided for fighting fires in the new, existing and temporary structures and other portions of the Work and responsible persons shall be designated and instructed in the operation of such fire apparatus so as to prevent or minimize the hazard of fire. The Contractor's fire protection program shall conform to the requirements of the OSHA Standards for Construction. The Contractor shall employ every reasonable means to prevent the hazard of fire.

B. HVAC Equipment: Unless County authorizes use of permanent HVAC system, provide vented, self-contained, liquid-propane-gas or fuel-oil heaters with individual space thermostatic control.

1. Use of gasoline-burning space heaters, open-flame heaters, or salamander-type heating units is prohibited.
2. Heating Units: Listed and labeled for type of fuel being consumed, by a qualified testing agency acceptable to authorities having jurisdiction, and marked for intended location and application.
3. Permanent HVAC System: If County authorizes use of permanent HVAC system for temporary use during construction, provide filter with MERV of 8 at each return-air-grille in system and remove at end of construction and clean HVAC system.

PART 3 EXECUTION

3.01 GENERAL INSTALLATION

A. Locate facilities where they will serve the Project adequately and result in minimum interference with performance of the Work. Relocate and modify facilities as required by progress of the Work. Locate facilities to limit site disturbance.

3.02 TEMPORARY UTILITY INSTALLATION

A. General: Install temporary service or connect to existing service.

1. Arrange with utility company, County, and existing users for time when service can be interrupted, if necessary, to make connections for temporary services.

B. Water Supply:

1. There is no potable water at any of the landfills. The nearest fire hydrant to the Badlands landfill is located near the intersection of Ironwood Ave. and Theodore and is approximately one mile from the landfill site. The nearest fire hydrant at the Lamb Canyon landfill is located at East 1st St., located approximately 3.3 miles from the landfill. For dust control and soil moisture conditioning activities only, the County will allow the Contractor to use these sources at no cost to the Contractor. Costs associated with transporting water from the water source to the Project Location shall be the Contractor's responsibility. Costs associated with repairing damages to the County's water source caused by the Contractor's action shall be borne by the Contractor.

2. Contractor may make arrangements for obtaining water supply for this Project via a separate water source. If the Contractor elects to do so, water shall be clean and free from objectionable deleterious amounts of acids, alkalis, salts, or organic materials. County must approve separate water source in advance and in writing. In either case, Contractor shall provide all labor and equipment to collect, load, and apply water in the Work areas.
3. At the County's option, and time permitting, water may at times be provided by the County's water truck to the Contractors tank on-site.
4. Prior to Final Acceptance of the Work, all temporary water connections, tanks, and piping installed by the Contractor shall be entirely removed, and all affected improvements shall be restored to their original condition, or better, to the satisfaction of the County and to the agency owning the affected utility.

C. Waste Collection:
1. Provide trash cans and instruct personnel to maintain a clean site. Waste-collection containers shall be adequately sized to handle waste from construction operations. Comply with requirements of authorities having jurisdiction.

D. Sanitary Facilities:
1. Sanitary facilities are located at both landfills and can be used by the contractor.

E. Heating and Cooling:
1. Provide temporary heating and cooling required by construction activities for curing or drying of completed installations or for protecting installed construction from adverse effects of low and high temperatures. Select equipment that will not have a harmful effect on completed installations or elements being installed.

F. Ventilation and Humidity Control:
1. Provide temporary ventilation required by construction activities for curing or drying of completed installations or for protecting installed construction from adverse effects of high humidity. Select equipment that will not have a harmful effect on completed installations or elements being installed. Coordinate ventilation requirements to produce ambient condition required and minimize energy consumption.

G. Electric Power Service:
1. The Contractor shall be responsible to provide necessary electrical power. The Contractor will be responsible for all temporary power and generators required during the construction and planned power shut-downs.

H. Lighting:
1. Provide temporary lighting with local switching that provides adequate illumination for construction operations, observations, inspections, and traffic conditions.

I. Telephone Service: The County's telephone system shall not be used by the Contractor's work force.

3.03 SUPPORT FACILITIES INSTALLATION

A. Temporary Roads:

1. Access to the Project Location shall be provided by the County. The Contractor shall not construct any staging areas, haul roads, and access roads without the approval of the County.
2. Provide dust-control treatment that is non-polluting and non-tracking. Reapply treatment as required to minimize dust.

B. Traffic Controls:

1. Comply with requirements of Authorities having jurisdiction and coordinate with County staff.
2. Protect existing site improvements to remain including curbs, pavement, and utilities.
3. Maintain access for fire-fighting equipment and emergency services.
4. Traffic control procedures for approaching, crossing, or traveling along public roadways or access roads according to the latest edition of the California Manual on Uniform Traffic Control Devices (MUTCD), which prescribes uniform standards and specifications for all official traffic control devices in California. The MUTCD can be viewed from Caltrans website at http://www.dot.ca.gov/hq/traffops/engineering/mutcd/. Signs and traffic control devices along public roadways or access roads shall be removed and stored or covered during periods of time when they are not needed, such as the end of each Working Day, weekends, and any time when no construction activities are being performed.

C. Parking: Use designated areas on Contractor's site plan as approved by the County, for construction personnel parking.

D. Dewatering Facilities and Drains: Comply with all Federal, State, and Local Government requirements. Maintain Project Location, excavations, and construction free of water.

1. Dispose of rainwater in a lawful manner that will not result in flooding of adjoining properties of endanger permanent Work or temporary facilities.

E. Lifts and Hoists: Provide facilities necessary for hoisting materials and personnel.

1. Truck cranes and similar devices used for hoisting materials are considered "tools and equipment" and not temporary facilities.

3.04 SECURITY AND PROTECTION FACILITIES INSTALLATION

A. Protection of Existing Facilities: Protect existing vegetation, equipment, structures, utilities, and other improvements at the Project Location and on adjacent properties, except those indicated to be removed or altered. Repair damage to existing facilities.

B. Environmental Protection: Provide protection, operate temporary facilities, and conduct construction as required to comply with environmental regulations and that

minimize possible air, waterway, and subsoil contamination or pollution of other undesirable effects.

C. Temporary Erosion and Sedimentation Control: Provide measures to prevent soil erosion and discharge of soil-bearing water runoff and airborne dust to undisturbed areas and to adjacent properties and walkways.

D. Stormwater Control: Comply with requirements of authorities having jurisdiction. Provide barriers in and around excavations and subgrade construction to prevent flooding by runoff of stormwater from heavy rains.

E. Tree and Plant Protection: Install temporary fencing located outside the drip line of trees to protect vegetation from damage form construction operations. Protect tree root systems from damage, flooding, and erosion.

F. Security Enclosure and Lockup: Install temporary enclosure around partially completed areas of construction. Provide lockable entrances to prevent unauthorized entrance, vandalism, theft, and similar violations of security. Lock entrances at end of each Work Day.

   1. The Contractor shall assume full responsibility for any theft or vandalism occurring to the Contractor's equipment, tools, materials, supplies, and construction (prior to Final Acceptance of the entire Project by the County), and shall take appropriate measures necessary to eliminate their occurrences.

G. Barricades, Warning Signs, and Lights: Comply with requirements of authorities having jurisdiction for erecting structurally adequate barricades, including warning signs and lighting.

H. Temporary Egress: Maintain temporary egress for existing occupied facilities as required by the County.

I. Temporary Enclosures: Provide temporary enclosures for protection of construction, in progress and completed, from exposure, foul weather, other construction operations, and similar activities. Provide temporary weather tight enclosure for building exterior.

   1. Where heating or cooling is needed and permanent enclosure is not complete, insulate temporary enclosures.

J. Temporary Fire Protection: Install and maintain temporary fire-protection facilities of types needed to protect against reasonably predictable and controllable fire losses. Comply with NFPA 241; manage fire prevention program.

   1. Prohibit smoking in construction areas.

   2. Supervise welding operations, combustion-type temporary heating units, and similar sources of fire ignition according to requirements of authorities having jurisdiction.

   3. Develop and supervise an overall fire-prevention and-protection program for personnel at the Project Location. Review needs with local fire department and establish procedures to be followed. Instruct personnel in methods and procedures. Post warnings and information.

3.05 OPERATION, TERMINATION, AND REMOVAL

A. Supervision: Enforce strict discipline in use of temporary facilities. To minimize waste and abuse, limit availability of temporary facilities to essential and intended uses.

B. Maintenance: Maintain facilities in good operating condition until removal.

   1. Maintain operation of temporary enclosure, heating, cooling, humidity control, ventilation, and similar facilities on a 24-hour basis where required to achieve indicated results and to avoid possibility of damage.

C. Termination and Removal: Remove each temporary facility when need for its service has ended, when it has been replaced by authorized use of a permanent facility, or no later than Substantial Completion. Complete or, if necessary, restore permanent construction that may have been delayed because of interference with temporary facility. Repair damaged Work, clean exposed surfaces, and replace construction that cannot be satisfactorily repaired.

   1. Materials and facilities that constitute temporary facilities are property of Contractor. County reserves right to take possession of Project signs.

   2. At Substantial Completion, repair, renovate, and clean permanent facilities used during construction period. Comply with final cleaning requirements specified in Detailed Provisions Section 01 7700 – Closeout Procedures.

END OF SECTION 01 5000

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SPECIFICATIONS – DETAILED PROVISIONS

SECTION 01 5526: TRAFFIC CONTROL

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SECTION 01 5526
TRAFFIC CONTROL

PART 1 GENERAL

1.01 SUMMARY

A. Section covers requirements for temporary traffic control during construction of the PROJECT.

B. Related Contract Document Sections include, but are not limited to:

1. Detailed Provisions Section 01 1100 – Summary of Work

1.02 REFERENCES

A. Comply with requirements of Detailed Provisions Section 01 4200 – Reference Standards and Abbreviations and as listed herein. The following is a list of standards referenced and incorporated into this Section:

1. AASHTO American Association of State Highway and Transportation Officials, Roadside Design Guide, Current Edition.
2. U.S. Department of Transportation(USDOT), Federal Highway Administration: Manual of Uniform Traffic Control Devices (MUTCD), Work Zone Safety and Mobility, and Temporary Traffic Control Devices
3. California Manual on Uniform Traffic Control Devices (CA MUTCD)
4. Work Area Traffic Control Handbook (WATCH)
5. California Department of Transportation (Caltrans):
    a. Construction Contract Standards (including Standard Plans, Standard Specifications, and Standard Special Provisions)
    b. Highway Design Manual
    c. Construction Manual
    d. Maintenance Manual

1.03 SUBMITTALS

A. Submittal Procedures: See Detailed Provisions Section 01 3300 for requirements for the mechanics and administration of the submittal process.

B. Traffic Control Plan, If Necessary:

1. Submit a project-specific Traffic Control Plan (TCP) within fourteen (10) Calendar days of issuance of Notice to Proceed and prior to commencing work at the Project Location.
2. Work shall not commence until the County provides a written acceptance of the TCP. County acceptance of the TCP does not release the Contractor of liability in the event of an accident or injury, nor does it place any liability on the County or

any County employees.

3. TCP must, at a minimum, comply with all federal, state, and local requirements regarding traffic control during construction activities.
4. The TCP shall be specific to the Project and include, at a minimum, a site map indicating the delineation of the proposed haul routes, traffic direction, signs, lane closures, and traffic control devices to be implemented during construction.
5. TCP shall address but not limited to the following: all demolition work; roadway asphalt work (including asphalt cold plane, asphalt overlay, asphalt removal and repair, and new asphalt placement for roadway and drainage structures); reinforced concrete work; scale work (disconnect and disassemble, demolition, storage, and installation); traffic signal and lighting standard installation; traffic signage installation; and thermoplastic striping, throughout all phases of the Project.
6. TCP shall address the procedures for approaching or crossing public access roads internal to the landfill during construction.
7. The Contractor's Safety Officer shall participate in the development of the TCP and be responsible for adherence to the TCP at all times.
8. Provide a system of informing workers, Subcontractors, and others about the TCP and conditions of the Work.
9. Revisions to the TCP:
    a. Revise the TCP prior to the start of Work as necessary to accommodate changes requested by the County, regulatory agencies, and jurisdictions having authority.
    b. Revise the TCP as necessary to accommodate changes in site conditions.
10. Contractor shall post copies of the TCP and all other applicable documents at the Project Location.
11. Failure to submit the Traffic Control Plans within the specified time frames will not be justification for additional workdays. Failure to adequately address comments in any required resubmittal also will not justify additional working days.
12. Contractor shall be responsible for securing any necessary permits or approvals related to Traffic Control activities. Application for permits and governing agency approvals shall only be made after acceptance of plan by County.

PART 2 PRODUCTS

2.01 TEMPORARY TRAFFIC CONTROL DEVICES AND SIGNANGE

A. Temporary signage, channelizing devices, barricades, and any other traffic control devices shall be industry standard and comply with the requirements of the approved TCP and any applicable requirements defined in the reference documents.

PART 3 EXECUTION

3.01 TRAFFIC CONTROL

A. Construction

1. Contractor and its subcontractors shall comply with all applicable Federal and State traffic control regulations and approved TCP.
2. To minimize disruption to landfill traffic, the Contractor shall ensure a minimum of two (2) landfill truck scales are always in operation during landfill operating hours of 6:00 a.m. to 4:30 p.m. Contractor shall maintain a minimum of two (2) two asphalt lanes (ingress and egress traffic) during landfill operating hours.
3. Contractor shall provide site access (ingress and egress) to County employees at all times throughout the duration of the Project.
4. Minimum lane width shall be 12 feet, unless noted otherwise.
5. The Contractor shall provide traffic directors, temporary control devices, and temporary signage in accordance with the TCP whenever necessary to control traffic, warn public of any dangerous conditions resulting from work activities, and provide safe passage of traffic through and around the work zone. Traffic directors should be trained in safe traffic control practices and must comply with all applicable Federal and State regulations.
6. Keep active traffic areas free of excavated material, construction equipment, and other materials and equipment.
7. Allow emergency vehicles immediate passage.

B. Periods of Construction Inactivity

1. During period when no construction work is being performed, landfill traffic shall be able to enter and exit the landfill site without the aide of a traffic director unless provided by the Contractor at their own expense. Ingress and egress traffic lanes shall be clearly marked and visible at all times.
2. Signs and traffic control devices along public access or landfill operation routes shall be removed and stored or covered during periods of time when they are not needed (such as at the end of each working day, weekends, and any time when no construction work is being performed).

END OF SECTION 01 5526

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SPECIFICATIONS – DETAILED PROVISIONS

SECTION 01 5600: PROJECT ENVIRONMENTAL CONTROLS

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SECTION 01 5600
PROJECT ENVIRONMENTAL CONTROLS

PART 1 GENERAL

1.01 SUMMARY

A. Section includes mitigation measures to be integrated into the Project to reduce the potential environmental impacts resulting from construction activities. The Contractor shall implement mitigation measures identified herein during the construction process, as well as any other measures required in the Contract Documents, and as required by Federal, State, and Local government entities.

B. Related Contract Document Sections include, but are not limited to:

1. General Provisions
2. Detailed Provisions Section 01 1100 – Summary of Work
3. Detailed Provisions Section 31 1000 – Site Clearing
4. Detailed Provisions Section 31 2300 - Earthwork

1.02 REFERENCES

A. Comply with requirements of Detailed Provisions Section 01 4200 – Reference Standards and Abbreviations and as listed herein.

B. Reference Codes, Regulations and Policies: The following codes, regulations and policies, including documents referenced therein, form part of this Detailed Provision and are incorporated herein by reference.

1. American Society of Testing and Materials (ASTM):
   a. ASTM E136 – Standard Test Method for Behavior of Materials in a Vertical Tube Furnace at 750 Deg C.
2. California Code of Regulations (CCR):
   a. 13 CCR 2449 – General Requirements for In-Use Off-Road Diesel-Fueled Fleets
   b. 13 CCR 2485 – Airborne Toxic Control Measure to Limit Diesel-Fueled Commercial Motor Vehicle Idling
   c. 19 CCR – Public Safety
3. California Department of Transportation (Caltrans):
   a. Caltrans Stormwater Pollution Prevention Plan (SWPPP) and Water Pollution Control Program (WPCP) Preparation Manual, current edition
   b. Caltrans Construction Site Best Management Practices (BMPs) Manual, current edition
4. California Health and Safety Code (CHSC):

a. CHSC Division 20, Chapter 6.95 – Hazardous Materials Release Response Plans and Inventory.

5. Code of Federal Regulations (CFR):
   a. 29 CFR 1926 – Safety and Health Regulations for Construction.
   b. 40 CFR 112 – Oil Pollution Prevention
6. California State Water Resources Control Board (SWRCB):
   a. SWRCB National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges Associated with Industrial Activities, Order No. 2014-0057-DWQ, NPDES No. CAS000001 ("the Industrial General Permit").
   b. SWRCB National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities, Order No. 2009-0009-DWQ, NPDES No. CAS000002 ("the General Permit").
7. California Stormwater Quality Association (CSQA):
   a. CSQA Construction BMP Handbook
   b. CSQA Industrial and Commercial BMP Handbook
8. County of Riverside:
   a. County Ordinance 651 – Requiring Disclosure of Hazardous Materials and the Formulation of Business Emergency Plans.
9. National Fire Protection Association (NFPA):
   a. NFPA 241 – Standard for Safeguarding Construction, Alteration, and Demolition Operations.
   b. NFPA 704 – Standard System for the Identification of the Hazards of Materials for Emergency Response.
10. South Coast Air Quality Management District (SCAQMD):
    a. SCAQMD Rule 403 – Fugitive Dust Control.

C. Additional reference information is provided as information to assist the Contractor with document preparation and registration requirements; and form part of this Detailed Provision and are incorporated herein:

1. Stormwater Water Pollution Prevention Plan (SWPPP):
   a. The 1972 amendments to the Federal Water Pollution Control Act (known as the Clean Water Act or CWA) provide the statutory basis for the National Pollutant Discharge and Elimination System (NPDES) permit program and the basic structure for regulating the discharge of pollutants from point sources to waters of the United States. Section 402 of the CWA specifically required the United States Environmental Protection Agency (EPA) to develop and implement the NPDES program. The full text of the Clean Water Act reference

and SWPPP preparation assistance is available from the following agency websites:

Agency Website	Reference	Website Address
EPA	Clean Water Act	http://www.epa.gov/npdes/pubs/cwatxt.txt
EPA	SWPPP Assistance	https://www3.epa.gov/npdes/pubs/sw_swppp_guide.pdf
Caltrans	SWPPP Assistance	http://www.dot.ca.gov/hq/construc/stormwater/manuals.htm
California Stormwater Quality Association	SWPPP Assistance	https://www.casqa.org/

2. Hazardous Materials Management:

   a. Title 40 of the Code of Federal Regulations (CFR) Part 112 establishes requirements for Oil Pollution Prevention. In accordance with this Regulation, the County has prepared a site specific Spill Prevention Control and Countermeasure Plan (SPCCP) for the Badlands and Lamb Canyon Landfills. Copies of the SPCCP are located at the Site and available for review at the County office.

   b. Title 19 Public Safety of the California Code of Regulations (CCR), along with the California Health and Safety Code (HSC), Division 20, Chapter 6.95 establish the requirements for hazardous material release reporting, inventory, and response plans. The County of Riverside has further adopted County Ordinance 651 "Requiring Disclosure of Hazardous Materials and the Formulation of Business Emergency Plans". The intent of this Ordinance is to impose additional and more stringent requirements on businesses that handle hazardous materials than those imposed by Chapter 6.95 of the HSC.

   c. In addition to the above Codes and Regulations, the Riverside County Department of Environmental Health (DEH) offers forms and guidelines for preparing a HMBEP. The full text of the above mentioned references and HMBEP preparation assistance is available from the following agency websites:

Agency Website	Reference	Website Address
e-CFR	CFR Title 40, Part 112 - Oil Pollution Prevention	http://www.ecfr.gov/cgi-bin/text-idx?SID=2feeeddb24b102687dcde2336206819e&mc=true&node=pt40.22.112&rgn=div5
California EPA	CCR Title 19 – Public Safety & CH&SC Chapter 6.95	http://www.calepa.ca.gov/cupa/LawsRegs/
County of Riverside, Clerk of the Board	County Ordinance 651	http://www.rivcocob.org/ords/600/651.4.pdf
County of Riverside Department of Environmental Health	HMBEP preparation assistance, Certified Union Program Agency (CUPA) & Hazardous Waste Generator Forms	http://www.rivcoeh.org/Forms/hazmat_guidance

Department of Toxic Substances Control (DTSC)	EPA ID Number	http://www.dtsc.ca.gov

D. Related Available Information:

1. As specified herein, comply with all requirements for the following County documents referenced and incorporated into this Section:

   a. Riverside County Department of Waste Resources; National Pollutant Discharge Elimination System: Storm Water Pollution Prevention Plan for the Badlands Sanitary Landfill (BAL SWPPP).

   b. Riverside County Department of Waste Resources; Spill Prevention, Control, and Countermeasure Plan, Badlands Sanitary Landfill (SPCCP).

   c. Riverside County Department of Waste Resources; National Pollutant Discharge Elimination System: Storm Water Pollution Prevention Plan for the Lamb Canyon Sanitary Landfill (LCL SWPPP).

   d. Riverside County Department of Waste Resources; Spill Prevention, Control, and Countermeasure Plan, Lamb Canyon Sanitary Landfill (SPCCP).

2. Copies of the BAL and LCL SWPPP and SPCCP are incorporated into the Contract Documents by reference and are available for review at the Site and at the County's office.

1.03 DEFINITIONS

A. Best Management Practices (BMPs) – BMPs are scheduling of activities, prohibitions of practices, maintenance procedures, and other management activities to prevent or reduce the discharge of pollutants. BMPs also include treatment requirements, operating procedures, and practices to control site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.

B. Dust – shall mean airborne particulate that is associated with or results from the Contractor's activities: Of particular concern is dust associated with the Contractor's earthwork activities; truck traffic onto and off of the Site; and wind traversing exposed stockpiled soil and debris.

C. General Permit – California State Water Resources Control Board (SWRCB) National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities, Order No. 2009-0009-DWQ, NPDES No. CAS000002 ("the General Permit").

D. Industrial General Permit – California State Water Resources Control Board (SWRCB) National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges Associated with Industrial Activities, Order No. 2014-0057-DWQ , NPDES No. CAS000001 ("the Industrial General Permit").

E. Likely Precipitation Event – Any weather pattern that is forecasted to have a 50% or greater chance of producing precipitation in the project area. The QSP shall obtain likely precipitation forecast information form the National Weather Service Forecast

Office (e.g., by entering the zip code of the project's location at: http://www.weather.gov).

F. NOI – Notice of Intent for General Permit.

G. Qualifying Rain Event – Any event that produces 0.5-inches or more precipitation with a 48-hour or greater period between rain events.

H. Qualified SWPPP Developer (QSD) – Individual who is trained and authorized to develop and revise SWPPPs pursuant to the Industrial General Permit and General Permit.

I. Construction General Permit Qualified SWPPP Practitioner (QSP) – Individual responsible for non-storm water and storm water visual observations, sampling and analysis, and for ensuring full compliance with the General Permit.

J. REAP – Rain Event Action Plan. The General Permit requires the QSP of Risk Level 2 and 3 sites to develop and implement REAPs that must be designed to protect all exposed portions of the site within 48-hours prior to any likely precipitation event.

K. SWPPP – Storm Water Pollution Prevention Plan

L. Visible Dust – shall mean dust that can be detected visibly, without instrumentation.

1.04 QUALITY ASSURANCE

A. In order to minimize the discharge of pollutants to storm water, the Contractor shall implement all temporary site controls in accordance with the project-specific SWPPP prepared by the Contractor. Contractor prepared SWPPP shall be developed by a QSD.

B. Implementation of site controls shall be performed under the oversight of a QSP. A qualified Contractor experienced in the proper installation of BMPs shall provide installation, maintenance and repair in accordance with: manufacturers' specifications; in keeping with recognized BMPs; and in keeping with compliance of the Site's Industrial General Permit for construction activities. The QSP is responsible for ensuring full compliance with NPDES requirements and implementation of all elements of the Contractor's SWPPP.

1.05 SUBMITTALS

A. Submittal Procedures: See Detailed Provisions Section 01 3300 – Submittal Procedures for requirements for the mechanics and administration of the submittal process.

B. Construction Fugitive Dust Control Plan:

1. Contractor shall prepare, submit for review and acceptance, and implement a dust control plan that conforms to South Coast Air Quality Management District (SCAQMD) Rule 403 requirements. Submit to County within two (2) weeks of the first Work Order issuance, and prior to delivering equipment and commencing work at the Project Location.

C. Hazardous Materials Business Emergency Plan (HMBEP):

1. Contractor shall prepare and submit for County review and acceptance a project-

specific HMBEP, if a Contractor's work requires the on-site storage of petroleum products, including, but not limited to: lubrication oils, antifreeze, greases or fuels, or if it is necessary for the Contractor to store petroleum waste products on-site such as waste oil, oil filters, antifreeze, greases, contaminated soil, and waste fuel on-site. Submit to County within two (2) weeks of the Award of Contract by the Riverside County Board of Supervisors, and prior to delivering equipment and commencing Work at the Project Location.

D. Product Data:

1. Provide manufacturer's catalog sheets, installation instructions, material testing, and data sheets for all products used in all BMPs prior to installation on the site.
2. Provide manufacturer's catalog sheets, installation instructions, material testing, and data sheets for all proposed soil stabilizers along with certification from Santa Ana Regional Water Quality Control Board for approved use.

E. Qualifications:

1. Submit documented training and certification qualifications of Contractor QSD and QSP personnel.

F. SWPPP Inspections:

1. Contractor shall submit SWPPP weekly and pre/post storm inspections to the County.

PART 2 PRODUCTS

2.01 BMP MATERIALS:

A. General: Specific site control devices shall be identified in the Contractor's SWPPP; and furnished and installed by the Contractor. Where such devices are indicated, their material composition shall comply with this section.

B. Silt Fences: implemented to filter, and remove sediment from storm water shall be composed of the following materials:

1. Geotextile Fabric – a non-woven, polypropylene, polyethylene, or polyamide fabric with non-raveling edges. It shall be non-biodegradable, inert to most soil chemicals, ultraviolet resistant, unaffected by moisture and other weather conditions, and permeable to water while retaining sediment. Fabric shall be 36-inches wide, with a minimum weight of 4.5 oz/yd.
2. Posts – metal fence posts shall be made of hot-rolled steel, galvanized or painted, a minimum of 4-feet long, with a Y-bar or TEE cross-section.
3. Wire Backing – a galvanized, 2-inch x 4-inch, welded wire fencing, 12 gauge minimum. Width shall be sufficient to support geotextile fabric 24-inches above adjacent grades.
4. Chain link fences located along the same lines as silt fences may be used to support geotextile fabric. In this circumstance, the geotextile fabric shall be firmly attached

to the fence.

5. Geotextile rolls shall be furnished with suitable wrapping for protection against moisture and extended ultraviolet exposure prior to placement. Each roll shall be labeled or tagged to provide product identification sufficient for inventory and quality control purposes. Rolls shall be stored in a manner that protects them from the elements.
6. Prefabricated Fence: Prefabricated fence systems may be used provided they meet all of the above material requirements.

C. Triangular Filter Dikes: for use on surfaces or in locations where standard silt fence cannot be implemented, shall be composed of the following:

1. Geotextile fabric – of the type described above, in a minimum width of 60-inches. Dike Structure – 6 gauge, 6x6 welded wire mesh, 60-inches wide, folded into a triangular form. Each side shall be 18-inches with an overlap of 6-inches.
2. Ties – metal shoat rings or standard wire/cable ties for attachment of wire mesh to itself, and for attachment of geotextile fabric to wire mesh.

D. Rock Berms: shall be composed of the following materials:

1. Rock – clean, open-graded rock, with a maximum diameter of 3-inches.
2. Wire Mesh Support – a galvanized, woven wire sheathing having a maximum opening size of 1-inch, and a minimum wire diameter of 20 gauge.

E. Fiber Rolls: shall consist of straw or flax rolled and bound into a tube and placed on slopes at regular intervals to reduce flow velocity and minimize sediment runoff.

1. Stakes, for the fiber rolls, shall be softwood lumber, chisel pointed.

F. Soil Retention Blankets: shall govern for providing and placing wood, straw or coconut fiber mat, synthetic mat, paper mat, jute mesh or other material as a soil retention blanket for erosion control on slopes, ditches and high traffic pedestrian areas of barren soil, for short term protection of seeded or sodded areas.

1. Samples of soil retention blankets must be submitted to the County for approval prior to use. Examples or soil retention blankets include:
    a. Jute Mat – a plain fabric made of jute yarn, woven in a loose and simple manner, with a minimum unit weight of 2.7 pounds per square yard. Width shall be as required for the dimensions of the area to be covered.
    b. Wood Fiber Mat – a mat composed of wood fibers, which are encased in nylon, cotton or other type of netting.
    c. Synthetic Webbing Mat – a mat manufactured from polyvinyl chloride or polypropylene monofilaments, which are bonded together into a three-dimensional web to facilitate erosion control and/or re-vegetation.
2. Fasteners shall conform to the manufacturer's recommendations.

G. Geotextiles are woven or non-woven synthetic fabrics, which are designed to be used for erosion control and soil stabilization applications.

H. Organic Mulches: shall be used for covering bare soil, retaining moisture under existing vegetation being preserved, and for absorbing the energy of compaction caused by foot or vehicular traffic. Mulch shall be one or more of the following:

1. Straw – from broken straw bales that are free of weed and grass seed where the grass from the seed is not desired vegetation for the area to be protected.
2. Hay – from broken hay bales containing an approved species of grass and seed, for use where the germinated grasses from the hay bales is considered desirable vegetation in the area to be protected.
3. Wood Chips – from chipped limbs of cleared trees on site, or delivered in chipped form, in bulk quantities of pine, cedar or cypress. Wood chips of all species shall be partially decomposed to alleviate nitrogen depletion of the soil in areas where existing vegetation is to be preserved and protected.
4. Shredded Mulches – from pine, cypress or cedar, mechanically shredded, and capable of forming an interlocking mat following placement, and after sufficient wetting and drying has taken place naturally.

I. Any other BMP materials indicated in the Contractor's SWPPP.

2.02 SOIL BINDER OR STABILIZER:

A. Soil binders and stabilizers shall be non-toxic dust palliative approved for use by the Santa Ana Regional Water Quality Control Board (SARWQCB) and the County.

2.03 DUST CONTROL FABRIC:

A. Fabric shall be woven mesh polypropylene fabric, closed black or green mesh, with manufacturer's recommendations for dust and wind control.

PART 3 EXECUTION

3.01 CALIFORNIA STATE WATER RESOURCES CONTROL BOARD (SWRCB) NATIONAL POLLUTION DISCHARGE AND ELIMINATION SYSTEM (NPDES) PERMIT

A. The County complies with the SWRCB General Industrial Activities NPDES permit through regular inspections, monitoring, and implementation of best management practices (BMPs) as described in the current NPDES Storm Water Pollution Prevention Plans for Badlands Landfill (BAL SWPPP) and Lamb Canyon Landfill (LCL SWPPP). The Contractor shall be responsible for compliance with the BAL and LCL SWPPPs.

B. The Contractor shall implement all BMPs required to provide erosion and sediment controls, control of non-stormwater discharges, and hazardous spill prevention and response.

C. Inspections:

1. Pre-/Post-Storm Inspections: Inspections shall be conducted by the Contractor and the County at the Project Location prior to anticipated storm events (greater than or

equal to 40% chance of precipitation as forecasted by the National Oceanic and Atmospheric Administration (NOAA); www.noaa.gov) and after actual storm events to identify areas contributing to a discharge of storm water associated with construction activity at the Project Location. These inspections shall also document any necessary corrective actions implemented or future plans for implementation.

D. Corrective Actions:

1. Any corrective actions found to be needed for compliance with the BAL SWPPP and LCL SWPPP and permit requirements during any inspection shall be implemented by the Contractor immediately. If the Contractor does not implement corrective actions within 24 hours of notification, the Contractor shall be in breach of Contract, and the County may suspend construction activities until corrective action is implemented by the Contractor.

E. Implementation of storm water quality measures shall be performed at no additional cost to the County and the Contractor shall include appropriate allowance in the Contractor's Bid Proposal to cover such measures.

3.02 AIR QUALITY

A. Construction Fugitive Dust Control Plan: The Contractor is responsible for implementing all necessary mitigation measure to ensure compliance with regulatory thresholds relating to air quality including, but not limited to SCAQMD Rule 403 Fugitive Dust Control requirements. The dust control plan shall include the following dust control procedures or others as required by SCAQMD or authorized Agencies having jurisdiction:

1. Water all active construction areas at least twice daily, taking into consideration of temperature and wind conditions.
2. Cover all trucks/equipment hauling soil, sand, and other loose materials or require trucks/equipment to maintain at least two (2) feet of freeboard.
3. Pave, apply water three (3) times daily, or apply (non-toxic, biodegradable) soil stabilizers on unpaved access roads, parking areas and staging areas at construction sites. Soil stabilizers shall be approved for use by the Santa Ana Regional Water Quality Control Board (SARWQCB).
4. If visible soil material is carried onto paved access roads or public streets, sweep daily (with water sweepers) all paved areas where soil material has been determined to be from Contractor's operation. Containerize, characterize, and properly dispose of soil collected from street sweeping.
5. Hydroseed or apply (non-toxic, biodegradable) soil stabilizers to inactive construction areas (previously graded areas inactive for ten (10) Calendar Days or more).
6. Enclose, cover, water twice daily or apply (non-toxic, biodegradable) soil binders to exposed stockpiles (dirt, sand, etc.).
7. Limit traffic speeds on access roads (paved and unpaved) to 15 mph.

8. Construct stabilized construction entrance/exit ways for any unpaved transition to paved roadways. Install fiber rolls, gravel bags or other erosion control measures to prevent silt runoff to paved roadways.

B. The County shall have the authority to immediately suspend all construction operations if, in the County's opinion, the Contractor fails to adequately provide for dust control. In the event wind speeds exceed 20 mph for more than 15 minutes, causing visible dust, Contractor shall halt earthwork activities until wind speeds decrease and no visible dust is observed.

C. If either (1) observations or measurements made by the Contractor, County or regulatory agencies, or (2) complaints by SCAQMD or nearby receptors indicate the need for more stringent dust control measures, Contractor shall promptly:

1. Increase the magnitude of dust control measures.
2. Increase the frequency of dust control measures.
3. Add dust palliative or surfactant to dust control water as approved by the SARWQCB and County.

D. Construction Exhaust Emissions Control Plan: Contractor shall implement an exhaust emissions control plan that shall include, but not limited to the following controls and practices:

1. On road vehicles with a gross vehicular weight rating (GVWR) of 10,000 pounds or greater shall not idle for longer than five (5) minutes at any location as required by Section 2485 of Title 113, Division 3, Chapter 10, Article 1 of the California Code of Regulations (CCR). This restriction does not apply when vehicles remain motionless during traffic or when vehicles are queuing.
2. Off road equipment engines shall not idle for longer than five (5) minutes per Section 2449(d)(3) of Title 13, Division 3, Chapter 9, Article 4.8 of the California Code of Regulations (CCR). All vehicle operators shall receive a written idling policy to inform them of idling restrictions. The policy shall list exceptions to this rule that include the following: idling when queuing; idling to verify that the vehicle is in safe operating condition; idling for testing, servicing, repairing or diagnostic purposes; idling necessary to accomplish Work for which the vehicle was designed (such as operating a crane); and idling required to bring the machine to operating temperature as specified by the manufacturer.
3. Off road engines greater than 50 horsepower shall, at a minimum, meet Tier 2 emissions standards. When available, higher Tier engines shall be utilized.

E. Implementation of air quality measures shall be performed at no additional cost to the County and the Contractor shall include appropriate allowance in the Contractor's Bid Proposal to cover such measures.

3.03 HAZARDOUS MATERIALS MANAGEMENT AND SPILL PREVENTION

A. General:

1. The Contractor shall at all times keep the site neat, tidy, and free of waste materials or rubbish resulting from Work. Toxic materials, including oil, fuel oil, diesel, gasoline, contaminated soil, coolant, fluid filters, and other contaminants, shall be transported off-site and disposed of at an approved facility. Containers temporarily holding these toxic materials shall be properly labeled, covered and stored in secondary containment areas, have no leaks and shall be removed from the site as quickly as is reasonably possible.
2. Any accidental spills or spills that are produced during routine equipment maintenance shall be cleaned up by removing all the contaminants and the contaminated soil, disposing of it at an approved facility, and replacing the removed contaminated soil volume with clean soil material.
3. In the event that evidence of potential soil contamination such as discoloration, noxious odors, debris, or buried storage containers, is encountered during construction, the Contractor shall have a contingency plan for sampling and analysis of potentially hazardous substances, including use of photoionization detector. The required handling, storage, and disposal methods depend on the types and concentrations of chemical identified in the soil. Any site investigations or remediation shall comply with Applicable Laws and will coordinate with the appropriate Agencies.
4. The Contractor shall comply with the requirements of the Badlands and Lamb Canyon Spill Prevention Control and Countermeasure Plans (SPCCP) and include spill response procedures in their project-specific Health and Safety Plan (HASP). The Contractor shall be responsible for any spills caused by its Subcontractors.

B. Hazardous Materials Business Emergency Plan: If a Contractor's Work requires the on-site storage of petroleum products including, but not limited to: lubrication oils, antifreeze, greases or fuels, or if it is necessary for the Contractor to store petroleum waste products on-site such as waste oil, oil filters, antifreeze, greases, contaminated soil, and waste fuel on-site the following actions must take place:

1. The Contractor shall prepare a Hazardous Materials Business Emergency Plan (HMBEP) for submittal to the County prior to performing any Work. The plan and the associated "Business Activities", "Business Owner/Operator Identification" and "Hazardous Materials Inventory" forms shall be also submitted to the Riverside County Department of Environmental Health (DEH) for registration and issuance of a Facility ID Number.
2. The Contractor may additionally be required to apply for a permit as a hazardous waste generator from the Riverside County Department of Environmental Health (DEH), and an EPA ID number as required by Federal, State, or Local authorized agencies. To obtain an EPA ID number, the Contractor should contact the Department of Toxic Substances Control (DTSC) Telephone Information Center at (800) 61-TOXIC or (800) 618-6942, to obtain information on EPA ID #'s. Applications are available at the DTSC website referenced above in Section 1.02.
3. The Contractor will be required to comply with the terms and conditions of Riverside County Ordinance 651, which include, but are not limited to::

a. Immediate correction of unsafe conditions

b. Maintain proper separation of hazardous materials from other potentially dangerous materials and from buildings.

c. Restrict access by unauthorized persons

d. Post warning and hazard identification signs in accordance with NFPA Standard 704 where applicable. Post appropriate signage at hazardous materials storage areas, entrances and exits.

e. Label all containers and maintain labels in legible condition at all times. Label above ground storage tanks with the appropriate NFPA 704 when applicable. Correctly label all containers, barrels, etc containing hazardous materials and/or hazardous waste.

f. Submit revised forms to the County prior to making changes to chemical inventory.

g. Submit copies of all hazardous waste manifests to the County for all materials being properly disposed from the site.

4. The Contractor shall additionally be required to comply with the conditions of the Badlands and Lamb Canyon Landfills respective Spill Prevention, Control, and Countermeasure Plans (SPCCP), Section 10, "Contractor's Responsibility" which is outlined as follows:

   a. The Contractor's tanks or drums used to store the product or waste must comply with the County's SPCCP requirements including, but not limited to: secondary containment system, drainage control and periodic inspection.

   b. Secondary containment systems shall comply with the following minimum guidelines:

      1) Methods of Containment – Recessed floors, raised sills, containment pallets, double-walled tanks, dikes, berms or walls.

      2) Capacity of Containment – Contain the entire volume of the largest container/ tank and the volume from a 24-hour rainfall as based on a 25-year storm frequency.

      3) Construction of Containment – Containment area shall be lined with compatible (impervious, chemical and puncture resistant) material and have no unsealed seams or gaps. No open or uncontrolled drains shall be located within the containment area. Floor of containment area shall be sloped to a recessed collection sump.

   c. Containment areas shall be sufficiently impervious to contain any discharge and be designed to prevent any drainage. Any accidental spills within the containment area shall be immediately cleaned up by removing the contaminants and properly disposing of them. When rain is forecasted, the containment area shall be covered to prevent rainfall accumulation. Any contained rainwater in the area must be inspected for contamination by County staff prior to being discharged by the Contractor. Any discharge that occurs

must be observed and logged by County staff on a "Drainage Discharge Report Form (WM880)" located in Appendix 1 of the SPCCP.

d. The Contractor shall conduct a daily inspection of their above ground storage tanks using the "Contractor's Daily Aboveground Storage Tank Inspection Form (WM850)" located in Appendix 1 of the SPCCP.

e. The Contractor shall conduct a weekly inspection of their work area using the "Contractor's Weekly Inspection Form (WM 860)" located in Appendix 1 of the SPCCP.

f. The Contractor shall document all problems found during the inspection and provide immediate correction of problems.

g. The Contractor shall document all corrections in writing and attach the documentation to the inspection form.

h. The Contractor shall submit their completed forms (including daily inspections, weekly inspections, hazardous waste manifests and correction documentation) to the County on a weekly basis.

C. Implementation of hazardous materials management and spill prevention measures shall be performed at no additional cost to the County and the Contractor shall include appropriate allowance in the Contractor's Bid Proposal to cover such measures.

3.04 NOISE

A. Contractor shall assure that construction equipment with internal combustion engines have sound control devices at least as effective as those provided by the original equipment manufacturer (OEM). No equipment shall be permitted to have an un-muffled exhaust.

3.05 SEASONAL RESTRICTIONS

A. Streambed/riparian areas are often habitat for nesting birds. For this reason, if construction activity takes place in any streambed/drainage course in the Project construction area during the period from February 15th through September 15th, the Contractor shall notify the County ten (10) days prior to the initiation of the construction activity to allow for survey/assessment of potential nesting bird activity. If nesting birds are found to be present, a buffer area shall be placed around the feature (size dependent upon species) and no Work shall occur within the buffer area, to include the streambed/drainage course, during the breeding season (February 15th – September 15th). The County shall be responsible for all costs associated with the survey/monitoring efforts, as well as determining the appropriate buffer area. Additional time will be granted to the Contractor if construction delays occur as a result of nesting bird seasonal restrictions.

3.06 CULTURAL RESOURCES

A. Inadvertent Discoveries: If discovery is made of items of historical or archaeological interest, the Contractor shall immediately cease all Work activities in the area (within

approximately 100 feet) of discovery. Prehistoric archaeological materials might include obsidian and chert flaked-stone tools (e.g. projectile points, knives, scrapers) or toolmaking debris; culturally darkened soil ("midden") containing heat-affected rocks, artifacts, or shellfish remains; and stone milling equipment (e.g., mortars, pestles, handstones, or milling slabs); and battered stone tools, such as hammerstones and pitted stones. Historic-period materials might include stone, concrete, or adobe footings and walls; filled wells or privies; and deposits of metal, glass, and/or ceramic refuse. After cessation of excavation the Contractor shall immediately contact the County. The Contractor shall not resume work until authorization is received from the County.

1. In the event of unanticipated discovery of archaeological indicators during construction, the County may elect to retain the services of a qualified biologist or archaeologist to evaluate the significance of the items prior to resuming any activities that could impact the site.
2. In the case of an unanticipated archaeological discovery, if it is determined that the find is unique under the National Historic Preservation Act (NHPA) and/or potentially eligible for listing in the National Register, and the site cannot be avoided, the County shall provide a research design and excavation plan, prepared by an archaeologist, outlining recovery of the resource, analysis, and reporting of the find.

B. Discovery of Human Remains: If potential human remains are encountered, the County shall halt Work in the vicinity of the find and contact the County coroner in accordance with Public Resources Code Section 5097.98 and Health and Safety Code Section 7050.5. If the coroner determines the remains are Native American, the coroner shall contact the Native American Heritage Commission (NAHC). As provided in Public Resources Code Section 5097.98, the NAHC shall identify the person or persons believed to be most likely descended from the deceased Native American. The most likely descendent makes recommendations for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods as provided in Public Resources Code Section 5097.98.

3.07 EXPLOSIVES AND BLASTING

A. Unless approved otherwise in writing by the County, the use or storage of explosives on the Work or Site will not be permitted.

3.08 SANITATION

A. The County's toilet facilities shall be used by the Contractor. See Detailed Provisions Section 01 5000 – Temporary Facilities and Controls.

END OF SECTION 01 5600

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SPECIFICATIONS – DETAILED PROVISIONS

SECTION 01 6000: PRODUCT REQUIREMENTS

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SECTION 01 6000
PRODUCT REQUIREMENTS

PART 1 GENERAL

1.01 SUMMARY

A. Section includes the following:

1. Product delivery, storage, and handling requirements.
2. Products submitted as “Or Approved Equal” or “Or Approved Alternate”.
3. Substitution procedure for requesting the approval of substitution of a product that is not equivalent to a product which is specified by descriptive or performance criteria or defined by reference to manufacturer, vendor, trade name, and/or model or catalog number.
4. Product warranties.

B. Related Contract Document Sections include, but are not limited to:

1. General Provisions

1.02 REFERENCES

A. National Fire Protection Association (NFPA) Standards.

1.03 DEFINITIONS

A. Approved Equal or Approved Alternate: A material, product, equipment, or process proposed by the Contractor that has demonstrated and approved by the County through the submittal process having same function, quality, durability, appearance, strength, and design characteristics equal to or better than those originally specified in the Contract Documents; and shall be compatible with all other systems, parts or components of the Project and Work under the Contract.

B. Assembly: Two or more products, materials or components that are utilized together to produce a composite application satisfying a set of requirements.

C. Basis-of-Design Product Specification: A specification in which a specific manufacturer’s product is named and accompanied by the words “basis-of-design product”, including make or model number, manufacturer name, or other designation, to establish the significant qualities related to type, function, dimension, in-service performance, physical properties, appearance, and other characteristics for purposes of evaluating comparable products of additional manufacturers named in the Specification.

D. Manufacturer: The entity or firm that produces, manufactures or assembles a material, product or item of equipment incorporated in the Work. “Vendor” and “Supplier” are used interchangeably with Manufacturer.

1. Manufacturers specifically named in Division 02 through 41 Detailed Provisions Sections are believed to have the capability of producing products, assemblies and systems meeting the requirements of the Contract Documents. Proposing a product, assembly or system produced by one of the named Manufacturers does not relieve the Contractor of the responsibility to demonstrate the proposed product, assembly or system meets the requirements of the Contract Documents.

E. Manufacturer's Representative: The person(s) designated by the Manufacturer as its representative(s) and technical authority(s) who is/are knowledgeable about and able to answer technical questions about the Manufacturer's products, equipment and services.

F. Manufacturer's Instructions: Written instructions and recommendations provided by the product Manufacturer regarding the use, installation, preparation of Work to receive the product, or similar written guidance to be followed by the installer and provided as part of the product submittal or by the Manufacturer's Representative.

1. Manufacturer's Instructions provided by the Manufacturer's Representative are subject to review and approval of the County.

G. Product: Items obtained for incorporating into the Work, whether purchased for Project of taken from previously purchased stock. The term "product" includes the terms "material", "equipment", "system", and terms of similar intent.

1. Named Products: Items identified by manufacturer's product name, including make or model number or other designation shown or listed in manufacturer's published product literature that is current as of date of the Contract Documents.

2. New Products: Items that have not previously been incorporated into another project or facility. Products salvaged or recycled from other projects are not considered new products.

H. Qualified Professional Engineer: A Professional Engineer who is legally authorized to practice in California (licensed) and who is experienced in providing engineering services related to a specific system, assembly or product proposed by the Contractor to meet the requirements of the Contract Documents.

1. For systems, assemblies, or products structural in nature and performance, the Qualified Professional Engineer shall be a licensed structural engineer.

I. System: Equipment of an electrical and/or mechanical nature that requires some form of energy input to operate and produce a useful result.

1.04 QUALITY ASSURANCE

A. In making request for substitution or in using an approved product, Contractor:

1. Has investigated proposed product, and has determined that it is adequate or superior in all respects to that specified, and that it will perform function for which it is intended.

2. Will provide same guarantee for substitute item as for product specified.

3. Will coordinate installation of accepted substitution into Work, to include structure

modifications, if necessary, making such changes as may be required for Work to be complete in all respects.

4. Waives all Claims for additional costs related to substitution which subsequently arise.

1.05 SUBMITTALS

A. Submittal Procedures: See Detailed Provisions Section 01 3300 for requirements for the mechanics and administration of the submittal process.

B. Substitution Requests:

1. Submit the Substitution Request Form at the end of this Section.

2. If necessary, County will request additional information or documentation for evaluation within one (1) week of receipt of a substitution request. County will notify Contractor of approval or rejection of proposed substitution request within fifteen (15) Working Days of receipt of request, or seven (7) Working Days of receipt of additional information or documentation, whichever is later.

   a. Use product specified if County does not issue a decision on substitution request within the time allocated.

1.06 DELIVERY, STORAGE AND HANDLING

A. Delivery:

1. Arrange deliveries of items in accordance with the Project Schedule identified in Detailed Provisions Section 01 3200 – Construction Progress Documentation.

2. Coordinate deliveries in accordance with provisions of Detailed Provisions Section 01 1400 – Work Restrictions.

3. Deliver products in undamaged condition.

   a. Deliveries are to be made in Manufacturers' original packaging, with seals and labels intact.

   b. Inspect deliveries immediately to ensure compliance with requirements of the Contract Documents and approved submittals.

   c. Assure that products are properly protected.

B. Store products, items, materials and equipment in accordance with Manufacturers' Instructions and provisions as follows:

1. Seals and labels are to remain intact until such time protective coverings are removed.

2. Protective covers must remain in place until items are prepared for installation.

   a. Remove and replace protective covers which get wet, or are otherwise damaged to the degree that leaving the protective covers in place threatens the integrity of the item.

3. Store products susceptible or subject to damage by the elements in weathertight enclosures.
4. Maintain temperature and humidity within the ranges required by Manufacturers' instructions.
5. Do not allow storage of combustible materials inside enclosed spaces except when allowed in accordance with applicable NFPA standards.
6. Exterior Storage:
    a. Store fabricated products aboveground.
        1) Position on blocking or skids.
        2) Prevent soiling, staining, and other damage.
        3) Cover products subject to deterioration using impervious sheet coverings.
        4) Provide adequate ventilation to prevent formation of condensation.
    b. Store loose granular materials in well-drained areas, and on solid unyielding surfaces.
        1) Prevent mixing and contamination with foreign matter.
    c. Comply with the requirements of Detailed Provisions Section 01 1400 – Work Restrictions for Project storage, staging and laydown areas.

C. Safety Data Sheets:
1. The Contractor is responsible for interpretation of information contained in Safety Data Sheets (SDS).
2. Do not submit or send SDSs for review unless specifically requested by the County. Remove SDS sheets from submittals prior to transmittance.
3. Submit SDS sheets when required for demonstration of sustainability objectives being met.

D. Protection:
1. Protect items after installation.
    a. Protect structures and Work from damage through County issuance of Certificate of Substantial Completion.
    b. Protect against traffic damage.
2. Repair or replace damaged items, products, materials and equipment.

1.07 SUBSTITUTIONS

A. General:
1. Certain types of equipment and kinds of material are described in Specifications by means of references to names of manufacturers and vendors, trade names, or catalog numbers.

a. When this method of specifying is used, it is not intended to exclude form consideration other products bearing other manufacturer's or vendor's names, trade names, or catalog numbers, provided said products are "Or Approved Equal" of "Or Approved Alternate", as determined by the County.

B. Substitution of Items, Materials, and Processes:

1. Products for the Project are specified "Or Approved Equal" or "Or Approved Alternate" unless identified otherwise in this Section.

a. It is the Contractor's responsibility to demonstrate to the County satisfaction that the products being proposed are equals to the products identified in the Contract Documents.

1) If applicable, substitutions may impact LEED® credit achievement. The Contractor shall investigate proposed substitutions with respect to the following environmental concerns:

(a) Contractor shall identify which LEED® credit strategies may be affected by the proposed substitution.
(b) All substitutions shall be accompanied with documentation indicating the pertinent environmental performance criteria of the substitute material are equal or superior to the specified material.

a. The County will not unreasonably withhold acceptance of an approvable equal product.

1) Decisions of the County regarding substitutions are final and not subject to appeal.

2) Do not assume acceptance at any time prior to written acceptance in a submittal response prepared by the County.

b. Lack of complete information, defective information, or other problem associated with Available Information for a named product does not relieve the Contractor of the responsibility to demonstrate the approvability and equal of an "Or Approved Equal" or "Or Approved Alternate" product for the intended application or purpose.

2. Submit the same required information for products proposed by the Contractor as Approved Equal, as would be required for the named items, materials and equipment.

C. Substitution Requests after the Contract Award:

1. Submit a completed Substitution Request Form with the associated submittal information for the material, product, equipment, or process.

a. Fill out the form included in this Section fully and completely.

b. The Contractor shall sign the document.

c. Provide samples as requested by the County.

1.08 PRODUCT WARRANTIES

A. Warranties specified in other Detailed Provisions Sections shall be in addition to, and run concurrent with, other warranties required by the Contract Documents. Manufacturer's disclaimers and limitations on product warranties do not relieve Contractor of obligations under requirements of the Contract Documents.

1. Manufacturer's Warranty: Written warranty furnished by individual manufacturer for a particular product and specifically endorsed by manufacturer to County.

PART 2 PRODUCTS

2.01 GENERAL

A. All material, products, and equipment incorporated in the completed Work shall be new and acceptable for the use intended except where reuse of materials, products, and equipment is specifically indicated in the Contract Documents.

PART 3 EXECUTION

3.01 GENERAL

A. All material, products and equipment incorporated in the completed Work shall be installed in accordance with the Manufacturer's Instructions unless such instructions are contrary to the requirements of the Contract Documents as determined by the County.

RIVERSIDE COUNTY DEPARTMENT OF WASTE RESOURCES

SECTION PRODUCT REQUIREMENTS SUBSTITUTION REQUEST FORM

DATE: _____

PROJECT: CONSTRUCTION OF GAS COLLECTION SYSTEMS

_____ hereby submits for County of Riverside's
(NAME OF CONTRACTOR)
consideration the following item instead of the specified item for the above project:

SECTION	PARAGRAPH	SPECIFIED ITEM

_____

PROPOSED SUBSTITUTION:

_____

_____

_____

Provide product data sheets, manufacturers' written installation instructions, drawings, details and similar information to demonstrate the Contractor's proposed substitution is an Approved Equal. Where answers require additional space, provide information on additional attached pages. Fill in blanks below:

State differences between proposed substitution and specified item. Differences include, but are not limited to interrelationship with other items; materials and equipment; function; utility; life cycle costs; applied finishes; appearance; and quality.

_____

_____

_____

_____

Demonstrate how the proposed substitution is compatible with or modifies other systems, parts, equipment or components of the Project and Work under the Contract.

_____

_____

_____

_____

What effect does the proposed substitution have on dimensions indicated on the Project Drawings and previously reviewed Shop Drawings?

_____

_____

_____

_____

What effect does the proposed substitution have on the construction schedule and Contract Time?

_____

_____

_____

_____

What effect does the proposed substitution have on the Contract Price? This includes all direct, indirect, impact and delay costs.

_____

_____

_____

_____

Manufacturer's guarantees of the proposed and specified items are:

_____Same _____Different (explain on attachment)

The undersigned state that the function, utility, life cycle costs, applied finishes, appearance and quality of the proposed substitution are equal or superior to those of the specified item.

Submitted by:

_____
Contractor's Signature

_____
Firm

Date _____

Telephone _____

For Use by County:

Accepted_____Accepted as Noted_____

Not Accepted_____ Received Too Late_____

By _____

Remark _____

_____

Date_____

END OF SECTION 01 6000

SPECIFICATIONS – DETAILED PROVISIONS

SECTION 01 7000: EXECUTION REQUIREMENTS

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SECTION 01 7000
EXECUTION REQUIREMENTS

PART 1 GENERAL

1.01 SUMMARY

A. Section includes the following:

1. Examination, preparation, and general installation procedures.
2. Construction.
3. Tolerances.
4. Site Restoration.
5. Cleaning and protection.
6. Starting of systems and equipment.
7. Demonstration and instruction of County personnel.

1.02 REFERENCES

A. Comply with the requirements of Detailed Provisions Section 01 4200 – Reference Standards and Abbreviations and as listed herein.

1.03 PROJECT CONDITIONS

A. Ventilate enclosed areas to assist cure of materials, to dissipate humidity, and to prevent accumulation of dust, fumes, vapors, or gases.

B. Execute Work by methods to minimize raising dust from construction operations. Provide positive means to prevent airborne dust from dispersing into atmosphere.

1.04 COORDINATION

A. Coordinate scheduling, submittals, and requirements of Detailed Provisions Section 01 3100 Project Management and Coordination to ensure efficient and orderly sequence of installation of interdependent construction elements.

B. Notify and coordinate with affected utility companies and comply with their requirements.

C. Verify that utility requirements and characteristics of new operating equipment are compatible with building utilities. Coordinate Work of various sections having interdependent responsibilities for installing, connecting to, and placing in service, such equipment.

D. Coordinate space requirements, supports, and installation of mechanical and electrical work that are indicated diagrammatically on Drawings. Follow routing shown for pipes, ducts, and conduits, as closely as practicable; place runs parallel with lines of building.

Utilize spaces efficiently to maximize accessibility for other installations, for maintenance, and for repairs.

E. After County occupancy of facility, coordinate access to the Site for correction of defective Work and Work not in accordance with Contract Documents, to minimized disruption of County's activities.

PART 2 PRODUCTS – NOT USED

PART 3 EXECUTION

3.01 EXAMINATION

A. The Contractor shall require the Subcontractors, suppliers, and installers of each element of the Work to perform a detailed inspection of work conditions prior to its performance of Work.

1. Inspect substrates, quality of Work, conditions of the Work area, and activities associated with adjacent and concurrent Work by others.
2. Examine and verify specific conditions described in individual Detailed Provisions Sections.
3. Verify that existing substrate is capable of structural support or attachment of new Work being applied or attached.
4. Take field measurements before confirming product orders or beginning fabrication, to minimize waste due to over-ordering or mis-fabrication.
5. Review all Contract Documents, RFI responses, Changes to the Work, Shop Drawing reviews.

B. Contractor Responsibilities for Existing Underground Conditions, Utilities, Structures, and Improvements.

1. Certain Available Information and Drawings provided by the County indicate existence of underground conditions, obstructions, utilities, structures, and improvements known to the County prior to execution of the Contract, which are within the Construction Limits.
    a. Review the Available Information and Drawings prior to performing Work adjacent, above or otherwise potentially affecting underground conditions, obstructions, utilities, structures, and improvements.
    b. Immediately notify the County of conditions which are not as indicated within the Available Information and Drawings.
2. Coordinate efforts to locate existing underground utilities.
    a. Contractor shall call Underground Service Alert of Southern California (USA/SC) at 811, the one-call underground facility locating service two (2) Working Days prior to making an excavation. Contractor shall be responsible

for such notification of Subcontractor's Work, or shall require Subcontractor to assume this responsibility.

b. The Contractor's attention is directed to the possible existence of pipe, conduit and other underground improvements which may or may not be shown on the Project Drawings. Preserve and protect any such improvements whether shown on the Project Drawings or not. Expose such improvements in advance of the underground construction to allow for changes in alignment as necessary. Where it is necessary to remove and replace or to relocate such improvements in order to prosecute Work, they shall be removed, maintained, and permanently replaced by the Contractor at their expense. Relocation of said improvements shall not be performed without written permission of the County or the Owner of the utility. Unless otherwise noted, existing underground utilities shall be protected in place.

3. Examine, mark, and record location of existing underground utilities, structures and improvements prior to commencing other Work activities.

4. Repair or replace any underground utilities, structures or improvements which are damaged or destroyed or rendered unusable by actions caused by or arising from the performance of Work by the Contractor or its Subcontractors

C. Contractor Responsibilities for Existing Above-Grade Utilities:

1. The Contractor shall be responsible to coordinate its Work activities around existing above-grade utilities, e.g. meters, power poles, light poles, electrical lines, transformers.

2. In the event the Contractor elects to adjust, move or relocate existing above-grade utilities, the Contractor shall obtain the approval of the County or utility owner, and furnish notification and Work plan information fourteen (14) Calendar Days prior to making such adjustments or relocations.

3. The Contractor shall be responsible for costs associated with its decision to adjust, move, or relocate existing above-grade utilities.

4. No additional costs shall be paid by the County if the Contractor elects to make such adjustments or relocations, except those noted to be relocated in the Project Drawings.

3.02 PREPARATION

A. Clean substrate surfaces prior to applying next material or substance.

B. Seal cracks or openings of substrate prior to applying next material or substance.

C. Apply manufacturer required or recommended substrate primer, sealer, or conditioner prior to applying any new material or substance in contact or bond.

3.03 LAYING OUT THE WORK

A. Verify locations of survey control points prior to starting Work.

B. Promptly notify County of any discrepancies discovered.

C. Protect survey control points prior to starting site Work; preserve permanent reference points during construction.

D. Promptly report to County the loss or destruction of any reference point or relocation required because of changes in grades or other reasons.

E. Replace dislocated survey control points based on original survey control. Make no changes without prior written approval from the County.

F. Utilize recognized engineering survey practices.

G. Establish elevations, lines and levels. Locate and lay out by instrumentation and similar appropriate means:

1. Site improvements, including: pavements, stakes for grading, fill and topsoil placement, utility locations, slopes, and invert elevations.
2. Grid or axis for structures.
3. Building foundation, column locations, and ground floor elevations.

3.04 INSTALLATION

A. General:

1. Provide all attachments, connection devices, and accessory components necessary for the completion and physical attachment and support of the Work.
2. Comply with requirements of Regulatory Agencies and Authorities having jurisdiction for bracing, restraints, supports, and attachments.
3. Install products as specified in individual Detailed Provisions Sections, in accordance with Manufacturer's Instructions and recommendations to avoid waste due to necessity for replacement.
4. Unless otherwise noted, make vertical elements plumb and horizontal elements level.
5. Unless otherwise noted, install equipment and fittings plumb and level, neatly aligned with adjacent vertical and horizontal lines.

B. Make neat transitions between different surfaces, maintaining texture and appearance.

C. Install equipment, products, coatings, materials, and finishes in accordance with the Contract Documents and manufacturer's written installation instructions.

1. In the event there is a conflict or inconsistency between the Contract Documents and manufacturer's written installation instructions, promptly inform the County of such issue through a Request for Information (RFI).

D. Work Results:

1. Install components, products, materials, equipment, and other items, and assemblies, only during appropriate weather conditions for that Work.

2. Coordinate installation activities such that these activities do not subject unfinished Work to adverse weather, cold temperatures, or other conditions detrimental to the Work.

E. Cutting and Patching:

1. Whenever possible, execute the Work by methods that avoid cutting or patching.
2. Execute Work by methods that avoid damage to other Work and that will provide appropriate surfaces to receive patching and finishing. In existing work, minimize damage and restore to original condition.
3. Employ original installer to perform cutting for weather exposed and moisture resistant elements, and sight exposed surfaces.
4. Cut rigid materials using masonry saw or core drill. Pneumatic tools not allowed without prior approval.
5. Restore Work with new products in accordance with requirements of Contract Documents.
6. Fit work air tight to pipes, sleeves, ducts, conduit, and other penetrations through surfaces.
7. Patching:
   a. Finish patch surfaces to match finish that existed prior to patching. On continuous surfaces, refinish to nearest intersection or natural break. For an assembly, refinish entire unit.
   b. Match color, texture, and appearance.
   c. Repair patched surfaces that are damaged, lifted, discolored, or showing other imperfections due to patching work. If defects are due to condition of substrate, repair substrate prior to repairing finish.

3.05 CONSTRUCTION

A. All construction means and methods, and any specialized techniques, employed or selected by the Contractor in the performance of the Work are the sole responsibility of the Contractor.

B. The Contractor's Work shall be coordinated to correctly interface, fit and come together with adjacent surfaces and utility structures, roadway structures, and grades.

3.06 TOLERANCES

A. Substantial Completion Conditions:

1. Earthwork and Paving:
   a. Conform to the grades and contours indicated on the Project Drawings.
   b. Deviation from compacted thickness: +/- ¼-inch.
   c. Variation from Design Elevation: +/- 1-inch.

d. Variation from Design Horizontal Location: 1-inch in any direction.

2. Structures and Structural Elements:
   a. Deviation for Design Elevation: +/- ½-inch.
   b. Variation from Design Horizontal Location: ½-inch in any direction.
   c. Variation in Plumb: two-tenths of one percent (0.2%).
3. Retaining Walls:
   a. Deviation for Design Elevation: +/- 1-inch.
   b. Variation from Design Horizontal Location: 1-inch in any direction.
   c. Variation in Plumb: one-half of one percent (0.5%).
4. Anchor Bolts, Base Plates and Concrete Embeds:
   a. Deviation from Design Elevation: +/- ½-inch.
   b. Variation from Design Horizontal Location: $\frac{1}{16}$-inch in any direction.
5. Utility Systems:
   a. Deviation from Design Elevation: +/- ½-inch.
   b. Deviation from Design Horizontal Position: +/- 1-inch.
   c. Deviation from Design Pipe Slope (gravity lines only): plus ½-inch per foot or minus zero (0) inch per foot.
6. Review other individual Detailed Provisions Sections for additional tolerance information. More stringent tolerances in other Detailed Provisions Sections or required by manufacturers of products and equipment being supplied on the Project shall supersede the tolerances above.

3.07 SITE RESTORATION

A. All areas, items, utilities or structures damaged or destroyed by the Contractor or its Subcontractors and suppliers during the construction of the Project, whether inside or outside of the Construction Limits, shall be restored by the Contractor to the satisfaction of the County, prior to the issuance of the Certificate of Substantial Completion.

3.08 CLEANING

A. Maintain the Project Location in a neat and orderly condition, removing empty containers, rags and rubbish daily.

B. Cleaning of Vehicles:
   1. Before leaving the Project Location, all vehicles and equipment shall be free of dust, mud, rocks, debris, and soils.

C. Street Cleaning:

1. If Contractor earthwork operations affect landfill and public roadways, all paved roadways used by the Contractor's trucks or any other equipment hauling material to and from the area shall be kept clean by the Contractor and shall be continuously serviced by the Contractor's use of broomed vacuum sweeper trucks to control dust and mud.
    a. Contractor shall comply with all permit requirements to keep public roadways clean of dust, dirt, and debris. Any associated costs shall be borne by the Contractor at no additional cost to the County.
2. Damage to roadway surfaces from the direct or indirect result of the Contractor's operation shall be repaired by the Contractor to the satisfaction of the responsible agency and the County at no additional cost to the County.
3. Do not allow sediment laden or contaminated surface water to enter storm water systems.

D. Remove rocks, dirt, debris, trash, shavings, filings, and surface dust from limited access spaces, vaults, pull boxes, and similar spaces.

E. Clean Project Location:
1. Sweep paved areas to a broom-clean condition.
2. Remove stains, petrochemical spills, and other foreign deposits.

3.09 PROTECTION

A. Temporary Protective Coverings:
1. Temporary protective coverings shall include sheet plastic, tarpaulins, sand bags, geotextiles, matting, and accessories as identified in the Contract Documents.
2. Apply temporary protective coverings when, where, and to the degree required by the Contract Documents to ensure continuous protection from damage, deterioration, and prohibited exposures until Substantial Completion of the Work is issued by the County.
3. Apply temporary protective coverings appropriate to the installation.
4. Removal:
    a. Remove temporary protection devices and facilities when requested by the County.
    b. Do not remove protection when subsequent Work activities including corrective Work could damage surfaces.

B. Limitation of Exposures:
1. Supervise and coordinate construction activities to ensure no part of the construction completed, or in progress, is subject to deleterious exposure during the construction period.
2. Protect against the following exposures:

a. Excessive loading, including static and dynamic forces.

b. Excessive pressures.

c. Excessive high and low temperatures.

d. Ice contamination of materials and products.

e. Air contamination, pollution, solvents, chemical, including release of volatile organic compounds.

f. Construction traffic.

g. Soiling, staining.

h. Mold, mildew, bacteria, and other organic processes.

i. Excessive electrical current or load.

j. Inadequate separation and/or isolation between dissimilar metals.

k. Improper shipping, handling, packing.

l. Unprotected, improper, insufficient storage.

3.10 SYSTEM START-UP

A. Coordinate schedule for start-up of various equipment and systems.

B. Notify County seven (7) days prior to start-up of each item.

C. Verify that each piece of equipment or system has been checked for proper lubrication, drive rotation, belt tension, control sequences, and for conditions that may cause damage.

D. Verify tests, meter readings, and specified electrical characteristics agree with those required by the equipment or system manufacturer.

E. Execute start-up under supervision of applicable Contractor personnel, County and manufacturer's representative in accordance with Manufacturer's Instructions.

F. When specified in individual Detailed Provisions Sections, require manufacturer to provide authorized representative to be present at site to inspect, check, and approve equipment or system installation prior to start-up, and to supervise placing equipment or system in operation.

3.11 DEMONSTRATION AND INSTRUCTION

A. Demonstrate start-up, operation, control, adjustment, trouble-shooting, servicing, maintenance and shutdown of each item of equipment at scheduled time, at equipment location.

B. Provide a qualified person who is knowledgeable about the Project to perform demonstration and instruction of County personnel.

3.12 ADJUSTING

A. Adjust operating products and equipment to ensure smooth and unhindered operation.

END OF SECTION 01 7000

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SPECIFICATIONS – DETAILED PROVISIONS

SECTION 01 7123: FIELD ENGINEERING
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SECTION 01 7123
FIELD ENGINEERING

PART 1 GENERAL

1.01 SUMMARY

A. Section includes the following:

1. Acceptance of County-provided survey.
2. Construction surveying.
3. Completed Work Verification Survey.

B. Related Detailed Provisions Sections include, but are not limited to:

1. Section 05 1200 – Structural Steel
2. Section 31 2300 – Earthwork

1.02 DEFINITIONS

A. Accepted Surface File types:

1. DEM: Digital Elevation Model.
2. TIN: Triangulated Irregular Network.
3. CSV: Comma Separated Values.

B. Project Datum and Date of County-Provided Survey:

1. The three dimensional coordinate system, as follows:
   a. Vertical Datum: North American Vertical Datum of 1988 (NAVD 88).
   b. Horizontal Datum: North American Datum of 1983 (NAD 83), Epoch 2007.0, California State Plane Coordinate System, Zone VI.
2. Date County-Provided Survey Was Performed:
   a. Performed using photogrammetric methods on September 17, 2025 for Badlands and on June 10, 2025 for Lamb Canyon.

1.03 SUBMITTALS

A. Submittal Procedures: See Detailed Provisions Section 01 3300 for requirements for the mechanics and administration of the submittal process.

B. Surveyor Qualifications:

1. Provide within seven (7) Calendar Days following the issuance of the Notice to Proceed the following for each licensed professional surveyor whose services the Contractor proposes to rely upon:

a. Name, address, e-mail, telephone number, and complete contact information.

C. Field Engineering prior to Commencing Layout:

1. Provide the County a complete closed survey loop identifying Project benchmarks, vertical and horizontal control, and data demonstrating these points relative to the Project Datum.

D. Written notice of discrepancies of County-provided survey.

E. Completed Work Verification Survey:

1. Submit electronic survey, certified by the Contractor's surveyor, of the entire completed Work, including, but not limited to: earthwork, structural steel, finish pad corners and elevations, conduits, and utility systems documenting the physical completion and accuracy of Work in accordance with the Contract Documents.

a. Submittal shall be provided to the County prior to Contractor's Request for Substantial Completion.

b. Demonstrate that the Work complies with the construction tolerances specified in Detailed Provisions Section 01 7000 – Execution Procedures.

1.04 ACCEPTANCE OF COUNTY-PROVIDED SURVEY

A. The nature and extent of the Work is dependent on original ground surface elevations and planimetric features as presented on the Project Drawings.

B. The Contractor has a single opportunity, during the preconstruction phase of the Contract, to identify differences or discrepancies in the County-provided survey, as shown on the Project Drawings.

1. Differences or discrepancies refer to variations in the elevations and locations shown on the Project Drawings that exceed the allowable tolerances stated in Detailed Provisions Section 01 7000 – Execution Procedures.

C. The Contractor has the option of:

1. Surveying the original ground surface elevations and planimetric features prior to issuance of the Notice to Proceed or date of mobilization, whichever comes first.

a. Contractor's survey shall be no less than ½ - foot contour interval.

2. Accept the elevations and planimetric features indicated on the Project Drawings, as is, by mobilizing equipment, material, or personnel.

D. Acceptance of County-Provided Survey:

1. The Contractor accepts the County-provided survey and agrees that the information is complete and accurate within the Tolerances of Preconstruction Conditions in accordance with Detailed Provisions Section 01 7000 – Execution Procedures, upon the mobilization of personnel, material, or equipment.

E. Contractor Identification of Correction of County-Provided Survey:

1. If the Contractor does not accept the County-provided survey, the Contractor shall complete its own survey and identify and quantify discrepancies, errors or differences in a letter to the County no later than two (2) weeks after issuance of the Notice to Proceed and prior to commencing structure layout and earthwork activities.
    a. Contractor shall provide a minimum of two (2) Working Days' notice to County for access to the Project Location.
    b. The County will escort the Contractor during its onsite survey.
2. Contractor will provide an accepted surface file of the Contractor's survey to the County upon completion of the Contractor's survey. Accepted surface file type shall be compliant with AutoCAD Civil 3D software format.
    a. The County will compare the Contractor's accepted surface file with the County's DEM to attempt to substantiate the Contractor's results.
3. In the event of a discrepancy between the County and Contractor surveys, the County shall reconcile the difference through additional survey and consultation with the Contractor.
4. If the County-reconciled survey differs beyond the tolerances, specified within Detailed Provisions Section 01 7000 – Execution Procedures, from the County-provided survey, as indicated on the Project Drawings, the Contractor may request an adjustment to the Contract Price or Contract Time in accordance with the General Provisions.

1.05 CONTRACTOR'S OWN SURVEY WORK

A. Perform surveying activities to sufficiently set out, control, and as-built the Work.

1.06 QUALITY ASSURANCE

A. Survey work of this Section is to be performed by a licensed Professional Land Surveyor registered in the State of California.

B. Corrections of the Work due to survey errors and omissions are the responsibility of the Contractor.

PART 2 PRODUCTS – NOT USED

PART 3 EXECUTION

3.01 GENERAL

A. Survey Control Points:

1. At the Badlands and Lamb Canyon Landfills, County surveyors have established external primary survey control points on firm ground outside the limits of the Work to be used throughout the construction period for the Contractor's Work.

B. Surveying and Layout:

1. Work from lines and levels established by County surveyors and provided in the Project Drawings.
2. Establish secondary benchmarks and control points to set lines and levels throughout the Project Location.
3. Locate and flag/stake the continuous Construction Limits indicated on the Project Drawings.
    a. Construction Limits flagging shall consist of continuous orange safety fencing.
    b. Keep the fencing in place, fully functional, until directed to remove it by the County.
4. Locate and layout site improvements, including but not limited to grade stakes, grading, fill placement, cut and fill slopes, invert elevations, utility alignments, foundations, finish pad elevations and corners, and pavements.
5. Locate and layout batter boards for structures, vaults, control lines, and levels.
6. Provide and maintain temporary means of checking and rechecking layout to confirm correct and accurate placement of materials and items.
7. Accurately record as-built information on the Record Drawings.

C. Do not scale Contract Documents provided by the County.

D. Surveyor Log:

1. Maintain a Surveyor Log of control data and other survey work at the Project Location.
2. Provide access to the Surveyor Log when requested by the County.

3.02 COMPLETED WORK VERIFICATION SURVEY

A. Contractor's surveyor shall survey the entire completed Work documenting the physical completion and accuracy of the Work in accordance with the Contract Documents.

B. Completed Work Verification Survey shall include all aspects of the Work, including, but not limited to: elevations and grades within the Construction Limits on a 25-foot by 25-foot minimum grid system in addition to survey points at:

1. All changes in grades.
2. Edge of pavements – not more than 25 feet between points and at all changes in direction of the pavement edges.
3. Structure ground floor elevations at corners of floor and slab grades.
4. Utility system locations, grades and elevations including rim and invert elevations of all structures and the location and elevation of all vaults, pull boxes, valves, and fittings.

5. Retaining wall locations and elevations including bottom of footings, top of walls.
6. Exterior light fixture locations.

C. Survey results shall be in an electronic format, including a DEM compatible with AutoCAD Civil 3D software.

D. County surveyors may elect to perform verification survey work to ensure all construction conforms to the requirements of the Contract Documents, and for surveying as-built information. The Contractor shall provide County surveyor's with access to the completed portions of the Work before they are covered by subsequent construction to allow County surveyor's to verify that all construction conforms to the requirements of the Contract Documents. The Contractor shall therefore provide notice to the County at least two (2) Working Days prior to the time the respective areas will be ready for verification surveys, and at least one (1) Working Day for the survey work or any other inspection to be completed. Major construction items requiring County surveyor verification include, but are not limited to:

1. Surfaces within limits of over-excavation area prior to placement of engineered fill.
2. Foundation subgrade.
3. Utility system locations, grades and elevations including rim and invert elevations of all structures and the location and elevation of all vaults, pull boxes, valves, and fittings.
4. Structure floor elevations and grades.
5. Other miscellaneous surveys as deemed necessary by the County to complete the Project.

E. County will check the Contractor's Completed Work Verification Survey and report any discrepancies to the Contractor for resolution as part of the Substantial Completion Punch List. In the event of discrepancies between Contractor's Completed Work Verification Survey and County verification survey, the County verification survey results shall govern.

3.03 FIELD QUALITY CONTROL

A. Survey Accuracy: Measurements performed in accordance with requirements of this Detailed Provisions Section are to be accurate within one-hundredth (0.01) of a foot in both vertical and horizontal planes.

3.04 PROTECTION

A. Protect benchmarks and control points used in the Work.

1. Promptly report lost or destroyed reference points, or requirements to relocate reference points because of necessary changes in grades or locations.
2. Do not relocate benchmarks without prior written approval from the County.
3. Promptly replace lost or destroyed project control points to the satisfaction of the County, at no additional cost to the County.

END OF SECTION 01 7123

SPECIFICATIONS – DETAILED PROVISIONS

SECTION 01 7419: CONSTRUCTION WASTE MANAGEMENT

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SECTION 01 7419
CONSTRUCTION WASTE MANAGEMENT

PART 1 GENERAL

1.01 SUMMARY

A. Section includes administrative and procedural requirements for the following:

1. Waste reduction measures including reuse, salvage, and recycling of construction and demolition waste.
2. Requirements for reporting recycled material quantities.

B. Related Contract Document Sections:

1. General Provisions.
2. Detailed Provisions Section 02 4100 – Demolition.
3. Detailed Provisions Section 31 1000 – Site Clearing.
4. Detailed Provisions Section 02 6113 – Refuse Excavation, Handling and Disposal.

1.02 REFERENCES

A. Comply with the requirements of Detailed Provisions Section 01 4200 – Reference Standards and Abbreviations and as listed herein.

B. California Green Building Standards (CALGreen).

1.03 DEFINITIONS

A. C&D: Construction and demolition waste.

B. Construction Waste: Building and site improvement materials and other solid waste resulting from construction, remodeling, or repair operations. Construction waste includes packaging. The Contractor shall be responsible for the disposal of waste generated from the Project. Waste shall be stored in proper containers and picked up on a daily basis by the Contractor.

C. Demolition Waste: Building and site improvement materials resulting from demolition or selective demolition operations.

D. Disposal: Removal from the Project Location of demolition and construction waste and subsequent recycling, reuse, salvage, or deposit in landfill acceptable to Authorities having jurisdiction.

PART 2 PRODUCTS

2.01 WASTE CONTAINERS

A. Durable, covered, secured, reusable containers for each category of waste.

B. Signs for each container: At least 6-feet by 3-feet, exterior grade panel, painted, message in large letters identifying waste category.

1. Signs shall include waste category in both English and Spanish.

PART 3 EXECUTION

3.01 IMPLEMENTATION

A. The Contractor shall use Best Management Practices (BMPs) throughout the duration of the Project.

B. Minimize the creation of construction waste on the job site. BMP steps may include:

1. Prevent waste in the first place:

a. Order material precut to required size.

b. Order only quantity required.

c. Use detailed take-offs to identify location and uses in structure to reduce risk of unplanned and potentially wasteful cuts.

d. Verify that field measurements are as indicated on Project and Shop Drawings before confirming product orders or proceeding with Work.

e. Protect products from damage during storage, installation and in-place.

f. Materials that become wet, damp or unusable for any reason due to improper storage shall be replaced at the Contractor's expense.

g. Request products delivered to the Project Location with packing materials that can be returned to sender, reused by others, or easily recycled.

h. Coordinate the schedule of product delivery to designated prepared areas in order to minimize site storage time and potential damage to stored materials.

2. Reuse materials that would otherwise become waste:

a. Use temporary materials and facilities that will be reused at other projects.

b. Reuse on-site waste for patching existing Work.

c. Arrange for the return of packing materials, such as wood pallets, where economically feasible.

C. Separation:

1. Separate materials.

2. Maintain materials in separate areas and containers after these have been separated.

3. Do not permit separated materials to be ruined or made unusable as a result of exposure to adverse weather to the degree this is possible and economically feasible.

D. Throughout all phases of construction, including suspension of Work and until Final Acceptance of the Project, the Contractor shall keep the Work areas clean and free of

waste generated as a result of the Contractor's operations. Do not allow waste materials that are to be disposed of accumulate in the project area.

E. Remove and transport waste in a manner that will prevent spillage on adjacent surfaces and areas.

F. All non-hazardous waste generated from the Project, shall be disposed of as a "no charge" account at the landfill where the project is being completed. Contractor shall be responsible for loading and hauling refuse through the fee booth/scale and unloading in the designated disposal area as directed by the County.

G. Waste generated from source other than the Project will not be accepted on a "no charge" basis. The Contractor shall not allow its employees, Subcontractors and suppliers to dispose of personal related refuse or refuse unrelated to the Project without going through the fee booth/scale and paying the tipping fee as for any other customer.

END OF SECTION 01 7419

SPECIFICATIONS – DETAILED PROVISIONS

SECTION 01 7700: CLOSEOUT PROCEDURES

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SECTION 01 7700
CLOSEOUT PROCEDURES

PART 1 GENERAL

1.01 SUMMARY

A. Section includes administrative and procedural requirements for contract closeout, including, but not limited to:

1. Substantial Completion procedures
2. Final Completion/Final Acceptance procedures.
3. Project Record Documents
4. Warranties.
5. Repair Work.
6. Final Cleaning.

B. Related Sections:

1. General Provisions.
2. Detailed Provisions Section 01 7823 – Operation and Maintenance Manuals.

1.02 REFERENCES

A. Comply with the requirements of Detailed Provisions Section 01 4200 – Reference Standards and Abbreviations and as listed herein.

1.03 DEFINITIONS

A. Project Record Documents: Various documents that define the work to be done that are kept current by neat, legible hand annotation of all deviations from what is shown or required by the Contractor during the course of construction to accurately document the "as-built" facility, including, but not limited to:

1. Project Drawings.
2. Shop Drawings.
3. Contract Documents (Administrative Provisions, General Provision, Special Provisions, and Detailed Provisions).
4. Addenda.
5. Change Orders.
6. Request for Information (RFI).
7. Completed Work Verification Survey: electronic copy and one (1) full-size hard copy.

8. Coordinate utility plans.
9. Field Directives.
10. Correspondence.
11. Submittals.

1.04 SUBSTANTIAL COMPLETION

A. Contractor shall notify the County in writing that the Work is Substantially Complete.

1. The County shall promptly inspect the Work and, if the County does not agree that the Work is Substantially Complete, the County will prepare a Punch List (list of items to be completed or corrected).

a. The County reserves the right to add to, modify, or change the Substantial Completion Punch List as circumstances dictate.

b. Failure by the County to include any items on such list does not alter the responsibility of the Contractor to complete or correct the Work in accordance with the Contract.

1.05 FINAL INSPECTION

A. When the Contractor considers that all Contract Work is ready for final inspection and Final Acceptance, the Contractor shall give written notice to the County.

B. County shall promptly perform a final inspection of the Work and, if necessary, prepare a Final Punch List (a list of items to be completed or corrected by the Contractor prior to the County granting Final Acceptance).

C. Final Punch List items may include, but are not limited to: Copies of warranties and guarantees required by the Contract; permit approvals and Certificates of Occupancy/Use; Operation and Maintenance Manuals, Project Record Documents; Right of Way, Easements and Property Releases, and any other documents called for elsewhere in the Contract Documents.

D. Should the Contractor fail to complete or correct all remaining Final Punch List items within the required time, the County may assess Liquated Damages against the Contractor for failure to achieve Final Acceptance in a timely manner.

E. After the Contractor completes all items identified in the Final Punch List(s), the Contractor shall notify the County in writing that the Final Punch List items have been successfully completed. After verification by the County that such completion was satisfactory, the Contractor shall submit a Final Application for Payment.

1.06 REQUIREMENTS FOR FINAL APPLICATION FOR PAYMENT

A. In addition to any other requirement identified in the Contract Documents, the Final Application for Payment shall include the following documents:

1. Affidavit of Wages Paid for Contractor and all Subcontractors in accordance with state law;
2. Contractor's release of Claims against the County from all parties who are entitled to Claims against the subject Project, property or improvement pursuant to the provisions of law;
3. Contractor certification that all Subcontractors and suppliers have been paid and there are no outstanding liens;
4. Right of Way, Easements and Property Releases;
5. Final, Project Record Documents ten (10) Working Days following issuance of the Certificate of Substantial Completion.
    a. One (1) complete full size set of finalized Project Record Drawings on bond.
    b. One (1) complete set of finalized Project Record Specifications.
    c. One (1) complete set of Contract documents, including approved Field Work Directives and Change Orders.
    d. One (1) complete set of Contractor's correspondence, including but not limited to RFIs, memorandums, and e-mails.
6. Final Application for Payment;
7. Completed permits and/or Certificates of Occupancy/use ten (10) Working Days following issuance of the Certificate of Substantial Completion; and
8. Complete the following:
    a. Complete Final Cleaning and Project Location cleanup.
    b. Complete all remaining obligations as set forth within this Section.

1.07 FINAL COMPLETION/FINAL ACCEPTANCE

A. Final Completion/Final Acceptance shall be achieved when all the obligations of the Contract have been successfully performed by the Contractor in accordance with the Contract and accepted by the County.

B. Neither Final Acceptance, nor Final Payment, shall release Contractor or its Sureties from any obligations under this Contract or the Performance and Payment Bonds, or constitute a waiver of any Claims by the County arising from or related to Contractor's performance or failure to perform the Work and to meet all contractual obligations in accordance with the Contract, including but not limited to:
    1. Unsettled liens, security interests or encumbrances;
    2. Damaged, non-conforming, or defective Work discovered by the County;
    3. Terms of any warranties or guarantees required by the Contract; and
    4. Payments made in error.

C. Except for any Claims properly submitted in accordance with the General Provisions, acceptance of Payment on the Final Application for Payment by the Contractor shall, on behalf of itself and its Subcontractors or Sureties, forever and unconditionally release and discharge the County, its officers, agents, employees, from:

1. Any and all disputes or Claims, including but not limited to Claims for damages, fines, interest, taxes, attorney fees, or costs, demands, rights, actions or causes of actions, known or unknown, arising out of or in any way related to the parties' performance under the Contract and/or Project; and
2. Any and all known and/or unknown liabilities, obligations, demands, actions, suits, debts, charges, causes of action, requests for money and/or payment under the Contract, outstanding invoices, or Claims directly or indirectly arising out of or related to the Contract and/or Project.

1.08 PROJECT RECORD DOCUMENTS

A. Provide to the County one (1) complete set of the Project Record Documents in accordance with the requirements of this Section.

B. Store Project Record Documents separate from documents used for construction.

C. Contractor shall red-line the Project Record Documents on a weekly basis concurrent with construction progress. The Contractor shall supply a red-line of the Project Record Documents that shall document all additions and modifications to the original Contract Documents as follows:

1. Specifications: Legibly mark and record at each Section description of actual Products installed, including the following:
    a. Manufacturer's name and product model and number.
    b. Product substitutions or alternates utilized.
    c. Changes made by Addenda.
2. Project Drawings and Shop Drawings: Legibly mark each item to record actual construction including:
    a. Measured horizontal and vertical location of underground utilities and appurtenances referenced to permanent surface improvements.
    b. Measure locations of internal utilities and appurtenances concealed in construction, referenced to visible and accessible features of the Work.
    c. Field changes of dimension and detail.
    d. Details not on original Contract Documents.
    e. Mark the Project Drawings and Shop Drawings completely and accurately. Use personnel proficient at recording graphic information in production of marked-up record prints.
3. Mark record sets with erasable, red-colored pencil. Use other colors to distinguish between changes for different categories of the Work at same location.

D. Project Record Documents Digital Data Files: Immediately before inspection for Certificate of Substantial Completion, review marked-up Project Record Documents and prepare a full set of corrected digital data files of the Project Record Documents in PDF format as follows:

1. Format: Scan Project Record Documents and assemble submittal package into a single indexed electronic PDF file with links enabling navigation to each item. Provide bookmarked table of contents at beginning of document.
2. Incorporate changes and additional information previously marked on red-line copies of the Project Record Documents. Delete, redraw, and add details and notations where applicable.
3. County will furnish Contractor with PDF of Contract Documents for use in recording information.

1.09 WARRANTIES/GUARANTEES

A. The Contractor's warranty period shall be a minimum of sixty (60) days from the date of final project acceptance by the County, except where longer warranty periods are specifically stated by the manufacturer of individual components or required in the Specifications.

B. Each warranty document lists the Work elements to which the warranty applies.

C. Provide two (2) executed copies of each warranty document required by the Contract Documents ten (10) Working Days following the issuance of the Certificate of Substantial Completion for the portion of the Work covered by that warranty.

1.10 SCHEDULE OF CONTRACT CLOSEOUT PROCEDURES

A. The following Closeout Procedures Checklist gives the order and responsibility for the requirements of the Final Contract Closeout. This list may not include all items required by the General Provisions and Detailed Provisions.

B. Contract Closeout Documents Checklist: Complete the items indicated, and submit this Checklist when directed by the County.

Checklist Item No.	Responsibility	Procedure	Date
1	Contractor	Notify County in writing that the Work is Substantially Complete	
2	County	Inspect the Work, prepare Punch List and identify items requiring completion/correction for Substantial Completion.	
3	Contractor	Complete/correct punch list items required for Substantial Completion.	
4	County	Verify Substantial Completion Punch List items have been completed/corrected and issue Certificate of Substantial Completion.	
5	Contractor	Notify County in writing that the Work is ready for Final Acceptance: Prepare Final Application for Payment that includes the following: a. Affidavit of Wages Paid for Contractor and all Subcontractors. b. Contractor release of Claims. c. Release of Liens Certificate from all Subcontractors. d. Project Record Documents. e. Operation and Maintenance Manuals. f. Warranties. g. Permits and Certificates of Occupancy/Use.	
6	County	Perform Final Inspection and if necessary issue Final Punch List.	
7	Contractor	Complete/correct Final Punch List items.	
8	County	Verify completion/correction of Final Punch List items. Prepare Notice of Completion and Final Payment for County Board of Supervisors Approval.	
9	County	County Board of Supervisor approves Notice of Completion and Final Payment. Notice of Completion is recorded.	
10	County	Release of all retention funds shall be within thirty-five (35) days after the recordation of the Notice of Completion. See General Provisions, Section. 7-3.3.4 – Final Payment.	

1.11 SUBMITTALS

A. Warranties:

1. Organize warranty documents into an orderly sequence based on the Detailed Provision Sections:

a. Bind warranties and bonds in heavy-duty, three-ring, vinyl-covered, loose-leaf binders, thickness as necessary to accommodate contents, and sized to receive 8-1/2 by 11 inch paper.

b. Provide heavy paper dividers with plastic-covered tabs for each separate warranty. Mark tab to identify the product or installation. Provide a typed description of the product or installation, including the name of the product and name, address, and telephone number of Installer.

c. Identify each binder on the front and spine with the typed title "WARRANTIES," Project name, and name of Contractor.

d. Warranty Electronic File: Scan warranties and bonds and assemble complete warranty and bond submittal package into a single indexed electronic PDF file with links enabling navigation to each item. Provide bookmarked table of contents at beginning of document.

2. Provide additional copies of each warranty to include in Operation and Maintenance Manuals.

B. Final, Project Record Documents:

1. One (1) complete full size set of finalized Project Drawings and Shop Drawings on bond.

2. One (1) complete set of finalized Project Record Specifications.

3. One (1) complete set of Contract Documents, including approved Field Work Directives and Change Orders.

4. One (1) complete set of Contractor's correspondence, including but not limited to: RFIs, memorandums, and e-mails.

5. Project Record Documents Digital Data Files:

a. Format: Scan Project Record Documents and assemble submittal package into a single indexed electronic PDF file with links enabling navigation to each item. Provide bookmarked table of contents at beginning of document.

C. Affidavit of Wages Paid for Contractor and all Subcontractors in accordance with state law.

D. Contractor's release of Claims against the County from all parties who are entitled to Claims against the subject Project, property or improvement pursuant to the provisions of law.

E. Contractor certification that all Subcontractors and suppliers have been paid and there are no outstanding liens;

F. Final Application for Payment;

G. Completed permits and/or Certificates of Occupancy/use.

PART 2 PRODUCTS

2.01 MATERIALS

A. Cleaning Agents: Use cleaning materials and agents recommended by manufacturer or fabricator of the surface to be cleaned. Do not use cleaning agents that are potentially hazardous to health or property or that might damage finished surfaces.

1. Use cleaning products that comply with Green Seal's GS-37, or if GS-37 is not applicable, use products that comply with the California Code of Regulations maximum allowable VOC levels.

PART 3 EXECUTION

3.01 REPAIR OF THE WORK

A. Complete repair and restoration operations before requesting inspection for determination of Substantial Completion.

B. Repair or remove and replace defective construction. Repairing includes replacing defective parts, refinishing damaged surfaces, touching up with matching materials, and properly adjusting operating equipment. When damaged or worn items cannot be repaired or restored, provide replacements. Remove and replace operating components that cannot be repaired. Restore damaged construction and permanent facilities used during construction to specified condition.

1. Remove and replace chipped, scratched, and broken glass, reflective surfaces, and other damaged transparent materials.
2. Touch up and otherwise repair and restore marred or exposed finishes and surfaces. Replace finishes and surfaces that already show evidence of repair or restoration.
    a. Do not paint over "UL" and other required labels and identification, including mechanical and electrical nameplates. Remove paint applied to required labels and identification.
3. Replace parts subject to operating conditions during construction that may impede operation or reduce longevity.
4. Replace burned-out bulbs and bulbs noticeably dimmed by hours of use to comply with requirements for new fixtures.

3.02 FINAL CLEANING

A. General: Perform final cleaning. Conduct cleaning and waste-removal operations to comply with local laws and ordinances and Federal and local environmental regulations.

3.03 PROJECT RECORD DOCUMENTS – RECORDING AND MAINTENANCE

A. Recording: Maintain one (1) copy of each submittal during the construction period for Project Record Document purposes. Post changes and revisions to Project Record Documents as they occur; do not wait until the end of the Project.

B. Maintenance of Project Record Documents and Samples: Store record documents and Samples at the Project Location apart from the documents used for construction. Do not use Project Record Documents for construction purposes. Maintain record documents in organized, clean, dry, legible condition, protected from deterioration and loss. Provide access to Project Record Documents for County's reference during normal working hours.

C. Filing and Archiving Requirements:

1. Boxes shall have attached lids.
2. All file folders shall be standard letter size, 8-1/2 x 11 inches.
3. Three ring binders are not acceptable for archiving. Chicago Screws are acceptable for "binding" specifications and correspondence in chronological order.
4. Hanging folders and/or rubber bands are not acceptable. Accordion folders or manila folders are acceptable.
5. Do not return file folders labeled with subject matter(s) that were not used in the Contract.
6. If Contractor did not use County's file code index, a copy of the Contractor's file code index shall be included with the files.
7. Do not separate transmittal cover sheets from the deliverable.
8. Do not include duplicates unless mandated in Contract Documents.

END OF SECTION 01 7700

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SPECIFICATIONS – DETAILED PROVISIONS

SECTION 01 7823: OPERATION AND MAINTENANCE MANUALS

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SECTION 01 7823
OPERATION AND MAINTENANCE MANUALS

PART 1 GENERAL

1.01 SUMMARY

A. Section includes administrative and procedural requirements for preparing Operation and Maintenance (O&M) Manuals.

1.02 SCHEDULE

A. Submit initial draft of the O&M Manual for the portion of the Project covered no later than forty-five (45) Calendar Days prior to the request for issuance of the Substantial Completion Certificate.

1. Submit final draft of the O&M Manual for the portion of the Project covered no later than fourteen (14) Calendar Days prior to the request for issuance of the Substantial Completion Certificate.

1.03 OPERATION AND MAINTENANCE MANUALS

A. Coordinate, assemble, and submit three (3) final sets of O&M Manuals that include O&M information for each product, material, system and piece of equipment or equipment assembly specified in the Contract Documents for the Project as noted below and in a specific work order:

Description	Detailed Provisions Section
Bird Control System	10 8113
Equipment: Basic Requirements	11 0505
Compressed-Air System	11 1113
Fire Suppression Water Storage and Distribution System	21 4000
Basic Electrical Requirements	26 0500
Control Equipment Accessories	26 0916
Low Voltage Lighting Control System	26 0943
Dry-Type Transformers	26 2213
Switchboards	26 2413
Panelboards	26 2416
Motor-Control Centers	26 2419
Overcurrent and Short Circuit Protective Devices	26 2800
Safety Switches	26 2816
Separately Mounted Circuit Breakers	26 2817
Manual Transfer Switches	26 3613
Lightning Protection System	26 4113

Description	Detailed Provisions Section
Low Voltage Surge Protection Devices	26 4313
Bridge Crane: Single Girder, Top-Running	41 2213

Include any additional equipment or systems in the Detailed Provisions.

B. All manufacturers' literature in each manual shall be original, not copies.

C. O&M Manuals, Paper Copies: Submit three (3) sets of manuals bound in a series of D-ring binders with durable plastic covers.

1. The front cover shall be imprinted with the title of the Project, the name of Owner (Riverside County Department of Waste Resources), and the name of the Contractor.

2. The back edge (spine) shall be imprinted with the Project title, Owner (Riverside County Department of Waste Resources), and the year of completion of the Project.

3. Manuals shall be 8-1/2 by 11 inches in size except for oversize drawings, which shall be bound in fold-out fashion or folded and placed inside a bound-in envelope or sheet protector.

4. Multiple, thinner binders are preferred to extra-large and bulky binders where subdivisions of the contents permit.

5. Manual volumes shall not exceed 3-inches in thickness.

6. Internally subdivide the binder contents with permanent page dividers, logically organized as described below; with tab titling clearly printed under reinforced laminated plastic tabs.

7. Equipment operating instructions and test reports shall be bound in front of maintenance instructions and other materials.

D. O&M Manuals, Electronic Files: In addition to paper copy binders, Contractor shall submit O&M manuals in the form of a multiple file composite electronic PDF file for each manual type required.

1. Electronic Files: Use electronic files prepared by manufacturer where available. Where scanning of paper documents is required, configure scanned file for minimum readable file size.

2. File Names and Bookmarks: Enable bookmarking of individual documents based on file names. Name document files to correspond to system, subsystem, and equipment names used in manual directory and table of contents. Group documents for each system and subsystem into individual composite bookmarked files, then create composite manual, so that resulting bookmarks reflect the system, subsystem, and equipment names in a readily navigated file tree. Configure electronic manual to display bookmark panel on opening file.

E. Each O&M manual shall include the following:

1. A title indicating its contents permanently labeled on the outside of the binder.

2. A cover sheet identifying equipment with the process or assembly in which it is used according to (1) location, (2) Detailed Provisions Section number and title, and (3) Contract Document Drawing number.
3. Table of contents for each volume, with material, equipment, or system description identified, typed on white paper. Each volume shall have a complete table of contents showing the volume divisions and other information.
4. System, subsystem, and equipment description.
5. Performance and design criteria if Contractor is delegated design responsibility.
6. Operating standards and procedures:
    a. Startup procedures.
    b. Equipment or system break-in procedures.
    c. Routine and normal operating instructions.
    d. Regulation and control procedures.
    e. Instructions on stopping.
    f. Normal shutdown instructions.
    g. Seasonal and weekend operating instructions.
    h. Required sequences for electric or electronic systems.
    i. Test and inspection instructions.
    j. Troubleshooting guide.
    k. Special operating instructions and procedures.
7. Instructions and data prepared by the manufacturer, including the following as applicable:
    a. Equipment operating instructions including startup and shutdown procedures, safety precautions, and instructions on specific controls.
    b. Electrical test reports, including electrical system and motor test reports.
    c. A complete set of applicable reviewed approval submittals.
        1) A complete set of applicable reviewed product data clearly identifying the system, assembly, material or product using the names or terminology for the system, assembly, material or product in the Contract Documents.
    d. Assembly Drawings.
    e. Complete parts lists and list of items recommended to be stocked as spare parts.
    f. Bill of materials.
    g. Wiring diagrams.
    h. Control diagrams.
    i. Piped system diagrams.

j. Maintenance and repair instructions to cover any routine operation required to ensure satisfactory performance and longevity of the product, material or equipment, such as lubrication instructions and list of lubricants, cleaning, adjustment, replacement of parts, etc.

k. Maintenance and Service Schedules: Include service and lubrication requirements for equipment and separate schedules for preventive and routine maintenance and service with standard time allotment.

l. Spare Parts List and Source Information: Include lists of replacement and repair parts, with parts identified and cross-referenced to manufacturer's maintenance documentation and local sources of maintenance materials and related services.

m. Precautions against improper use.

n. Maintenance summary forms.

o. Copy of manufacturer's warranty.

8. Divide manuals into the following sections:

a. Part 1: Directory, listing names, addresses, and telephone numbers of Contractor, Subcontractors, and suppliers.

b. Part 2: Operation and maintenance instructions arranged by system and subdivided by Detailed Provisions Section. For each category, identify names, addresses, and telephone numbers of Subcontractors and suppliers. Identify the following:

1) Significant design criteria.

2) List of equipment.

3) Parts list for each component.

4) Operating instructions.

5) Maintenance instructions for equipment and systems.

6) Maintenance instructions for special finishes, including recommended cleaning methods and materials, and special precautions identifying detrimental agents.

7) Summary listing of warranty dates.

c. Part 3: Project documents and certificates, including the following:

1) Shop Drawings and product data.

2) Certificates and permits.

3) Copies of warranties.

F. Three (3) unbound copies of each volume shall be submitted to the County for approval. After review by the County, revise content as required by County comments and resubmit for approval.

G. Three (3) bound paper copies and electronic file of the final approved O&M Manuals shall be submitted. All copies of the final O&M Manuals shall be submitted to the County before final payment is made.

PART 2 – PRODUCTS – NOT USED

PART 3 – EXECUTION – NOT USED

END OF SECTION 01 7823

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SPECIFICATIONS – DETAILED PROVISIONS

SECTION 02 0100: MAINTENANCE OF EXISTING CONDITIONS

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SECTION 02 0100
MAINTENANCE OF EXISTING CONDITIONS

PART 1 GENERAL

1.01 SUMMARY

A. Section includes:

1. Identification and field mark out of any and all on-site utility lines to remain in operation during construction.
2. Identification and in-place protection of existing groundwater monitoring wells and gas monitoring probes.
3. Identification and in-place protection of existing drainage features.
4. Identification and in-place protection of existing subgrade sections.
5. Repair of any damage during construction operations.

B. Related Contract Document Sections include, but are not limited to:

1. Detailed Provisions Section 01 1400 – Work Restrictions
2. Detailed Provisions Section 01 4320 – Surveying
3. Detailed Provisions Section 01 5000 – Temporary Facilities and Controls
4. Project Drawings

PART 2 PRODUCTS – NOT USED

PART 3 EXECUTION

3.01 IDENTIFICATION

A. Locate all existing utilities which are to remain in service during construction as shown on the Project Drawings.

B. Identify all existing concrete slabs and drainage structures within the project limits as shown on the Project Drawings.

C. Identify subgrade section where design contours match existing contours as shown on the Project Drawings.

3.02 PROTECTION

A. Flag, barricade or suitably protect existing utilities during construction operations and equipment movement. Install shoring and bracing as required.

B. Prevent interruption of existing utility service to occupied or used facilities, except when authorized in writing by authorities having jurisdiction.

C. Existing utility lines that are indicated on the Project Drawings or which are made known to the Contractor prior to grading activities, and all utility lines that are constructed during grading activities shall be protected from damage during grading activities.

D. All existing hardscape, which includes, but is not limited to: curb and gutters, drainage driveways, and concrete slabs-on-grade shall be protected in place during construction activities to prevent damage.

E. Existing subgrade sections that are to remain in-place as shown on Project Drawings shall be identified and marked by means of survey as outlined in Detailed Provision Section 01 4320 – Surveying. Grading activities involving excavation or backfill for anything other than utility trenching and backfilling shall not take place within the existing subgrade section. Contractor shall keep subgrade section marked and protected for the duration of all grading activities.

3.03 REPAIR

A. Any damage to existing, operational utilities by the Contractor or his/her subcontractors during the ongoing construction operation shall be immediately repaired to operational standards at the Contractor's expense. If the repairs are not immediately addressed by the Contractor, the County shall contract for the repair at the Contractor's expense.

B. Any and all damage to protected features shall be repaired by the Contractor at his/her own expense. Protected features include, but are not limited to: existing drainage structures, concrete slabs-on-grade, and subgrade sections. In the event the County elects to make necessary repairs with their own workforce, the Contractor shall reimburse the County for the cost of repairs. Contractor shall repair or replace any and all damaged features as required to return it to its original state before final payment shall be issued by the County.

END OF SECTION 02 0100

SPECIFICATIONS – DETAILED PROVISIONS

SECTION 02 4100: DEMOLITION

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SECTION 02 4100
DEMOLITION

PART 1 GENERAL

1.01 SUMMARY

A. Section includes:

1. Deconstruction, removal, abandonment, and salvage, recycle, or disposal of various existing improvements including, but not limited to: reinforced concrete slabs and foundations, concrete and asphalt drainage structures, utilities, asphalt and concrete pavement, fencing, signs, poles, reinforced concrete or CMU walls, structure mechanical and electrical systems, and other incidental items necessary for the completion of the Project.
2. Furnish all labor, materials, tools, equipment, and services for demolition, as indicated, in accordance with provisions of the Contract Documents.
3. Completely coordinate Work with other trades.

B. Related Specification Sections include, but are not limited to:

1. Division 00 – Bidding Requirements, Contract Forms, and Conditions of the Contract.
2. Section 01 1400 – Work Restrictions
3. Section 01 3300 – Submittal Procedures
4. Section 01 7410 – Construction Waste Management
5. Section 01 9110 – Regulated Building Materials
6. Section 26 0500 – Basic Electrical Requirements
7. Section 31 2133 – Trenching, Backfilling, and Compacting for Utilities
8. Section 31 2300 - Earthwork
9. Section 31 2500 – Soil Erosion and Sediment Control

1.02 QUALITY ASSURANCE

A. Conduct Work in accordance with Cal-OSHA and EPA requirements.

B. Comply with American National Standards Institute (ANSI) /American Society of Safety Engineers (ASSE) A10.6 – Safety and Health Program Requirements for Demolition Operations.

C. Comply with National Fire Protection Agency (NFPA) 241 – Standard for Safeguarding Construction, Alteration, and Demolition Operations.

D. Use only firms or individual trades qualified to perform Work required under this Section.

1.03 DEFINITIONS

A. Abandon: Cut, cap, and fill a feature, as approved by County,and leave in place.

B. Relocate: Preserve a feature and the functionality of a feature. Move the feature to a designated location on the Site.

C. Remove: Take appropriate action to eliminate a feature from the Project Site. Removal may include disposal, recycling, or salvage.

D. Salvage: Preserve and protect a feature and the functionality of the feature. Move the feature to the designated location and turn over custody to the County.

E. Cal-OSHA: California Department of Industrial Relations – Division of Occupational Safety and Health.

F. EPA: United States Environmental Protection Agency.

1.04 SUBMITTALS

A. Submittal Procedures: See Detailed Provisions Section 01 3300 for requirements for the mechanics and administration of the submittal process.

B. Approval Submittals:

1. Demolition Plan not later than thirty (30) Calendar Days prior to the intended start of demolition work. Demolition Plan shall include, but is not limited to::

   a. Sequencing of the Work.

   b. Protection of workers and the public.

   c. Traffic control, where demolition is adjacent to existing operations or as required in public right-of-way.

   d. Environmental protection.

   e. Means and methods to minimize disposal and maximize salvage and recycling.

   f. Demolition disposal procedures.

   g. Salvaged items to be delivered to County.

   h. Disposal of demolition debris.

      1) Coordinate with the Waste Recycling Plan required in Detailed Provisions Section 01 7410 – Construction Waste Management.

1.05 DESCRIPTION

A. Work includes:

1. Demolition of structures, utilities, and other site features as indicated.

2. Removal of demolition debris.

3. Protection of existing structures to remain, including:

   a. Utilities.

b. Other items, as indicated.

B. Condition of existing structures to be demolished:

1. County assumes no responsibility for actual condition of structures to be demolished.

2. Conditions existing at time of inspection for bidding purposes will be maintained by County insofar as practicable.

3. Hazardous Waste Assessment – Does not apply.

1.06 JOB CONDITIONS

A. Perform preliminary investigations as required to ascertain extent of Work.

1. Conditions which would be apparent by such investigation will not be allowed as cause for Claims for extra costs.

B. Before start of Work, obtain and pay for permits required by Authorities having Jurisdiction and notify interested utility companies.

C. Observe safety precautions in all phases of the Work. Included shall be: trench shoring, bracing, lighting, and barricades as dictated by reason and by Safety Orders of the Division of Industrial Safety, State of California (Cal-OSHA). Shoring is required for all trench portions greater than 4-feet in depth. Trenches greater than 20-feet in depth require protection systems designed by a Professional Structural Engineer licensed in the state of California.

D. Hazardous Materials and Dangerous Wastes – If materials suspected of containing hazardous materials are encountered, do not disturb; immediately notify the County. Hazardous materials will be removed by County under a separate Contract or negotiated with the Contractor via a Change Order.

E. When performing underground work, the Contractor shall call Underground Service Alert of Southern California (USA/SC) at 811, the one-call underground facility locating service, two (2) Working Days prior to making an excavation. Contractor shall be responsible for such notification of Subcontractor's Work, or shall require Subcontractor to assume this responsibility.

F. On-site storage or sale of removed items or materials is not permitted.

PART 2 PRODUCTS – NOT USED

PART 3 EXECUTION

3.01 PREPARATION

A. Identification:

1. Field locate and mark all structures to be removed.

2. Existing Utilities:

a. Locate utilities within or adjacent to the Site.

b. Take all necessary precautionary measures to protect utilities.

c. Provide adequate means of support and protection during removal operations for utilities that are to remain in service.

d. Do not interrupt existing utility services, except when permitted in writing by the County, and then only after acceptable temporary utility services have been provided if required by the County and utility owner.

1) Provide minimum seven (7) Calendar Days notice to County and utility owner, and receive written notice to proceed before interrupting any utility.

B. Protection:

1. Maintain facility operations and traffic for the duration of the Work in accordance with Detailed Provisions Section 01 1400 – Work Restrictions.

2. Take all necessary precautionary measures to protect all utilities, structures and surrounding areas.

C. Comply with all requirements of ANSI/ASSE A10.6 and NFPA 241.

3.02 POLLUTION CONTROLS

A. Provide erosion and sediment controls in accordance with Detailed Provisions Section 31 2500 – Soil Erosion and Sediment Control prior to initiating Work.

B. Clean adjacent structures and improvements of dust, dirt, and debris caused by demolition operations.

C. Alleviate dust and provide dust control measures as needed.

D. Return adjacent areas to condition existing prior to start of Work.

3.03 ITEMS TO BE SALVAGED FOR COUNTY

A. Unless determined as unsalvageable by the County, all items designated for salvage shall be removed with care to prevent damage.

B. If, in the opinion of the County, salvageable features were unnecessarily damaged, damaged salvageable features shall be replaced or repaired, to the satisfaction of the County, by the Contractor at no additional cost to the County.

C. Remove salvage items at appropriate stage of demolition, but early enough to prevent damage to them by demolition operations.

D. Coordinate with County on items the County wants to salvage or relocate:

1. Precast concrete drainage sump.

2. Class II aggregate base material.

3. Unsuitable fill material, excavated on-site that contains no contaminants or chemicals and is approved by the County for landfill soil cover material. Refer to Specification Section 31 2300 – Earthwork.

3.04 ITEMS SALVAGED FOR CONTRACTOR

A. Items of salvage value to Contractor not designated in Contract Documents as items to salvage or relocate may be removed from the Site as Work progresses.

B. Transport salvaged items from Site as they are removed. Storage or sale or removed items are not permitted on the Site.

3.05 ITEMS TO BE REMOVED FOR RE-INSTALLATION IN PROJECT

A. Remove items designated for re-use:

1. Tag, protect from damage, store, if required, and deliver to designated locations.

3.06 GENERAL DEMOLITION PROCEDURES

A. Remove features/structures as indicated on the Project Drawings and as necessary to complete the Project.

B. Comply with all requirements of ANSI/ASSE A10.6 and NFPA 241.

C. Keep elements of the deconstructed features/structures that are designated as contaminated and not suitable for recycling as designated in Detailed Provisions Section 01 7410 – Construction Waste Management, such as contaminated concrete and asphalt separate from similar materials that are recyclable.

D. Demolition of entire features/structures:

1. Demolish completely and remove from site.

2. Use such methods as required to complete Work within limitations of governing regulations.

E. Demolition of portions of features/structures:

1. Cut, cap, sawcut, or otherwise provide clean break between the portion of the feature to be demolished and portion to remain.

2. Protect portion of feature to remain in place from damage during demolition.

F. Start and complete Work as established by approved schedule; operational procedures and sequence of Work are optional provided schedule is maintained.

G. Protect property to remain:

1. Promptly repair damage caused by demolition, as directed by the County, at no cost to the County.

2. Conduct operations to prevent damage by falling debris or other cause to adjacent structures or features as well as persons.

3. Provide interior and exterior shoring, bracing, or support to prevent movement, settlement or collapse of structures.

H. Conduct operations to ensure minimum interference with roads, walkways, entrances, exits, and other adjacent occupied facilities.

1. Do not close or obstruct public thoroughfares or walkways unless approved by Authorities having Jurisdiction.

2. Provide alternate routes around closed or obstructed traffic ways.

I. Provide covered passageways where necessary to ensure safe passage of persons in or near areas of Work.

J. Provide barricades and safety lights as required.

K. Abandon utilities that are indicated to be abandoned.

L. If suspected, hazardous materials or unexpected structures such as underground storage tanks are encountered, Contractor shall stop Work and notify the County immediately for further direction.

M. Structural Demolition:

1. Demolish concrete and masonry in small sections.

2. Perform removal to avoid excessive loads on supporting walls, floor, or framing.

N. Contractor is responsible for all disposal fees.

3.07 SAWCUTTING

A. Make a neat vertical saw cut at the boundaries of the asphalt and/or concrete area to be removed.

1. Care shall be taken when saw cutting so as not to damage any of the existing asphalt concrete pavement to remain in place.

2. Sawcutting shall extend through the full slab/pavement depth, or to a maximum depth of 12-inches, whichever is less.

3. Any slab/pavement damaged by Contractor due to its operations shall be repaired or replaced at no cost to the County.

4. Contractor is responsible for ensuring that special precautions are taken so that no concrete or concrete by-products, or products and by-products used in the sawcut of asphalt or concrete, are discharged into any storm water drainage system or surface waters.

B. Wastewater from Cutting Operations:

1. Wastewater from Portland Cement Concrete, masonry, and asphalt concrete cutting operations shall not be discharged to storm water drainage system or surface waters.

2. Cutting operations typically increase the pH of wastewater, therefore, just filtering of wastewater at treatment prior to discharge is not acceptable.

3. To thoroughly clean saw cuts where necessary, use high pressure water (high pressure water is considered greater than 1400 psi).
4. All wastewater shall be collected using a wet-dry vacuum or pumped into appropriate storage containers for proper disposal.
5. Impervious surfaces contaminated with sediment and grit from cutting or pulverizing operations shall be cleaned by sweepers to prevent contaminants from entering the storm water drainage system or surface waters.

3.08 REMOVAL OF PAVEMENT AND CURBS

A. Pavement and curbs shall be sawcut in such a fashion to form a neat break line.

B. All transitions to existing asphalt or cement concrete roadways and curb and gutter shall be vertically sawcut the full depth with straight, uniform edges.

C. Removing Asphalt Concrete Pavement:

1. Existing asphalt concrete pavement shall be removed at the locations indicated in the Project Drawings or as designated by the County.
    a. Concrete and asphalt pavement that have been exposed to solid waste, leachate and wastewater are not recyclable.
2. Removal shall be accomplished by making a neat longitudinal vertical cut along the boundaries of the area to be removed.
3. Sawcutting shall be accomplished with a self-propelled machine capable of cutting to a depth of 12-inches. The use of pneumatic hammers or punches will not be permitted.
4. Care shall be taken in removing the pavement not to damage any of the existing pavement that is to remain in place.
5. Any remaining pavement damaged due to Contractor operations shall be replaced by the Contractor, to the satisfaction of the County, at Contractor's expense.

D. Removing Cement Concrete Curb and Gutter:

1. Existing cement concrete curb and gutter shall be removed at the locations indicated in the Project Drawings or as designated by the County.
2. Removal shall be accomplished by making a neat longitudinal vertical cut along the boundaries of the area to be removed or closest expansion/construction joint.
3. Care shall be taken in removing the curb and gutter such as not to damage any curb and gutter or pavement that is to remain in place.
4. Any remaining curb and gutter damaged due to Contractor operations shall be replaced by the Contractor, to the satisfaction of the County, at Contractor's expense.

E. Removing Pavement Markings:

1. Existing pavement markings including plastic stop bars and traffic arrows, and lane markers shall be removed at all locations indicated on the Project Drawings and as required for revisions to traffic lanes.
2. Removal of existing pavement markings shall be conducted using such methods to prevent damage to the remaining pavement. Do not use chemicals that may be harmful to the pavement.
3. Damaged pavement shall be replaced at Contractor's expense.
4. Painted and thermoplastic pavement markings shall be removed by sandblasting, grinding, or other method approved by the County. All markers to be removed shall be done without damaging the pavement section.

3.09 REMOVAL OF EXISTING UTILITY STRUCTURES

A. Vaults and Catch Basins
   1. All existing concrete vaults and catch basins shall be removed and disposed of off the Site.
      a. Concrete vaults and catch basins that have been exposed to leachate and wastewater are not recyclable.

3.10 EXISTING PIPE ABANDONMENT

A. Clean interior contact surfaces of all pipes to be cut off and abandoned.

B. Construct concrete plug in ends of pipes.
   1. Minimum length of plug shall be equal to two (2) diameters of the pipe.

C. Concrete shall completely fill the pipe opening.

3.11 REMOVAL AND/OR RESETTING OF MISCELLANEOUS ITEMS

A. Remove and/or reset miscellaneous items as described in the Project Drawings and as necessary to satisfactorily complete the Project.

B. Items requiring resetting shall be protected from damage during removal. If, in the opinion of the County, an item requires replacement due to the Contractor's operations it shall be replaced at Contractor's expense.

C. Fencing and signs identified for removal shall be properly disposed of by Contractor. Post holes shall be filled with approved excavated material from elsewhere on-site.

D. Lighting fixtures identified for removal shall be disconnected and removed, including foundations and associated wiring.

3.12 CLEAN-UP AND DISPOSAL OF DEMOLTION MATERIALS

A. Materials, except those identified as salvage, resulting from the removal of structures and obstructions shall be hauled to an approved waste disposal site, secured by the Contractor, and shall be disposed of in such a manner as to meet the requirements of

federal, state, county, and municipal regulations regarding health, safety, and public welfare.

1. Coordinate with the Waste Recycling Plan required in Detailed Provisions Section 01 7410 – Construction Waste Management.

B. Clean up other debris resulting from this Work.

END OF SECTION 02 4100

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SPECIFICATIONS – DETAILED PROVISIONS

SECTION 02 6113: REFUSE EXCAVATION, HANDLING, AND DISPOSAL

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SECTION 02 6113
REFUSE EXCAVATION, HANDLING, AND DISPOSAL

PART 1 GENERAL

1.01 SUMMARY

A. Section includes:

1. This Work shall include furnishing all labor, supervision, tools equipment and materials necessary for the excavation, handling and disposal of refuse.

B. Related Detailed Provisions Sections include, but are not limited to:

1. Section 01 5600 – Project Environmental Controls
2. Section 01 7419 – Construction Waste Management
3. Section 02 0100 – Maintenance of Existing Conditions
4. Section 31 1000 – Site Clearing
5. Section 31 2300 – Earthwork

1.02 QUALITY ASSURANCE

A. Conduct Work in accordance with Cal-OSHA and EPA requirements.

B. Use only firms or individual trades qualified to perform Work required under this Section.

1.03 DEFINITIONS

A. Alternative Daily Cover (ADC): Includes but is not limited to: 6-inches of cover soil, Greenwaste material, tarps or other approved equals.

B. Cal-OSHA: California Department of Industrial Relations – Division of Occupational Safety and Health.

C. Designated Disposal Area: An area within the permitted landfill unit that shall be used to dispose of any project related refuse.

D. EPA: United States Environmental Protection Agency.

E. Final Cover: Minimum three (3) feet thick final cover layer in accordance with Detailed Provision Section 32 2300 – Earthwork required to be placed over any refuse.

F. Refuse: Non-hazardous municipal solid waste for disposal.

G. Remove: Take appropriate action to eliminate the feature from the Project Location. Removal may include disposal, recycling, or salvaging.

H. Salvage: Preserve and protect the feature and the functionality of the feature. Move the feature to the designated location and turn over custody to the County.

1.04 SUBMITTALS

A. Submittal Procedures: Detailed Provisions Section 01 3300 – Submittal Procedures for requirements for the mechanics and administration of the submittal process.

1.05 DESCRIPTION

A. General Description:

1. Encountering refuse may require further excavation and hauling of all of the material encountered. Refuse material may require hauling from the location encountered to a designated disposal area.

2. Disposal:

a. Cover refuse at the end of the day with ADC.

b. Place the final cover layer over refuse once no more refuse shall be disposed.

1.06 JOB CONDITIONS

A. Perform preliminary investigations as required to ascertain extent of Work.

1. Conditions which would be apparent by such investigation will not be allowed as cause for claims for extra costs.

B. Before start of Work, obtain and pay for permits required by Authorities Having Jurisdiction and notify interested utility companies.

1. The County shall apply for and obtain a Rule 1150 Excavation Management Permit.

C. Observe safety precautions in all phases of the Work. Included shall be trench shoring, bracing, lighting, and barricades as dictated by reason and by Safety Orders of the Division of Industrial Safety, State of California (Cal-OSHA). Shoring is required for all trench portions greater than 4-feet in depth. Trenches greater than 20-feet in depth require protection systems designed by Professional Structural Engineer licensed in California.

D. Hazardous Material and Dangerous Waste – If materials suspected of containing hazardous materials are encountered, do not disturb and immediately notify the County. Hazardous materials will be removed by the County under a separate contract or negotiated with the Contractor via a change order.

E. When performing underground work, the Contractor shall call Underground Service Alert of Southern California (USA/SC) at 811 two (2) Working Days prior to excavation. Contractor shall be responsible for such notification of subcontractor's Work or shall require subcontractor to assume this responsibility.

F. On-site storage or sale of refuse is not permitted.

PART 2 PRODUCTS – (NOT APPLICABLE TO THIS SECTION)

PART 3 EXECUTION

3.01 PREPARATION

A. Identification:

1. Field locate and mark all refuse to be disposed of.

B. Protection:

1. Maintain facility operations traffic for the duration of the Work in accordance with Detailed Provisions Section 01 1400 – Work Restrictions.
2. Take all necessary precautionary measures to protect all utilities, structures and surrounding areas.

C. Comply with all requirements of ANSI/ASSP A10.6 and NFPA 241.

3.02 POLLUTION CONTROLS

A. Provide erosion and sediment controls in accordance with Detailed Provisions Section 01 5600 – Project Environmental Controls prior to initiating Work.

B. Alleviate dust and provide dust control measures as needed.

C. Return adjacent areas to condition existing prior to start of Work.

3.03 REFUSE EXCAVATION, HANDLING AND DISPOSAL PROCEDURES

A. Refuse or soil co-mingled with refuse may be encountered during excavation within the landfill footprint limits, however, it is also possible that refuse may also be encountered in any excavation area for the project.

B. The Contractor shall remove interim cover soil, refuse or soil co-mingled refuse encountered during excavation for the project.

C. Excavated interim cover soil that does not contain co-mingled refuse or has been deemed suitable by the County may be used as source material for engineered fill and other miscellaneous sources.

D. Contractor shall haul excavated refuse and soil co-mingled with refuse to the designated disposal area and cover the exposed refuse with a minimum of 6-inches of clean compacted earthen cover material or approved ADC as directed by the County.

E. If the cover material placed over refuse is to act as subgrade for engineered fill, a drainage structure, etc. Contractor shall prepare the cover soil according to the proper Detailed Provisions.

F. At the end of the workday, Contractor shall cover all refuse surfaces and may not allow refuse surfaces to be exposed overnight. If excavation of refuse to the design grade has not been completed by the end of the workday, Contractor may cover the refuse surface with 6-inches of clean, compacted earthen cover soil or alterative daily cover including, but not limited to: 6-inches of process greenwaste material, tarps or approved equal.

G. In the event the County or Contractor suspects any excavation material from the landfill is hazardous (as defined by CalRecycle or the Local Enforcement Agency), the Contractor shall stockpile the suspected material in a location separate from the rest of the excavated material. The Contractor shall immediately notify the County if excavation material is suspected to be hazardous.

H. The County will make the appropriate analyses to determine if the suspected hazardous material is hazardous by CalRecycle's or LEA's definition. The Contractor shall dispose of determined non-hazardous material at the landfill working face, as directed by the County. County determined hazardous waste shall be disposed offsite by the County. The Contractor shall be compensated for disposal of such hazardous waste.

I. Any hazardous material generated by the Contractor including, but not limited to, spills or leaks during routine equipment maintenance or any spills caused by any of the Contractor's subcontractors or suppliers, shall be properly disposed of at the Contractor's expense as stated in the Contract Documents.

J. The Contractor shall fill the Designated Disposal Area and place the Final Cover Layer over the Designated Disposal Area last to provide an area for any Project related demolition to be buried. The Final Cover Layer will be a minimum of 3-feet thick if placed on exposed refuse or 2-feet thick over a minimum 1-foot thick intermediate cover layer. The Final Cover Layer material and placement shall be in accordance with Detailed Provisions Section 31 2300 – Earthwork.

    1. While most waste can be disposed of on-site at the designated disposal area, on-site treated wood power poles cannot. They must be properly disposed of off-site.

K. Start and complete Work as established by the approved schedule; operational procedures and sequence of Work are optional provided the approved schedule is maintained.

L. Excavations conducted into refuse, including vertical well drilling, shall be completed in accordance with the County's Permits to Operate/Construct, issued by the South Coast Air Quality Management District. Copies of the permits are provided as an Appendix to the Construction Documents.

END OF SECTION 02 6113

SPECIFICATIONS – DETAILED PROVISIONS

SECTION 31 1000: SITE CLEARING

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SECTION 31 1000
SITE CLEARING

PART 1 GENERAL

1.01 SUMMARY

A. Description:

1. This Work consists of site clearing, grubbing, stripping of topsoil, and demolition of structures and obstructions found within the limits of the Project including Work for loading, hauling, and disposing of non-salvageable materials obtained as part of the Contractor's site clearing operation.

B. Related Detailed Provisions Sections include, but are not limited to:

1. Division 01 – General Requirements.
2. Section 31 2133 – Trenching, Backfilling, and Compacting for LFG HDPE Pipe.
3. Section 31 2300 – Earthwork.

1.02 QUALITY ASSURANCE

A. Requirements of Regulatory Agencies: Perform Work, including disposal of debris, in accordance with rules and regulations of Federal, State, and local agencies having jurisdiction.

1.03 SUBMITTALS

A. Project Record Documents

1. Record actual locations of buildings, structures, utilities, and infrastructure improvements and elevations. Identify and describe unexpected variations to subsoil conditions or discovery of undocumented utilities.

1.04 SURROUNDING SITE CONDITION SURVEY

A. Prior to commencing the Work, Contractor and County shall tour the jobsite together to examine and record damage to the site. This record shall serve as basis for determination of subsequent damage due to Contractor's operations and shall be signed by all parties making the tour. Any cracks, sags, or damage to adjacent buildings, structures, and infrastructure improvements not noted in the original survey, but subsequently discovered, shall be reported to the County immediately.

1.05 PROTECTION OF EXISTING STRUCTURES AND UTILITIES

A. Prior to commencing the Work, Contractor shall locate and surface mark (with colors specified by USA) all known existing underground structures and utilities. Stake and flag utility valve boxes and other surface improvements. Prior to commencing the Work, call Underground Service Alert of Southern California (USA/SC) at 811, the

one-call underground facility locating service two (2) Working Days prior to start. Contractor shall be responsible for such notification of Subcontractor's Work, or shall require Subcontractor to assume this responsibility. Provide USA/SC notification permit number to County prior to starting site Work. Existing underground structures and utilities shall be kept in service unless approval to interrupt or shutdown service is obtained from County. If damaged, the utility shall be repaired at no additional cost to the County.

B. Contractor shall uncover, prior to any earthwork, all existing piping where crossings, interferences, close proximity (five (5) feet or less) or connections are shown on the Project Drawings, from one (1) foot below proposed elevation to the existing ground surface. Any variation in the actual elevations and the indicated elevations shall be brought to the County's attention. If the Contractor does not expose all existing utilities, Contractor shall not be entitled to additional compensation for Work necessary to avoid interferences.

C. If interferences occur at locations other than the general locations shown on the Drawings, and such utilities are damaged before their locations have been established, or create an interference, the Contractor shall notify the County and a method for repairing the damage or correcting the interference shall be provided by the County. Payment for additional Work due to interferences not shown on the Project Drawings shall be in accordance with the General Provisions.

D. Care shall be exercised to prevent damage to adjacent facilities including structures, pavement and drainage facilities from settlement, lateral movement, undermining, and washout and other hazards. Where equipment will pass over obstructions, suitable planking and/or bridging shall be provided by the Contractor. Damaged facilities due to the Contractor's operations shall be removed and replaced at the Contractor's expense.

E. If any structure or utility is damaged, take immediate action to ensure the safety of persons and property. Correct damage immediately. Contractor shall bear all costs of correction, replacement, repair, restoration, including related damages additional testing, inspection, and compensation for County's services and expenses. Compensation to the County shall be made by deducting expenses from final contract payment.

F. No Work is to be performed on energized electrical equipment unless scheduled with the County.

PART 2 PRODUCTS – NOT USED

PART 3 EXECUTION

3.01 PREPARATION

A. Notify County before starting Work and comply with County requirements.

B. Do not close or obstruct roadways, structures or utilities without County's approval.

3.02 SITE CLEARING

A. Conduct clearing with minimum interference to public and private access. Maintain egress and access from adjacent areas at all times.

B. Clear the site within the limits shown and remove all pavement, aggregate base, shrubs, remaining brush, stumps and waste material that would interfere with construction operations, except as specifically indicated otherwise on the Project Drawings or as identified by the County.

C. Salvage Existing Aggregate Base:

1. Strip aggregate base materials to depths encountered.

a. Separate from underlying subsoil or objectionable material.

2. Stockpile aggregate base material where directed by County.

a. Construct storage piles to freely drain surface water.

D. Topsoil Removal:

1. Strip topsoil to depths encountered.

a. Remove heavy growths of grass before stripping.

b. Separate from underlying subsoil or objectionable material.

2. Stockpile topsoil where directed by County.

c. Construct storage piles to freely drain surface water.

d. Cover storage piles to prevent erosion.

E. Clearing and Grubbing:

1. Clear from within limits of construction all vegetation not marked to remain.

a. Include shrubs, brush, downed timber, rotten wood, heavy growth of grass and weeds, vines, rubbish, pavement, structures and debris.

2. Grub (remove) from within limits of construction all stumps, roots, root mats, logs and debris encountered.

a. Totally grub under areas to be paved and where structures will be constructed.

F. Pollution and Dust:

1. Wet down dirt areas by spraying as required to prevent dust from becoming airborne.

G. In areas not to be further excavated, fill depressions resulting from site clearing. Place and compact satisfactory soil materials to a minimum of ninety percent (90%) compaction in 6-inch lifts, unless specified otherwise.

H. Disposal of Waste Materials:

1. Do not burn combustible materials on-site.

2. Remove all waste materials from site. At the County's direction, topsoil material not containing unreasonable amounts or organic material may be stockpiled on-site in a location as directed by the County.
3. Do not bury organic matter on-site.

3.03 ACCEPTANCE

A. Upon completion of the site clearing, obtain County's acceptance of the extent of clearing, depth of stripping and rough grade.

END OF SECTION 31 1000

SPECIFICATIONS – DETAILED PROVISIONS

SECTION 31 2133: TRENCHING, BACKFILLING, AND COMPACTING FOR LFG HDPE PIPE

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SECTION 31 2133
TRENCHING, BACKFILLING, AND COMPACTING FOR LFG HDPE PIPE

PART 1 GENERAL

1.01 SUMMARY

A. This Work consists of excavation, backfilling and compacting for buried LFG HDPE pipe.

B. Related Detailed Provisions Sections include, but are not limited to:

1. Division 01 – General Requirements
2. Section 02 6113 Refuse Excavation, Handling and Disposal
3. Section 31 2300 – Earthwork
4. Section 33 5216.26 – LFG HDPE Pipe

1.02 QUALITY ASSURANCE

A. Referenced Standards:

1. American Society for Testing and Materials (ASTM):
   a. ASTM C33/C33M – Standard Specification for Concrete Aggregates.
   b. ASTM D75/D75M – Standard Practice for Sampling Aggregates.
   c. ASTM D698 – Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 ft-lbf/ft^3 (600 kN-m/m^3)).
   d. ASTM D1556/D1556M – Standard Test Method for Density and Unit Weight of Soil in Place by the Sand-Cone Method.
   e. ASTM D1557 – Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Standard Effort (56,000 ft-lbf/ft^3 (2,700 kN-m/m^3)).
   f. ASTM D2216 – Standard Test Methods for Laboratory Determination of Water (Moisture) Content of Soil and Rock by Mass
   g. ASTM D2321 – Standard Practice for Underground Installation of Thermoplastic Pipe for Sewers and Other Gravity-Flow Applications.
   h. ASTM D2487 – Classification of Soils for Engineering Purposes (Unified Soil Classification System).
   i. ASTM D2488 – Standard Practice for Description and Identification of Soils
   j. ASTM D4253 – Standard Test Methods for Maximum Index Density and Unit Weight of Soils Using a Vibratory Table.

k. ASTM D4254 – Standard Test Methods for Minimum Index Density and Unit Weight of Soils and Calculation of Relative Density.

l. ASTM D4643 – Standard Test Method for Determination of Water (Moisture) Content of Soil by Microwave Oven Heating

m. ASTM D6938 – Standard Test Method for In-Place Density and Water Content of Soil and Soil-Aggregate by Nuclear Methods (Shallow Depth).

2. California Code of Regulations (CCR): CCR Title 8 – Industrial Relations.

3. California Department of Industrial Relations – Division of Occupational Safety and Health (Cal-OSHA).

4. California Labor Code – Section 6705

5. State of California, Business and Transportation Agency, Department of Transportation (Caltrans):

a. Caltrans Standard Specifications – Division III: Earthwork and Landscape

b. Caltrans Manual of Uniform Traffic Control Devices; http://www.dot.ca.gov/hq/traffops/engineering/mutcd/

B. Testing and Inspection Service:

1. At the County's discretion, the County will procure Testing/Inspection Provider services, for quality assurance testing during earthwork operations.

C. Applicable Site Permits (Copies provided in Contract Document Appendices):

1. Permit to Construct/Operate, Permit No. G80544, Facility ID 006979, Badlands Landfill, dated July 29, 2025.

2. Permit to Construct/Operate, Permit No. G48761, A/N 595802, Facility ID 015793, Lamb Canyon Landfill, dated November 19, 2020.

1.03 DEFINITIONS

A. Backfill Material: Backfill for both trench backfill and pipe bedding (or pipe zone backfill).

B. Construction Spoils: Per the South Coast Air Quality Management District Permits, this material is landfill waste, material that is mixed with landfill waste, material that has been in contact with landfill waste, or odorous material that is removed from excavations.

C. Excavation Spoils: Any type of material excavated from the landfill. This can include aggregate base, interim cover soil, landfill waste and suspected hazardous waste.

D. Landfill Gas (LFG): Gas that is generated by natural landfill waste decomposition. LFG can be explosive, flammable and hazardous.

E. Pipe Bedding: Layer of material immediately below pipe or conduit and extending over the full trench width in which the pipe is bedded. Bedding material is as specified herein.

F. Pipe Zone: The pipe zone shall include the full width of trench from the bottom of the pipe or conduit to a horizontal level 12-inches above the top of the pipe or conduit. Where multiple pipes are placed in the same trench, the pipe zone shall extend from the bottom of the lowest pipe or conduit to a horizontal level above the top of the highest or topmost pipe. Thickness of pipe zone above the highest top of pipe shall be a minimum of 12-inches.

G. Relative Compaction: Ratio, expressed as a percentage of the in-place dry-density as compacted to a laboratory maximum dry-density of representative sample of the same material determined by ASTM D1557.

H. Standard Specifications: Refers to the Standard Specifications of the State of California, Business and Transportation Agency, Department of Transportation (Caltrans), latest edition. In case of conflict between the Standard Specifications and these Specifications, the strictest specifications shall govern. Provisions for measurement and payment specified within the Standard Specifications shall be disregarded and the provisions of these Contract Documents shall govern.

I. Subgrade: Previously undisturbed material prepared, and compacted to required density and elevation to support a structure, pavement system, or to receive additional specified materials.

J. Trench Zone: The trench zone includes the portion of the trench from the top of the pipe zone to the bottom of the pavement zone or to the existing surface in unpaved areas.

K. Unsuitable Material: Shall consist of materials determined by the County and/or Testing/Inspection Provider to be:

1. Soft, loose, unstable or yielding, or
2. Previously placed uncontrolled fill, or
3. Designated material to be overexcavated per geotechnical report requirements, or
4. Unable to be compacted to specified density using ordinary methods at optimum moisture content, or
5. Contains visible or excessive deleterious material as determined by the County or Testing/Inspection Provider, or
6. Too wet to be properly compacted and circumstances prevent processing suitable in-place drying prior to being used as backfill, or
7. Otherwise unsuitable for planned use.

Such material shall be removed to the limits directed by the County and the resulting excavation backfilled with engineered fill material.

L. Upper Zone: The upper zone includes the portion of the trench from the top of the pipe zone to the bottom of the pavement zone or to the existing surface in unpaved areas.

1.04 SUBMITTALS

A. Submittal Procedures: See Detailed Provisions Section 01 3300 – Submittal Procedures for requirements for the mechanics and administration of the submittal process.

B. Approval Submittals:

1. Product technical data including:

a. Acknowledgement that products submitted meet requirements of standards referenced.

b. Manufacturer's installation instructions.

2. Excavation Plan:

a. In accordance with Section 5-5.1.1 – Accident Prevention of the General Provisions, Contractor shall submit to the County a detailed plan showing the design of shoring, bracing, sloping of the sides of trenches, or other provisions to be made for the protection of personnel during earthwork operations.

b. County acceptance of the Excavation Plan does not release the Contractor of liability in the event of an accident or injury, nor does it place any liability on the County or any County employees.

3. Trench shoring or shield (trench box) certification if employed:

a. Specific to Project Conditions.

b. Certified by Professional Structural Engineer, registered in California.

c. County is not responsible to, and will not, review and approve.

d. Cal-OSHA Contractor compliance information for trench safety. Submit an exemption letter or trenching permit from Cal-OSHA and comply with California Labor Code Section 6705, Excavation Plans for Worker Protection.

e. Submit a Confined Space Emergency Plan prior to any personnel entering trenches or excavations greater than four (4) feet in depth.

1.05 SAFETY PRECAUTIONS

A. Observe safety precautions in all phases of the Work. Included shall be trench shoring, bracing, lighting, and barricades as dictated by reason and by Safety Orders of the Division of Industrial Safety, State of California (Cal-OSHA).

B. Acquire an exemption letter or trenching permit from Cal-OSHA and comply with California Labor Code Section 6705, Excavation Plans for Worker Protection. Submit a copy of the exemption letter or trenching permit with excavation drawings to the County prior to excavation work.

C. Install all necessary underpinning, shoring, lagging, cribbing, and bracing of ample strength to support adjoining soils, paving and structures.

D. Barricade open depressions and holes occurring as part of this Work, and post warning lights on property adjacent to or with public access.

E. Operate warning lights during hours from dusk to dawn each day and as otherwise required.

F. No trenches deeper than four (4) feet shall be left open during non-working hours, unless temporary steel plating and shoring support for the plates is provided to completely cover excavation. See Paragraph 1.06.I. herein.

G. Install fences and barricades to secure excavation areas.

H. Smoking is prohibited except in designated areas. Designated areas have been established at each landfill. The designated smoking areas for each landfill shall be indicated on maps provided after the "Notice to Proceed" for each phase is issued.

I. No worker will be allowed to work alone at any time in or near an excavation or trenching site. Other workers will be stationed beyond the area considered to be subject to the possible effects of LFG to assist in removing an injured or endangered worker or to summon help.

J. No worker may handle excavated solid waste or leachate without wearing appropriate work gloves and clothing, which will provide an adequate barrier to the waste.

K. Any time excavations and trenching exceed 5-feet in depth; shoring, bracing or sloping of the side walls is required prior to personnel entry. If sloping is the method used to prevent cave-in, slope the side walls of the trench at a 45 degree angle away from the trench.

L. Entry into excavations or trenches greater than 4-feet in depth shall be considered a Confined Space. The Contractor's Safety Office shall determine the requirements for a Confined Space Entry Permit according to Contract Documents.

M. Many gases are heavier than air and settle in low areas such as trenches and excavations. Additional precautions must be observed in these low lying areas. Specifically, the need for constant Oxygen monitoring, forced ventilation, combustible gas monitoring, respiratory protective equipment, etc. shall be determined by the Contractor. The County may impose additional requirements when deemed necessary for worker safety.

N. Construction equipment must be equipped with a vertical exhaust at least 5-feet above grade or with spark arrestors.

O. All electric motors and electric controls used in the excavation area will be explosion proof or non-sparking TEFC and meet the requirements for Class 1, Division 1, Group D (methane), and rated equipment in accordance with the National Electric Code (NEC). If the potential for a hazardous location can be eliminated with the use of forced ventilation, then explosion proof equipment is not required.

P. No welding is permitted in, on, or immediately near the excavation area, unless continuous monitoring for methane and other combustible gases is performed. In-trench fusion welding of HDPE pipe should only be done as a last resort and only then with the proper precautions taken.

Q. Solvent cleaning, gluing or bonding of pipe should be done, to the extent possible, outside the trench.

R. During pipe assembly, all valves should be closed immediately after installation to prevent the migration of landfill gases through the pipe.

S. All exposed trench or excavation shall be covered with an impermeable membrane and plywood or steel plate prior to the end of the working day barriers and warning signs shall be placed around covered excavations.

T. Whenever refuse is encountered during excavations, the work area will be monitored continuously for level of methane, volatile organic compounds, hydrogen sulfide and oxygen deficiency.

U. All newly installed piping that is connected to a LFG source shall be capped as soon as possible following installation and at the end of each working day.

1.06 PROJECT CONDITIONS

A. Avoid overloading or surcharge a sufficient distance back from edge of excavation to prevent slides or caving.

1. Maintain and trim excavated materials in such manner to be as little inconvenience as possible to landfill operations.

B. Provide full access to areas required for landfill operations and points as designated by the County to prevent serious interruption of travel.

C. Protect and maintain benchmarks, monuments or other established points and reference points and if disturbed or destroyed, replace items to full satisfaction of the County.

D. Verify location of existing underground utilities.

E. When performing underground work, the Contractor shall call Underground Service Alert of Southern California (USA/SC) at 811, the one-call underground facility locating service two (2) Working Days prior to making an excavation. Contractor shall be responsible for such notification of Subcontractor's Work, or shall require Subcontractor to assume this responsibility.

F. The Contractor's attention is directed to the possible existence of pipe, conduit and other underground improvements which may or may not be shown on the Project Drawings. Preserve and protect any such improvements whether shown on the Project Drawings or not. Expose such improvements in advance of the underground construction to allow for changes in alignment as necessary. Where it is necessary to remove and replace or to relocate such improvements in order to prosecute Work, they shall be removed, maintained, and permanently replaced by the Contractor at their expense. Relocation of said improvements shall not be performed without written permission of the County or the owner of the utility. Unless otherwise noted, existing underground utilities shall be protected in place.

G. Excavation made with power driven equipment is not permitted within five (5) feet of any know utility or subsurface construction. For Work immediately adjacent to or for excavation exposing a utility or other buried obstruction, use hand or light equipment excavation. Start excavation on each side of the indicated obstruction and continue until the obstruction is uncovered or until clearance for the new grade is assured. Support

uncovered lines or other existing Work as affected by the contract excavation until approval for backfill is granted by the County. The Contractor shall report damage of utility lines or subsurface construction immediately to the County and make repairs at no additional cost to the County.

H. Protect excavations by shoring, bracing, sheeting, underpinning, or other methods as required, to prevent cave-ins or loose dirt from entering excavations. Barricade open excavations and post warning lights at work adjacent to roadways and walks.

I. Contractor shall provide temporary steel plating and shoring support for the plates, to completely cover the excavation created across roadways. Temporary steel plating must be provided by the Contractor for areas which will remain open overnight. The temporary plating shall be a minimum of 0.75-inch thickness steel, but in no case shall the thickness be less than that required to support AASHTO-H20 traffic loading. Provide a visible barrier along the excavation path on each side of the roadway with a combination of highly visible "Caution Tape" and construction cones.

J. Protect existing streams, ditches and storm drain inlets using proper erosion control methodology.

K. Do not use explosives unless approved otherwise in writing by the County.

L. Provide dust alleviation and control measures continuously during the course of the Work to the satisfaction of the County.

1.07 SOILS TESTING

A. At the County's discretion, a Testing/Inspection Provider will be procured by the County for testing and inspection.

B. All materials, Work, methods and equipment shall be subject to inspection at the jobsite and import sources. Material or workmanship not complying with the Contract Documents will not be accepted. The Contractor shall give the County reasonable notice, at a minimum 24 hours advance notice, when ready for inspection and shall supply samples for inspection without extra charge.

C. Cost of Testing:

1. With the exceptions of retest due to material or Contractor workmanship, the County will assume the cost for all tests and inspections specified to be performed by the Testing/Inspection Provider. Additional costs of retesting incurred by the County shall be deducted from the Contract Final Payment.

D. Tests performed by the Testing/Inspection Provider may include, but are not limited to:

1. Determine the density of soil in place by the sand cone method, ASTM D1556 or by nuclear methods, ASTM D6938.

2. Determine laboratory moisture-density relations of soils by ASTM D1557.

3. Determine the relative density of cohesion-less soils by ASTM D4253 and D4254.

4. Visual soil classification by ASTM D2488.

5. Sample backfill materials in accordance with ASTM D75.
6. Conduct in-place moisture-density tests for backfilling to assure that all work complies with this Detailed Provisions Section.

E. Make excavation for compaction tests at the locations and to the depths designated by the Testing/Inspection Provider. Backfill and re-compact the excavation at completion of testing. When test indicate that the compaction is less than the specified relative compaction, rework and retest those areas until the specified relative compaction has been obtained.

1.08 MAINTENANCE

A. Protect newly graded areas from traffic, erosion, and settlement. Repair and reestablish damaged or eroded slopes, elevations, or grades and restore surface construction prior to acceptance.

B. Repair settlement at excavated areas for a period of 1 year following Final Acceptance at no additional cost to the County. Remove surface (pavement, or other finish), add backfill material, compact, and replace surface treatment; restore appearance, quality, and conditions of surface and finish to match adjacent work, and eliminate evidence of restoration.

C. The Contractor shall make, or cause to be made, all repairs or replacements made necessary by settlement within 30 days after written notice from the County.

PART 2 PRODUCTS

2.01 MATERIALS

A. Horizontal Well Bedding and Well Casing Zone Materials (aggregate):

1. The County shall provide the bedding and well casing zone materials.
2. The bedding and well casing zone materials shall be one of the following:
   a. 2 to 4-inch crushed washed rock aggregate; or
   b. Type A tire derived aggregate.

B. Pipe Bedding and Pipe Zone Materials:

1. Imported sand consisting of natural or manufactured granular material, or a combination thereof, free of deleterious amounts of organic material, mica, loam, clay, and other substances. The material must have been tested to a minimum Sand Equivalent of 30 within two (2) weeks of its use. Imported sand shall have the following gradation or similar:

SIEVE SIZE	PERCENT PASSING BY WEIGHT
3/8”	100
#4	75-100

#30	12-50
#100	5-20
#200	0-15

2. Pipe bedding thickness = $^1/_8$ pipe outside diameter or 6-inches, whichever is greater.
3. Special requirements for bedding may be described as part of the Special Conditions, pipe manufacturer's instructions or as shown on the Project Drawings shall supersede and take precedence over any and all other requirements found elsewhere in these Detailed Provisions.

C. Trench Zone Backfill Materials - General:

1. Backfill material shall consist of suitable material from excavations, onsite material provided by the County or imported material when suitable material is not available from the site. All excavated materials incorporated as part of trench backfill must be inspected and approved to be suitable by the County and/or Testing/Inspection Provider. Excavated material may need to be processed to meet specification requirements and shall be provided at the Contractor's expense.
2. Backfill material shall be free of rock cobbles, roots, trash, vegetation or other organic matter.
3. Backfill material shall contain no lumps of rocks over 3-inches in greatest dimension, and with no more than fifteen percent (15%) of rocks over 2-inches in their greatest dimension.
4. Backfill materials that are obtained from trench excavated materials to the extent such material is available, shall be screened at the discretion of the County. Hand selecting of rocks from excavated material will not be permitted in lieu of screening.
5. Excavated soils from the trenching operation may generally be used as engineered fill provided that the following conditions are true:
   a. The soil is free of trash, lumber, debris, leaves, grass, roots, stumps, and other vegetable matter.
   b. The soil shall not be contaminated with hydrocarbons or other chemical contaminants.
   c. The soil is satisfactory to the County.
6. If the County decides that the excavated soil is unsatisfactory, the County will provide backfill materials, at no charge to the Contractor, within a reasonable distance of the excavation.
7. Special requirements for trench backfill materials may be described as part of the Special Conditions, pipe manufacturer's instructions or as shown on the Project Drawings shall supersede and take precedence over any and all other requirements found elsewhere in these Detailed Provisions.

D. Unsuitable Material:

1. Shall consist of materials too wet, soft, or loose to properly support the pipe, conduit or appurtenant structure. Such material shall be removed to the limits directed by the County or Testing/Inspection Provider and the resulting excavation backfilled with pipe bedding material compacted to a minimum of 90% relative compaction.

E. Subgrade Stabilization Materials: Compacted structural fill composed of Pipe Bedding Material, in accordance with Detailed Provisions Section 31 2300 – Earthwork.

F. Geotextile:

1. The Geotextile that is specified for use in Horizontal Well Construction shall be supplied by the County.

2. The Geotextile shall be a new, high quality product designed and manufactured specifically for the purposes of the Project. Its suitability and durability for this type of Work shall have been adequately demonstrated by prior applications. The Geotextile shall be of woven needle punched, polyester fabric, Treviria Spunbound type, type II35 or approved equal. The Geotextile fabrics shall be uniform in thickness and surface texture.

3. The Geotextile shall be free of any chemical treatment or coating that reduces permeability and shall be inert to chemicals commonly found in soils.

4. The Geotextile shall conform to the minimum physical properties listed below:

Property	Unit	Test Method	Value/ 10 oz.
Mass per unit Area	oz/cy	ASTM D5261	10
Grab Tensile Strength	lb	ASTM D4632	305
Grab elongation	lb	ASTM D-4632	60
Mullen burst strength	PSI	ASTM D-3786	500
Trapezoid strength	lb	ASTM D-4553	100

PART 3 EXECUTION

3.01 GENERAL

A. Remove and dispose of unsuitable materials as directed by the County.

B. Trenches shall be excavated in such a manner as to ensure that trench sidewalls will be stable under all working conditions.

C. Trench walls shall be sloped and/or supported in conformance with Cal-OSHA standards.

D. All excavations shall be barricaded in conformance with Cal-OSHA standards.

E. Prior to excavation, Contractor shall acquire and submit an exemption letter or trenching permit from Cal-OSHA and comply with Labor Code Section 6705, Excavation Plans for Worker Protection.

F. Sheeting and shoring for the Work and for the safety of personnel shall be in compliance with Cal-OSHA regulations. Shoring is required for all trench portions greater than 4-feet in depth. Trenches greater than 20-feet in depth require protection systems designed by Professional Structural Engineer licensed in California.

3.02 DEWATERING

A. Dewatering equipment shall be provided by the Contractor to remove and dispose of all surface water entering excavations. The Contractor shall take adequate measures to minimize surface water entry into excavations.

B. The Contractor shall excavate and backfill in a manner and sequence that will provide proper drainage at all times. The Contractor shall remove all water, including runoff and run-on collected from rainwater encountered during excavation, to a location approved by the County, by pumps, drains, and other approved methods. The Contractor shall prevent water from ponding in excavations and site construction areas.

3.03 EXCAVATION

A. Unclassified Excavation: Remove rock excavation, clay, silt, gravel, hard pan, loose shale, and loose stone as directed by the County.

B. Excavation for Appurtenances:

1. 12-inch (minimum) clear distance between outer surface and embankment.

2. See Detailed Provisions Section 31 2300 – Earthwork for applicable requirements.

C. Excavation shall be performed to the lines and grades indicated. During excavation, material satisfactory for backfilling shall be stockpiled in an orderly manner at a distance from the banks of the trench equal to one-half the depth of the excavation, but in no instance closer than 2-feet. At Contractor's expense, excavated material not required or not suitable for backfill shall be disposed of at the landfill's working face or if deemed suitable by the County, may be stockpiled on-site in a location as directed by the County.

D. Grading shall be completed as necessary to prevent surface water from flowing into the excavation, and any water accumulating therein shall be removed to maintain the stability of the bottom and sides of the excavation.

E. Trench Excavation:

1. The trench shall be excavated as recommended by the manufacturer of the pipe or conduit to be installed.

2. Open trench outside buildings, units, and structures:

a. No more than the distance between two vaults, structures, units or three hundred (300) linear feet, whichever is less.

b. Field adjust limitations as weather conditions dictate.

3. Trenching within buildings, units, or structures:
   a. No more than one hundred (100) linear feet at any one time.
4. Any trench or portion of trench, which is opened and remains idle for seven (7) Calendar Days, or longer, as determined by the County, may be directed to be immediately refilled, without completion of Work, at no additional cost to the County.
   a. Said trench may not be reopened until County is satisfied that Work associated with trench will be prosecuted.
5. Observe following trenching criteria:
   a. Trench size:
      1) Excavate width to accommodate free working space.
      2) Unless otherwise specified in the Special Conditions, pipe manufacturer instructions, or on the Project Drawings, maximum trench width at top of pipe or conduit may not exceed outside diameter of pipe by more than the following dimensions:

Outside Diameter of Pipe	Excess Dimension
33-inches and less	18-inches
More than 33-inches	24-inches

      3) Cut trench walls vertically from bottom of trench to 1-foot above top of pipe or conduit.
      4) Trenches for horizontal wells shall generally be 2-feet in width by 4-feet in depth, as shown in the Project Drawings. The first 1-foot of the trench excavation will typically be composed of intermediate soil cover. The lower 3-feet of the trench excavation will typically be composed of landfill waste.
      5) When the existing ground surface of the horizontal well is composed of aggregate base, the trench shall generally be 2-feet in width by 4-feet in depth below the bottom of the aggregate base. The total depth of the excavation, measured from the top of the adjacent aggregate base ground surface, shall be greater than 4-feet deep to account for the thickness of the existing aggregate base.

6. Horizonal wells trenching will typically be located on a level flat soil surface of the landfill.
7. Keep trenches free of surface water runoff.
    a. No separate payment for surface water runoff pumping will be made by the County.
8. Where the pipe or conduit is in an existing paved area, the pavement shall be saw cut in a straight line parallel to the pipe on each side. Saw cutting operations shall be performed prior to excavation to avoid excessive removal of pavement. Care shall also be taken during installation of pipe or conduit to avoid damage to adjoining surfaces.

F. Trench Excavation in Road Crossing
1. Road crossings must be trenched across the road and maintain a minimum slope of 10%, to ensure of proper drainage of the header or lateral piping through the entire width of the road.
2. The road crossing trench depth will vary. The specific depths shall be provided in the Provided Drawings issued with a project Notice to Proceed. The Contractor should plan on encountering landfill waste at any depth when trenching any road crossing.

G. Removal of Rock
1. Contractor shall notify County when rock is encountered at the bottom of a trench. Rock shall be removed to a depth and in a manner as directed by the County and replaced with select granular material.

H. Removal of Unsuitable Material
1. Contractor shall notify County when unsuitable material is encountered in the bottom of the trench. Such material shall be removed to the depth directed and replaced to proper grade with select granular material or compacted structural fill in accordance with Detailed Provisions Section 31 2300 – Earthwork.

3.04 EXCAVATION SPOILS HANDLING

A. The Contractor shall be responsible for the complete removal and disposal of all waste material and soil cuttings each day.

B. The Contractor shall separate aggregate base, interim cover soils and landfill waste when encountered. Each type of excavation spoil requires different handling requirements.

C. In the event that trenching is required to take place across a wet weather area of the landfill, or any area where the surface is composed of aggregate base, the Contractor shall sort and stockpile the aggregate base during trenching. The aggregate base shall be reused during backfill operations.

D. Interim cover soils, overlying landfill waste, shall be sorted and stockpiled. Provided this soil is clean and free of landfill waste, this soil may be reused as Common Trench Backfill.

E. The Contractor shall load Construction Spoils directly into a truck or trailer upon removal from the excavation. All construction spoils shall be transported to the active working face of the landfill within 1 hour of generation or as deemed necessary by South Coast Air Quality Management District personnel.

F. If approved in writing by the County, the Contractor may handle Construction Spoils as follows:

    1. Landfill waste removed from trenching shall be completely covered to prevent any emission of landfill gas to the atmosphere whenever work is not actively in progress. The cover shall include, but may not be limited to, a minimum of 6 inches of clean soil, approved foam, or polyethylene plastic sheeting (min 6-mil thickness). Foam by itself shall not be used as a night cover if it is raining or rain is predicted by the National Weather Service prior to the next scheduled working day.

    2. All construction spoils shall be transported to the active working face of the landfill within 1 hour of generation or as deemed necessary by South Coast Air Quality Management District personnel.

G. During transport of the construction spoils, no material shall extend above the sides or rear of the vehicle hauling the material

H. All Construction Spoils shall be disposed of on a daily basis on site at the active face as the location designated by the County and 30 minutes prior to closing of disposal operations. There shall be no fee to the Contractor for the disposal of Construction Spoils generated onsite.

I. The exterior of the vehicle (including the tires) hauling the construction spoils shall be cleaned off prior to leaving the working site.

J. The Contractor shall keep the landfill surface and all roads free of Excavation Spoils. Any Excavation Spoils dropped during transport shall be immediately picked up and transported to the proper storage or disposal location.

K. In the event the County or the Contractor suspects any Excavation Spoils may be hazardous waste (as defined by State and Federal Regulations) the Contractor shall stockpile the suspect material in a separate location from the rest of the Excavated Spoils.

1. All suspected hazardous waste shall be placed on polyethylene plastic sheeting (min 6-mil thickness). The stockpile shall also be covered by Contractor with polyethylene plastic sheeting (min 6-mil thickness), and protected.
2. The County shall determine if the suspected hazardous material is hazardous waste.
3. The suspected hazardous waste shall not be used as Common Backfill Material unless directed to do by the County in writing.
4. If the suspected hazardous waste is determined to be hazardous waste, the County shall coordinate the disposal.

3.05 SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT PERMIT CONDITIONS

1. Excavation/trenching shall not be conducted between the hours of 5 P.M. and 7 A.M. or on Saturdays, Sundays or legal holidays, unless otherwise approved by the County in writing.
2. Excavation/trenching shall not be conducted on days when the South Coast Air Quality Management District forecasts first, second or third stage episodes for Area No. 28, or when the South Coast Air Quality Management District requires companies in Area No. 28 to implement their first, second or third stage episode plans. Episode forecasts for the following day can be obtained by calling 1-800-CUT-SMOG.
3. Trenching shall not be conducted on days when the wind speed is greater than 15 mph average (over 15 minutes) or the wind speed instantaneously exceeds 25 mph. The Contractor shall monitor the wind speed to comply with this permit condition.
4. Trenching which exposes landfill refuse to the atmosphere shall be staged such that no more than 100 linear feet is exposed at any time prior to backfilling.
5. If a distinct odor level (Level 3 or greater) resulting from the construction is detected at or beyond the property line, all work shall cease until the odor sources are determined and eliminated. Odor levels shall be determined by South Coast Air Quality Management District personnel or on-site safety coordinator in the absence of South Coast Air Quality Management District personnel. The Contractor shall provide an on-site safety coordinator in the absence of South Coast Air Quality Management District personnel.

Odor Scale	Description of Odor Intensity
1	Very light odor detected
2	Light odor detected, distinguishable
3	Moderate odor, very distinguishable
4	Strong odor, very distinguishable, irritable
5	Very strong odor, very distinguishable, overpowering and intolerable

6. During trenching, if a considerable number of complaints are received, all work shall cease, and approved mitigation measures shall be implemented immediately.

Work shall not resume until the emissions causing the complaints are mitigated and the approval to resume work is received from the County and South Coast Air Quality Management District.

3.06 PREPARATION OF FOUNDATION FOR PIPE LAYING

A. This section is not applicable for Horizontal Wells.

B. Over-Excavation:

1. Excavate minimum of 6-inches below bottom exterior surface of the pipe or conduit.
2. Backfill with pipe bedding material.

C. Subgrade Stabilization:

1. Stabilize the subgrade when directed by the County.
2. Observe the following requirements when unstable trench bottom materials are encountered.
    a. Notify County when unstable materials are encountered.
    b. Remove unstable trench bottom caused by Contractor failure to dewater, rainfall, or Contractor operations.
        1) Replace with subgrade stabilization with no additional compensation.

3.07 HORIZONTAL WELL CONSTRUCTION

A. The Horizontal Wells shall be constructed to the lines and grade and at locations as shown on the Project Drawings and/or as directed by the County.

B. The perforated HDPE pipe shall be placed on a 4-inch thick aggregate bedding.

C. The horizontal well trench excavation shall be backfilled as specified herein.

3.08 AGGREGATE PIT CONSTRUCTION

A. Aggregate pits shall be excavated inline and in conjunction with horizontal well trench excavations.

B. The aggregate pits shall be constructed to the lines and grade and at locations as shown on the Project Drawings and/or as directed by the County.

C. A single aggregate pit shall generally be 10-feet by 10-feet by 4-feet deep. The depth of the aggregate pit shall match the adjoining trench excavation of the horizontal well.

D. The perforated pipe of the horizontal well shall be located directly through the center of the square aggregate pit, such that the excavation sidewalls are located 5-feet laterally from the centerline of the pipe.

E. The HDPE pipe shall be placed on a 4-inch thick aggregate bedding.

F. The aggregate pit shall be backfilled with aggregate, to an elevation matching the adjoining horizontal well.

G. When specified in the Project Drawings, Geotextile shall be placed on top of the aggregate, prior to backfill materials. The Geotextile shall cover the entire planar surface area of the aggregate pit.

H. The aggregate pit excavation shall be backfilled as specified herein.

3.09 BACKFILLING METHODS

A. Do not backfill until tests to be performed on system show system is in full compliance to specified requirements.

B. Carefully Compacted Backfill:

1. Furnish where indicated on Project Drawings, specified for trench embedment conditions and for compacted backfill conditions up to 12-inches above top of pipe or conduit.
2. This material shall be composed of Pipe Bedding and Pipe Zone Material.
3. Comply with the following:
    a. Place backfill in lifts not exceeding 8-inch (loose thickness).
    b. Hand place, shovel slice, and pneumatically tamp all carefully compacted backfill.
    c. Observe specific manufacturer's recommendations regarding backfilling and compaction.
    d. Compact each lift to specified requirements.
4. Horizontal Well construction (backfill surrounding and immediately on top of perforated HDPE pipe): the backfill shall be composed of aggregate up to 18-inches above the top of pipe.

C. Common Trench Backfill:

1. This material shall be composed of Trench Zone Backfill Materials.
2. Perform in accordance with the following:
    a. Place backfill in lift thicknesses capable of being compacted to densities specified.
    b. Observe specific manufacturer's recommendations regarding backfilling and compaction.
    c. Avoid displacing joints and appurtenances or causing any horizontal or vertical misalignment, separation, or distortion.

D. Water flushing (jetting) for consolidating/compacting granular backfill is not permitted.

3.10 COMPACTION

A. General:

1. Place and assure bedding, backfill, and fill materials achieve an equal or higher degree of compaction than undisturbed materials adjacent to the Work.

2. In no case shall degree of compaction below minimum compactions specified shall be accepted.

B. Compaction Requirements:

1. Unless noted otherwise on Drawings or more stringently by other Detailed Provisions Sections, comply with the following minimum trench compaction criteria.

a. Bedding material:

LOCATION	SOIL TYPE	COMPACTION DENSITY
Solid HDPE Pipe	Cohesionless soils	75% of relative density by ASTM D4253 and ASTM D4254.
Perforated HDPE Pipe	Aggregate	None

b. Carefully compacted backfill:

LOCATION	SOIL TYPE	COMPACTION DENSITY
Solid HDPE Pipe	Cohesionless soils	75% of relative density by ASTM D4253 and ASTM D4254.
Perforated HDPE Pipe	Aggregate	None

c. Common trench backfill:

LOCATION	SOIL TYPE	COMPACTION DENSITY
Under pavements, roadways, surfaces within traffic areas, aggregate base surfaces	Cohesive soils	90% of maximum dry density by ASTM D1557.
	Cohesionless soils.	90% of relative density by ASTM D4253 and ASTM D4254.
Under turfed, sodded, plant seeded, non-traffic areas.	Cohesive soils	85% of maximum dry density by ASTM D1557.
	Cohesionless soils	85% of relative density by ASTM D4253 and ASTM D4254.

3.11 FIELD QUALITY CONTROL

A. At the County's discretion, the County shall procure the services of a Testing/Inspection Provider and laboratory to conduct in-place moisture-density tests for backfilling to assure that all Work complies with this Detailed Provisions Section.

B. Testing to be performed:

1. In-place moisture-density tests.
2. Additional tests until compaction meets or exceeds requirements.

C. The Contractor shall ensure the following:

1. Assure County and Testing/Inspection Provider staff has immediate access for testing of all soils-related work.
2. Ensure excavations are safe for testing personnel.

END OF SECTION 31 2133

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SPECIFICATIONS – DETAILED PROVISIONS

SECTION 31 2300: EARTHWORK

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SECTION 31 2300
EARTHWORK

PART 1 GENERAL

1.01 SUMMARY

A. Work includes:

1. Regardless of the nature or type of the materials encountered, includes excavating and grading for site grades, building preparation, roadways, driveways, parking areas, excavating below grade, excavating channels and ditches, removing slide material, and disposing of all excavated material. These activities may be performed in making cuts, embankments, slopes, fills, roadways, drainage features, parking areas, completing finished grade, and in completing related Work where shown on the Project Drawings or as designated by the County.
2. Finish grading shall consist of scarifying and establishing finish grade to conform to Project Drawings.
3. Removal of unsuitable materials.
4. Over-excavation and recompaction of suitable materials.
5. Subgrade preparation and engineered fill placement.
6. Aggregate base placement.
7. Soil hauling.
8. Dust alleviation and control.
9. Erosion control measures to prevent run-off of sediment and other unsuitable materials.
10. Location of Work: All areas within limits of grading and all areas outside limits of grading which are disturbed in the course of the Work.

B. Related Detailed Provisions Sections include, but are not limited to:

1. Division 01 – General Requirements.
2. Section 31 1000 – Site Clearing.
3. Section 31 2133 – Trenching, Backfilling, and Compacting for LFG HDPE Pipe.

C. Related Available Information:

1. None.

1.02 QUALITY ASSURANCE

A. Referenced Standards:

1. American Association of State Highway and Transportation Officials (AASHTO):
   a. AASHTO T90 – Determining the Plastic Limit and Plasticity of Index Soils.

b. AASHTO T180 – Standard Specification for Moisture-Density Relations of Soils Using a 4.54 kg (10-lb) Rammer and a 457 mm (18 in.) Drop.

2. American Society for Testing and Materials (ASTM):
   a. ASTM C33/C33M – Standard Specification for Concrete Aggregates.
   b. ASTM D75/D75M – Standard Practice for Sampling Aggregates.
   c. ASTM D698 – Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 ft-lbf/ft^3 (600 kN-m/m^3)).
   d. ASTM D1556/D1556M – Standard Test Method for Density and Unit Weight of Soil in Place by the Sand-Cone Method.
   e. ASTM D1557 – Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Standard Effort (56,000 ft-lbf/ft^3 (2,700 kN-m/m^3)).
   f. ASTM D2167 – Standard Test Method for Density and Unit Weight of Soil in Place by the Rubber Balloon Method.
   g. ASTM D2216 – Standard Test Methods for Laboratory Determination of Water (Moisture) Content of Soil and Rock by Mass
   h. ASTM D2419 – Standard Test Method for Sand Equivalent Value of Soils and Fine Aggregates
   i. ASTM D2487 – Classification of Soils for Engineering Purposes (Unified Soil Classification System).
   j. ASTM D2488 – Standard Practice for Description and Identification of Soils
   k. ASTM D3786/D3786M – Standard Test Method for Bursting Strength of Textile Fabrics-Diaphragm Bursting Strength Tester Method.
   l. ASTM D4253 – Standard Test Methods for Maximum Index Density and Unit Weight of Soils Using a Vibratory Table.
   m. ASTM D4254 – Standard Test Methods for Minimum Index Density and Unit Weight of Soils and Calculation of Relative Density.
   n. ASTM D4632/D4632M – Standard Test Method for Grab Breaking Load and Elongation of Geotextiles.
   o. ASTM D4643 – Standard Test Method for Determination of Water (Moisture) Content of Soil by Microwave Oven Heating
   p. ASTM D6938 – Standard Test Method for In-Place Density and Water Content of Soil and Soil-Aggregate by Nuclear Methods (Shallow Depth).
3. California Code of Regulations (CCR): Title 8 – Construction Safety Orders.
4. California Department of Industrial Relations – Division of Occupational Safety and Health (Cal-OSHA).
5. State of California; Business, Transportation and Housing Agency; Department of Transportation (Caltrans):

a. Caltrans Standard Specifications – Division III: Earthwork and Landscape

B. Testing and Inspection Service:

1. At the County's discretion, the County will procure Testing/Inspection Provider services, for quality assurance testing during earthwork operations.

1.03 DEFINITIONS

A. Backfill: Refill of an excavation, previously removed.

B. Earth Excavation: Earth excavation includes excavation of pavement and other obstructions visible on the ground surface, underground structures, utilities and other items to be demolished and removed; together with earth and other materials encountered that are not classified as rock or unauthorized excavation.

C. Fill: Placement of material in an excavation or on prepared subgrade to final grade.

D. Finish Grade: The establishment of grades to a plus or minus 0.05-feet of final grades as indicated on Project Drawings.

E. Finished Grade Elevations: Indicated on Project Drawings.

F. Grading Intent: Spot elevations (grades) and contours are indicated based on the best available data. Drawings are referenced to provide additional site grading data. The intent is to maintain constant slopes between spot elevations. If a spot elevation is determined to be in error, or the difference in elevation between points change, contact the County immediately for field adjustments of spot elevations.

G. Relative Compaction: Ratio, expressed as a percentage of the in-place dry-density as compacted to a laboratory maximum dry-density of representative sample of the same material determined by ASTM D1557.

H. Rough Grade: The establishment of grades to $^{1}/_{10}$ -foot plus or minus tolerance of grades required to accomplish the Work described on Project Drawings or applicable Detailed Provisions Sections.

I. Standard Specifications: Refers to the Standard Specifications of the State of California, Business and Transportation Agency, Department of Transportation (Caltrans), latest edition. In case of conflict between the Standard Specifications and these Specifications, the strictest specifications shall govern. Provisions for measurement and payment specified within the Standard Specifications shall be disregarded and the provisions of these Contract Documents shall govern.

J. Structural Fill: Any fill placed under structures and any backfill placed adjacent to buried walls.

K. Sub-base: Compacted layer of approved material used between the subgrade and the pavement.

L. Subgrade: Previously undisturbed material prepared and compacted to required density and elevation to support a structure, pavement system, or to receive additional specified materials.

M. Subgrade Elevations: 4-inches below finish grade elevations indicated on Project

Drawings, unless otherwise indicated.

N. Unauthorized Excavation: Includes removal and disposal of material beyond subgrade elevations, and dimensions indicated without prior approval of the County.

O. Unsuitable Material: Shall consist of materials determined by the County and/or Testing/Inspection Provider to be:

1. Soft, loose, unstable or yielding, or
2. Previously placed uncontrolled fill, or
3. Designated material to be overexcavated per geotechnical report requirements, or
4. Unable to be compacted to specified density using ordinary methods at optimum moisture content, or
5. Contains visible or excessive deleterious material as determined by the County or Testing/Inspection Provider, or
6. Too wet to be properly compacted and circumstances prevent processing suitable in-place drying prior to being used as backfill, or
7. Otherwise unsuitable for planned use.

Such material shall be removed to the limits directed by the County and the resulting excavation backfilled with engineered fill material.

1.04 SUBMITTALS

A. Submittal Procedures: See Detailed Provisions Section 01 3300 – Submittal Procedures for requirements for the mechanics and administration of the submittal process.

B. Approval Submittals:

1. Product technical data including:
   a. Acknowledgement that products submitted meet requirements of standards referenced.
   b. Manufacturer's installation instructions.
2. Trench shoring or shield (trench box) certification if employed:
   a. Specific to Project Conditions.
   b. Certified by Professional Structural Engineer, registered in California.
   c. County is not responsible to, and will not, review and approve.
   d. Cal-OSHA Contractor compliance information for trench safety: Submit an exemption letter or trenching permit from Cal OSHA and comply with Labor Code Section 6705, Excavation Plans for Worker Protection.
   e. Submit a Confined Space Emergency Plan prior to any personnel entering trenches or excavations greater than four (4) feet in depth.
3. Excavation Plan:

a. In accordance with Section 5.1.5 – Accident Prevention of the General Provisions, Contractor shall submit to the County a detailed plan showing the design of shoring, bracing, sloping of the sides of trenches, or other provisions to be made for the protection of personnel during earthwork operations.

b. County acceptance of the Excavation Plan does not release the Contractor of liability in the event of an accident or injury, nor does it place any liability on the County or any County employees.

4. Testing laboratory reports verifying that imported material conforms to the specified gradations or characteristics.

1.05 SAFETY PRECAUTIONS

A. Observe safety precautions in all phases of the Work. Included shall be trench shoring, bracing, lighting, and barricades as dictated by reason and by Safety Orders of the Division of Industrial Safety, State of California (Cal-OSHA).

B. Acquire an exemption letter or trenching permit from Cal-OSHA and comply with Labor Code Section 6705, Excavation Plans for Worker Protection. Submit a copy of the exemption letter or trenching permit with excavation drawings to the County prior to excavation work.

1.06 DELIVERY, STORAGE, AND HANDLING

A. Stockpile satisfactory excavated materials in a location approved by the County, until required for backfill or fill. Place, grade, shape, and stabilize stockpiles for proper drainage and erosion control.

1. Separate differing materials with dividers or stockpile separately to prevent intermixing. Segregate stockpiles for waste, rock and soil generated during construction. To the extent possible, separate saturated soil from unsaturated soil.

2. Each stockpile will be placed on, at minimum, 6-mil plastic sheeting and, at a minimum, the sides and top will be covered by one layer of 6-mil plastic sheeting at all times except when the material is being handled. Contractor will cover each stockpile segment at the end of the workday.

3. Provide berms around the stockpile area to contain precipitation runoff and to prevent run-on.

1.07 PROJECT CONDITIONS

A. Avoid overloading or surcharge a sufficient distance back from edge of excavation to prevent slides or caving.

1. Maintain and trim excavated materials in such manner to be as little inconvenience as possible to public and adjoining property owners.

B. Protect and maintain benchmarks, monuments or other established points and reference points and if disturbed or destroyed, replace items to full satisfaction of the County and no additional cost to the County.

C. Verify location of existing underground utilities.

D. When performing underground work, the Contractor shall call Underground Service Alert of Southern California (USA/SC) at 811, the one-call underground facility locating service two Working Days prior to making an excavation. Contractor shall be responsible for such notification of Subcontractor's Work, or shall require Subcontractor to assume this responsibility.

E. The Contractor's attention is directed to the possible existence of pipe, conduit and other underground improvements which may or may not be shown on the Project Drawings. Preserve and protect any such improvements whether shown on the Project Drawings or not. Expose such improvements in advance of the underground construction to allow for changes in alignment as necessary. Where it is necessary to remove and replace or to relocate such improvements in order to prosecute Work, they shall be removed, maintained, and permanently replaced by the Contractor at their expense. Relocation of said improvements shall not be performed without written permission of the County or the owner of the utility. Unless otherwise noted, existing underground utilities shall be protected in place.

F. Excavation made with power driven equipment is not permitted within five (5) feet of any know utility or subsurface construction. For Work immediately adjacent to or for excavation exposing a utility or other buried obstruction, use hand or light equipment excavation. Start excavation on each side of the indicated obstruction and continue until the obstruction is uncovered or until clearance for the new grade is assured. Support uncovered lines or other existing Work as affected by the contract excavation until approval for backfill is granted by the County. The Contractor shall report damage of utility lines or subsurface construction immediately to the County and make repairs at no additional cost to the County.

G. Protect excavations by shoring, bracing, sheeting, underpinning, or other methods as required, to prevent cave-ins or loose dirt from entering excavations. Barricade open excavations and post warning lights at Work adjacent to public streets and walks.

H. Protect existing streams, ditches and storm drain inlets using proper erosion control methodology.

I. Do not use explosives unless approved otherwise in writing by the County.

J. Provide dust alleviation and control measures continuously during the course of the Work to the satisfaction of the County.

1.08 EXISTING CONDITIONS

A. A topographic survey of the property has been included in the Project Drawings, it is for reference only. Upon beginning the earthwork, the Contractor represents that they have inspected the project areas and are satisfied as to actual grades and levels and the true conditions under which the Work is to be performed.

1.09 SOILS TESTING

A. At the County's discretion, a Testing/Inspection Provider will be procured by the

County for testing and inspection.

B. All materials, work, methods and equipment shall be subject to inspection at the Project Location. Material or workmanship not complying with the Contract Documents will not be accepted. The Contractor shall give the County reasonable notice, at a minimum 24 hours advance notice, when ready for inspection and shall supply samples for inspection without extra charge.

C. Cost of Testing:

1. With the exceptions of retest due to material or Contractor workmanship, the County will assume the cost for all tests and inspections to be performed by the Testing/Inspection Provider. Additional costs of retesting incurred by the County shall be deducted from the Contract Final Payment.

D. Tests performed by the Testing/Inspection Provider may include, but are not limited to:

1. Determine the density of soil in place by the sand cone method, ASTM D1556 or by nuclear methods, ASTM D6938.
2. Determine laboratory moisture-density relations of soils by ASTM D1557.
3. Determine the relative density of cohesion-less soils by ASTM D4253 and D4254.
4. Sample backfill materials in accordance with ASTM D75.
5. Conduct in-place moisture-density tests for backfilling to assure that all work complies with this Detailed Provisions Section.

E. The Contractor shall make excavations for compaction tests at the locations and to the depths designated by the Testing/Inspection Provider. The Contractor shall backfill and re-compact the excavation at completion of testing. When test indicate that the compaction is less than the specified relative compaction, the Contractor shall rework those areas until the specified relative compaction has been obtained.

1.10 MAINTENANCE

A. Protect newly graded areas from traffic, erosion, and settlement. Repair and reestablish damaged or eroded slopes, elevations, or grades and restore surface construction prior to acceptance.

B. Repair settlement at excavated areas for a period of 1 year following Final Acceptance at no additional cost to the County. Remove surface (pavement, or other finish), add backfill material, compact, and replace surface treatment; restore appearance, quality, and conditions of surface and finish to match adjacent work, and eliminate evidence of restoration.

C. The Contractor shall make, or cause to be made, all repairs or replacements made necessary by settlement within 30 days after written notice from the County.

PART 2 PRODUCTS

2.01 FILL MATERIALS

A. General:

1. All fill material shall be approved by the County and conform to requirements of the Caltrans Standard Specifications Section 19 – "Earthwork".
2. All earthwork shall be consistent with the findings and recommendations of geotechnical reports prepared for the Project and are subject to inspection and verification by the County and Testing/Inspection Provider.
3. Representative samples of materials to be used for engineered fill shall be tested by the County's Testing/Inspection Provider to determine soil classification, potential contaminants (for imported soil materials), maximum dry density, optimum moisture content and particle size.
4. Materials shall be free of trash, lumber, debris, leaves, grass, roots, stumps, and other vegetable matter. Materials shall not be contaminated with hydrocarbons or other chemical contaminants.
5. Unless noted otherwise, materials derived from processing demolished or removed asphalt are not acceptable.
6. Fill required shall consist of suitable excavated material if available, and/or other onsite material, as provided by the County, which conform to the requirements of this Detailed Provisions Section.

B. General Site Engineered Fill:

1. Sand and silty-sand soils derived from the jobsite are generally suitable for use in general engineered fill material under the following requirements:
    a. Soil materials are at workable moisture content and free of organic materials, rubble or debris.
    b. Maximum particle size as follows:
        1) Fill Placed within upper 2 feet of Finished Grade – material shall be free of lumps and/or cobbles larger than 3-inches in any dimension.
        2) Fill Placed below upper 2 feet of Finished Grade – material shall be free of rock larger than 6-inches in any dimension.
    c. On-site excavated clay and fine-grained soils are not considered suitable for use in engineered fill. Soil materials with an expansion index (EI) of less than 30 shall be used.
    d. Moisture content at time of placement: between the optimum moisture content and 3% above optimum moisture content as specified in accordance with ASTM D1557.
    e. Excavated soils from the trenching operation may generally be used as engineered fill provided that the following conditions are true:

1) The soil is free of trash, lumber, debris, leaves, grass, roots, stumps, and other vegetable matter.

2) The soil shall not be contaminated with hydrocarbons or other chemical contaminants.

3) The soil is satisfactory to the County.

f. If the County decides that the excavated soil is unsatisfactory, the County will provide engineered fill for backfill material, at no charge to the Contractor, within a reasonable distance of the excavation.

2.02 WATER

A. The Contractor shall provide water for compaction and/or dust control.

B. Water used in compaction shall have a maximum chloride concentration of 500 mg/l, a maximum sulfate concentration of 500 mg/l, and shall have a pH of 7.0 to 9.0. Water shall be free of acid, alkali, or organic materials.

2.03 ACCESSORIES

A. Geogrid Subgrade Stabilization:

1. Tensar International Corporation; BX-1220 Geogrid; www.tensarcorp.com

2. Or approved equal.

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify existing grades and conditions are as indicated on the Project Drawings. Designate and identify datum elevation and project engineering reference points. Set required lines, levels, and elevations.

B. Verify earthwork volume of soil to be filled.

C. Notify County if indicated conditions on Project Drawings conflict with actual conditions. Non-notification of discrepancies between actual field conditions and the conditions shown on the Project Drawings, in writing, shall indicate Contractor's acceptance of such field conditions. Adjustments/modifications to the construction to accommodate the inconsistencies (without notification) shall be at no additional cost to the County.

3.02 PROTECTION

A. Protection of the jobsite during the performance of earthwork shall be the responsibility of the Contractor.

B. Protect the jobsite from flooding, ponding, or inundation during site clearing, excavation, placement of fill and grading. Make temporary provisions during the rainy season to adequately direct surface drainage away from and off the jobsite. Dispose of

water in a manner to prevent damage to adjacent property and in accordance with regulatory agency requirements.

C. Use plastic sheeting to prevent unprotected slopes from becoming saturated. Install checkdams, desilting basins, riprap, sand bags, or other devices or methods necessary to control erosion.

D. Following periods of rainfall, the County will visually assess rain related damage. At the request of the County, the Contractor shall make excavations in order to evaluate the extent of rain related damage.

E. Rain related damage will be considered to include, but may not be limited to, erosion, silting, saturation, swelling, structural distress and other adverse conditions identified by the County.

F. Where soil has been adversely affected by rain-related damage, it shall be overexcavated and replaced with compacted fill or other remedial grading as directed by the County. Repairs shall be performed at Contractor's expense.

G. Call Underground Service Alert of Southern California (USA/SC) at 811, the one-call underground facility locating service two (2) Working Days prior to making an excavation. Contractor shall be responsible for such notification of Subcontractor's Work, or shall require Subcontractor to assume this responsibility.

H. Protect existing surface and subsurface features on-site and adjacent to jobsite as follows:

1. Provide barricades, coverings, or other type of protection necessary to prevent damage to existing items indicated to remain in place.
2. Protect and maintain benchmarks, monuments or other established reference points and property corners.
    a. If disturbed or destroyed, Contractor shall replace at their own expense to full satisfaction of the County and controlling agency.
3. Verify location of utilities:
    a. Omissions or inclusion of utility items does not constitute nonexistence of definite location.
    b. Secure and examine local utility records.
    c. Take necessary precautions to protect existing utilities from damage due to any construction activity.
    d. Remove abandoned utility service lines from areas of excavation. Cap, plug, or seal abandoned lines and identify termination points at grade level with markers.
    e. Perform excavation work near utilities by hand and provide necessary shoring, sheeting, and supports as the Work progresses.
    f. Repair damages to utility items at Contractor's expense.
    g. In case of damage, notify County at once so required protective measures may

be taken.

4. Maintain free of damage, existing concrete, structures, and pavement to the greatest extent possible.
    a. Any item known or unknown or not properly located that is damaged shall be repaired to original condition.
    b. All repairs to be made at Contractor's expense.
5. Provide full access to areas required for landfill operations and other points as designated by the County to prevent serious interruption of travel.
6. Maintain stockpiles and excavations in such a manner to prevent inconvenience or damage to structures on-site.
7. Avoid surcharge or excavation procedures which can result in heaving, caving, or slides.

3.03 PREPARATION

A. The Contractor shall provide all construction staking and layout of all Work. If determined to be necessary by the Contractor or by applicable law, this work shall be performed under the direction of a Professional Land Surveyor registered in the State of California.
    1. Stake all units, structures, piping, roads, parking areas and walks and establish their elevations.
    2. Perform other layout work required.
    3. Replace benchmarks, monuments, and/or property corner markers to original location if disturbed or destroyed.

B. Unless otherwise stated, equipment used in the excavation, transport, processing, installation and compaction of all materials used in construction of the earthwork shall be standards of practice grading machinery of known specifications suitable for performing Work in a timely, proper, and efficient manner.

C. Site clearing, grubbing, and stripping shall be performed in accordance with Detailed Provisions Section 31 1000 – Site Clearing.

3.04 EXCAVATION

A. Earth excavation shall include the satisfactory removal and disposal of all materials encountered, regardless of the nature of the materials, the condition of the materials at the time they are excavated, or the manner in which they were excavated.

B. This Work may include ripping, breaking, and dozing of materials using standard earthmoving equipment up to and including CAT D-9 with single ripper type equipment. Based on a previous subsurface soil investigation, the material within limits of excavation has been determined to be rippable. In the event non-rippable material is encountered, the Contractor shall immediately notify the County. Prior to the removal of non-rippable material, Contractor and the County shall mutually decide upon the

most acceptable method of removal for this material. This Work shall be considered as Extra Work and therefore will be paid for in accordance with Section 7-4 of the General Provisions entitled "Payment for Extra Work." This item shall also include keeping excavation areas neat and orderly and completing the excavation to the satisfaction of the County.

C. All excavated materials incorporated as part of compacted engineered fill must be inspected and approved to be suitable by the County and/or Testing/Inspection Provider.

D. Excavation shall be performed to the lines and grades indicated. During excavation, material suitable for fill materials shall be stockpiled in an orderly manner within the designated project limits at a minimum distance from the banks of excavation area equal to one-half the depth of the excavation, but in no instance closer than five (5) feet. At Contractor's expense, excavated material not required or not suitable for fill materials shall be disposed of in a lawful manner. If excess material contains no contaminants, material may be stockpiled at a location as approved and directed by the County for beneficial reuse as landfill daily cover material. If approved, material will be accepted for no-charge, but Contractor shall be responsible for hauling and stockpiling material within the landfill disposal area.

E. Do not operate excavation equipment within five (5) feet of structures or utilities. Excavate with hand tools in these areas or light equipment as approved by the County.

F. Excavate unsuitable materials extending below required elevations to depth as directed by the County and/or Testing/Inspection Provider. Over-excavation shall include the removal of all unsuitable materials that exists directly beneath a structure or within a zone outside and below the structure defined by a line sloping at one horizontal to one vertical (1H:1V) from the outside edge of the footing. Refill the over-excavated areas with compacted engineered fill material.

G. Excavate to the depths and widths needed to accomplish the construction. Allow for forms, working space, structural backfill and grading. Unless unsuitable materials are encountered, do not carry excavation deeper than the elevations shown.

H. Take every precaution to prevent water from entering, softening, and undercutting excavated areas, including but not limited to: pits, footings, and trenches.

I. All excavations shall be barricaded in conformance with Cal-OSHA standards.

J. Sheeting and shoring for the Work and for the safety of personnel shall be in compliance with Cal-OSHA regulations. Shoring is required for all trench portions greater than 4-feet in depth. Trenches greater than 20-feet in depth require protection systems designed by Professional Structural Engineer licensed in California.

K. Notify the County immediately upon discovery of unsuitable materials or unforeseen site conditions. Excavation shall include the complete removal of the unsuitable materials and its legal disposal thereof.

3.05 PLACING AND COMPACTING FILL MATERIAL

A. Subgrade Preparation:

1. Excavate and shape subgrade to line, grade, and cross-section. Fill holes, open joints, rock fractures, and depressions created by the excavation to the required line, grade, and cross-sections with compacted engineered fill material.
2. The Contractor shall at all times maintain the subgrade surface in such condition as to readily drain effectively. Storage or stockpiling of heavy loads on the prepared subgrade will not be permitted. Contractor shall be responsible to repair any damage to the prepared subgrade.
3. Prior to placement of fill material, the Contractor shall:
    a. Remove and replace unsuitable material to the satisfaction of the County and/or Testing/Inspection Provider.
    b. Remove form materials and trash from the subgrade area.
    c. Obtain approval of the subgrade surface from the County and/or Testing/Inspection Provider.
    d. Scarify to a minimum depth of 8-inches, moisture condition to a moisture content between the optimum moisture content and 3% above the optimum moisture content, and compact to at least 90% of the maximum dry density per ASTM D1557.

B. Placement of Fill Material:

1. Any fill where site preparation, type of material, or compaction is not approved or observed by the County and/or the Testing/Inspection Provider shall be removed and/or recompacted until the requirements are satisfied.
2. Suitable and sufficient hauling, processing, grading and compaction equipment shall be continuously utilized to handle the amount of fill material being generated and placed. Excavation or hauling equipment shall be shut down temporarily in order to allow time for proper preparation, placement, and/or compaction of fill material. Sufficient moisture conditioning equipment shall be provided by the Contractor with consideration to the type of fill material, rate of placement, and weather conditions.
3. Fill materials shall be placed in uniform layers which, when loose, shall not exceed 6-inches for hand operated mechanical compactors and not to exceed 8-inches per layer for heavy equipment compactors. Each layer shall be spread evenly and shall be thoroughly mixed during the spreading to insure uniformity of material and moisture.
4. Each layer shall be moisture conditioned to a moisture content between the optimum moisture content and 3% above the optimum moisture content. If any material is placed that does not have correct moisture content, it shall be aerated if too wet or wetted if too dry. Fill materials shall be aerated by plowing, discing, blading, or other satisfactory methods until moisture content is acceptable. Aerating of material is considered incidental to the Work and no additional compensation will be allowed. “Puddling” or “soaking” is not permitted. Soft, spongy or springy material causing areas that “pump” when heavy loads pass over them shall be removed and replaced with suitable material. This condition shall be considered as

sufficient evidence without further testing that the moisture content is not correct and the material shall be removed and no additional compensation will be allowed.

5. In areas of excess lift thickness, re-grading and compacting of the surface to the maximum lift thickness must be completed by the Contractor prior to construction of additional lifts.
6. Backfilling against concrete will not be permitted until the concrete has reached the specified strength as verified via the compressive strength testing or as approved by the County.
7. Existing sloped surfaces to receive fill material shall be keyed and benched. Excavate horizontal keys and vertical benches into the slope area to receive the fill material. Keying and benching shall provide at least 15-foot wide benches and a minimum of 4 feet of vertical bench height within the firm subgrade. Fill material shall be keyed into the subgrade a minimum of 5 feet deep at the toe of all fill slopes.
8. Where Work is interrupted by rain, fill operations shall not be resumed until observations and field tests by the County and/or Testing/Inspection Provider indicate in-place fills and/or materials intended for placement are within specification requirements.

C. Compaction:

1. Compaction testing shall be performed by a Testing/Inspection Provider procured by the County and shall be performed simultaneously with placement of fill materials.
2. Structural Fill shall be compacted as to at least ninety-five (95%) of the maximum dry density obtained per ASTM D1557. Unless otherwise specified or indicated, all other fill shall be compacted to at least ninety percent (90%) of the maximum dry density obtained per ASTM D1557.
3. Backfill material for trenched areas shall be as specified in Section 31 2133 – Trenching, Backfilling, and Compacting for LFG HDPE Pipe.
4. Do not operate earthmoving equipment within 5-feet of concrete structures. Place and compact backfill adjacent to concrete walls with hand-operated tampers or other equipment that will not damage the structure.
5. The top of each previously compacted layer shall be scarified to provide a good bond between lift layers and minimize separation between lift layers.

3.06 GRADING

A. Grade surfaces to assure areas drain away from structures and to prevent ponding and pockets of surface drainage. Provide subgrade surfaces free from irregular surface changes and as follows:

1. Rough Grading – Plus or minus 0.10-foot subgrade tolerance. Finish required will be that ordinarily obtained from either blade-grader or scraper operations.
2. Subgrade – Provide subgrade free of exposed boulders or stones exceeding 4-inches

in greatest dimension.

3. Paved Areas – Shape surface of subgrade areas to line, grade, and cross-section indicated. Provide compacted subgrade suitable to receive paving base materials. Subgrade tolerance plus 0 inches, minus 0.5-inch.
4. Aggregate Base – Grade subgrade surface smooth and even, free of voids to the required subgrade elevation. Provide compacted subgrade suitable to receive base materials. Tolerance ½-inch in 10 feet.
5. Drainage Swales: Grade to profiles and cross-sections indicated.

B. Finish Grade:

1. Remove exposed roots and rocks exceeding 3-inches in greatest dimension. Round tops of banks to circular curves to not less than a 6-foot radius. Neatly and smoothly trim rounded surfaces.
2. Finish grade tolerance plus or minus 0.05 feet to finished grades shown on the Project Drawings.
3. Existing grades which are to remain but are disturbed by the Contractor's operations shall be restored. Any disturbed slopes shall be track-walked and flatter grounds shall be finish graded with a blade-grader or approved equal, and graded to drain by the Contractor as directed by the County.
4. After other outside work has been finished and backfilling completed and settled, all areas which are to be graded shall be brought to grade at the indicated elevations, slopes, and contours. All surfaces shall be graded to secure effective drainage. Unless otherwise indicated, a slope of at least three percent shall be provided. Final grading and surfacing shall be smooth, even, and free from clods and stones larger than one inch in greatest dimension, weeds, brush, and other debris.

3.07 SOIL HAULING

A. At times, the County will be unable to supply backfill material in the area where the work is being performed. At the County's direction, the Contractor shall furnish all labor, supervision, and equipment necessary to load and haul soil from within the landfill property, with a dump truck, to the work area for the Contractor's use.

B. The dump truck shall have a minimum capacity to store 10 cubic yards of soil, loosely placed within the bed of the dump truck. (capacity anywhere between 10-16 cubic yards, depending on the owner's manual) within a site.

C. The County will specify County's soil stockpile location, on the landfill property, where soil shall be loaded, with Contractor's loading equipment, and hauled to the Contractor's working area to be placed.

D. The County will specify the haul route that the Contractor is to utilize to drive to and from the stockpile location and the work area.

3.08 DUST ALLEVIATION AND CONTROL

A. The Contractor shall be responsible for and shall provide pollution and dust abatement and control measures continuously during the course of the Work.

3.09 FIELD QUALITY CONTROL

A. As the County's discretion, the County shall procure the services of a Testing/Inspection Provider to conduct in-place moisture-density tests for fill materials to assure that all Work complies with this Detailed Provisions Section.

B. Moisture density relations, to be established by the soils testing agency and is required for all materials to receive compaction. This test shall be conducted when the material changes, based on visual observation of the soils, and/or based on in-place density test results of the compacted fill.

C. Extent of compaction testing will be as necessary to assure compliance with Specifications.

D. Contractor shall provide a minimum 48 hour advance notice to County when ready for compaction or subgrade testing and inspection.

E. Should any compaction density test or subgrade inspection fail to meet specification requirements, perform corrective work as necessary at no additional cost to the County.

F. Contractor shall be responsible for all costs associated with corrective work and retesting resulting from failing compaction density tests.

G. Testing:

1. The Testing/Inspection Provider may perform testing at the requency specified in the following table:

TEST	TEST DESIGNATION	TEST FREQUENCY	Project Minimum Value
Field Testing			
In-place moisture/ density (nuclear)	ASTM D6938	Every 100 CY of soil subgrade material (engineered fill and/or existing in-place soil)	90% or 95% per project requirement of Maximum Dry Density and from 0% to 3% above OMC
In-place moisture/ density (nuclear)	ASTM D6938	Every 100 CY of base material	90% or 95% per project requirement of Maximum Dry Density and from 0% to 3% above OMC
In-place moisture/ density (sand	ASTM D1556 and ASTM D4643	Every 500 CY; a minimum of one per day	90% or 95% per project requirement of Maximum Dry Density and from 0% to

cone)			3% above OMC
Visual Soil Classification	ASTM D2488	Continuous	
Laboratory Testing			
Moisture Density Relationship	ASTM D1557	One per material type	

2. If compaction fails to meet the requirements of this Specification, the Contractor shall remove and replace fill material at proper density or shall bring the density up to specified level by other means acceptable to the County. Subsequent testing required to confirm that the reconstructed material has been brought up to specified density shall be paid for by the Contractor.
3. Contractor shall assure County and Testing/Inspection Provider staff have immediate access for testing of all soils related work.
4. Contractor shall ensure excavations are safe for testing personnel.

END OF SECTION 31 2300

SPECIFICATIONS – DETAILED PROVISIONS

SECTION 32 3913: MANUFACTURED METAL BOLLARDS

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SECTION 32 3913
MANUFACTURED METAL BOLLARDS

PART 1 GENERAL

1.01 SUMMARY

A. Section includes:

1. The Work covered by this section shall consist of furnishing all necessary labor, materials, tools, equipment, transportation, services, coordination, supervision, and all other items necessary for the construction of manufactured metal bollards.

B. Related Detailed Provisions Sections include, but are not limited to:

1. Divisions 01 – General Requirements.
2. Section 03 3100 – Cast-In-Place Structural Concrete.
3. Section 31 2300 – Earthwork.

1.02 QUALITY ASSURANCE

A. Reference Standards:

1. American Society for Testing and Materials (ASTM):
   a. ASTM A36/A36M – Standard Specification for Carbon Structural Steel.
   b. ASTM A53/A53M – Standard Specification for Pipe, Steel, Black and Hot-Dipped, Zinc-Coated, Welded and Seamless.
   c. ASTM A312/A312M – Standard Specification for Seamless, Welded, and Heavy Cold Worked Austenitic Stainless-Steel Pipes.
   d. ASTM A500/A500M – Standard Specification for Cold-Formed Welded and Seamless Carbon Steel Structural Tubing in Rounds and Shapes.
   e. ASTM A536 – Standard Specification for Ductile Iron Castings.
   f. ASTM B26/B26M – Standard Specification for Aluminum-Alloy Sand Castings.
   g. ASTM D1654 – Standard Test Method for Evaluation of Painted or Coated Specimens Subjected to Corrosive Environments.

1.03 SUBMITTALS

A. Submittal Procedures: See Detailed Provisions Section 01 3300 – Submittal Procedures for requirements for the mechanics and administration of the submittal process.

B. Approval Submittals:

1. Product Data: Provide bollard type, component, finish, and any accessory specified.
2. Shop Drawings:

a. Show mounted items and coordination required for Work specified in other Detailed Provisions Sections.

b. Indicate construction and installation details.

3. Verification Samples:

a. Provide one (1) sample of each product specified, representing colors and finishes to be installed.

4. Maintenance Information:

a. Submit manufacturer's touch-up, cleaning, and maintenance information.

1.04 DELIVERY, STORAGE, AND HANDLING

A. Protect bollards and accessories during delivery, storage, and handling.

PART 2 PRODUCTS

2.01 ACCEPTABLE MANUFACTURERS

A. Subject to compliance with the Contract Documents, the following manufacturers are acceptable:

1. Calpipe Security Bollards; www.calpipebollards.com
2. Lakewood Pipe & Steel; www.lakewoodpipe.com
3. Alameda Pipe & Steel Co.; www.alamedapipe.com

B. Submit requests for substitution in accordance with Detailed Provisions Section 01 6000 – Product Requirements.

2.02 MANUFACTURED METAL BOLLARDS

A. Overall Dimensions:

1. Outer Diameter: 4-inches
2. Height: 4-feet (from Finished Surface Elevation to top of bollard)

B. Material:

1. Flat top carbon steel pipe completely filled with grout such that it has a rounded top.

C. Concrete Footing:

1. Concrete footing shall extend 6-inches on both sides of and below the bollard.
2. Bollard shall be fixed, embedded into concrete footing a minimum of 3feet.

D. Finish:

1. Polymer powder coat finish utilizing an epoxy prime coat and a polyester top coat.

2. Color: Safety Yellow, RAL 1023 and affix a reflecting tape completely around the circumference of the bollard two inches from the top.
3. Bollards shall be free of burrs and sharp corners.

E. Spacing:

1. Post location shall be ≥ 3-feet from the protected object.
2. Post spacing shall be ≤ 4-feet on-center of separation.

PART 3 EXECUTION

3.01 EXAMINATION

A. Examine substrate for compliance with manufacturer's requirements for placement and location of embedment, condition of substrate, and other conditions affecting installation procedures.

B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.02 INSTALLATION

A. General: Comply with manufacturer's installation instructions and Construction Drawings.

B. Concrete Pads:

1. Bollards shall be positioned no more than six (6) inches from the corners of concrete pads requiring protection from vehicular traffic and spaced no more than five (5) feet along the concrete pad sides, as determined by the Engineer.

C. Do not install damaged, cracked, chipped, deformed, or marred bollards. Field touch-up minor imperfections in accordance with manufacturer's instructions. Replace bollards that cannot be field repaired.

3.03 CLEANING AND PROTECTION

A. Protect bollards against damage.

B. Immediately prior to Substantial Completion, clean bollards in accordance with manufacturer's instructions to remove dust, dirt, adhesives, and other foreign materials.

C. Touch up damaged finishes according to manufacturer's instructions.

END OF SECTION 32 3913

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SECTION 33 5126: LFG VERTICAL WELLS
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SECTION 33 5126
LANDFILL GAS VERTICAL WELLS

PART 1 GENERAL

1.01 SUMMARY

A. The Work covered by this Section shall consist of furnishing all necessary labor, materials, equipment, tools, permits, and supervision for the construction of two (2) groundwater monitoring wells at the approximate locations shown on the Project Drawings.

B. Related Contract Document Sections include, but are not limited to:

1. Detailed Provisions Division 1 – General Requirements
2. Detailed Provisions Section 02 0100 – Maintenance of Existing Conditions
3. Detailed Provisions Section 33 5126.01 – LFG Well Head Assembly

1.02 QUALITY ASSURANCE

A. Reference Standards:

1. The "Greenbook" Standard Specifications for Public Works Construction.

B. Quality Assurance:

1. All Work shall be done to the satisfaction of the County and applicable regulatory agencies.

1.03 SUBMITTALS

A. Submittal Procedures: See Detailed Provisions Section 01 3300 – Submittal Procedures for requirements for the mechanics and administration of the submittal process.

B. Measuring Device:

1. The Contractor shall submit details of the measuring device to be used to measure the level of the aggregate throughout the backfilling process.
2. The Contractor shall provide documentation acceptable to the County that the measurement method is proven to be accurate.

C. Alternative Drilling Method, if applicable.

D. Daily Construction Progress Report.

E. Material Calculations for:

1. Aggregate
2. Transition Gravel
3. Pellet Annular Seal

1.04 DELIVERY, STORAGE, AND HANDLING

A. Delivery, Storage, and Handling shall be made in accordance with the following:

1. Maintain end caps through shipping, storage and handling to prevent damage and to prevent entrance of dirt, debris and moisture. Do not remove end protectors unless necessary for inspection; then reinstall for storage.
2. Protect from weather. Support off the ground or pavement in watertight enclosures when outdoor storage is necessary.
3. Use slings to handle materials if size requires handling by crane or lift. Rig materials to avoid damage to exposed parts. Do not use handwheels or stems as lifting or rigging points.
4. Store plastic piping protected from direct sunlight and provide support to prevent sagging and bending.

PART 2 PRODUCTS

2.01 GENERAL

A. All construction materials shall be new prior to delivery onsite.

B. Construction and equipment substitutions require written notification at the time of the bid and shall not be accepted anytime thereafter, unless by written authorization from the County.

C. All equipment supplied by the Contractor shall be available for inspection by the County prior to the beginning of well construction operations.

1. If, in the opinion of the County, any of the equipment is not suitable for well construction operations, either because of mechanical problems, excessive noise, deviation from the specifications, or the build-up of substances which could cause borehole contamination (i.e., from oil, diesel, hydraulic leaks or exhaust residue, etc.), the Contractor shall adjust, replace or decontaminate it with suitable equipment at the Contractor's expense.

DRILLING METHODS

A. **The drilling rig and drilling method is at the Contractor's discretion.** All associated drilling equipment shall be in good condition and have sufficient capacity to drill to the depths specified in the Contract Documents.

2.03 BOREHOLE

A. Each well borehole shall be drilled by a method chosen by the Contractor. Limitations and/or conditions for different drilling methods are specified in Section 2.02 of this Detailed Provisions.

B. Payment for drilling and sampling of the well borehole shall be based on vertical feet drilled (first pass) measured from the ground surface. It shall include all materials,

labor, tools, and equipment required to drill the borehole and protect the borehole from caving.

1. No payment will be made for temporary casings installed at the Contractor's option.

2.04 BLANK WELL CASING

A. The blank well casing shall be nominal 4 or 6 inch inner diameter, HDPE.

B. HDPE pipe and fittings shall be SDR 17 or 11 unless otherwise indicated on the Project Drawings or Work Order.

C. The County shall provide all blank well casing.

D. The Contractor shall furnish all fittings for construction and installation.

2.05 PERFORATED WELL SCREENS

A. The well screens shall be nominal 4 or 6 inch diameter, HDPE. The

B. HDPE pipe and fittings shall be SDR 17 or 11 unless otherwise indicated on the Project Drawings or Work Order.

C. The County shall provide all blank well casing.

D. The Contractor shall furnish all fittings for construction and installation.

2.06 AGGREGATE

A. Aggregate shall be utilized as backfill for wells.

B. The backfill around the perforated well screen shall consist of clean, washed 1"- 2" crushed aggregate with the dimensions indicated in these Specifications and on the Project Drawings.

C. Aggregate Type - Crushed Clean Rock: Natural stone; washed, free of dust, fines, clay, shale, and organic matter; graded in accordance with the following limits: Marble, calcium carbonate or other similar chemically reactive stone shall not be used.

D. The Contractor shall provide this material.

2.07 TRANSITION GRAVEL

A. Composition: Gravel material to be used, shall consist of naturally occurring, semi-round, smooth, water-washed, river stone.

B. Deleterious substances: Gravel shall be reasonably clean, dried, and free of lumps of clay, organic matter, and other substances not defined which may possess undesirable characteristics.

C. The gravel gradation blend shall meet the sieve analyses parameters specified below.

Sieve #	Sieve Opening (mm)	Cumulative Percent Passing
1/2-Inch	12.5	100

3/8-Inch	9.5	50
¼-Inch	6.3	0

2.08 PELLET ANNULAR SEAL

A. An approximate 5-foot thick seal consisting of dry non-coated medium-sized bentonite chips or tablets shall be installed above the screened interval, or as otherwise specified.

B. Coated bentonite pellets, chips or tablets shall not be used to construct these seals.

C. The bentonite chips or tablets shall be certified NSF/ANSI Standard 60, Drinking Water Treatment Chemicals - Health Effects.

D. The Contractor shall provide this material.

2.09 CLEAN FILL SOIL

A. Clean sandy non-cohesive soil shall be installed above the pellet annular seal.

B. The County shall provide this material.

2.10 WELL CASING CENTRALIZER

A. Stainless-steel centralizers shall be used when installing well casings.

PART 3 EXECUTION

3.01 GENERAL

A. The Contractor is cautioned to properly secure/stabilize the well during all phases of construction. Improper or poor security/stabilization of the well may lead to delays. Such delays will be the responsibility of the Contractor and the County shall not pay any cost associated with such delays.

B. The Contractor shall use good practice during installation, backfilling and well development to ensure the integrity of the borehole, screen and casing is maintained.

C. A general schematic diagram of the well construction is provided in the Project Drawings on Sheet G9.

3.02 DAILY CONSTRUCTION PROGRESS REPORT

A. The driller shall prepare a daily record of drilling activities completed each Working Day that drilling is completed.

B. The Daily Construction Progress Report shall identify:

1. First pass vertical footage drilled.

C. The report shall be submitted to the County for review and approval at the conclusion of each Working Day.

3.03 BOREHOLE DRILLING

A. The Contractor shall not start drilling without the County onsite to confirm the location of the borehole.

B. The Contractor shall provide all tools, accessories, air compressor, power, fuel, materials, supplies, lighting, other equipment, and experienced personnel necessary to conduct safe and efficient drilling operations.

C. A drilling superintendent (tool pusher) shall be available at all times at the request of the County.

D. The Contractor shall prepare to drill the borehole to the total depth specified in the Contract Documents.

   1. The borehole diameter shall be a minimum of 24-inches.

   2. The County will be onsite during the drilling process to specify the exact depth of the borehole to be drilled based on drilling cuttings, the geologic log and the depth to groundwater encountered during drilling.

   3. The exact depth specified by the County may be more or less than the total depth specified in the Contract Documents.

E. The Contractor shall take all measures necessary to protect the borehole from caving or raveling during drilling operations and at the conclusion of drilling operations, when the final depth has been achieved.

   1. Improper or poor security/stabilization of the borehole may lead to borehole collapse and delays prior to or during well construction.

   2. Such collapse or delays will be the responsibility of the Contractor and the County shall not pay any costs associated with such delays or collapse.

F. The borehole shall be straight and vertical in order to facilitate proper well construction.

G. Drilling shall be performed according to the applicable conditions of the SCAQMD Permit to Construct/Operate.

H. During drilling, an SCAQMD approved emission control box shall be placed over the well hole to collect landfill gas.

I. Once the waste cuttings are drilled and removed from the subsurface, the waste cuttings shall be handled, transported and disposed in accordance with the site specific South Coast Air Quality Management District Permit to Operate/Construct. The subject permits are provided as an Appendix to the Construction Documents.

J. Waste cuttings shall be disposed at the working face of the landfill.

K. If groundwater is encountered during borehole drilling, the Contractor shall stop drilling and immediately notify the County. The Contractor shall backfill and seal the borehole with a bentonite pellet seal to a depth five feet above the depth that groundwater was encountered.

3.04 WELL CASING AND SCREEN INSTALLATION

A. Refer to Drawing G9 for a schematic of the typical well design and well depths.

B. A typical well design will consist of a variable length interval of perforated well casing with approximately 40 feet of blank casing above the screen and extending to the ground surface. Well designs can also include up to two nested well casings in a single borehole.

C. The proposed well casing and screen lengths are specified in the Contract Documents.

   1. These lengths are subject to change, as specified by the County, based on the subsurface conditions encountered during drilling.

   2. The County will provide the actual well design depths/lengths to the Contractor when a Work Order is issued.

D. Joints:

   1. All field joints, where blank casings and/or perforated casing are joined together, shall be connected via the butt fusion welding process, or alternative method which is able be withstand installation forces and temperature upon use. Any such alternative shall be approved in writing by the County.

E. Installation of casing and perforations:

   1. The well casing string shall be suspended at all times in tension from the surface by means of a clamp, landing plate, or equivalent method. The bottom of the casing string shall be at a sufficient distance above the bottom of the borehole to ensure that it is not supported by the bottom of the borehole.

   2. The Contractor will measure and record the lengths of the casing as it is being installed into the borehole.

      a. The casing lengths will be such that the screens are placed per the design interval and the total installed length of the casing is as specified in the design.

   3. Centralizers:

      a. Two centralizers shall be installed around the screen section, one near the bottom and one approximately mid-height.

      b. One centralizer shall be installed around the blank casing, at approximately mid-height.

   4. The Contractor shall take all necessary precautions to install and maintain the well casing in a vertical orientation throughout construction. If the well casing is not vertical, the Contractor at its own expense will correct the alignment.

   5. Proper clamping and strapping of the well casing is required to set the casing into the hole without damaging the casing and joints.

   6. If for any reason the casing cannot be placed in the correct position, or at a depth acceptable to the County, the Contractor shall take whatever measures are necessary to properly construct the well at his own expense, including abandoning the borehole.

   7. If any of the casings should collapse or break prior to well completion, they shall be withdrawn and replaced at the Contractor's expense.

8. All Work required to be repeated because of the Contractor, and all additional materials, labor, and equipment required, shall be furnished at the expense of the Contractor and no claim for additional compensation shall be made or be allowed therefore, except as specifically provided herein.

   The well casing shall be completed at ground surface.

F. Prior to backfilling the annular space around the casing string, the Contractor shall measure the bottom of the well casing to verify its total depth.

G. The top of the well casing shall be capped immediately following installation.

3.05 AGGREGATE INSTALLATION

A. Once drilling is completed, the bottom of the borehole is stabilized, if necessary, and the casing is installed within the borehole, the installation of the aggregate can proceed.

B. The aggregate shall be kept free of all foreign matter.

   1. Aggregate suspected of being contaminated with dust, oil or other contaminants will not be accepted and shall be removed at the contractor's expense prior to the arrival of new aggregate on site.

C. Throughout the backfilling process, the Contractor shall complete calculations to determine the amount of material necessary to backfill the specified interval.

   a. The Contractor shall record all calculations and volumes of material used to backfill the specified interval, as well as measurements obtained after the aggregate placement and verify those calculations with the County.

D. The aggregate shall be placed into the annulus of the well through a tremie.

E. The Contractor shall ensure that the well casing and tremie are sufficiently aligned to prevent binding while raising the tremie during the backfilling process.

F. The aggregate shall not be allowed to freefall more than 20-feet from the bottom of the tremie to the top of the gravel/sand.

G. The aggregate level shall be measured throughout the backfilling process.

H. The aggregate shall be installed from the bottom of the borehole to approximately five feet above the top of perforated casing.

3.06 TRANSITION GRAVEL INSTALLATION

A. The transition gravel, if stockpiled onsite, shall be kept free of all foreign, matter.

B. Transition gravel suspected of being contaminated with dust, oil or other contaminants will not be accepted and shall be removed at the contractor's expense prior to the arrival of new transition gravel on site.

C. Throughout the backfilling process, the Contractor shall complete calculations to determine the amount of material necessary to backfill the specified interval.

1. The Contractor shall record all calculations and volumes of material used to backfill the specified interval, as well as measurements obtained after the transition gravel layer placement and verify those calculations with the County.

D. The transition gravel shall be placed into the annulus of the borehole through a tremie.

E. The Contractor shall ensure that the well casing and tremie are sufficiently aligned to prevent binding while raising the tremie during the backfilling process.

F. The transition gravel shall not be allowed to freefall more than 20 feet from the bottom of the tremie to the top of the transition gravel.

G. The transition gravel level shall be measured throughout the backfilling process.

H. The transition gravel layer shall be installed from the top of the aggregate to a thickness of 2 feet.

3.07 PELLET ANNULAR SEAL INSTALLATION

A. Once the aggregate and transition gravel are installed above the perforated well casing, the annular seal can be installed.

B. The seal shall be composed of medium-sized bentonite pellets and be installed in the annulus of the borehole.

C. Annular Seal Installation.

1. The Contractor shall calculate the amount of seal material necessary to backfill a specified interval.

    a. The Contractor shall record all calculations and volumes of seal mixture used, and the measurements obtained after the seal placement and verify those calculations with the County.

D. An approximate five-foot thick seal, consisting of bentonite chips or tablets, shall be installed by gravity via a tremie above the transition gravel layer.

E. The Contractor shall ensure that the well casing and tremie are sufficiently aligned to prevent binding while raising the tremie during the backfilling process.

F. Seal materials shall not be allowed to freefall more than 20 feet from the bottom of the tremie to the depth established from previous measurement.

G. The seal level shall be measured throughout the backfilling process.

H. The seal shall be installed from the top of the transition gravel to a thickness of five feet in a continuous operation.

I. The Contractor shall measure the depth of the top of the seal after installation.

3.08 CLEAN FILL SOIL INSTALLATION

A. The clean fill soil shall be placed above the pellet annular seal and into the annulus of the borehole, surrounding the well casing.

B. The soil backfill shall be compacted periodically during the backfill process to greater than using a powder puff pneumatic compactor, or equivalent. Soil shall be placed in approximate one foot loose lifts and compacted.

C. The soil backfill shall be moisture conditioned prior to during placement, for near optimum moisture, to facilitate compaction. for all fill above the bentonite seal of the vertical well.

3.09 CLEANUP

A. Any waste that is generated by the Contractor, which is incidental to any well construction activities, shall be collected and properly disposed by the Contractor, as specified in Detailed Provisions Section 01 5600 – Project Environmental Controls and Section 01 7700 – Closeout Procedures.

B. The procedure for collecting, handling and disposing soil drilling cuttings is specified herein and in Detailed Provisions Section 02 6113.

END OF SECTION 33 5126

SPECIFICATIONS – DETAILED PROVISIONS

SECTION 33 5126.10: NATIVE LFG WELLS AND NATIVE PROBES

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SECTION 33 5126.10
NATIVE LFG WELLS AND NATIVE PERIMETER PROBES

PART 1 GENERAL

1.01 SUMMARY

A. The Work covered by this Section shall consist of furnishing all necessary labor, materials, equipment, tools, permits, and supervision for the construction of native monitoring wells at the approximate locations shown on the Project Drawings.

B. Related Contract Document Sections include, but are not limited to:

1. Detailed Provisions Division 1 – General Requirements
2. Detailed Provisions Section 33 5126.01 – LFG Well Head Assembly

1.02 QUALITY ASSURANCE

A. Reference Standards:

1. The "Greenbook" Standard Specifications for Public Works Construction.

B. Quality Assurance:

1. All Work shall be done to the satisfaction of the County and applicable regulatory agencies.

1.03 SUBMITTALS

A. Submittal Procedures: See Detailed Provisions Section 01 3300 – Submittal Procedures for requirements for the mechanics and administration of the submittal process.

B. Measuring Device:

1. The Contractor shall submit details of the measuring device to be used to measure the level of the aggregate, filter pack, and pellet annular seal throughout the backfilling process.
2. The Contractor shall provide documentation acceptable to the County that the measurement method is proven to be accurate.

C. Alternative Drilling Method, if applicable.

D. Daily Construction Progress Report.

E. Material Calculations for:

1. Aggregate
2. Transition Gravel
3. Probe Filter Pack
4. Pellet Annular Seal
5. Grout Annular Seal

6.

1.04 DELIVERY, STORAGE, AND HANDLING

A. Delivery, Storage, and Handling shall be made in accordance with the following:

1. Maintain end caps through shipping, storage and handling to prevent damage and to prevent entrance of dirt, debris and moisture. Do not remove end protectors unless necessary for inspection; then reinstall for storage.
2. Protect from weather. Support off the ground or pavement in watertight enclosures when outdoor storage is necessary.
3. Use slings to handle materials if size requires handling by crane or lift. Rig materials to avoid damage to exposed parts. Do not use handwheels or stems as lifting or rigging points.
4. Store plastic piping protected from direct sunlight and provide support to prevent sagging and bending.

PART 2 PRODUCTS

2.01 GENERAL

A. All construction materials shall be new prior to delivery onsite.

B. Construction and equipment substitutions require written notification at the time of the bid and shall not be accepted anytime thereafter, unless by written authorization from the County.

C. All equipment supplied by the Contractor shall be available for inspection by the County prior to the beginning of well construction operations.

1. If, in the opinion of the County, any of the equipment is not suitable for well construction operations, either because of mechanical problems, excessive noise, deviation from the specifications, or the build-up of substances which could cause borehole contamination (i.e., from oil, diesel, hydraulic leaks or exhaust residue, etc.), the Contractor shall adjust, replace or decontaminate it with suitable equipment at the Contractor's expense.

2.02 DRILLING METHODS

A. **The drilling rig and drilling method is at the Contractor's discretion.** All associated drilling equipment shall be in good condition and have sufficient capacity to drill to the depths specified in the Contract Documents.

B. Drill Pipe/Auger

1. The drilling pipe/auger shall be in good condition and shall be connected by standard tool joints.
2. The Contractor shall not use drilling pipe equipped with external air lines.

3. The drill pipe/auger shall be steam-cleaned prior to its arrival at the drilling site.
4. Drill pipe/auger suspected of being contaminated shall be removed and steam-cleaned at the Contractor's expense prior to its use at the site.
5. Pipe dope or other lubricating material such as "Gimmie the Green Stuff" or other environmentally safe material, as pre-approved by the County, can be used on the threads of the drill pipe/auger and tremie.

C. Air Rotary Drilling Equipment

1. The Contractor shall utilize an oil-less, filtered air compressor with the capability of properly drilling to the minimum depth proposed in the Contract Documents.
2. The Contractor shall use an air cyclone or other acceptable method, pre-approved by the County, for the collection of drill cuttings at the point where air is returned to the surface (i.e., flow directed out of the discharge pipe).
3. The air cyclone shall function to allow the County to collect representative samples of the subsurface.
4. If samples cannot be adequately collected, drilling will cease until the problem can be corrected to the satisfaction of the County.

D. Conductor Casing

1. A conductor casing shall be utilized if the Contractor chooses to use the air rotary drilling method, the conductor casing shall be in good condition and shall be connected by standard tool joints.
2. The conductor casing shall be decontaminated prior to its arrival at the site.
3. Conductor casing suspected of being contaminated shall be decontaminated at the Contractor's expense prior to its use at the site.
4. Pipe dope or other lubricating material such as "Gimmie the Green Stuff" or other environmentally safe material, as pre-approved by the County, can be used on the threads of the conductor casing if necessary.

E. If the Contractor chooses to use a drilling method, other than auger drilling or air rotary drilling, the Contractor shall submit a written description of the proposed drilling method to the County, prior to mobilizing the drilling equipment.

1. The County shall review the written submittal and may amend the Contract Documents to account for the proposed drilling method.
    a. The scope of any amendments will be limited to specifications to ensure the environmental integrity of the borehole.
2. The County shall authorize the proposed drilling method in writing.
    a. The Contractor may mobilize drilling equipment after written approval.
    b. The County's approval of a Contractor's alternative drilling method does not relieve the Contractor of his responsibility to drill the boreholes to the depths specified in the Contract Documents or to construct the monitoring wells.

c. The County's authorization does not constitute approval or agreement that the alternative drilling method will allow the Contractor to successfully complete the Project.

2.03 BOREHOLE

A. The purpose of the well/probe borehole is to determine the thickness and nature of all formations penetrated, determine the location of water bearing strata, obtain other hydrological and geological information and allow for well construction.

B. Each well/probe borehole shall be drilled by a method chosen by the Contractor. Limitations and/or conditions for different drilling methods are specified in Section 2.02 of this Detailed Provisions.

C. Payment for drilling and sampling of the well/probe borehole shall be based on vertical feet drilled (first pass) measured from the ground surface. It shall include all materials, labor, tools, and equipment required to drill the borehole, collect formation samples, maintain circulation (depending on drilling method chosen) and protect the borehole from caving.

1. No payment will be made for temporary casings installed at the Contractor's option.

D. Payment will only be made for the Contractor's first pass successful drilling method.

1. If the Contractor chooses drilling method(s) that are unsuccessful, the County will not make additional payment for vertical feet drilled for second, third or any subsequent passes by the Contractor to obtain the required borehole depth.

2. No payment will be made for borehole corrections that may be necessary to comply with these specifications. Payment for any borehole corrections will be included in the unit price for the corresponding Borehole Drilling and Sampling.

2.04 BLANK LFG WELL CASING

A. The blank well casing shall be nominal 4 or 6 inch inner diameter, HDPE.

B. HDPE pipe and fittings shall be SDR 17 or 11 unless otherwise indicated on the Project Drawings or Work Order.

C. The County shall provide all blank well casing.

D. The Contractor shall furnish all fittings for construction and installation.

2.05 PERFORATED LFG WELL SCREENS

A. The well screens shall be nominal 4 or 6 inch diameter, HDPE.

B. HDPE pipe and fittings shall be SDR 17 or 11 unless otherwise indicated on the Project Drawings or Work Order.

C. The County shall provide all blank well casing.

D. The Contractor shall furnish all fittings for construction and installation.

2.06 BLANK PROBE CASING

A. The blank well casing shall be nominal half-inch inner diameter, schedule 80 PVC as specified in ASTM D1785 (latest edition), equipped with threaded joints at the ends of the blank casing sections. The blank casings shall be factory assembled.

B. Threaded joints shall be machined with beveled/interference compression fit shoulder seals to increase compressional strength.

C. O-ring seals shall be provided within the threaded joints to mitigate leakage and contaminants from entering at the threaded joint.

D. In all cases, the blank casing used in conjunction with the screen shall have the same inner diameter as the screen to ensure that the inside diameter of the blank casing matches the inside diameter of the screen.

E. The bottom of each well casing shall be fitted with a threaded end cap. The end cap shall be of the same chemical and physical properties as the blank well casing.

F. All casing material shall be new.

G. The County shall provide all blank well casing.

H. The Contractor shall furnish all fittings for construction and installation.

2.07 SLOTTED PROBE SCREENS

A. The well screens shall be nominal half-inch diameter, schedule 80 PVC as specified in ASTM D1785 (latest edition), equipped with threaded joints at the end of the slotted well screen section. The screen shall be factory-assembled.

B. The slotted well screen shall be machined 0.020-inch slot (20-slot).

C. Threaded joints shall be machined with beveled/interference compression fit shoulder seals to increase compressional strength.

D. O-ring seals shall be provided within the threaded joints to mitigate leakage and contaminants from entering at the threaded joint.

E. In all cases, the slotted well screens used in conjunction with the blank casing shall have the same inner diameter as the screen to ensure that the inside diameter of the blank casing matches the inside diameter of the screen.

F. All casing material shall be new.

G. The Contractor shall furnish all probe screens and fittings for construction and installation.

2.08 AGGREGATE

A. Aggregate shall be utilized as backfill for native LFG wells.

B. The backfill around the perforated well screen shall consist of clean, washed 1"- 2" crushed aggregate with the dimensions indicated in these Specifications and on the Project Drawings.

C. Aggregate Type - Crushed Clean Rock: Natural stone; washed, free of dust, fines, clay, shale, and organic matter; graded in accordance with the following limits: Marble, calcium carbonate or other similar chemically reactive stone shall not be used.

D. The Contractor shall provide this material.

2.09 TRANSITION GRAVEL

A. Composition: Gravel material to be used, shall consist of naturally occurring, semi-round, smooth, water-washed, river stone.

B. Deleterious substances: Gravel shall be reasonably clean, dried, and free of lumps of clay, organic matter, and other substances not defined which may possess undesirable characteristics.

C. The gravel gradation blend shall meet the sieve analyses parameters specified below.

Sieve #	Sieve Opening (mm)	Cumulative Percent Passing
1/2-Inch	12.5	100
3/8-Inch	9.5	50
¼-Inch	6.3	0

2.10 PROBE FILTER PACK

A. All sand/gravel to be used for the filter pack shall be hard, water or air worn gravels, and washed clean of silt, sand, dirt and foreign matter. It shall be well rounded, graded, and shall have a coefficient of uniformity less than 2.5.

B. The gravel/sand shall be kept free of all foreign matter. Gravel/sand suspected of being contaminated with dust, oil or other contaminants will not be accepted and shall be removed at the Contractor's expense prior to the arrival of new gravel/sand.

C. Gravel shall be non-mixed (i.e., pure silica) #3 gradation blend by Oglebay Norton Industrial Sands, Inc. (formerly known as Colorado Silica Sand, Inc.), or approved equal.

D. The #3 gradation blend shall meet the sieve analyses parameters specified below.

Sieve #	Sieve Opening (mm)	Cumulative Percent Passing
1/2-Inch	12.5	100
4	4.75	100
6	3.35	100
8	2.36	100-98
12	1.7	89-55
16	1.18	46-10
20	0.85	13-1
30	0.60	5-0

E. Crushed gravel will not be accepted.

F. All gravel is subject to approval by the County prior to use in the packing process.

G. The Contractor shall provide this material.

2.11 PELLET ANNULAR SEAL

A. An approximate 5-foot thick seal consisting of dry non-coated medium-sized bentonite chips or tablets shall be installed above the screened interval, or as otherwise specified.

B. Coated bentonite pellets, chips or tablets shall not be used to construct these seals.

C. The bentonite chips or tablets shall be certified NSF/ANSI Standard 60, Drinking Water Treatment Chemicals - Health Effects.

D. The Contractor shall provide this material.

2.12 GROUT ANNULAR SEAL

A. The grout shall be composed of a bentonite-cement mixture.

B. Cement used for the transition grout seal shall be a Type II Portland cement conforming to ASTM C150 (latest edition).

C. Bentonite used in the grout shall be pulverized (powder or granular) and shall be certified NSF/ANSI Standard 60, Drinking Water Treatment Chemicals – Health Effects.

D. Water used for the cement mix shall be clean and of potable quality.

E. The transition grout shall be composed of 1 gallon of water to 1 - 1¼ pounds of bentonite powder. Cement shall be added to the bentonite grout at a ratio of 1 – 2 pounds of cement to 1 gallon of water.

2.13 ABOVEGROUND MONUMENT FOR PROBE

A. The aboveground monument installed to protect the wellhead shall be a 12-in diameter x 5-ft tall well protector, with a hinge lockable lid, or County approved equal.

2.14 WELL CASING CENTRALIZER

A. Stainless-steel centralizers shall be used when installing well casings.

PART 3 EXECUTION

3.01 GENERAL

A. The Contractor is cautioned to properly secure/stabilize the borehole during all phases of construction. Improper or poor security/stabilization of the well may lead to delays. Such delays will be the responsibility of the Contractor and the County shall not pay any cost associated with such delays.

B. The Contractor shall use good practice during well/probe construction (casing installation and backfilling) to ensure the integrity of the borehole and casing is maintained.

C. A general schematic diagram of the well and probe construction is provided in Project Drawings on Sheets G10 and G11.

3.02 DAILY CONSTRUCTION PROGRESS REPORT

A. The driller shall prepare a daily record of drilling activities completed each Working Day that drilling is completed.

B. The Daily Construction Progress Report shall identify:

1. First pass vertical footage drilled.

C. The report shall be submitted to the County for review and approval at the conclusion of each Working Day.

3.03 BOREHOLE DRILLING

A. The Contractor shall not start drilling without the County onsite to confirm the location of the borehole.

B. The Contractor shall provide all tools, accessories, air compressor, power, fuel, materials, supplies, lighting, other equipment, and experienced personnel necessary to conduct safe and efficient drilling operations.

C. A drilling superintendent (tool pusher) shall be available at all times at the request of the County.

D. The Contractor shall prepare to drill the borehole to the total depth specified in the Contract Documents.

1. The borehole diameter shall be a minimum of 10-inches.

2. The County will be onsite during the drilling process to specify the exact depth of the borehole to be drilled based on drilling cuttings, the geologic log and the depth to groundwater encountered during drilling.

3. The exact depth specified by the County may be more or less than the total depth specified in the Contract Documents.

E. The Contractor shall take all measures necessary to protect the borehole from caving or raveling during drilling operations and at the conclusion of drilling operations, when the final depth has been achieved.

1. Improper or poor security/stabilization of the borehole may lead to borehole collapse and delays prior to or during well construction.

2. Such collapse or delays will be the responsibility of the Contractor and the County shall not pay any costs associated with such delays or collapse.

F. Soil drilling cuttings shall be transported by the Contractor to a location at the landfill site. Soil drilling cuttings may be placed near the borehole, as long as the location does not interfere with daily landfilling activities.

G. If groundwater is encountered during borehole drilling, the Contractor shall stop drilling and immediately notify the County. The Contractor shall backfill and seal the borehole with a bentonite pellet seal five feet above the depth that groundwater was encountered.

H. The Contractor may discharge minor volumes of nuisance groundwater generated during drilling directly to the ground surface adjacent to the well site, as permitted by the State Water Resources Control Board Water Quality Order No. 2014-0057-DWQ.

I. The Contractor shall implement appropriate best management practices (BMPs) to mitigate the discharge of sediment laden groundwater.

   1. Where necessary, BMPs shall also be implemented to mitigate groundwater discharge related erosion.

   2. The discharge of groundwater shall also be controlled to prevent contact with significant materials or equipment, including those of the Contractor and County.

3.04 SUBSURFACE FORMATION SAMPLING

A. The Contractor shall, at each change of formation, at five-foot intervals between changes in formation, and at intervals requested by the County, collect a representative sample of the interval or new formation. Each sample shall be given to the County for proper logging and storage.

B. If the Contractor chooses to drill with hollow stem auger, the Contractor shall collect relatively undisturbed soil samples with a Standard Penetration Test split spoon sampler.

C. If the Contractor chooses to drill with a form of air rotary, the Contractor shall provide an acceptable means to the County whereby the Contractor can safely obtain representative samples of formation cuttings from the air stream.

D. The ground surface around the sampling area shall be kept graded and free from stockpiled drilling cuttings and shall be kept free of trash, equipment and other debris.

E. If samples cannot be adequately collected, drilling will cease until the problem is corrected to the satisfaction of the County.

3.05 LFG WELL INSTALLATION

A. Refer to Drawing G9 for a schematic of the typical well design and well depths.

B. A typical well design will consist of a variable length interval of perforated well casing with approximately 40 feet of blank casing above the screen and extending to the ground surface.

C. The proposed well casing and screen lengths are specified in the Contract Documents.

1. These lengths are subject to change, as specified by the County, based on the subsurface conditions encountered during drilling.

D. The County will provide the actual well design depths/lengths to the Contractor when a Work Order is issued.

E. Joints:

1. All field joints, where blank casings and/or perforated casing are joined together, shall be connected via the butt fusion welding process, or alternative method which is able be withstand installation forces and temperature upon use. Any such alternative shall be approved in writing by the County.

F. Installation of casing and perforations:

1. The well casing string shall be suspended at all times in tension from the surface by means of a clamp, landing plate, or equivalent method. The bottom of the casing string shall be at a sufficient distance above the bottom of the borehole to ensure that it is not supported by the bottom of the borehole.

2. The Contractor will measure and record the lengths of the casing as it is being installed into the borehole.

   a. The casing lengths will be such that the screens are placed per the design interval and the total installed length of the casing is as specified in the design.

3. Centralizers:

   a. Two centralizers shall be installed around the screen section, one near the bottom and one approximately mid-height.

   b. One centralizer shall be installed around the blank casing, at approximately mid-height.

4. The Contractor shall take all necessary precautions to install and maintain the well casing in a vertical orientation throughout construction. If the well casing is not vertical, the Contractor at its own expense will correct the alignment.

5. Proper clamping and strapping of the well casing is required to set the casing into the hole without damaging the casing and joints.

6. If for any reason the casing cannot be placed in the correct position, or at a depth acceptable to the County, the Contractor shall take whatever measures are necessary to properly construct the well at his own expense, including abandoning the borehole.

7. If any of the casings should collapse or break prior to well completion, they shall be withdrawn and replaced at the Contractor's expense.

8. All Work required to be repeated because of the Contractor, and all additional materials, labor, and equipment required, shall be furnished at the expense of the Contractor and no claim for additional compensation shall be made or be allowed therefore, except as specifically provided herein.

9. The well casing shall be completed at ground surface.

G. Prior to backfilling the annular space around the casing string, the Contractor shall measure the bottom of the well casing to verify its total depth.

H. The top of the well casing shall be capped immediately following installation.

3.06 AGGREGATE INSTALLATION

A. Once drilling is completed, the bottom of the borehole is stabilized, if necessary, and the casing is installed within the borehole, the installation of the aggregate can proceed.

B. The aggregate shall be kept free of all foreign matter.

1. Aggregate suspected of being contaminated with dust, oil or other contaminants will not be accepted and shall be removed at the contractor's expense prior to the arrival of new aggregate on site.

C. Throughout the backfilling process, the Contractor shall complete calculations to determine the amount of material necessary to backfill the specified interval.

a. The Contractor shall record all calculations and volumes of material used to backfill the specified interval, as well as measurements obtained after the aggregate placement and verify those calculations with the County.

D. The aggregate shall be placed into the annulus of the borehole through a tremie.

E. The Contractor shall ensure that the well casing and tremie are sufficiently aligned to prevent binding while raising the tremie during the backfilling process.

F. The aggregate shall not be allowed to freefall more than 20-feet from the bottom of the tremie to the top of the gravel/sand.

G. The aggregate level shall be measured throughout the backfilling process.

H. The aggregate shall be installed from the bottom of the borehole to approximately five feet above the top of perforated casing.

3.07 TRANSITION GRAVEL INSTALLATION

A. The transition gravel, if stockpiled onsite, shall be kept free of all foreign, matter.

B. Transition gravel suspected of being contaminated with dust, oil or other contaminants will not be accepted and shall be removed at the contractor's expense prior to the arrival of new transition gravel on site.

C. Throughout the backfilling process, the Contractor shall complete calculations to determine the amount of material necessary to backfill the specified interval.

D. The Contractor shall record all calculations and volumes of material used to backfill the specified interval, as well as measurements obtained after the transition gravel layer placement and verify those calculations with the County.

E. The transition gravel shall be placed into the annulus of the borehole through a tremie.

F. The Contractor shall ensure that the well casing and tremie are sufficiently aligned to prevent binding while raising the tremie during the backfilling process.

G. The transition gravel shall not be allowed to freefall more than 20 feet from the bottom of the tremie to the top of the transition gravel.

H. The transition gravel level shall be measured throughout the backfilling process.

I. The transition gravel layer shall be installed from the top of the aggregate to a thickness of 2 feet.

3.08 PELLET ANNULAR SEAL INSTALLATION

A. Once the aggregate and transition gravel are installed above the perforated well casing, the annular seal can be installed.

B. The seal shall be composed of medium-sized bentonite pellets and be installed in the annulus of the borehole.

C. Annular Seal Installation.

1. The Contractor shall calculate the amount of seal material necessary to backfill a specified interval.

    a. The Contractor shall record all calculations and volumes of seal mixture used, and the measurements obtained after the seal placement and verify those calculations with the County.

D. An approximate five-foot thick seal, consisting of bentonite chips or tablets, shall be installed by gravity via a tremie above the transition gravel layer.

E. The Contractor shall ensure that the well casing and tremie are sufficiently aligned to prevent binding while raising the tremie during the backfilling process.

F. Seal materials shall not be allowed to freefall more than 20 feet from the bottom of the tremie to the depth established from previous measurement.

G. The seal level shall be measured throughout the backfilling process.

H. The seal shall be installed from the top of the transition gravel to a thickness of five feet in a continuous operation.

I. The Contractor shall measure the depth of the top of the seal after installation.

3.09 GROUT ANNULAR SEAL INSTALLATION

A. The grout annular seal seals the annular space between the borehole and the well casing in the upper portion of the borehole.

B. Bentonite and water shall be mixed first, prior to the addition of cement.

C. Bentonite, water and cement shall be mixed in the ratios specified in Section 9.2.1.

D. The final mixture of transition grout shall be thoroughly blended before pumping. Bentonite and cement shall be completely incorporated into the grout, no unmixed lumps of material shall exist in the grout.

E. The Contractor shall calculate the amount of transition grout necessary to complete the annular seal.

1. The volume placed shall not be less than the calculated volume of the annular space between the borehole and the well casing.
2. The Contractor shall record all calculations and volumes used, and measurements obtained after each interval is pumped.
3. The Contractor shall provide the calculations and volumes to the County for his review and approval.

F. The grout shall be placed into the annulus of the well through a tremie.

G. The Contractor shall ensure that the well casing and tremie are sufficiently aligned to prevent binding while raising the tremie during the backfilling process.

H. The tremie pipe shall extend from the ground surface to the bottom of the zone to be grouted.

I. The grout shall be placed from bottom to top, in a continuous operation.

J. The tremie pipe shall be slowly raised as the grout is placed, but the discharge end of the grout pipe must be submerged in the emplaced grout at all times until grouting is completed.

K. The Contractor shall take whatever precautions are necessary to prevent borehole and/or casing collapse during placement of the grout.
1. In the event any borehole and/or casing collapses prior to completion of the transition grout, the Contractor shall take whatever steps are necessary to reopen the borehole, replace the casing and place the seal as specified.
2. Any such remedial action shall be conducted at the Contractor's expense.

L. The casing shall be adequately secured such that no damage or contamination will occur during this period.

3.10 PROBE CONSTRUCTION

A. Refer to Drawing G10 for a schematic of the typical probe design and probe depths.

B. A typical probe design will consist of a 5-foot length of probe screen with a variable length of blank casing above the screen and extending to the ground surface.

C. The proposed probe casing and screen lengths are specified in the Contract Documents.
1. These lengths are subject to change, as specified by the County, based on the subsurface conditions encountered during drilling.

D. The County will provide the actual well design depths/lengths to the Contractor when a Work Order is issued.

E. Joints:
1. All field joints, where blank casings and/or screen casing are joined together, shall be connected via the machine threaded ends.

F. Installation of casing and screen:

1. The probe casing string shall be suspended at all times in tension from the surface by means of a clamp, landing plate, or equivalent method. The bottom of the casing string shall be at a sufficient distance above the bottom of the borehole to ensure that it is not supported by the bottom of the borehole.
2. The Contractor will measure and record the lengths of the casing as it is being installed into the borehole.
    a. The casing lengths will be such that the screens are placed per the design interval and the total installed length of the casing is as specified in the design.
3. If for any reason the casing cannot be placed in the correct position, or at a depth acceptable to the County, the Contractor shall take whatever measures are necessary to properly construct the well at his own expense, including abandoning the borehole.
4. If any of the casings should collapse or break prior to well completion, they shall be withdrawn and replaced at the Contractor's expense.
5. All Work required to be repeated because of the Contractor, and all additional materials, labor, and equipment required, shall be furnished at the expense of the Contractor and no claim for additional compensation shall be made or be allowed therefore, except as specifically provided herein.
    a. The probe casing shall be completed above the ground surface. Extra casing length shall be added to allow for construction within the Above Ground Monument, as specified herein and as shown on Sheet G10 of the Project Drawings.

G. Prior to backfilling the annular space around the casing string, the Contractor shall measure the bottom of the well casing to verify its total depth.

3.11 FILTER PACK INSTALLATION

A. Once drilling is completed, the bottom of the borehole is stabilized, if necessary, and the casing is installed within the borehole, the installation of the filter pack can proceed.

B. The filter pack, if stockpiled onsite, shall be kept free of all foreign matter.
    1. Filter pack suspected of being contaminated with dust, oil or other contaminants will not be accepted and shall be removed at the contractor’s expense prior to the arrival of new filter pack on site.

C. Throughout the backfilling process, the Contractor shall complete calculations to determine the amount of material necessary to backfill the specified interval.
    1. The Contractor shall record all calculations and volumes of material used to backfill the specified interval, as well as measurements obtained after the filter pack placement and verify those calculations with the County.

D. The filter pack shall be placed into the annulus of the well through a tremie.

E. The Contractor shall ensure that the well casing and tremie are sufficiently aligned to prevent binding while raising the tremie during the backfilling process.

F. The filter pack shall not be allowed to freefall more than 20-feet from the bottom of the tremie to the top of the gravel/sand.

G. The filter pack level shall be measured throughout the backfilling process.

H. The filter pack shall be installed from the bottom of the borehole to approximately one foot above the top of screen.

3.12 PELLET ANNULAR SEAL INSTALLATION (PROBE)

A. Once the filter pack is installed above the screened probe casing, the annular seal can be installed.

B. The seal shall be composed of medium-sized bentonite pellets and be installed in the annulus of the borehole.

C. The Contractor shall calculate the amount of seal material necessary to backfill a specified interval.

1. The Contractor shall record all calculations and volumes of seal mixture used, and the measurements obtained after the seal placement and verify those calculations with the County.

D. An approximate five-foot thick seal, consisting of bentonite chips or tablets, shall be installed by gravity via a tremie above the filter pack layer.

E. The Contractor shall ensure that the probe casing and tremie are sufficiently aligned to prevent binding while raising the tremie during the backfilling process.

F. Seal materials shall not be allowed to freefall more than 20 feet from the bottom of the tremie to the depth established from previous measurement.

G. The seal level shall be measured throughout the backfilling process.

H. The seal shall be installed from the top of the filter pack to a thickness of five (5) feet in a continuous operation.

I. The Contractor shall measure the depth of the top of the seal after installation.

3.13 GROUT ANNULAR SEAL INSTALLATION

A. The grout annular seal seals the annular space between the borehole and the probe casings in the borehole.

B. Bentonite and water shall be mixed first, prior to the addition of cement.

C. Bentonite, water and cement shall be mixed in the ratios specified in Section 9.2.1.

D. The final mixture of transition grout shall be thoroughly blended before pumping. Bentonite and cement shall be completely incorporated into the grout, no unmixed lumps of material shall exist in the grout.

E. The Contractor shall calculate the amount of transition grout necessary to complete the annular seal.

1. The volume placed shall not be less than the calculated volume of the annular space between the borehole and the well casing.
2. The Contractor shall record all calculations and volumes used, and measurements obtained after each interval is pumped.
3. The Contractor shall provide the calculations and volumes to the County for his review and approval.

F. The grout shall be placed into the annulus of the well through a tremie.

G. The Contractor shall ensure that the well casing and tremie are sufficiently aligned to prevent binding while raising the tremie during the backfilling process.

H. The tremie pipe shall extend from the ground surface to the bottom of the zone to be grouted.

I. The grout shall be placed from bottom to top, in a continuous operation.

J. The tremie pipe shall be slowly raised as the grout is placed, but the discharge end of the grout pipe must be submerged in the emplaced grout at all times until grouting is completed.

K. The Contractor shall take whatever precautions are necessary to prevent borehole and/or casing collapse during placement of the grout.
1. In the event any borehole and/or casing collapses prior to completion of the transition grout, the Contractor shall take whatever steps are necessary to reopen the borehole, replace the casing and place the seal as specified.
2. Any such remedial action shall be conducted at the Contractor's expense.

L. The casing shall be adequately secured such that no damage or contamination will occur during this period.

3.14 ABOVE GROUND PROBE HEAD PROTECTION

A. The Contractor shall install an above ground monument surrounded by cement-filled bollards to protect the probes.

B. Upon completion of probe construction and borehole backfill, the Contractor shall excavate around the probe casing(s) to approximately 1.5 feet below ground surface, to a sufficient width, to facilitate the installation of the monument.

C. The Contractor shall cut off the probe casing(s) such that the casing extends approximately 40 inches above the top of surrounding ground surface.
1. The cut edges shall be regular in appearance and Contractor shall file the edges to remove all burrs and sharp corners from the edge.
2. Contractor shall equip each cut well casing with a fitted J-plug.

D. The Contractor shall install an approximate six-inch thick layer of aggregate in the base area between the probe casing(s) and the excavation walls to support the monument.
1. The aggregate shall be compacted and leveled to provide a supportive surface.

E. Contractor shall install the monument on top of the aggregate such that the elevation of the top of the monument is approximately four (4) feet above the surrounding ground surface.

F. Contractor shall install an additional approximate six-inch layer of crushed rock base in the space between the monument and the probe casing(s), and in the space between the monument and the surrounding excavation walls, to provide lateral stability to the monument.

   1. The rock base shall be compacted and leveled within the vault to provide a supportive surface free of trip hazards.

G. Contractor shall install concrete between the monument and the excavation walls, from the top of the rock base to an elevation matching the surrounding grade.

H. Contractor shall install a concrete pad measuring 4-feet by 4-feet by 4-inches in thickness, centered on the monument.

   1. The concrete pad shall consist of structural concrete installed in a single pour at the same time the concrete is placed surrounding the monument.

I. The Contractor shall install four (4) bollards in accordance with Detailed Provisions Section 32 3913 – Manufactured Metal Bollards, around the above ground monument to protect the monument from vehicular traffic.

3.15 CLEANUP

A. Any waste that is generated by the Contractor, which is incidental to any well construction activities, shall be collected and properly disposed by the Contractor to comply with local laws and ordinances and Federal and local environmental regulations.

B. The procedure for collecting and handling soil drilling cuttings is specified herein.

END OF SECTION 33 5126.01

SPECIFICATIONS – DETAILED PROVISIONS

SECTION 33 5126.01: LFG WELL HEAD ASSEMBLY (INSTALL OR RELOCATE)

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SECTION 33 5126.013
LFG WELL HEAD ASSEMBLY (INSTALL OR RELOCATE)

PART 1 GENERAL

1.01 SUMMARY

A. The work covered by this Section shall consist of furnishing all necessary labor, materials, equipment, tools, permits, and supervision to install or relocate landfill gas (LFG) well head assemblies at locations shown on the Project Drawings.

B. Related Contract Document Sections include, but are not limited to:

1. General Provisions
2. Detailed Provisions Section 01 1100 – Summary of Work
3. Detailed Provisions Section 02 0100 – Maintenance of Existing Conditions
4. Detailed Provisions Section 31 2300 – Earthwork
5. Detailed Provisions Section 33 5216.26 – LFG HDPE Pipe

1.02 REFERENCES

A. The "Greenbook" Standard Specifications for Public Works Construction.

1.03 QUALITY ASSURANCE

A. All work shall be done to the satisfaction of the County.

1.04 SUBMITTALS

A. Submittal Procedures: See Detailed Provisions Section 01 3300 – Submittal Procedure for requirements for the mechanics and administration of the submittal process.

B. Product Details:

1. Submit for County approval product details of alternative Connection Fittings, if required for the Project.

1.05 DELIVERY, STORAGE AND HANDLING

A. Delivery, Storage and Handling shall be made in accordance with the following:

1. Maintain end caps through shipping, storage and handling to prevent damage and to prevent entrance of dirt, debris and moisture. Do not remove end protectors unless necessary for inspection; then reinstall for storage.
2. Protect from weather. Support off the ground or pavement in watertight enclosures when outdoor storage is necessary.

3. Use slings to handle materials if size requires handling by crane or lift. Rig materials to avoid damage to exposed parts. Do not use handwheels or stems as lifting or rigging points.
4. Store plastic piping protected from direct sunlight and provide support to prevent sagging and bending.

PART 2 PRODUCTS

2.01 WELL HEAD ASSEMBLY

A. The County shall provide the well head assemblies for new installations. The Contractor shall utilize County specified existing well head assemblies for relocations.

2.02 CONNECTION FITTINGS

A. Minor connection fittings, including but not limited to bushings, couplings and clamps, shall be composed of HDPE, neoprene, stainless steel, or other County approved equal.

2.03 SERIES 6000 INFA-JUST PIPE SUPPORTS

A. The County shall provide Series 6000 Infa-Just Pipe Supports, manufactured by Real Enviromental Products, sized based on the pipe diameter. All steel pipe anchors shall be schedule 40 black or galvanized pipe.

PART 3 EXECUTION

3.01 GENERAL

A. All HDPE pipe shall be joined by butt fusion and in conformance with the manufacturer's recommendations. Laterals (2 to 6-inch pipe) shall be joined to the header pipe (8-inch or greater) by fusion welding branch saddles using a McElroy Sidewinder Chain Clamp Fusion Unit or equivalent or with the use of tees.

B. Fusion welding of HDPE pipe shall be performed by a qualified person.

C. Jointing can be performed inside or outside of the work area, at the Contractor’s discretion. Pipe cutting in or near an open trench shall be done only with mechanical cutters.

D. Flange alignment shall be perpendicular to pipe center line and shall not exceed plus or minus 1/32-inch in tolerance measured at the flange O.D.

E. Pipes shall be installed in such a manner so as to provide for expansion and contraction, as recommended by the manufacturer. Pipes shall be fully supported on the base with no induced strain. Where there is evidence of induced pipe strain, the Contractor shall make the required pipe cuts and install angle fittings as necessary to eliminate the strain. The Contractor shall also remove and replace any fittings that induce either torque or strain to the pipe.

F. HDPE pipe lengths, fittings, and flange connections to be joined by thermal butt-fusion shall be of the same type, grade, and class of HDPE compound, and shall be supplied from the same raw material supplier.

G. Unless shown otherwise on the plans mechanical connections of the HDPE pipe to auxiliary equipment, such as valves and other piping systems, shall be through flange connections.

H. Before covering the pipes with backfill material, the pipe shall be surveyed by the County for verification of alignment and grade.

I. Solid HDPE pipe shall be tested by the Contractor for any leaks as directed by the County before covering the solid lateral pipe.

J. Pipe and fittings shall be held firmly in position and protected from damage while backfill material is being placed.

K. All pipe and fittings shall be kept clean during the progress of the work. Any pipe that becomes either partially or fully clogged or damaged before final acceptance, shall be cleaned, repaired, or replaced to the satisfaction of the County, by the Contractor, at the expense of the Contractor.

L. All new horizontal solid pipe well laterals shall be capped with a schedule 40 PVC cap.

M. All pipes 2-inches and larger shall be flanged at the weld ends and welded with full penetration butt welds.

N. When mating to piece of equipment with a flat-face flange, the corresponding pipe flange shall also be flat faced. Otherwise, all flanges shall be raised face.

O. Prior to connecting new sections of pipe to the existing collection system, the new pipe shall be flushed with water to remove soil, debris and deleterious material until only clean water comes out.

P. The Contractor will install one Infa-Just Pipe Support for each new lateral pipe near the well head and near the header pipe, as shown in the Project Drawings.

Q. There will be approximately two fittings per 100-feet of pipe. Fittings are defined as but not limited to: elbows, reducers, flange adapters, tees, and saddles.

3.02 WELL HEAD ASSEMBLY RELOCATION

A. The Contractor shall relocate existing well head assemblies as specified on the Project Drawings. Care shall be taken when removing and storing existing well head assemblies from existing laterals to enable their reuse.

B. The Contractor shall provide any couplings, clamps or fittings necessary to relocate and reuse any existing well head assembly.

C. The Contractor shall properly connect the well head assembly, as verified by a visual leak test.

3.03 WELL HEAD ASSEMBLY INSTALLATION (NEW)

A. The Contractor shall install new well head assemblies as specified on the Project Drawings.

B. The County shall provide the new well head assemblies for the Contractor to install.

C. The County shall provide typical couplings, clamps or fittings with the new well head assemblies. The Contractor shall provide any additional coupling, clamps or fitting necessary to install the new well head assembly.

D. The Contractor shall properly connect the well head assembly.

END OF SECTION 33 5126.01

SPECIFICATIONS – DETAILED PROVISIONS

SECTION 33 5216.26: LFG HDPE PIPE

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SECTION 33 5216.26
LFG HDPE PIPE

PART 1 GENERAL

1.01 SUMMARY

A. Work includes:

1. The CONTRACTOR shall furnish all labor, materials, tools, supervision, transportation, and installation equipment necessary for installation of all high density polyethylene (HDPE) pipe fittings and appurtenances as specified herein, as shown on the drawings.
2. Delivery, Storage and Handling
3. Quality Assurance / Quality Control
4. Field Quality Control

B. Related Detailed Provisions include, but are not limited to:

1. Division 01 – General Requirements.
2. Section 31 2133 – Trenching, Backfilling, and Compacting for LFG HDPE Pipe

1.02 QUALITY ASSURANCE

A. Referenced Standards:

1. PPI Handbook of Polyethylene Pipe Chapter 2 (2nd Edition)
2. American Society for Testing and Materials (ASTM):
   a. ASTM A351-18 – Standard Specification for Castings, Austenitic, for Pressure-Containing Parts
   b. ASTM D638-22 – Standard Test Method for Tensile Properties of Plastics.
   c. ASTM D790-17 – Standard Test Methods for Flexural Properties of Unreinforced and Reinforced Plastics and Electrical Insulating Materials.
   d. ASTM D256-10 – Standard Test Methods for Determining the Izod Pendulum Impact Resistance of Plastics.
   e. ASTM D1505-18 - Standard Test Method for Density of Plastics by the Density-Gradient Technique.
   f. ASTM D1693 – 21 – Standard Test Method for environmental Stress-Cracking of Ethylene Plastics
   g. ASTM D2839-16 – Standard Practice for Use of a Melt Index Strand for Determining Density of Polyethylene.
   h. ASTM D1238-20 – Standard Test Method for Melt Flow Rates of Thermoplastics by Extrusion Plastometer.

i. ASTM D2240-15 – Standard Test Method for Rubber Property—Durometer Hardness.

j. ASTM D3035-21 – Standard Specification for Polyethylene Plastic Pipe Based on Controlled Outside Diameter.

k. ASTM D3261-16 – Standard Specification for Butt Heat Fusion Polyethylene Plastic Fittings for Polyethylene (Plastic Pipe and Tubing

l. ASTM D3350-21 – Standard Specification for Polyethylene Plastics Pipe and Fittings Materials

m. ASTM F714-22 - Standard Specification for Polyethylene Plastic Pipe Based on Outside Diameter

n. ASTM F1417 – Standard Practice for Installation Acceptance of Plastic Non-pressure Sewer Lines Using Low-Pressure Air

o. ASTM F2164 – Standard Practice for Field Leak Testing of Polyethylene Pressure Piping Systems Using Hydrostatic Pressure

p. ASTM F2206-19 – Standard Specification for Fabricated Fittings of Butt-Fused Polyethylene Plastic Pipe, Fittings, Sheet Stock, Plate Stock, or Block Stock

q. ASTM F2620-20 Standard Practice for Heat Fusion Joining of Polyethylene Pipe and Fittings

r. ASTM F3124-15 Standard Practice for Data Recording the Procedure used to Produce Heat Butt Fusion Joints in Plastic Piping Systems or Fittings

s. ASTM F3183-21 Standard Practice for Guided Side Bend Evaluation of Polyethylene Pipe Butt Fusion Joint

t. ASTM 3190-21 Standard Practice for Heat Fusion Equipment Operator Qualification on Polyethylene and Polyamide Pipe and Fittings

1.03 RESPONSIBILITY

A. The Contractor shall provide the services of a HPDE pipe and fittings Manufacturer, and Installer. The Contractor shall, however, accept and retain full responsibility for all materials and installation and shall be held responsible for any defects in the completed HDPE pipe and fittings.

B. The Manufacturer shall be responsible for the production and delivery of the HDPE pipe and fittings and shall be a well-establish firm with more than two years experience in the manufacture of HDPE pipe and fittings.

C. The Contractor shall be responsible for field handling, storage, installing, and other site aspects of the installation of the HDPE pipe and fittings.

1.04 DEFINITIONS

A. High Density Polyethylene (HDPE): HDPE is the high-density polyethylene material used in the manufacturing of piping.

B. Landfill Gas (LFG): Gas that is generated by natural landfill waste decomposition. LFG can be explosive, flammable and hazardous.

C. Leachate: This term is defined as liquid that has come in contact with or percolated through waste materials.

1.05 SUBMITTALS

A. Submittal Procedures: See Detailed Provisions Section 01 3300 – Submittal Procedures for requirements for the mechanics and administration of the submittal process.

B. Approval Submittals:

1. Product technical data including:

a. Acknowledgement that products submitted meet requirements of standards referenced.

b. Manufacturer's installation instructions.

2. Fusion Equipment Service.

3. Fusion Equipment Operator Training.

PART 2 PRODUCTS

2.01 HIGH DENSITY POLYETHYLENE PIPES

A. The HDPE pipe that is specified for use in this section shall be supplied by the County.

B. The HDPE pipe shall be SDR 11 or 17.

C. Perforated pipe for horizontal wells shall have ½-inch diameter holes, at 6-inch spacing with four holes every 90 degree interval. All perforations shall completely penetrate the thickness of the pipe.

D. The HDPE pipe shall be homogeneous throughout, and shall be free of visible cracks, holes (other than intentional perforations or slots), foreign inclusions, or other defects. Any pipe with nicks, scrapes, or gouges deeper than 5% of the nominal wall thickness shall be rejected by the Contractor and not utilized in the project. Pipe material shall be uniform in color, capacity, and other physical properties.

E. Fittings at the end of pipes shall consist of HDPE end caps unless indicated otherwise on the Drawings

2.02 HIGH DENSITY POLYETHYLENE PIPE FITTINGS

A. All HDPE fittings shall comply with ASTM F714.

B. All HDPE fittings shall have a Standard Dimension Ratio (SDR) that matches the adjoining pipe, unless indicated otherwise on the Project Drawings.

C. HDPE fittings shall be molded from polyethylene compound having a cell classification equal to or exceeding the compound used in the pipe or shall be

manufactured using polyethylene compound have a cell classification equal to or exceeding the cell classification of the pipe as specified herein.

D. End termination fittings shall be used to seal the system at both ends. The fitting shall be butt fused. Terminations that are not butt fused in the system will not be allowed. These fittings shall use the following components and guidelines:

1. Flange Adapters shall meet the dimensional and material requirements of ASTM F2880.
2. 316 Stainless Steel or ASTM A351 CF8M back-up rings (Van-Stone style lap joint flanges) shall have a radius on the inside diameter of the bore so as to be compatible with HDPE Flanges. Back up rings shall have bolt pattern that will mate with AWWA C207 Class D (or B or E), ASME/ANSI B 16.5 Class 150, ASME/ANSI B 16.1 Class 125, or ASME/ANSI B16.47 Series A.
3. Flange assemblies shall be assembled and torqued according to PPI TN-38, "Bolt Torque for Polyethylene Flanged Joints."
4. Blind Flanges shall be made HDPE and be one-thick at minimum.
5. Flanged connections shall be fastened with ASTM A240, type 316 Stainless Steel screws, nuts, and washers. Bolts and nuts of sufficient length to show a minimum of three complete threads when the joint is made, tightened to the manufacturer's standard, and re-torque after four hours.
6. Fittings and stub ends for HDPE pipe with a minimum design pressure rating of 160 PSI at 73.4 °F.
7. HDPE stub ends shall be thermally butt-fused to the ends of the pipe.
8. Neoprene gaskets shall be utilized with all flanged connections, unless otherwise specified.

2.03 FUSION UNITS

A. All Fusion Equipment, whether new or used, rented or owned, shall be approved for use by the pipe system supplier. The butt fusion equipment used to join the pipe shall be capable of meeting all normal butt fusion requirements: alignment, heating, trimming and fusion pressure.

B. If the Contractor owns butt fusion equipment, the equipment must be serviced within 3 months prior to use for this Project. The machine must be environmentally friendly and in satisfactory working order. The hydraulic system must be leak free.

C. Fusion Operators:

1. The employer of the fusion machine operator is responsible for the fusion joint quality of the fusion weld made by that individual. The employer is responsible for documenting all training and qualification records for that individual, including compliance to any code requirements for fusion/bonder operators.
2. Fusion equipment operators shall have current, formal training on all fusion equipment employed on the project. Training received more than two years prior to

operation with no evidence of activity within the past 6 months shall not be considered current. A record or certificate of training for the fusion operator must be provided that documents training date.

2.04 BUTTERFLY VALVES

A. Valves shall be supplied by the County.

B. Valves shall be 150 lb. full lug cast iron body with stainless steel disk, 316 stainless steel stem, and Viton liner or approved equal. Valve bodies may be painted.

C. Valves shall have a gear operator with a valve position indicator.

2.05 MISCELLANEOUS HDPE PIPE APPURTENANCES

A. The below appurtenances shall be supplied by the County.

B. Rebar stakes shall be billet steel conforming to ASTM A 615 and shall be either Grade 40 or 60. The rebar shall be three feet long and diameter ranging from ??? to ???. Plastic rebar safety caps shall be OSHA approved.

C. Series 6000 Infa-Just Pipe Supports, manufactured by Real Enviromental Products, shall be sized based on the pipe diameter. All steel pipe anchors shall be schedule 40 black or galvanized pipe.

D. HDPE fittings shall be of material which is compatible with the pipe for the purpose of fusion welding and shall be free from cracks, holes foreign intrusions, voids, or other defects. The minimum "quick-burst" strength of the fittings shall not be less than that of the pipe.

2.06 DETECTABLE MARKER TAPE

A. Contractor shall use polyethylene plastic and metallic core, acid- and alkali-resistant, polyethylene plastic warning tape manufactured specifically for warning and identification of buried utility lines. Warning tape shall be a 3-inch minimum width with warning and identification imprinted in bold black letters continuously over the entire tape length. The warning tape color will be yellow and have a warning message of “CAUTION BURIED PIPELINE BELOW” or approved equal.

B. Polyethylene plastic tape shall conform to the width, color, and printing requirements indicated above. Minimum thickness of the tape shall be 0.004 inches. Tape shall have a minimum strength of 1500 psi lengthwise and 1250 psi crosswise. The tape shall be manufactured with integral wires, foil backing, or other means of enabling detection by a metal detector when the tape is buried in depths down to 3 feet deep below finished grades. The Contractor shall provide detectable warning tape with a means of corrosion protection subject to County’s approval.

PART 3 EXECUTION

3.01 GENERAL

A. All HDPE pipe and fittings shall be joined and installed in accordance with the pipe manufacturer's recommendations. Joining, laying, and pulling of polyethylene pipe shall be accomplished by personnel trained in working with HDPE pipe systems.

3.02 TRANSPORTATION, UNLOADING, HANDLING AND STORAGE

A. The manufacturer shall package product in a manner designed to deliver the pipe and fittings to the project neatly, intact and without physical damage. Pipe ends shall be covered prior to shipment to prevent debris and / or liquid from entering pipe ends. During transportation each pipe shall rest on suitable pads, strips skids, or blocks securely wedged or tied in place.

B. During loading, transportation, and unloading, every precaution should be taken to prevent damage to the pipe. The handling of the pipeline shall be in such a manner that the pipe is not damaged by dragging it over sharp and cutting objects. Cuts or gouges that reduce the wall thickness by more than 5% are not acceptable and must be cut out and discarded.

C. The Contractor shall exercise care when transporting, handling, and placing HDPE pipe and fittings, such that they shall not be cut, kinked, twisted or otherwise damaged.

D. Ropes, fabric, or rubber-protected slings and straps shall be used when handling HDPE pipe. Slings, hooks or pipe tongs shall be padded and used in such a manner as to prevent damage to the exterior surface or interior of the pipe. Slings, straps, etc shall not be positioned at butt-fused joints. Chains, cables or hooks shall not be inserted into the pipe ends as a means of handling pipe.

E. Under no circumstances shall materials be dropped.

F. Material, if stored, shall be kept safe from damage. Pipe shall not be stored close to heat sources. Stacking shall be limited to a height that shall not cause excessive deformation of the bottom layers of pipers under anticipated temperature conditions and per the manufacturer’s recommendations. Bottom tiers of pipe shall be stored on wooden sleepers, timbers, rail, or concrete; spaced suitably and of such width as not to allow deformation of the pipe at the point of contact with the support or between supports. The pipes should be stored out of direct sunlight.

G. Sealing surfaces of mating components (i.e. flange faces) shall be kept free from dirt or foreign matter at all times. Flange face protection shall be used to keep the surface free from scratches and gouges.

H. Whenever pipe laying is not actively in progress, the open end of pipe that has been placed shall be closed using a watertight plug.

3.03 RECEIPT INSPECTION

A. All pipe and fittings shall be subjected to visual inspection at time of delivery and before they are installed or lowered into the trench to be laid. Defective, damaged, or unsound pipe shall be rejected by the Contractor. Cuts, punctures, or gouges that penetrate or reduce the wall thickness by 5% or more are not acceptable and must be

removed and discarded. Joints or fittings that do not conform to these specifications will be rejected and must be removed immediately by the Contractor.

3.04 PIPE JOININING AND INSTALLATION

A. HDPE pipe and components shall be placed to the lines and grades and at locations as shown on the Project Drawings and/or as directed by the County.

B. Trenching, backfilling, and compacting for the dual wall containment pipe shall be per Detailed Provision 31 2133 - Trenching, Backfilling, and Compacting for LFG HDPE Pipe.

C. Fusion Joining Requirements:

1. HDPE pipe shall be joined using the simultaneous butt fusion welding process which produces homogeneous, seal, leak tight joints.
2. Considerations should be given to adverse weather conditions, such as temperatures below freezing, precipitation, or wind.
3. The open ends of all pipe sections of joined and/or installed pipe (not in service) shall be capped or plugged to prevent insects, animals, or foreign material from entering the pipe. Use waterproof caps to prevent the entrance of any type of contamination into the pipe and secure to the pipe in such a manner that the wind cannot blow loose. Where possible, the pipe shall be raised and supported at a suitable distance from the open end such that the open end will be below the level of the pipe at the point of support.

3.05 BUTT FUSION VISUAL EXAMINATION

A. For pipe sections, examine the full exterior circumference of the containment for bead uniformity. All beads should have visually acceptable bead formation as shown in Fig 4 and Appendix X2 of ASTM F2620. In addition, the following characteristics are expected:

1. There shall be no evidence of cracks or incomplete fusing.
2. There shall be no evidence of captured objects (e.g., pipe shavings, facer ribbons) between bonded surfaces.
3. Variations in upset bead heights on opposite sides of the cleavage and around the circumference of fused pipe joints are acceptable.
4. The apex of the cleavage between the upset beads of the fused joint shall remain above the base material surface.
5. Fused joints shall not display visible angular misalignment, and outside diameter mismatch shall be less than 10% of the nominal wall thickness.
6. Fusion data records, when required, shall be reviewed to meet acceptable fusion criteria can be used as additional verification of visual indicators.

3.06 SOLID PIPE TESTING AND LEAKAGE

A. All solid HDPE pipe, fittings and valves shall be pressure tested by the Contractor per ASME B31.8, with the County present.

B. The Contractor shall ensure testing can be accomplished in a safe manner, including protection of personnel, equipment, and public in the event of a failure during testing. The Contractor shall restrain pipe, components, and test equipment as required. All pumps, valves, temporary connections, meters, gauges and other measuring devices shall be furnished, installed and operated by the Contractor.

C. The pressure gauges or data recorders should be calibrated and sufficiently sized to provide mid-range data (pressure tested will not be below 10% or greater than 90% of gauge capacity) that result in easy reading, interpretation.

D. Extreme caution should be used when working around the pipe being pressure tested due to the high energy content of compressed air. Adequate protection and safety precautions must be used to protect the people and property.

E. The pipe network may be tested in sections or as an entire assembly at the Contractor's option. The test pressure shall be equal to the maximum rated pressure of the weakest part in the pipe system or 3 PSIG, whichever is lower. The Contractor shall provide all temporary plugs, flanges or other sealing devices needed for the air testing. The County recommends conducting the pressure test before well assemblies are connected and also recommends butt fusing temporary HDPE caps on to connections.

F. The system shall hold pressure for at least 2 hours with no more than a 0.2 PSIG loss in pressure. Should the pressure decrease, all joints shall be soap bubble tested to determine the source of the leak. Fusion welds shall be cleaned of all dust, debris, dirt and other foreign matter. A soap solution shall be applied to the test area with a paint roller or spray bottle and the test pressure shall be applied and held as long as necessary to visually inspect and mark for repair any suspicious areas as evidenced by bubbles in the soap solution or failure of pressure to be formed.

G. Repairs shall be made and the system shall be retested. All costs associated with the testing shall be included in the bid price. No separate payment will be made.

3.07 SOLID PIPE WELD QUALITY CONTROL

A. One solid HDPE pipe joint may be selected daily at random by the County and cut from the piping joint to verify its integrity. Testing will be performed by the County according to Plexco's "Qualification Procedures for PE 3408 Extra High Molecular Weight High Density Polyethylene Bulletin No. 105Y or 106.

B. If the joint fails to pass inspection, it shall be re-welded and retested until the weld passes and a minimum of 10% of the previously welded joints done during the day will be randomly cut from the pipe and inspected. If these joints pass inspection, then welding can proceed.

C. If any of the 10 percent fail, all weld joints made during that day shall be removed from the pipe and re-welded. These welds are also subject to the above procedure. All costs associated with re-welding shall be borne by the Contractor.

3.08 DETECTABLE MARKER TAPE

A. The Contractor shall install tape in accordance with the manufacturer's recommendations except as modified herein. Location of the buried detectable marker tape shall be 18 inches above the top of the solid HDPE pipe. For horizontal well construction, the buried detectable marker tape shall be place on top of the aggregate, or when a geosynthetic fabric is used, on top of the geosynthetic fabric.

3.09 HORIZONTAL WELL CONSTRUCTION

A. The County supplied HDPE pipe used for horizontal well construction shall be located at the County's pipe storage facility, which is located on the landfill property. The Contractor shall transport all pipe required for the project from the storage facility to the project location.

B. The HDPE pipe shall be placed to the lines and grades and at locations as shown on the Project Drawings and/or as directed by the County.

C. All HDPE pipe shall be cleaned as needed to remove dirt and debris before installing in the trench.

D. The perforated HDPE pipe shall be placed on a 2-inch thick aggregate bedding.

E. All perforated 6-inch HDPE SDR 11 pipe shall be joined by slipping a four-foot long section of 8-inch perforated pipe over the 6-inch perforated pipe joint. The 8-inch perforated pipe fitting shall be placed equidistant over the pipe point, such that with two-feet of 8-inch perforated pipe is on each section of the joined 6-inch perforated pipe, as shown in the project drawings.

F. All solid (non-perforated) HDPE pipe shall be joined by butt fusion and in conformance with the manufacturer's recommendations. Laterals (2 to 8-inch pipe) shall be joined to the header pipe (10-inch or greater) by fusion welding branch saddles using a McElroy Sidewinder Chain Clamp Fusion Unit or equivalent or with the use of tees.

G. Jointing can be performed inside or outside of the work area, at the Contractor's discretion. Pipe cutting in or near an open trench shall be done only with mechanical cutters.

H. Solid lateral pipe shall be installed up the slope of the current landfill waste lift.

I. Pipes shall be installed in such a manner so as to provide for expansion and contraction, as recommended by the manufacturer. Pipes shall be fully supported on the base with no induced strain. Where there is evidence of induced pipe strain, the Contractor shall make the required pipe cuts and install angle fittings as necessary to eliminate the strain. The Contractor shall also remove and replace any fittings that induce either torque or strain to the pipe.

J. HDPE pipe lengths, fittings, and flange connections to be joined by thermal butt-fusion shall be of the same type, grade, and class of HDPE compound, and shall be supplied from the same raw material supplier.

K. Unless shown otherwise on the Project Drawings, mechanical connections of the HDPE pipe to auxiliary equipment, such as valves and other piping systems, shall be through flange connections.

L. The terminal end of the perforated pipe, not connected to solid pipe, shall have a thermally butt fused stub end.

M. Before covering the pipes with backfill material, the pipe shall be surveyed by the County for verification of alignment and grade.

N. Solid HDPE pipe shall be tested by the Contractor for any leaks before covering the solid lateral pipe.

O. When specified in the Project Drawings, geotextile must be cut to actual trench width by the Contractor and shall be laid down on top of the aggregate across the full width of the trench before any backfill material is placed in the trench.

P. Pipe and fittings shall be held firmly in position and protected from damage while backfill material is being placed.

Q. All pipe and fittings shall be kept clean during the progress of the work. Any pipe that becomes either partially or fully clogged or damaged before final acceptance, shall be cleaned, repaired, or replaced to the satisfaction of the County, by the Contractor, at the expense of the Contractor.

R. All new horizontal solid pipe well laterals shall be temporarily capped with a schedule 40 PVC cap.

3.10 UNDERGROUND PIPE PLACEMENT

A. This section describes underground solid pipe placement (non-perforated pipe [NOT horizontal well construction]).

B. The County supplied HDPE pipe used for underground pipe placement shall be located at the County's pipe storage facility, which is located on the landfill property. The Contractor shall transport all pipe required for the project from the storage facility to the project location.

C. The HDPE pipe shall be placed to the lines and grades and at locations as shown on the Project Drawings and/or as directed by the County.

D. All HDPE pipe shall be cleaned as needed to remove dirt and debris before installing in the trench.

E. The HDPE pipe shall be placed on a 2-inch thick aggregate bedding.

F. All HDPE pipe shall be joined by butt fusion and in conformance with the manufacturer's recommendations. Laterals (2 to 6-inch pipe) shall be joined to the header pipe (8-inch or greater) by fusion welding branch saddles using a McElroy Sidewinder Chain Clamp Fusion Unit or equivalent or with the use of tees.

G. Fusion welding of HDPE pipe shall be performed by a qualified person.

H. Jointing can be performed inside or outside of the work area, at the Contractor's discretion. Pipe cutting in or near an open trench shall be done only with mechanical cutters.

I. Flange alignment shall be perpendicular to pipe center line and shall not exceed plus or minus 1/32-inch in tolerance measured at the flange O.D.

J. Pipes shall be installed in such a manner so as to provide for expansion and contraction, as recommended by the manufacturer. Pipes shall be fully supported on the base with no induced strain. Where there is evidence of induced pipe strain, the Contractor shall make the required pipe cuts and install angle fittings as necessary to eliminate the strain. The Contractor shall also remove and replace any fittings that induce either torque or strain to the pipe.

K. HDPE pipe lengths, fittings, and flange connections to be joined by thermal butt-fusion shall be of the same type, grade, and class of HDPE compound, and shall be supplied from the same raw material supplier.

L. Unless shown otherwise on the plans mechanical connections of the HDPE pipe to auxiliary equipment, such as valves and other piping systems, shall be through flange connections.

M. Before covering the pipes with backfill material, the pipe shall be surveyed by the County for verification of alignment and grade.

N. Solid HDPE pipe shall be tested by the Contractor for any leaks before covering the solid lateral pipe.

O. When specified in the Project Drawings, geotextile must be cut to actual trench width by the Contractor and shall be laid down on top of the aggregate across the full width of the trench before any backfill material is placed in the trench.

P. Pipe and fittings shall be held firmly in position and protected from damage while backfill material is being placed.

Q. All pipe and fittings shall be kept clean during the progress of the work. Any pipe that becomes either partially or fully clogged or damaged before final acceptance, shall be cleaned, repaired, or replaced to the satisfaction of the County, by the Contractor, at the expense of the Contractor.

R. All new horizontal solid pipe well laterals shall be capped with a schedule 40 PVC cap.

S. All pipes 2-inches and larger shall be flanged at the weld ends and welded with full penetration butt welds.

T. When mating to piece of equipment with a flat-face flange, the corresponding pipe flange shall also be flat faced. Otherwise, all flanges shall be raised face.

U. Prior to connecting new sections of pipe to the existing collection system, the new pipe shall be flushed with water to remove soil, debris and deleterious material until only clean water comes out.

V. Valve installation shall be per the manufacturer's specifications. All butterfly valves shall be installed so that the valve stem is located on the vertical axis and the operator

is located at the top of the valve. If the butterfly valve's disk interferes with the inside diameter of the pipe, the Contractor shall remove excess material from the ID of the pipe flange adapter by machining, until the valve is clear from hitting the pipe.

W. There will be approximately two fittings per 100-feet of pipe. Fittings are defined as but not limited to: elbows, reducers, flange adapters, tees, and saddles.

X. All electrofusion couplings shall be installed in accordance with the manufacturer's recommended specifications, including amperage and fusion time. The pipe shall be properly scuffed and new fittings shall be no less than ½" shorter than the piece of pipe removed from the existing pipe.

3.11 ABOVE GROUND PIPE PLACEMENT

A. The County supplied HDPE pipe used for above ground pipe placement shall be located at the County's pipe storage facility, which is located on the landfill property. The Contractor shall transport all pipe required for the project from the storage facility to the project location.

B. The HDPE pipe shall be placed to the lines and grades and at locations as shown on the Project Drawings and/or as directed by the County.

C. All HDPE pipe shall be cleaned as needed to remove dirt and debris before installing.

D. All HDPE pipe shall be joined by butt fusion and in conformance with the manufacturer's recommendations. Laterals (2 to 6-inch pipe) shall be joined to the header pipe (8-inch or greater) by fusion welding branch saddles using a McElroy Sidewinder Chain Clamp Fusion Unit or equivalent or with the use of tees.

E. Fusion welding of HDPE pipe shall be performed by a qualified person.

F. Jointing can be performed inside or outside of the work area, at the Contractor's discretion. Pipe cutting in or near an open trench shall be done only with mechanical cutters.

G. Flange alignment shall be perpendicular to pipe center line and shall not exceed plus or minus 1/32-inch in tolerance measured at the flange O.D.

H. Pipes shall be installed in such a manner so as to provide for expansion and contraction, as recommended by the manufacturer. Pipes shall be fully supported on the base with no induced strain. Where there is evidence of induced pipe strain, the Contractor shall make the required pipe cuts and install angle fittings as necessary to eliminate the strain. The Contractor shall also remove and replace any fittings that induce either torque or strain to the pipe.

I. HDPE pipe lengths, fittings, and flange connections to be joined by thermal butt-fusion shall be of the same type, grade, and class of HDPE compound, and shall be supplied from the same raw material supplier.

J. Unless shown otherwise on the plans mechanical connections of the HDPE pipe to auxiliary equipment, such as valves and other piping systems, shall be through flange connections.

K. Solid HDPE pipe shall be tested by the Contractor for any leaks.

L. Pipe and fittings shall be held firmly in position and protected from damage while backfill material is being placed.

M. All pipe and fittings shall be kept clean during the progress of the work. Any pipe that becomes either partially or fully clogged or damaged before final acceptance, shall be cleaned, repaired, or replaced to the satisfaction of the County, by the Contractor, at the expense of the Contractor.

N. All new horizontal solid pipe well laterals shall be capped with a schedule 40 PVC cap.

O. All pipes 2-inches and larger shall be flanged at the weld ends and welded with full penetration butt welds.

P. When mating to piece of equipment with a flat-face flange, the corresponding pipe flange shall also be flat faced. Otherwise, all flanges shall be raised face.

Q. Prior to connecting new sections of pipe to the existing collection system, the new pipe shall be flushed with water to remove soil, debris and deleterious material until only clean water comes out.

R. The header pipe (8 to 24-inch) shall be held horizontally in place by installing rebar stakes as shown in the Project Drawings. The Contractor shall install rebar on the downhill side of the pipe, at approximate 10-foot intervals. The County shall supply the rebar. The rebar shall vary from 30" to 48" depending on the header pipe size. The rebar shall be driven into the ground a minimum of 18-inches and shall extend several inches above the header pipe. The Contractor is to install OSHA approved plastic safety caps on each rebar installed.

S. Infa-Just Pipe Supports shall be installed on header pipe (8 to 24-inch), as shown in the Project Drawings. The Contractor shall install the Infa-Just Pipe Supports at approximate 70-feet intervals. The Infa-Just Pipe Support anchors shall be driven into the ground a minimum of 30-inches.

T. The Contractor will install one Infa-Just Pipe Support for each new lateral pipe near the well head and near the header pipe, as shown in the Project Drawings.

U. Valve installation shall be per the manufacturer's specifications. All butterfly valves shall be installed so that the valve stem is located on the vertical axis and the operator is located at the top of the valve. If the butterfly valve's disk interferes with the inside diameter of the pipe, the Contractor shall remove excess material from the ID of the pipe flange adapter by machining, until the valve is clear from hitting the pipe.

V. There will be approximately two fittings per 100-feet of pipe. Fittings are defined as but not limited to: elbows, reducers, flange adapters, tees, and saddles.

W. All electrofusion couplings shall be installed in accordance with the manufacturer's recommended specifications, including amperage and fusion time. The pipe shall be properly scuffed and new fittings shall be no less than ½" shorter than the piece of pipe removed from the existing pipe.

3.12 ABOVE GROUND PIPE RELOCATION

A. The existing HDPE pipe shall be relocated to the lines and grades and at locations as shown on the Project Drawings and/or as directed by the County.

B. All HDPE pipe shall be joined by butt fusion and in conformance with the manufacturer's recommendations. Laterals (2 to 6-inch pipe) shall be joined to the header pipe (8-inch or greater) by fusion welding branch saddles using a McElroy Sidewinder Chain Clamp Fusion Unit or equivalent or with the use of tees.

C. Fusion welding of HDPE pipe shall be performed by a qualified person.

D. Jointing can be performed inside or outside of the work area, at the Contractor's discretion. Pipe cutting in or near an open trench shall be done only with mechanical cutters.

E. Flange alignment shall be perpendicular to pipe center line and shall not exceed plus or minus 1/32-inch in tolerance measured at the flange O.D.

F. Pipes shall be installed in such a manner so as to provide for expansion and contraction, as recommended by the manufacturer. Pipes shall be fully supported on the base with no induced strain. Where there is evidence of induced pipe strain, the Contractor shall make the required pipe cuts and install angle fittings as necessary to eliminate the strain. The Contractor shall also remove and replace any fittings that induce either torque or strain to the pipe.

G. HDPE pipe lengths, fittings, and flange connections to be joined by thermal butt-fusion shall be of the same type, grade, and class of HDPE compound, and shall be supplied from the same raw material supplier.

H. Unless shown otherwise on the plans mechanical connections of the HDPE pipe to auxiliary equipment, such as valves and other piping systems, shall be through flange connections.

I. Solid HDPE pipe shall be tested by the Contractor for any leaks.

J. Pipe and fittings shall be held firmly in position and protected from damage while backfill material is being placed.

K. All pipe and fittings shall be kept clean during the progress of the work. Any pipe that becomes either partially or fully clogged or damaged before final acceptance, shall be cleaned, repaired, or replaced to the satisfaction of the County, by the Contractor, at the expense of the Contractor.

L. All well laterals shall be capped with a schedule 40 PVC cap.

M. All pipes 2-inches and larger shall be flanged at the weld ends and welded with full penetration butt welds.

N. When mating to piece of equipment with a flat-face flange, the corresponding pipe flange shall also be flat faced. Otherwise, all flanges shall be raised face.

O. Prior to connecting relocating sections of pipe to the existing collection system, the new pipe shall be flushed with water to remove soil, debris and deleterious material until only clean water comes out.

P. The Contractor shall salvage and re-use rebar and Infa-Just Pipe Supports.

Q. The header pipe (8 to 24-inch) shall be held horizontally in place by installing rebar stakes as shown in the Project Drawings. The Contractor shall install rebar on the downhill side of the pipe, at approximate 10-foot intervals. The County shall supply the rebar. The rebar shall vary from ?30" to 48" depending on the header pipe size. The rebar shall be driven into the ground a minimum of 18-inches and shall extend several inches above the header pipe. The Contractor is to install OSHA approved plastic safety caps on each rebar installed.

R. Infa-Just Pipe Supports shall be installed on header pipe (8 to 24-inch), as shown in the Project Drawings. The Contractor shall install the Infa-Just Pipe Supports at approximate 70-feet intervals. The Infa-Just Pipe Support anchors shall be driven into the ground a minimum of 30-inches.

S. The Contractor will install one Infa-Just Pipe Support for each lateral pipe near the well head and near the header pipe, as shown in the Project Drawings.

T. Valve installation shall be per the manufacturer's specifications. Existing butterfly valves will need to be relocated and re-installed by the Contractor. All butterfly valves shall be installed so that the valve stem is located on the vertical axis and the operator is located at the top of the valve. If the butterfly valve's disk interferes with the inside diameter of the pipe, the Contractor shall remove excess material from the ID of the pipe flange adapter by machining, until the valve is clear from hitting the pipe.

U. There will be approximately two fittings per 100-feet of pipe. Fittings are defined as but not limited to: elbows, reducers, flange adapters, tees, and saddles.

V. All electrofusion couplings shall be installed in accordance with the manufacturer's recommended specifications, including amperage and fusion time. The pipe shall be properly scuffed and new fittings shall be no less than ½" shorter than the piece of pipe removed from the existing pipe.

W. The contractor shall cut out and remove all existing reducers, and elbows from the pipe.

3.13 PRODUCT PROTECTION

A. The Contractor shall use all means necessary to protect all prior work and materials and completed work per 01 6000 Product Requirements.

B. In the event of damage to prior work or work completed as specified in this Section, the Contractor shall immediately make all repairs and replacements necessary to the approval of the County at no cost to the County in accordance with 01 6000 Product Requirements

END OF SECTION 33 5216.26

APPENDIX A: LANDFILL SITE RULES

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BADLANDS AND LAMB CANYON LANDFILL FACILITIES

OPEN: 6:00 am to 4:30 pm Monday through Saturday

NEXT HOLIDAY CLOSURE: _____

For services/complaints contact the Riverside County Waste Management Department at (951) 486-3200 or via website *www.rivcowm.org*

LANDFILL RULES

- **Obey County personnel and signs. It is for your safety.**
- **Anyone under 16 years of age and pets must remain in vehicle.**
- **High visibility safety vest must be worn at all times.**
- **Stay within 5 feet of your vehicle while unloading and 15 feet away from heavy equipment.**
- **No alcohol, drugs, weapons, smoking, salvaging, or loitering.**
- **Commercial refuse vehicles must have an operational back-up alarm.**

STAY ALERT – STAY ALIVE

County is not responsible for damage to customer's vehicle and/or equipment due to customer's negligence or failure to follow site rules and reserves the right to deny access to anyone violating said rules or creating a safety hazard. Landfills are dangerous construction zones. Disposal is at customer's own risk.

ALL LOADS SUBJECT TO INSPECTION

Disposal of hazardous, toxic, flammable, corrosive, explosive and radioactive waste/materials may be prosecuted under Health and Safety Code 25189.5 and Penal Code 374.8

APPENDIX B: SCAQMD PERMITS TO CONSTRUCT/OPERATE

South Coast
Air Quality Management District
21865 Copley Drive, Diamond Bar, CA 91765-4178
(909) 396-2000 • www.aqmd.gov

July 29, 2025

Mr. Todd Shibata
Principal Engineer
Riverside County, Waste Management, Badlands Landfill
14310 Frederick St
Moreno Valley, CA 92553-9000

Re: Riverside County, Waste Management, Badlands Landfill (Badlands Landfill) (Facility ID 6979) Revision (Revision No. 9) to the Title V Permit

Dear Mr. Shibata:

Please find enclosed the revised Title page, Table of Contents, and Section D of your Title V Facility Permit. The revised sections reflect the approval of a Minor Revision of your Title V Permit for Riverside County, Waste Management, Badlands Landfill (Facility ID 6979), which has been issued by the South Coast Air Quality Management District (South Coast AQMD).

The South Coast AQMD submitted a proposed draft permit to Environmental Protection Agency (U.S. EPA) Region IX for review on July 18, 2025 requesting expedited review of the proposal on or before August 1, 2025. Confirmation was received on July 23, 2025 that there were no comments from the U.S. EPA. Although no comments were received from the U.S. EPA, the 60-day period for the public to petition the Administrator to object to the permit begins the day after U.S. EPA's 45-day review period would otherwise end. Also note, that if the permit is later found to require corrective steps (including, but not limited to, reopening the permit for cause), the expiration of both U.S. EPA's review period and the public petition period without U.S. EPA objection does not compromise the U.S. EPA's authority to take such measures. A Public Notice was not required for this revision.

Your Title V Facility Permit has been updated to reflect the inclusion of the following changes:

Section D, Facility Description and Equipment Specific Conditions

Appl. No.	Equipment	Description
N/A	Facility-Wide Conditions	• Revised Facility-Wide Condition Nos. 2 and 6 to incorporate applicable rule and permit requirements.

		• Revised Facility-Wide Condition No. 7 with phrasing for improved clarity of Rule 1150.1 requirements. • Added Facility-Wide Condition No. 8 to incorporate applicable 40 CFR 60 Subpart XXX requirements. • Revised Facility-Wide Condition No. 9 (formerly No. 8) with additional language to specify and clarify the applicable 40 CFR 63 Subpart AAAA requirements. • Removed former Facility-Wide Condition No. 9 regarding 40 CFR 62 Subpart F and 40 CFR 62 Subpart OOO, as the facility is subject to 40 CFR 60 Subpart XXX. • Added Facility-Wide Condition No. 10 to reflect where higher operating value (HOV) and corrective action plan submittals, as required by 40 CFR 63 Subpart AAAA, shall be submitted.
472572	LFG Flaring System No. 1, 34.1 MMBtu/hr	Removed from the Facility Permit to reflect equipment inactivation.
595810	Landfill Gas Collection System	Removed from the Facility Permit as permit is superseded by A/N 647568.
647568	Landfill Gas Collection System	Modification of the landfill gas collection system to include additional extraction wells.

Please review the attached pages and then replace the enclosed sections in your Title V Facility Permit and discard the earlier versions. If you have any questions concerning changes to your permit, or if you determine any administrative error, please contact Mr. Andrew Dinh at (909) 396-2509 or by email at ADinh@aqmd.gov, within 30 days of the receipt of your permit.

Sincerely,

Jillian Wong

Jillian Wong, PhD
Assistant Deputy Executive Officer
Engineering & Permitting

AIS: NMI: TR: CB/AD
Enclosures: Title V Permit Revision
cc: w/ enclosure
U.S. EPA (via CDX)
Title V Central File
Title V Minor Revision 647942 File

South Coast Air Quality Management District
21865 Copley Drive, Diamond Bar, CA 91765-4178

Title Page
Facility ID: 006979
Revision #: 9
Date: July 29, 2025

FACILITY PERMIT TO OPERATE

RIV CO., WASTE MGMT, BADLANDS LANDFILL
31125 IRONWOOD AVE
MORENO VALLEY, CA 92555

NOTICE

IN ACCORDANCE WITH RULE 206, THIS PERMIT TO OPERATE OR A COPY THEREOF MUST BE KEPT AT THE LOCATION FOR WHICH IT IS ISSUED.

THIS PERMIT DOES NOT AUTHORIZE THE EMISSION OF AIR CONTAMINANTS IN EXCESS OF THOSE ALLOWED BY DIVISION 26 OF THE HEALTH AND SAFETY CODE OF THE STATE OF CALIFORNIA OR THE RULES OF THE SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT. THIS PERMIT SHALL NOT BE CONSTRUED AS PERMISSION TO VIOLATE EXISTING LAWS, ORDINANCES, REGULATIONS OR STATUTES OF ANY OTHER FEDERAL, STATE OR LOCAL GOVERNMENTAL AGENCIES.

Wayne Nastri
Executive Officer

By Jillian Wong
for Jason Aspell
Deputy Executive Officer
Engineering and Permitting

South Coast Air Quality Management District
21865 Copley Drive, Diamond Bar, CA 91765-4178

Table of Content
Facility ID: 006979
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Date: July 29, 2025

FACILITY PERMIT TO OPERATE
RIV CO., WASTE MGMT, BADLANDS LANDFILL

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C	Facility Plot Plan	TO BE DEVELOPED	
D	Facility Description and Equipment Specific Conditions	8	07/29/2025
E	Administrative Conditions	2	11/23/2022
F	RECLAIM Monitoring and Source Testing Requirements	2	11/23/2022
G	Recordkeeping and Reporting Requirements for RECLAIM Sources	2	11/23/2022
H	Permit To Construct and Temporary Permit to Operate	4	11/23/2022
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A	NOx and SOx Emitting Equipment Exempt From Written Permit Pursuant to Rule 219	2	11/23/2022
B	Rule Emission Limits	3	11/23/2022

FACILITY PERMIT TO OPERATE
RIV CO., WASTE MGMT, BADLANDS LANDFILL

Facility Equipment and Requirements
(Section D)

This section consists of a table listing all permitted equipment at the facility, facility wide requirements, all individual Permits to Construct/Operate and Permits to Operate issued to various equipment at the facility, and Rule 219-exempt equipment subject to source-specific requirements. Each permit and Rule 219-exempt equipment will list operating conditions including periodic monitoring requirements, and applicable emission limits and requirements. Also included are the rule origin and authority of each emission limit and permit condition.

FACILITY PERMIT TO OPERATE
RIV CO., WASTE MGMT, BADLANDS LANDFILL

PERMITTED EQUIPMENT LIST

The following is a list of all Permits to Construct/Operate and Permits to Operate at this facility:

Application number	Permit number	Equipment description	Page
411687	R-F58662	Landfill Condensate/Leachate/Collection System	8
581419	R-G40266	Material Screening System	11
616858	G70518	LFG Flaring System, No. 3, 150 MMBtu/hr	13
622783	G70519	LFG Flaring System, No. 2, 54.6 MMBtu/hr	20
647568	G80544	Landfill Gas Collection System	26

NOTE: Permits to Construct (if any) are listed in Section H of this facility permit. Any other applications that are still being processed and have not been issued Permits to Construct or Permits to Operate will not be found in this Title V Permit.

FACILITY PERMIT TO OPERATE
RIV CO., WASTE MGMT, BADLANDS LANDFILL

FACILITY WIDE CONDITION(S)

Condition(s):

1. Except for open abrasive blasting operations, the operator shall not discharge into the atmosphere from any single source of emissions whatsoever any air contaminant for a period or periods aggregating more than three minutes in any one hour which is:

   A. As dark or darker in shade as that designated No. 1 on the Ringelmann chart, as published by the United States Bureau of Mines; or

   B. Of such opacity as to obscure an observer's view to a degree equal to or greater than does smoke described in subparagraph (a) of this condition.

   [Rule 401]

2. The operator shall not purchase any diesel fuel for stationary source application in the South Coast AQMD, unless the fuel is low sulfur diesel for which the sulfur content shall not exceed 15 ppm by weight as supplied by the supplier.
   [Rule 431.2]

3. The operator shall not use fuel oil containing sulfur compounds in excess of 0.05 percent by weight.
   [Rule 431.2]

4. The operator shall not burn landfill gas containing sulfur compounds in excess of 150 ppmv calculated as hydrogen sulfide averaged daily.
   [Rule 431.1]

5. All recording devices shall be synchronized with respect to the time of day.
   [Rule 204]

6. Continuous operation of monitoring systems not subject to Rule 218, Rule 218.1, Rule 218.2, or Rule 218.3 are not required when the associated basic equipment is not in operation, or when necessary calibration, maintenance or repair activities are performed in accordance with manufacturer's recommendation. The operator shall take all reasonable actions to minimize the time required to perform such activities. In no event shall any such activities exceed ninety-six (96) consecutive hours for any one calibration, maintenance, or repair activity. The operator shall notify the South Coast AQMD within twenty-four (24) hours of the start of a calibration, maintenance, or repair activity, if the activity is expected to last more than 24 consecutive hours.
   [Rule 204]

7. The owner/operator of a MSW landfill shall comply with the following unless otherwise approved in a valid Rule 1150.1 Compliance Plan:

   A. Install and operate a wind speed and direction monitoring system with a continuous recorder. For wind speed, use a 3-cup assembly with a range of 0 to 50 miles an hour, with a threshold of 0.75 mile per hour or less. For wind direction, use a vane with a range of 0 to 540 degrees azimuth, with a threshold of plus-minus 2 degrees. An approved alternative may be used in lieu of the above.

B. Monitor and collect monthly, or as per the approved 1150.1 alternative, samples for analysis of TOC and TAC from the subsurface refuse boundary sampling probes.

C. Operate the gas collection and control system to prevent the concentration of TOC measured as methane from exceeding 5% by volume in the subsurface refuse boundary sampling probes.

D. Collect monthly, or as per the approved 1150.1 alternative, integrated samples for analysis of TOC and TAC from the landfill surface.

E. Operate the gas collection and control system to prevent the concentration of TOC measured as methane from exceeding 25 ppmv as determined by integrated samples taken on numbered 50,000 square foot landfill grids or as per the approved 1150.1 alternative.

F. Monitor quarterly, or as per the approved 1150.1 alternative, the landfill surface for TOC.

G. Operate the gas collection and control system to prevent the concentration of TOC measured as methane from exceeding 500 ppmv above background as determined by instantaneous monitoring at any location on the landfill, except at the outlet of any control device.

H. Operate the gas collection and control system so that there are no leaks that exceed 500 ppmv TOC measured as methane at any component under positive pressure.

I. Collect monthly, or as per the approved 1150.1 alternative, landfill gas samples for analysis of TOC and TAC from the main gas collection header line entering the gas treatment and/or gas control system.

J. Collect monthly, or as per the approved 1150.1 alternative, ambient air samples for analysis of TOC and TAC from the landfill property boundary.

K. Operate the gas collection and control system at all times for landfills with active collection systems. In the event the gas collection or gas control systems are inoperable, the active collection systems shall be shut down and all valves in the gas collection and gas control systems contributing to venting of the gas to the atmosphere shall be closed no later than one hour after such breakdown or no later than one hour after the time the owner or operator knew or reasonably should have known of its occurrence, or per the approved 1150.1 alternative.

L. Operate all wellheads so the gauge pressure is under a constant vacuum, except during well head raising and/or repair and temporary shutdown due to a catastrophic event.

[Rule 1150.1]

8. The owner or operator of a MSW landfill shall comply with the following requirements of 40 CFR 60 Subpart XXX:

A. The owner or operator shall comply with the standards for air emissions from municipal solid waste landfill provisions of §60.762.

B. The owner or operator shall install and start up a collection and control system pursuant to 60.762(b)(2)(ii) and 60.762(b)(2)(iii).

An active collection system shall:

i. Be designed to handle the maximum expected gas flow rate from the entire area of the landfill that warrants control over the intended use period of the gas control system equipment;
ii. Collect gas from each area, cell, or group of cells in the landfill in which the initial solid waste has been placed for a period of 5 years or more if active; or 2 years or more if closed or at final grade.
iii. Collect gas at a sufficient extraction rate;
iv. Be designed to minimize off-site migration of subsurface gas.

C. Operate the collection and control device installed to comply with this subpart in accordance with the provisions of §§ 60.763, 60.765, and 60.766; or the provisions of §§ 63.1958, 63.1960, and 63.1961 of this chapter. Once the owner or operator begins to comply with the provisions of §§ 63.1958, 63.1960, and 63.1961 of this chapter, the owner or operator must continue to operate the collection and control device according to those provisions and cannot return to the provisions of §§ 60.763, 60.765, and 60.766.

D. The owner or operator shall comply with the operational standards for collection and control systems provisions of §63.1958 pursuant to §60.762(b)(2)(iv).

E. The owner or operator shall comply with the test method and procedures provisions of §60.764.

F. The owner or operator shall comply with the compliance provisions of §63.1960 pursuant to §60.762(b)(2)(iv).

G. The owner or operator shall comply with the monitoring operations provisions of §63.1961 pursuant to §60.762(b)(2)(iv).

H. The owner or operator shall comply with the reporting requirements of §60.757.

I. The owner or operator shall comply with recordkeeping requirements of §60.768.
[40 CFR 60 Subpart XXX]

9. The owner or operator of an MSW landfill shall comply with the following requirements of 40 CFR 63 Subpart AAAA:

A. Operate the collection system such that the gas is collected from each area, cell or group of cells of the landfill in which the solid waste has been in place for a period of:
i. Five (5) years or more if active; or
ii. Two (2) years or more if closed or at final grade.

B. Operate the collection system with negative pressure at each wellhead except under the following conditions:
i. A fire or increased well temperature, the owner or operator shall record the instances when positive pressure occurs in efforts to prevent a fire. These records shall be submitted with the annual reports as provided in §63.1981(h).
ii. Use of a geomembrane or synthetic cover. The owner or operator shall develop acceptable pressure limits in the design plan.
iii. A well is decommissioned. A well may experience a static positive pressure after shut down to accommodate for declining flows. All design changes must be approved by the Administrator as specified in §63.1981(d)(2).

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C. Operate each interior wellhead in the collection system with a landfill gas temperature less than 62.8 degrees Celsius (145 degrees Fahrenheit) as specified in 40 CFR §63.1958(c)(1). The owner or operator may establish a higher operating temperature value at a particular well. A higher operating value demonstration must be submitted to the Administrator for approval and must include supporting data demonstrating that the elevated parameter neither causes fires nor significantly inhibit anaerobic decomposition by killing methanogens. The demonstration must satisfy both criteria in order to be approved (i.e., neither causing fires nor killing methanogens is acceptable).

D. Operate the collection system so that the methane concentration is less than 500 ppm above background at the surface of the landfill. To determine if this level is exceeded, the owner or operator shall conduct surface testing around the perimeter of the collection area and along a pattern that traverses the landfill at no more than 30-meter intervals and where visual observations indicate elevated concentrations of landfill gas, such as distressed vegetation and cracks or seeps in the cover. The owner or operator may establish an alternative traversing pattern that ensures equivalent coverage. A surface monitoring design plan shall be developed that includes a topographical map with the monitoring route and the rationale for any site-specific deviations from the 30-meter intervals. Areas with steep slopes or other dangerous areas may be excluded from the surface testing.

i. Conduct surface testing using an organic vapor analyzer, flame ionization detector, or other portable monitor meeting the specifications provided in § 63.1960(d).

ii. Conduct surface testing at all cover penetrations. Thus, the owner or operator must monitor any cover penetrations that are within an area of the landfill where waste has been placed and a gas collection system is required.

iii. Determine the latitude and longitude coordinates of each exceedance using an instrument with an accuracy of at least 4 meters. The coordinates must be in decimal degrees with at least five decimal places.

E. Operate the system as specified in §63.1958(e).

F. Operate the control system at all times when the collected gas is routed to the system.

G. If monitoring demonstrates that the operational requirements in paragraph §63.1958(b), (c), or (d) are not met, corrective action shall be taken as specified in §63.1960(a)(3) and (5) or (c). If corrective actions are taken as specified in §63.1960, the monitored exceedance is not a deviation of the operational requirements in this section.

H. Operate the collection and control system in compliance with §63.1958.

I. Operate the collection and control system in compliance with procedures and requirements of §63.1959 and §63.1962.

J. Operate the collection and control system in compliance with compliance provisions of §63.1960.

K. Operate the collection and control system in compliance with monitoring procedures of §63.1961.

L. Operate the collection and control system in compliance with reporting requirements of §63.1981.

M. Operate the collection and control system in compliance with record keeping requirements of §63.1983. [40 CFR 63 Subpart AAAA]

10. The owner or operator shall submit all higher operating values and corrective action plans (for approval) and all submittals as required by 40 CFR Part 63 Subpart AAAA to EPA Region IX Enforcement via email (aeo_r9@epa.gov) and cc South Coast AQMD.
[40 CFR 63 Subpart AAAA]

FACILITY PERMIT TO OPERATE
RIV CO., WASTE MGMT, BADLANDS LANDFILL

PERMIT TO OPERATE

Permit No. R-F58662
A/N 411687

Equipment description:

Landfill Condensate/Leachate Collection and Storage System, consisting of:

1. Three (3) leachate storage tanks, polyethylene, 10,500 gallon capacity, with secondary containment, each vented to a common 55 gallon carbon canister.

2. One (1) condensate storage tank, HDPE, 10,500 gallon capacity, with secondary containment, located at the south side of the landfill to collect condensate from the entire gas collection system, vented to a carbon canister.

3. One (1) condensate/leachate recirculation tank, fiberglass, 5,000 gallon capacity, with secondary containment, located at the north side of the landfill to recirculate condensate/leachate back into the lined landfill, vented to a carbon canister.

4. Temporary leachate tanks, each vented to individual carbon canisters, as needed during wet winter situations.

5. Temporary leachate tank, 1,000 gallon capacity, double walled, for use during construction of expansion project.

6. Associated piping, collecting, and transporting condensate/leachate.

Conditions:

1. Operation of this equipment shall be conducted in accordance with all data and specifications submitted with the application under which this permit is issued unless otherwise noted below.
[Rule 204]

2. This equipment shall be properly maintained and kept in good operating condition at all times.
[Rule 204]

3. This equipment shall be operated by personnel properly trained in its operation.
[Rule 204]

4. Construction shall not be conducted on days when the South Coast AQMD forecasts first, second or third stage episodes for Area No. 28, or when the South Coast AQMD requires companies in Area No. 28 to implement their first, second or third stage episode plans. Episode forecasts for the following day can be obtained by calling (800) 242-4666.
[Rule 402, Rule 1150]

5. Construction shall not be conducted between the hours of 5 P.M. and 7 A.M. on weekdays and during all hours on Saturdays, Sundays, and legal holidays unless otherwise approved by the South Coast AQMD.
[Rule 402, Rule 1150]

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6. Construction shall not be conducted when the wind speed is greater than 15 m.p.h. average (over 15 minutes) or the instantaneous wind speed exceeds 25 m.p.h.
[Rule 402, Rule 1150]

7. The construction of any piping or well trench which exposes landfill refuse to the atmosphere shall be staged such that no more than 100 linear feet of trench is exposed at any time prior to backfilling.
[Rule 402, Rule 1150]

8. Trenches and exposed landfill refuse shall be completely covered to prevent emissions of landfill gas to the atmosphere whenever work is not actively in progress. The cover shall include, but may not be limited to, a minimum of 6 inches of clean dirt, approved foam, or heavy-duty plastic sheeting. Foam by itself shall not be used as a night cover if it is raining or when rain is predicted by the National Weather Service prior to the next scheduled working day.
[Rule 402, Rule 1150]

9. For the purposes of this permit, construction spoils are landfill refuse, material that is mixed with landfill refuse, material that has been in contact with landfill refuse, or odorous material that is removed from well holes or trenches.
[Rule 1150]

10. Construction spoils and all working areas being actively used for truck and construction equipment trafficking shall be maintained in a moist condition to minimize dust and emissions.
[Rule 402, Rule 1150]

11. Construction spoils shall not be stockpiled on site. All construction spoils shall be deposited directly into the truck or trailer bed which will haul it off site for disposal. The truck beds or trailers hauling the construction spoils shall be completely covered with an impermeable cover with such covers tied down. All seams shall be sealed to prevent any material from escaping during transport.
[Rule 402, Rule 1150]

12. During transport of the construction spoils, no material shall extend above the sides or rear of the vehicle hauling the material.
[Rule 402, Rule 1150]

13. The exterior of the vehicle (including the tires) hauling the construction spoils shall be cleaned off prior to leaving the working site.
[Rule 402, Rule 1150]

14. If a distinct odor level (Level 3 or greater) resulting from the construction is detected at or beyond the property line, all work shall cease until the odor sources are determined and eliminated. Odor levels shall be determined by South Coast AQMD personnel or on-site safety coordinator in the absence of South Coast AQMD personnel.

Odor Scale	Description of Odor Intensity
0	No odor detected
1	Very light odor detected
2	Light odor detected, distinguishable
3	Moderate odor, very distinguishable
4	Strong odor, very distinguishable, irritable
5	Very strong odor, very distinguishable, overpowering and intolerable

[Rule 402, Rule 1150]

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15. During construction, if a considerable number of complaints are received, all work shall cease and approved mitigation measures shall be implemented immediately. Work shall not resume until the emissions causing the complaints are mitigated and the approval to resume work is granted by the South Coast AQMD.
[Rule 402, Rule 1150]

16. Mitigation measures, other than those indicated in these conditions, which are deemed appropriate by South Coast AQMD personnel as necessary to protect the comfort, repose, health or safety of the public shall be implemented upon request.
[Rule 204]

17. The South Coast AQMD shall be notified in writing when work on this system commences and when it is completed. Such notification shall occur at least two (2) days prior to the commencement and within five (5) days after the completion of the work.
[Rule 204]

18. All condensate/leachate collected shall be disposed of and/or treated properly.
[Rule 204, Rule 402]

19. Emissions from the outlets of any carbon canister shall not exceed 50 ppm Total Organic Compounds measured as methane.
[Rule 204, Rule 402]

20. All connections, valves and openings shall be properly sealed or closed so as to prevent raw landfill gas and/or condensate/leachate vapors from entering into the atmosphere.
[Rule 204, Rule 402]

21. All records required to demonstrate compliance shall be kept and maintained for at least five (5) years and made available to South Coast AQMD personnel upon request.
[Rule 204]

This Permit to Operate No. R-F58662 supersedes Permit to Operate No. F58662 issued on 02/20/2003.

FACILITY PERMIT TO OPERATE
RIV CO., WASTE MGMT, BADLANDS LANDFILL

PERMIT TO OPERATE

Permit No. R-G40266
A/N 581419

Equipment Description:

Portable (intra-facility) material screening system, 2007 Extec S-5, model 516RT, serial no. 7620, 52'-6" L. x 8'-6" W. x 12'-11" H., track mounted, consisting of:

1. Feed hopper, with a hopper belt, 3'-11" W x 11'-6" L.
2. Double screen box assembly, each screen 4'-11" W. x 8'-2" L.
3. Main conveyor, 3'-3" W. x 36'-6" L., with variable discharge height.
4. Tail conveyor, 3'-11" W. x 23'-5" L., with variable discharge height.
5. Two (2) side conveyors, 2'-4" W. x 31'-10" L., with variable discharge height.

Conditions:

1. Operation of this equipment shall be conducted in accordance with all data and specifications submitted with the application under which this permit is issued unless otherwise noted below.
[Rule 204]
2. This equipment shall be properly maintained and kept in good operating condition at all times.
[Rule 204]
3. This equipment shall be operated and maintained by personnel properly trained in its operation.
[Rule 204]
4. The total volume of material processed through this system shall not exceed 384 cubic yards in any one (1) day, and 4,889 cubic yards in any one (1) month.
[Rule 402, Rule 405]
5. This equipment shall only be used to treat soil.
[Rule 204]
6. A water sprayer shall be adequately utilized in order to maintain the moisture of the material processed to prevent excessive dust emissions. This shall also include the wetting of stockpiles before and after screening.
[Rule 204, Rule 403, Rule 1303(a)-BACT/LAER]
7. There shall be no visible emissions beyond the property line on which the equipment is being operated.
[Rule 403]

8. All records required to demonstrate compliance shall be kept and maintained for at least five (5) years and made available to South Coast AQMD personnel upon request.
[Rule 3004(a)(4)]

This Permit to Operate No. R-G40266 supersedes Permit to Operate No. G40266 issued on 5/13/2016.

FACILITY PERMIT TO OPERATE
RIV CO., WASTE MGMT, BADLANDS LANDFILL

PERMIT TO CONSTRUCT/OPERATE

Permit No. G70518
A/N 616858

Equipment Description:

Landfill Gas Flaring (LFG) System, consisting of:

1. One (1) skid mounted HDPE moisture separator, with demister.
2. Two (2) landfill gas extraction blowers (one stand-by), maximum capacity 5,500 scfm each.
3. One (1) thermal mass flow meter, insertion type, for landfill gas flow and one (1) velocity flow meter for combustion air flow.
4. One (1) flare inlet flame arrestor, 16" Dia.
5. One (1) combustion air blower, 43,000 scfm capacity, VFD.
6. Enclosed flare, No. 3, John Zink, Model ZULE, 13' Dia. x 50' H., 5,500 scfm capacity, 150 MMBtu/hr (HHV), with four combustion air dampers (automatic combustion air control), seven (7) ceramic burner cans, a propane gas or natural gas fired pilot.
7. Automated shutoff/restart ignition system, one (1) self-checking ultraviolet flare scanner, seven (7) burner thermocouples, three (3) flare temperature monitoring thermocouples.

Conditions:

1. Construction and operation of this equipment shall be conducted in accordance with all data and specifications submitted with the application under which this permit is issued unless otherwise noted below.
[Rule 204]

2. This equipment shall be properly maintained and kept in good operating condition at all times.
[Rule 204]

3. This equipment shall be operated and maintained by personnel properly trained in its operation.
[Rule 204]

4. Identification tag(s) or nameplate(s) shall be displayed on the equipment to show manufacturer, model number, and the rated heat input capacity (HHV). The tag(s) or plate(s) shall be issued by the manufacturer and shall be affixed to the equipment in a permanent and conspicuous position.
[Rule 204, Rule 1118.1]

5. The flare shall be designed and operated so that the flame in the flare remains below the height of the flare's operating thermocouple at all times.
[Rule 204]

6. The flare shall be equipped with a sufficient number of view ports to allow visual inspection of the flame height within the flare at all times. The view ports shall be located at the elevation of the temperature sensor locations. Safe and adequate access shall be provided for all view ports upon request by South Coast AQMD personnel. [Rule 204, Rule 217]

7. A sufficient number of sampling ports shall be maintained in the exhaust stack at least one-half duct diameter upstream of the exhaust outlet, and at least two duct diameters downstream from the nearest flow disturbances (e.g. elbows, tees and fans). Each sampling port shall consist of a four-inch coupling with plug. All ports shall be properly centered. An equivalent method of emission sampling may be used upon approval of the South Coast AQMD. Adequate and safe access to all source test ports shall be provided within 48 hours' notice by the South Coast AQMD.
[Rule 204, Rule 217]

8. A sampling port shall be maintained at the inlet gas line to the flare to allow the collection of a landfill gas sample.
[Rule 204, Rule 217, Rule 431.1, Rule 1150.1]

9. The maximum skin temperature at any accessible location shall not exceed 250 degrees Fahrenheit, upon request by South Coast AQMD personnel.
[Rule 204, Rule 217]

10. The flare shall be equipped with an automatic shut-down system with a failure alarm, which has been approved by South Coast AQMD, to automatically isolate the flare from the landfill gas supply line, shut off the blower, and immediately notify a responsible party of the shut-down. The automatic shutdown safety system shall be tested monthly for proper operation of the flare and the results recorded.
[Rule 1303(a)(1)-BACT]

11. The flare shall be equipped with a shroud which will ensure complete flame retention within the shroud.
[Rule 1303(a)(1)-BACT]

12. A pressure differential indicator shall be maintained across the moisture separator demister pad.
[Rule 204]

13. A pressure differential indicator shall be maintained across the flame arrestor.
[Rule 204]

14. This equipment shall be operated in compliance with all applicable provisions of Rules 431.1, 1118.1, and 1150.1.
[Rule 431.1, Rule 1118.1, Rule 1150.1]

15. The flare shall be equipped with a continuous temperature indicator and recorder which measures and records the gas temperature in the exhaust stack. The temperature indicator and recorder shall operate whenever the flare is in operation. The temperature shall be measured at a location above the flame zone at least 0.6 second downstream of the burner and not less than five (5) feet from the top of the stack.
[Rule 1150.1, Rule 1303(a)(1)-BACT]

16. Whenever the flare is in operation, a temperature of not less than 1,400 degrees Fahrenheit, 15-minute average, as measured by the temperature indicator and recorder shall be maintained except during periods of startup and shutdown. Startup is defined as the period from flare ignition to the time when 1,400 degrees Fahrenheit is

achieved, not to exceed 30 minutes. Shutdown is the period from when the gas valve begins to be shut and completely shuts off, not to exceed 30 minutes.
[Rule 1303(a)(1)-BACT]

17. All collected landfill gas shall be directed to this equipment for combustion and/or appropriate equipment which has a valid Permit to Construct or Operate issued by South Coast AQMD.
[Rule 1150.1, Rule 1303(a)(1)-BACT]

18. Operation of this equipment shall not result in any release of raw landfill gas into the atmosphere. Any breakdown or malfunction which results in emission of landfill gas shall be reported to the South Coast AQMD in accordance with Rule 430 provisions and immediate remedial measures shall be undertaken to correct the problem and prevent further emissions into the atmosphere.
[Rule 402, Rule 430, Rule 1150.1, 40 CFR 62 Subpart F, 40 CFR 63 Subpart AAAA]

19. The applicant shall conduct a gas leak detection program with a combustible detector calibrated for methane by inspecting the blowers and any component under positive pressure. This inspection program shall be conducted on a quarterly basis pursuant to Rule 1150.1 or per a valid and approved rule 1150.1 Compliance Plan. All leaks detected above 500 ppm shall be reported to the South Coast AQMD and repaired in accordance with Rule 1150.1 or per a valid and approved Rule 1150.1 Compliance Plan. A log showing the results of each inspection shall be maintained and shall be available to South Coast AQMD personnel upon request.
[Rule 402, Rule 1150.1]

20. Either a pilot flame or landfill gas combustion flame shall be maintained in the flare whenever landfill gas may be venting to the flare.
[Rule 204]

21. A continuous flow indicating and recording device shall be installed and maintained in the landfill gas supply line(s) to the flare to measure and record the quantity of landfill gas (in scfm) being combusted in the flare at least every fifteen minutes and shall be operated whenever the flare is in operation.
[Rule 204, Rule 1303(b)(2)-Offset]

22. The maximum LFG flowrate entering the flare shall not exceed 5,500 scfm.
[Rule 1303(b)(2)-Offset]

23. The exhaust stack shall have an inner diameter of 13 feet and the height shall be a minimum of 50 feet in height.
[Rule 204, Rule 1401]

24. Weekly readings of the methane content and higher heating value (HHV) in the landfill gas shall be determined using an instrument and/or method approved by South Coast AQMD. Results shall be recorded and provided to South Coast AQMD upon request.
[Rule 204, Rule 1303(b)(1)-Modeling, Rule 1303(b)(2)-Offsets]

25. The maximum heat input through the flare shall not exceed 150 MMBtu/hr (HHV). A log shall be kept indicating the total heating value (HHV) of the landfill gas burned in the flare based on the recorded flow rate (scfm) and weekly Btu content (Btu/scf) reading.
[Rule 204, Rule 1303(b)(1)-Modeling, Rule 1303(b)(2)- Offset, Rule 1401]

26. The operator shall maintain a copy of the manufacturer's, distributor's, installer's or maintenance company's written maintenance schedule and instructions.
[Rule 1118.1]

27. The operator shall conduct a source test on the flare at the maximum flow rates achievable at the time, within 90 days after the flare is able to achieve a firing period of at least 60 minutes, but not later than 180 days after initial startup, unless otherwise approved in writing by South Coast AQMD. Thereafter, the operator shall conduct subsequent source tests on the flare at least every five years and in accordance with Rule 1118.1 and Rule 1150.1 (or other schedule according to an approved Rule 1150.1 alternative monitoring plan) and as indicated below, in as-found condition. Initial and subsequent source testing shall be conducted under the following conditions:

A. Testing shall be conducted by an approved contractor under the South Coast AQMD Laboratory Approval Program (LAP) and in compliance with South Coast AQMD Rule 304 (No Conflict of Interest).

B. The LAP contractor shall not conduct any pre-tests for compliance.

C. Sampling facilities shall comply with South Coast AQMD "Guidelines for Construction of Sampling and Testing Facilities" pursuant to Rule 217.

D. At least one week prior to the scheduled source test, South Coast AQMD shall be notified of the scheduled source test date. If a scheduled source test is delayed, an owner or operator shall notify the South Coast AQMD within 24 hours from the time that an owner or operator knew of the delay. An owner or operator shall provide at least 7 days prior notice of the rescheduled date of the source test or arrange a rescheduled date with the South Coast AQMD by mutual agreement.

E. A source test protocol shall be submitted to South Coast AQMD no later than 90 days before the proposed test date and shall be approved by South Coast AQMD before the test commences or a valid previously South Coast AQMD approved protocol may be used for recurring source test and pursuant to Rule 1118.1(f) as applicable. At a minimum, the source test protocol should include the following, unless otherwise approved in writing by South Coast AQMD:

I. The name, address, and contact information of the unit operator and the South Coast AQMD approved source testing contractor that will conduct the test(s).

II. The application and permit number.

III. A copy of the current valid approved permit.

IV. A description of the equipment to be tested. Include a process schematic indicating sampling locations/ports, and sampling duct/stack dimensions along with upstream and downstream flow disturbances (e.g. elbows, tees and fans).

V. A brief process description.

VI. Operating conditions under which the test will be performed, including flow rate, temperature, pressure, number of tests to be conducted, and operation loads.

VII. A description of the sampling and analytical methods for each constituent measured.

VIII. Complete calculations for flow rates, concentrations, emission rates, and efficiencies.

IX. A description of the calibration and quality assurance procedures.

X. Sampling facilities shall comply with the South Coast AQMD guidelines for construction of sampling and testing facilities, pursuant to Rule 217.

XI. Copy of LAP approval for methods being used in the source test.

XII. A statement determining that the testing laboratory qualifies as an "independent testing laboratory" under Rule 304 (no conflict of interest), signed by the responsible authority.

F. Source test report(s) shall be submitted to the South Coast AQMD Waste Management Permitting Unit within 45 days after completion of the source test, unless otherwise approved in writing by the South Coast AQMD. The testing and source test report shall include, but not limited to, unless otherwise approved in writing by South Coast AQMD, a test of the inlet to the flare and the flare exhaust for:

I. Methane

II. Total Non-Methane Organic Compounds (TNMOC)

III. Speciated organics including, but not limited to Rule 1150.1 Table 1 Carcinogenic and Toxic Air Contaminants

IV. NOx, as NO2 (exhaust only)

V. CO (exhaust only)

VI. Total Particulates (PM10) (exhaust only)

VII. Oxygen and Carbon Dioxide

VIII. Moisture Content

IX. Temperature (exhaust only)

X. Flowrate of inlet landfill gas and exhaust gas

XI. Total Sulfur Compounds as Hydrogen Sulfide and speciated sulfur compounds (inlet only)

XII. Btu Value (HHV) (inlet only)

XIII. Nitrogen (exhaust only)

XIV. Methane and TNMOC destruction efficiency

[Rule 204, Rule 217, Rule 304, Rule 1118.1, Rule 1150.1, Rule 1303(a)(1)-BACT, Rule 1303(b)(2)-Offset, Rule 1401, 40 CFR 63 Subpart AAAA, Rule 3004(a)(4)-Periodic Monitoring]

28. The operator shall operate and maintain this equipment according to the following requirements:

A. The exhaust temperature shall be maintained at a minimum of 1,400 degrees Fahrenheit, averaged over a 15-minute period, whenever the equipment it serves is in operation.

B. Continuous exhaust temperature monitoring and recording system shall be pursuant to the operation and maintenance requirements specified in 40 CFR Part 64.7. Such a system shall have an accuracy of within ± 1% of the temperature being monitored and shall be inspected, maintained, and calibrated on an annual basis in accordance with the manufacturer's specifications using an applicable South Coast AQMD or EPA approved method.

C. For the purpose of this condition, a deviation shall be defined as when a temperature of less than 1,400 degrees Fahrenheit occurs during normal operation. The operator shall review the records of temperature on a daily basis to determine if a deviation occurs or shall install an alarm system to alert the operator when a deviation occurs.

D. For each semi-annual reporting period specified in Condition No. 23 in Section K, whenever a deviation occurs from 1,400 degrees Fahrenheit, the operator shall take immediate corrective action, and keep

records of the duration and cause (including unknown cause, if applicable) of the deviation and the corrective action taken.

E. All deviations shall be reported to the South Coast AQMD on a semi-annual basis pursuant to the requirements specified in 40 CFR Part 64.9 and Condition No. 22 and 23 in Section K of this permit.

F. The operator shall submit an application with a Quality Improvement Plan (QIP) in accordance with 40 CFR Part 64.8 to the South Coast AQMD if an accumulation of deviations exceeds 5 percent duration of this equipment's total operating time for any semi-annual reporting period specified in Condition No. 23 in Section K of this permit. The required QIP shall be submitted to the South Coast AQMD within 90 calendar days after the due date for the semi-annual monitoring report.

G. The operator shall inspect and maintain all components of this equipment on an annual basis in accordance with the manufacturer's specifications.

H. The operator shall keep adequate records in a format that is acceptable to the South Coast AQMD to demonstrate compliance with all applicable requirements specified in this condition and 40 CFR Part 64.9 for a minimum of five years.

[Rule 3004(a)(4)-Periodic Monitoring, 40 CFR Part 64]

29. A maximum of ninety (90) days may be allowed for simultaneous operation of LFG flare under A/N 616858, Permit to Operate TBD, and LFG flare under A/N 472572, Permit to Operate R-G5699. Riv. Co., Waste Mgmt, Badlands Landfill shall submit a written request to the South Coast AQMD for the inactivation of Permit to Operate R-G5699, within ninety (90) days of start-up of the LFG flare under A/N 616858, PO TBD.
[Rule 204, Rule 1313]

30. This Permit to Construct shall expire if construction of this equipment is not complete within one year from the date of issuance unless an extension is granted by South Coast AQMD. At least 30 days prior to the expiration date of the Permit to Construct, Riv. Co., Waste Mgmt, Badlands Landfill shall submit a written request for and obtain an extension of time to construct this equipment on an annual basis until such time construction is completed and a written notification has been submitted reporting the date construction was completed and the date operation of the equipment is intended to begin. Each extension request shall include the following information:

A. The permit number and application number for which an extension is requested.
B. The increments of construction progress that have been completed thus far, with schematics, specification, and/or photos (if available).
C. The increments of construction progress that have yet to be completed for construction to be complete.
D. Explanation and description of any delays or circumstance necessitating the extension.
E. The proposed date being requested for the Permit to Construct.

[Rule 205]

31. The operator of this equipment shall submit final as-built specifications (make, model, dimensions, size, maximum capacities) and P&I diagrams to South Coast AQMD, within 60 days of completing construction of this equipment, unless otherwise approved by South Coast AQMD. The submittal shall identify the equipment location, initial operation date, and application number.
[Rule 204]

32. All records required to demonstrate compliance shall be kept and maintained for at least five (5) years and made available to South Coast AQMD personnel upon request.
[Rule 204, Rule 1118.1, Rule 1150.1]

FACILITY PERMIT TO OPERATE
RIV CO., WASTE MGMT, BADLANDS LANDFILL

Emissions and Requirements:

33. This equipment is subject to the applicable requirements of the following rules and regulations:

CO:	2000 ppmv, Rule 407
CO:	0.06 lb/MMBtu (HHV), Rule 1118.1, Rule 1303(a)(1)-BACT/LAER
CO:	9.00 lb/hr, Rule 1303(b)(1)-Modeling, Rule 1303(b)(2)-Offset
CO:	6,570 lb/month, Rule 1313(g)
NOx:	0.025 lb/MMBtu (HHV), Rule 1118.1, Rule 1303(a)(1)-BACT/LAER
NOx:	3.75 lb/hr, Rule 1303(b)(1)-Modeling, Rule 1303(b)(2)-Offset
NOx:	2,737.50 lb/month, Rule 1313(g)
PM:	Rule 404, see Appendix B for emission limits
PM:	0.1 gr/scf, Rule 409
PM10:	6 lb/million cubic feet of inlet gas, Rule 1303(a)(1)-BACT/LAER
PM10:	1.98 lb/hr, Rule 1303(b)(1)-Modeling, Rule 1303(b)(2)-Offset
PM10:	1,445.40 lb/month, Rule 1313(g)
SOx:	150 ppmv in inlet, total sulfur as H2S, Rule 431.1
SOx:	60 ppmv (averaged monthly) & 85 ppmv (averaged daily) in inlet, total sulfur as H2S, Rule 1303(a)(1)-BACT/LAER
SOx:	4.74 lb/hr, Rule 1303(b)(2)-Offset
SOx:	2,445.50 lb/month, Rule 1313(g)
VOC:	0.038 lb/MMBtu (HHV), Rule 1118.1
VOC:	0.010 lb/MMBtu (HHV), Rule 1303(a)(1)-BACT/LAER
VOC:	1.50 lb/hr (NMOC), Rule 1303(b)(2)-Offset
VOC:	1,095.00 lb/month, Rule 1313(g)
Methane:	99 wt % methane destruction efficiency, Rule 1150.1
NMOC:	98 wt % destruction efficiency or <20 ppmv, hexane, 3% O2 dry, Rule 1150.1, 40 CFR 63 Subpart AAAA

FACILITY PERMIT TO OPERATE
RIV CO., WASTE MGMT, BADLANDS LANDFILL

PERMIT TO OPERATE

Permit No. G70519
A/N 622783

Equipment Description:

Landfill Gas Control System, consisting of:

1. One (1) Skid Mounted Moisture Separator, ZMS, HDPE, with demister pad element for moisture collection.
2. Two (2) Blowers, one standby, a VFD and pressure transmitter for VFD vacuum control, and one common insertion type thermal mass flow meter, venting landfill gas from collection wells and trenches.
3. Combustion Air Blower, max air flow 14,500 scfm with a combustion air blower VFD, and an insertion type thermal mass flow meter.
4. One (1) Flare Inlet Flame Arrestor, 10" Dia.
5. Flare, No. 2, John Zink, Model ZULE, 9' Dia. x 40' H., rated at 2,000 scfm capacity, 54.6 MMBtu/hr, two combustion air dampers, flare alarm system, automated ignition system with propane gas pilot assembly, one (1) self checking ultraviolet flame scanner, three (3) burner thermocouples, three (3) flare temperature monitoring thermocouples at different elevations, ignition transformer, and two 5-gallon capacity propane tanks.

Conditions:

1. Operation of this equipment shall be conducted in accordance with all data and specifications submitted with the application under which this permit is issued unless otherwise noted below.
[Rule 204]

2. This equipment shall be properly maintained and kept in good operating condition at all times.
[Rule 204]

3. This equipment shall be operated and maintained by personnel properly trained in its operation.
[Rule 204]

4. Identification tag(s) or nameplate(s) shall be displayed on the equipment to show manufacturer, model number, and the rated heat input capacity (HHV). The tag(s) or plate(s) shall be issued by the manufacturer and shall be affixed to the equipment in a permanent and conspicuous position.
[Rule 204, Rule 1118.1]

5. The operator shall maintain a copy of the manufacturer's, distributor's, installer's or maintenance company's written maintenance schedule and instructions.
[Rule 1118.1]

FACILITY PERMIT TO OPERATE
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6. Four sampling ports shall be maintained in the flare stack at least (5) feet upstream of the flare outlet. Each sampling port shall consist of a four inch coupling with plug. All ports shall be properly centered. An equivalent method for emissions sampling may be used upon approval of the South Coast AQMD. Adequate and safe access to all test ports shall be provided.
[Rule 217]

7. A sampling port shall be installed and maintained at the inlet gas line to the flare station to allow the collection of a landfill gas sample.
[Rule 217, Rule 431.1, Rule 1150.1]

8. The flare shall be equipped with at least one temperature indicator and a recording device which measures and records the gas temperature in the flare stack. The temperature indicator and recording device shall operate whenever the flare is in operation. The temperature shall be measured at a location above the flame zone, at least 0.6 second downstream of the burner and not less than five (5) feet from the top of the stack.
[Rule 1303(a)(1)-BACT, Rule 1150.1, Rule 1714, Rule 3004(a)(4)]

9. Whenever the flare is in operation, a temperature of not less than 1400 degrees Fahrenheit, 15 minute average, as measured by the temperature indicator and recorder shall be maintained except during periods of startup and shutdown. Startup is defined as the period from flare ignition to the time when 1400 degrees f is achieved, not to exceed 30 minutes. Shutdown is the period from when the gas valve begins to be shut and completely shuts off, not to exceed 30 minutes.
[Rule 1303(a)(1)-BACT, Rule 1714]

10. A flow indicator and recording device shall be maintained in the landfill gas supply line to flare to measure and record the quantity of landfill gas (in scfm) being sent to flare.
[Rule 1150.1, Rule 1714]

11. A flow indicator shall be maintained in the combustion air line to flare to measure the quantity of air flow (in scfm) being sent to flare. In case a pressure sensor device is used in place of the flow indicator, a conversion chart shall be posted on the equipment to indicate the flow rate in scfm corresponding to the pressure drop reading.
[Rule 1150.1, Rule 1714]

12. This equipment shall be operated in compliance with all applicable provisions of Rules 431.1, 1118.1, and 1150.1.
[Rule 431.1, Rule 1118.1, Rule 1150.1]

13. The total volume of landfill gas burned in this flare shall not exceed 2,000 standard cubic feet per minute (scfm).
[Rule 1303(b)(1)-Modeling, Rule 1303(b)(2)-Offset, Rule 1401, Rule 1714]

14. The maximum heat input rate to flare shall not exceed 54.6 MMBTU per hour. A log shall be kept indicating the total heating value of landfill gas burned in each flare based on the recorded flow rate (scfm) and the latest weekly BTU content (BTU/scf) reading.
[Rule 1303(b)(1)-Modeling, Rule 1303(b)(2)-Offset, Rule 1401, Rule 1714]

15. The flare shall be equipped with an automatic shut-down system with a failure alarm, which has been approved by the South Coast AQMD, to automatically isolate the flare from the landfill gas supply line, shut off the blower and immediately notify a responsible party of the shut-down.
[Rule 1303(a)(1)-BACT, Rule 1714]

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16. The automatic shutdown safety system shall be tested monthly for proper operation of each flare and the results recorded.
[Rule 1303(a)(1)-BACT]

17. The operator shall conduct source tests on the flare at least every five years and in accordance with applicable provisions of Rule 1118.1 and Rule 1150.1 (or other schedule according to an approved Rule 1150.1 alternative monitoring plan) and as indicated below, in as-found condition. Source testing shall be conducted under the following conditions:

A. Testing shall be conducted by an approved contractor under the South Coast AQMD Laboratory Approval Program (LAP) and in compliance with South Coast AQMD Rule 304 (No Conflict of Interest).

B. The LAP contractor shall not conduct any pre-tests for compliance.

C. Sampling facilities shall comply with South Coast AQMD "Guidelines for Construction of Sampling and Testing Facilities" pursuant to Rule 217.

D. At least one week prior to the scheduled source test, South Coast AQMD shall be notified of the scheduled source test date. If a scheduled source test is delayed, an owner or operator shall notify the South Coast AQMD within 24 hours from the time that an owner or operator knew of the delay. An owner or operator shall provide at least 7 days prior notice of the rescheduled date of the source test or arrange a rescheduled date with the South Coast AQMD by mutual agreement.

E. A source test protocol shall be submitted to South Coast AQMD no later than 90 days before the proposed test date and shall be approved by South Coast AQMD before the test commences or a valid previously South Coast AQMD approved protocol may be used for recurring source test and pursuant to Rule 1118.1(f) as applicable. At a minimum, the source test protocol should include the following, unless otherwise approved in writing by South Coast AQMD:

I. The name, address, and contact information of the unit operator and the South Coast AQMD approved source testing contractor that will conduct the test(s).

II. The application and permit number.

III. A copy of the current valid approved permit.

IV. A description of the equipment to be tested. Include a process schematic indicating sampling locations/ports, and sampling duct/stack dimensions along with upstream and downstream flow disturbances (e.g. elbows, tees and fans).

V. A brief process description.

VI. Operating conditions under which the test will be performed, including flow rate, temperature, pressure, number of tests to be conducted, and operation loads.

VII. A description of the sampling and analytical methods for each constituent measured.

VIII. Complete calculations for flow rates, concentrations, emission rates, and efficiencies.

IX. A description of the calibration and quality assurance procedures.

X. Sampling facilities shall comply with the South Coast AQMD guidelines for construction of sampling and testing facilities, pursuant to Rule 217.

XI. Copy of LAP approval for methods being used in the source test.

XII. A statement determining that the testing laboratory qualifies as an "independent testing laboratory" under Rule 304 (no conflict of interest), signed by the responsible authority.

F. Source test report(s) shall be submitted to the South Coast AQMD Waste Management Permitting Unit within 45 days after completion of the source test, unless otherwise approved in writing by the South Coast AQMD. The testing and source test report shall include, but not limited to, unless otherwise approved in writing by South Coast AQMD, a test of the inlet to the flare and the flare exhaust for:

I. Methane

II. Total Non-Methane Organic Compounds (TNMOC)

III. Speciated organics including, but not limited to Rule 1150.1 Table 1 Carcinogenic and Toxic Air Contaminants

IV. NOx, as NO2 (exhaust only)

V. CO (exhaust only)

VI. Total Particulates (PM10) (exhaust only)

VII. Oxygen and Carbon Dioxide

VIII. Moisture Content

IX. Temperature (exhaust only)

X. Flowrate of inlet landfill gas and exhaust gas

XI. Total Sulfur Compounds as Hydrogen Sulfide and speciated sulfur compounds (inlet only)

XII. Btu Value (HHV) (inlet only)

XIII. Nitrogen (exhaust only)

XIV. Methane and TNMOC destruction efficiency

[Rule 204, Rule 217, Rule 304, Rule 1118.1, Rule 1150.1, Rule 1303(a)(1)-BACT, Rule 1303(b)(2)-Offset, Rule 1401, Rule 3004(a)(4)-Periodic Monitoring, 40 CFR 63 Subpart AAAA]

18. The flare shall be equipped with a sufficient number of view ports to allow visual inspection of the flame height within the flare at all times. The view ports shall be located at the elevation of the temperature sensor locations. Safe and adequate access shall be provided for all view ports upon request by South Coast AQMD personnel.
[Rule 1303)(a)(1)-BACT]

19. The maximum skin temperature at any accessible location shall not exceed 250 degrees Fahrenheit, upon request by South Coast AQMD.
[Rule 217]

20. All landfill gas collected shall be directed to the flare station for combustion or to any other combustion or processing facility which is in full use, can adequately process the volume of gas collected and has been issued a valid permit to operate/construct by South Coast AQMD.
[Rule 1150.1, Rule 1303(a)(1)-BACT, 40 CFR 62 Subpart F, 40 CFR 62 Subpart OOO, 40 CFR 63 Subpart AAAA]

21. Operation of this equipment shall not result in the release of raw landfill gas into the atmosphere. Any breakdown or malfunction which results in emission on landfill gas shall be reported to the South Coast AQMD in accordance with Rule 430 provisions and immediate remedial measures shall be undertaken to correct the problem and prevent further emissions into the atmosphere.
[Rule 402, Rule 430, Rule 1150.1, 40 CFR 62 Subpart F, 40 CFR 63 Subpart AAAA]

22. The applicant shall conduct a gas leak detection program with a combustible detector calibrated for methane by inspecting the blowers and any component under positive pressure. This inspection program shall be conducted on a quarterly basis pursuant to Rule 1150.1 or per a valid and approved Rule 1150.1 Compliance Plan. All leaks detected above 500 ppm shall be reported to the South Coast AQMD and repaired in accordance with Rule 1150.1 or per a valid and approved Rule 1150.1 Compliance Plan. A log showing the results of each inspection shall be maintained and shall be available to South Coast AQMD personnel upon request.
[Rule 402, Rule 1150.1]

23. All records required to demonstrate compliance shall be kept and maintained for at least five (5) years and shall be made available to South Coast AQMD personnel upon request.
[Rule 204, Rule 3004(a)(4)]

24. The exhaust temperature shall be maintained at a minimum of 1,400 (for all flares) degrees Fahrenheit averaged over 15-minute period whenever the equipment is in operation, excluding start up and shutdown. Startup is defined as the period from flare ignition to the time when 1,400 degrees Fahrenheit is achieved, not to exceed 30 minutes. Shutdown is the period from when the gas valve begins to be shut and completely shuts off, not to exceed 30 minutes.

Each flare shall be equipped with a continuous exhaust temperature monitoring and recording system pursuant to the operation and maintenance requirements specified in 40 CFR 64.7 and the recording system shall be in operation when the flare is operating. Such a system shall have an accuracy of within ± 1% of the temperature being monitored and shall be inspected, maintained, and calibrated on an annual basis in accordance with the manufacturer's specifications using an applicable South Coast AQMD or EPA approved method.

For the purpose of this condition, a deviation shall be defined as when a 15-minute average temperature of less than 1,400 degrees Fahrenheit occurs during operation excluding start up and shutdown. The exhaust temperature shall be recorded at least once in every 15-minute period. The operator shall review the records of temperature on a daily basis to determine if a deviation occurred or shall install an alarm system to alert the operator when a deviation occurs.

For each semi-annual reporting period specified in Condition No. 23 in Section K, whenever a deviation occurs from 1,400 degrees Fahrenheit, the operator shall take immediate corrective action, and keep records of the duration and cause (including unknown cause, if applicable) of the deviation and the corrective action taken.

All deviations shall be reported to the South Coast AQMD on a semi-annual basis pursuant to the requirements specified in 40 CFR 64.9 and Condition Nos. 22 and 23 in Section K of this permit.

The operator shall submit an application with a Quality Improvement Plan (QIP) in accordance with 40 CFR 64.8 to the South Coast AQMD if an accumulation of deviation exceeds 5 percent duration of this equipment's total operating time for any semi-annual reporting period specified in Condition No. 23 in Section K of this permit. The required QIP shall be submitted to the South Coast AQMD within 90 calendar days after the due date for the semi-annual monitoring report.

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The operator shall keep adequate records in a format that is acceptable to the South Coast AQMD to demonstrate compliance with all applicable requirements specified in this condition and 40 CFR 64.9 for a minimum of five years.
[Rule 3004(a)(4)-Periodic Monitoring, 40 CFR 64]

Emissions and Requirements:

25. This equipment is subject to the applicable requirements of the following rules and regulations:

CO:	2,000 ppmv, Rule 407
CO:	0.06 lb/MMBtu (HHV), Rule 1118.1, Rule 1303(a)(1)-BACT/LAER
CO:	3.28 lb/hr, Rule 1303(b)(1)-Modeling, Rule 1303(b)(2)-Offset
CO:	2,394.40 lb/month, Rule 1313(g)
NOx:	0.025 lb/MMBtu (HHV), Rule 1118.1, Rule 1303(a)(1)- BACT/LAER
NOx:	1.37 lb/hr, Rule 1303(b)(1)-Modeling, Rule 1303(b)(2)-Offset
NOx:	1,000.10 lb/month, Rule 1313(g)
PM:	Rule 404, see Appendix B for emissions limits
PM:	0.1 gr/scf, Rule 409
PM10:	1.20 lb/hr, Rule 1303(b)(1)-Modeling, Rule 1303(b)(2)-Offset
PM10:	876.00 lb/month, Rule 1313(g)
SOx:	1.52 lb/hr, Rule 1303(b)(2)-Offset
SOx:	1,109.60 lb/month, Rule 1313(g)
SOx:	150 ppmv in inlet, total sulfur as H2S, Rule 431.1
VOC:	1.22 lb/hr, Rule 1303(b)(2)-Offset
VOC:	890.60 lb/month, Rule 1313(g)
Methane:	99 wt% methane destruction efficiency, Rule 1150.1
NMOC:	98 wt % destruction efficiency or < 20 ppmv, hexane, 3% O2 dry, Rule 1150.1, 40 CFR 63 Subpart AAAA

FACILITY PERMIT TO OPERATE
RIV CO., WASTE MGMT, BADLANDS LANDFILL

PERMIT TO CONSTRUCT/OPERATE

Permit No. G80544
A/N 647568

Equipment Description:

Modifications to existing Landfill Gas Collection System (Previously Permit No. R-G48355), consisting of (as of July 2025):

1. Sixty-seven (67) vertical gas extraction wells, ranging from 30 to 220 feet deep, 3" – 6" Dia., perforated PVC or HDPE pipes.

2. Seventy-three (73) horizontal gas extraction wells, ranging from 300 to 1100 feet long, 6" – 8" Dia., perforated PVC or HDPE pipes.

3. Laterals and headers, 3"– 16" Dia. HDPE ducts, connecting the vertical and horizontal wells to a gas treatment facility.

4. Landfill gas collection from the leachate collection system.

By the addition of:

5. Fifty (50) vertical gas extraction wells, ranging from 40 to 220 feet deep, 3"– 6" Dia., perforated Stainless Steel, PVC or HDPE pipes.

6. One-hundred (100) horizontal gas extraction wells, 6" – 8" Dia., perforated Stainless Steel, PVC or HDPE pipes.

7. Laterals and headers, 3"– 24" Dia. HDPE ducts, connecting the vertical and horizontal wells to a gas treatment facility.

Conditions:

1. Operation of this equipment shall be conducted in accordance with all data and specifications submitted with the application under which this permit is issued, unless otherwise noted below.
[Rule 204]

2. This equipment shall be properly maintained and kept in good operating condition at all times.
[Rule 204]

3. This equipment shall be operated and maintained by personnel properly trained in its operation.
[Rule 204]

4. South Coast AQMD shall be notified in writing when work on this system commences and when it is completed. Such notification shall occur at least two (2) days prior to the commencement and within five (5) days after the completion of the work.
[Rule 204, 1150.1]

FACILITY PERMIT TO OPERATE
RIV CO., WASTE MGMT, BADLANDS LANDFILL

5. The South Coast AQMD shall be notified in writing at least one (1) week in advance when an additional well or set of wells and their associated piping will be installed. The proposed well locations and connecting piping shall be identified on a drawing which show the entire gas collection system and shall be described in writing. Estimated gas collection volume, well depths, pipe lengths, diameters and layouts shall be supplied to the South Coast AQMD in this advance notification.
[Rule 204, 1150.1]

6. Well drilling, driving, and/or trenching shall not be conducted between the hours of 5 P.M. and 7 A.M. or on Saturdays, Sundays or legal holidays, unless otherwise approved by the South Coast AQMD.
[Rule 402, Rule 1150]

7. Well drilling, driving, and/or trenching shall not be conducted on days when the South Coast AQMD forecasts first, second or third stage episodes for Area No. 28, or when the South Coast AQMD requires companies in Area No. 28 to implement their first, second or third stage episode plans. Episode forecasts for the following day can be obtained by calling 1-800- CUT-SMOG.
[Rule 402, Rule 1150]

8. Well drilling, driving, and/or trenching shall not be conducted on days when the wind speed is greater than 15 M.P.H. average (over 15 minutes) or the wind speed instantaneously exceeds 25 M.P.H.
[Rule 402, Rule 1150]

9. During vertical well drilling, an approved emission control box shall be placed over the well hole to collect landfill gas. The collected gas shall either be directed to an operating landfill gas flare system or other appropriate air pollution control system which has adequate landfill gas volumetric flow rate processing capacity and a valid permit issued by the South Coast AQMD.
[Rule1150.1, Rule 1303(a)(1)-BACT]

10. Each well shall be completed and capped the same day its construction commences unless the well hole is completely sealed, and the well casing is connected to the operating gas collection header to prevent any landfill gas from escaping into the atmosphere.
[Rule 402, Rule 1150]

11. The construction of any piping or well trenching which exposes landfill refuse to the atmosphere shall be staged such that no more than one hundred (100) linear feet is exposed at any time prior to backfilling.
[Rule 402, Rule 1150]

12. Well holes, trenches and exposed landfill refuse shall be completely covered to prevent any emission of landfill gas to the atmosphere whenever work is not actively in progress. The cover shall include, but may not be limited to, a minimum of 6 inches of clean dirt, approved foam, or heavy-duty plastic sheeting. Foam by itself shall not be used as a night cover if it is raining or rain is predicted by the National Weather Service prior to the next scheduled working day.
[Rule 402, Rule 1150]

13. For purposes of this permit, construction spoils are landfill refuse, material that is mixed with landfill refuse, material that has been in contact with landfill refuse, or odorous material that is removed from well holes or trenches.
[Rule 1150]

FACILITY PERMIT TO OPERATE
RIV CO., WASTE MGMT, BADLANDS LANDFILL

14. All construction spoils shall be transported to the active working face of the landfill within one (1) hour of generation or as deemed necessary by South Coast AQMD personnel. If the landfill is closed and the working face is unavailable, all construction spoils shall be deposited directly into the truck or trailer bed which shall haul the construction spoils off site for disposal at the end of each working day. The truck beds or trailers hauling the construction spoils shall be completely covered with an impermeable cover with such covers tied down. All seams shall be sealed to prevent any material from escaping during transport.
[Rule 402, Rule 1150]

15. During transport of the construction spoils, no material shall extend above the sides or rear of the vehicle hauling the material.
[Rule 402, Rule 1150]

16. The exterior of the vehicle (including the tires) hauling the construction spoils shall be cleaned off prior to leaving the working site.
[Rule 402, Rule 1150]

17. During well drilling, driving, and/or trenching, all working areas, excavated material, and unpaved roadways shall be maintained in a moist condition to minimize dust and emissions.
[Rule 402, Rule 1150]

18. If a distinct odor level (Level 3 or greater) resulting from the construction is detected at or beyond the property line, all work shall cease until the odor sources are determined and eliminated. Odor levels shall be determined by South Coast AQMD personnel or on-site safety coordinator in the absence of South Coast AQMD personnel.

Odor Scale	Description of Odor Intensity
0	No odor detected
1	Very light odor detected
2	Light odor detected, distinguishable
3	Moderate odor, very distinguishable
4	Strong odor, very distinguishable, irritable
5	Very strong odor, very distinguishable, overpowering and intolerable

[Rule 402, Rule 1150]

19. During well drilling, driving, and/or trenching, if a considerable number of complaints are received, all work shall cease, and approved mitigation measures shall be implemented immediately. Work shall not resume until the emissions causing the complaints are mitigated and the approval to resume work is received from the South Coast AQMD.
[Rule 402, Rule 1150]

20. Prior to connecting any landfill gas collection line to the collection system, each piping line shall be sealed at both ends to prevent landfill gas from escaping from the line into the atmosphere.
[Rule 1150, Rule 1150.1]

21. Each vertical and horizontal well head shall be equipped with a shut-off valve and a sampling port.
[Rule 1150.1, Rule 1303(a)(1)-BACT]

22. Until connected to an operating landfill gas collection system, each completed well shall be capped and its gas control valve closed to avoid venting landfill gas to the atmosphere.
[Rule 1150.1, Rule 1303(a)(1)-BACT]

23. Each well shall be securely sealed to prevent any emissions of landfill gas from around the well casing.
[Rule 1150, Rule 1150.1]

24. All openings of the landfill gas collection system shall be properly sealed to prevent escape of gas into the atmosphere.
[Rule 402, Rule 1150]

25. All gases collected by this system shall be vented to a combustion or gas processing system which is in full use, can adequately process the volume of gas collected, and has been issued a valid Permit to Construct or Operate by the South Coast AQMD.
[Rule 1150.1, Rule 1303(a)(1)-BACT]

26. Operation of this equipment shall not result in the release of raw landfill gas or condensate into the atmosphere.
[Rule 402, 1150.1]

27. Any breakdown of the equipment which results in a violation of any rule or permit condition not specified in Rule 430(b)(3)(B) shall be reported to the South Coast AQMD within one hour of breakdown, or within one hour of the time said person knew or reasonably should have known of its occurrence.
[Rule 430]

28. Any malfunction which results in emissions of raw or treated landfill gas prior to combustion shall be reported to the South Coast AQMD (1-800-CUT-SMOG) within one hour of occurrence, or within one hour of the time the owner or operator knew or reasonably should have known of its occurrence, and immediate remedial measures shall be undertaken to correct the problem and prevent further emissions into the atmosphere.
[Rule 204, 402,1150.1]

29. All landfill gas condensate shall be disposed of properly.
[Rule 402, Rule 1150]

30. Mitigation measures, other than those indicated in these conditions, which are deemed appropriate by South Coast AQMD personnel as necessary to protect the comfort, repose, health or safety of the public shall be implemented upon request.
[Rule 1150.1]

31. This Permit to Construct shall expire if construction of the equipment is not completed within one year from the date of issuance of this permit unless an extension is granted by the South Coast AQMD. At least 30 days prior to the expiration date of the Permit to Construct, the operator shall make a written request for and obtain an extension of time to construct this equipment on an annual basis until such time construction is completed and a written notification has been submitted reporting the date construction was completed and the date operation of the equipment is intended to be operated. Each extension request shall include the following:
    A. The permit number and application number for which an extension is requested.
    B. The increments of construction progress that have been completed thus far, with schematics, specification, and/or photos (if available).
    C. The increments of construction progress that have yet to be completed for construction to be completed.
    D. Explanation and description of any delays or circumstances necessitating the extension.
    E. The proposed date of extension being requested for the Permit to Construct.
[Rule 205]

32. As-built drawings showing trench locations, landfill gas well locations, line sizes, and associated piping shall be submitted to the South Coast AQMD within thirty (30) days after construction is completed. [Rule 204, 1150.1]

33. The operator shall keep and maintain adequate records for this equipment to verify compliance with the conditions of this permit for at least five years and made available to South Coast AQMD personnel upon request. These records shall be prepared in a format which is acceptable to the South Coast AQMD. [Rule 204, Rule 1150.1]

Emissions and Requirements:

34. This equipment is subject to the applicable requirements of the following rules and regulations:

Gaseous emissions: Rule 1150.1
Gaseous emissions: 40 CFR 60 Subpart XXX
Gaseous emissions: 40 CFR 63 Subpart AAAA

FACILITY PERMIT TO OPERATE
RIV CO., WASTE MGMT, BADLANDS LANDFILL

RULE 219 EQUIPMENT

Equipment Description:

Rule 219 exempt equipment, coating equipment, portable, architectural coatings.

Periodic monitoring:

1. The operator shall keep records, in a manner approved by the South Coast AQMD, for the following parameter(s) or item(s):

   For architectural applications where no thinners, reducers, or other VOC containing materials are added, maintain semi-annual records of all coatings consisting of:

   A. Coating type,
   B. VOC content as supplied in grams per liter (g/L) of materials for low-solids coatings,
   C. VOC content as supplied in g/L of coating, less water and exempt solvent, for other coating.

   For other architectural applications where thinners, reducers, or other VOC containing materials are added, maintain daily records for each coating consisting of:

   A. Coating type,
   B. VOC content as applied in grams per liter (g/L) of materials used for low-solids coatings,
   C. VOC content as applied in g/L of coating, less water and exempt solvent, for other coating.

   [Rule 3004(a)(4)]

Emissions and Requirements:

2. This equipment is subject to the applicable requirements of the following rules and regulation:

   VOC: Rule 1113, see Appendix B for emission limits

FACILITY PERMIT TO OPERATE
RIV CO., WASTE MGMT, BADLANDS LANDFILL

RULE 219 EQUIPMENT

Equipment Description:

Rule 219 exempt equipment, hand wiping operations.

Emissions and Requirements:

1. This equipment is subject to the applicable requirements of the following rules and regulation:

   VOC: Rule 109
   VOC: Rule 1171, see Appendix B for emission limits

FACILITY PERMIT TO OPERATE
RIV CO., WASTE MGMT, BADLANDS LANDFILL

RULE 219 EQUIPMENT

Equipment Description:

Rule 219 exempt equipment, fire extinguishing equipment.

Emissions and Requirements:

1. This equipment is subject to the applicable requirements of the following rules and regulation:

   Halon: Rule 1418
   VOC: Rule 1171, see Appendix B for emission limits

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South Coast Air Quality Management District
21865 Copley Drive, Diamond Bar, CA 91765-4178

FACILITY PERMIT TO OPERATE

RIV CO, WASTE RESOURCES MGMT DIST, LAMB
16411 LAMB CANYON RD HWY 79
BEAUMONT, CA 92223

NOTICE

IN ACCORDANCE WITH RULE 206, THIS PERMIT TO OPERATE OR A COPY THEREOF MUST BE KEPT AT THE LOCATION FOR WHICH IT IS ISSUED.

THIS PERMIT DOES NOT AUTHORIZE THE EMISSION OF AIR CONTAMINANTS IN EXCESS OF THOSE ALLOWED BY DIVISION 26 OF THE HEALTH AND SAFETY CODE OF THE STATE OF CALIFORNIA OR THE RULES OF THE SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT. THIS PERMIT SHALL NOT BE CONSTRUED AS PERMISSION TO VIOLATE EXISTING LAWS, ORDINANCES, REGULATIONS OR STATUTES OF ANY OTHER FEDERAL, STATE OR LOCAL GOVERNMENTAL AGENCIES.

Wayne Nastri
Executive Officer

By Thomas H. Liebel for
Amir Dejbakhsh
Deputy Executive Officer
Engineering and Permitting

South Coast Air Quality Management District
21865 Copley Drive, Diamond Bar, CA 91765-4178

FACILITY PERMIT TO OPERATE
RIV CO, WASTE RESOURCES MGMT DIST, LAMB

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South Coast Air Quality Management District
21865 Copley Drive, Diamond Bar, CA 91765-4178

FACILITY PERMIT TO OPERATE
RIV CO, WASTE RESOURCES MGMT DIST, LAMB

SECTION A: FACILITY INFORMATION

LEGAL OWNER &/OR OPERATOR:	RIV CO, WASTE RESOURCES MGMT DIST, LAMB
LEGAL OPERATOR (if different than owner):	
EQUIPMENT LOCATION:	16411 LAMB CANYON RD HWY 79 BEAUMONT, CA 92223
MAILING ADDRESS:	14310 FREDERICK ST MORENO VALLEY, CA 92553
RESPONSIBLE OFFICIAL:	HANS KERNKAMP
TITLE:	GENERAL MANAGER - CHIEF ENGINEER
TELEPHONE NUMBER:	(951) 486-3232
CONTACT PERSON:	NOAH RAU
TITLE:	SENIOR CIVIL ENGINEER
TELEPHONE NUMBER:	(951) 486-3267
TITLE V PERMIT ISSUED:	March 28, 2014
TITLE V PERMIT EXPIRATION DATE:	March 27, 2019

TITLE V	RECLAIM	
YES	NOx:	NO
	SOx:	NO
	CYCLE:	0
	ZONE:	INLAND

South Coast Air Quality Management District
21865 Copley Drive, Diamond Bar, CA 91765-4178

FACILITY PERMIT TO OPERATE
RIV CO, WASTE RESOURCES MGMT DIST, LAMB

SECTION B: RECLAIM ANNUAL EMISSION ALLOCATION

NOT APPLICABLE

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SECTION C: FACILITY PLOT PLAN

(TO BE DEVELOPED)

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Facility Description and Equipment Specific Conditions
(Section D)

This section consists of a table listing all permitted equipment at the facility, facility wide requirements, all individual Permits to Construct/Operate and Permits to Operate issued to various equipment at the facility, and Rule 219-exempt equipment subject to source-specific requirements. Each permit and Rule 219-exempt equipment will list operating conditions including periodic monitoring requirements and applicable emission limits and requirements that the equipment is subject to. Also included is the rule origin and authority of each emission limit and permit condition.

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PERMITTED EQUIPMENT LIST

The following is a list of all Permits to Construct/Operate and Permits to Operate at this facility:

Application No.	Permit No.	Equipment Description	Page
525693	G26969	Landfill condensate/leachate collection system	6
581381	G47426	Material screening system, dirt	9
595802	G48761	Landfill gas collection (>50 wells) system	10
601900	G63525	Landfill gas flaring system, enclosed flare, 167 MMBtu/hr	14
604470	G63527	Landfill gas flaring system, enclosed flare, 42 MMBtu/hr	20

NOTE: Permits to Construct (if any) are listed in Section H of this facility permit. Any other applications that are still being processed and have not been issued Permits to Construct or Permits to Operate will not be found in this Title V Permit.

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FACILITY WIDE CONDITION(S)

Condition(s):

1. Except for open abrasive blasting operations, the operator shall not discharge into the atmosphere from any single source of emissions whatsoever any air contaminant for a period or periods aggregating more than three minutes in any one hour which is:

   A. As dark or darker in shade as that designated No. 1 on the Ringlemann Chart, as published by the United States Bureau of Mines; or

   B. Of such opacity as to obscure an observer's view to a degree equal to or greater than does smoke described in subparagraph (A) of this condition.

   [Rule 401]

2. The operator shall not use fuel oil containing sulfur compounds in excess of 0.05 percent by weight.
   [Rule 431.2]

3. The operator shall not use landfill gas containing sulfur compounds in excess of 150 ppmv calculated as hydrogen sulfide averaged daily.
   [Rule 431.1]

4. The owner/operator of a municipal solid waste (MSW) landfill shall comply with the following:

   A. Install and operate a wind speed and direction monitoring system with a continuous recorder. For wind speed, use a 3 cup assembly with a range of 0 to 50 miles an hour, with a threshold of 0.75 mile per hour or less. For wind direction, use a vane with a range of 0 to 540 degrees azimuth, with a threshold of plus-minus 2 degrees. An approved alternative may be used in lieu of the above.

   B. Monitor and collect monthly, or as per the approved Rule 1150.1 alternative, samples for analysis of TOC and TAC from the subsurface refuse boundary sampling probes.

   C. Operate the collection system to prevent the concentration of TOC measured as methane from exceeding 5% by volume in the subsurface refuse boundary sampling probes.

   D. Collect monthly, or as per the approved Rule 1150.1 alternative, integrated samples for analysis of TOC and TAC from the landfill surface.

   E. Operate the gas collection and control system to prevent the concentration of TOC measured as methane from exceeding 25 ppmv as determined by integrated samples taken on numbered 50,000 square foot landfill grids or as per the approved Rule 1150.1 alternative

   F. Monitor quarterly, or as per the approved Rule 1150.1 alternative, the landfill surface for TOC.

   G. Operate the gas collection and control system to prevent the concentration of TOC measured as methane from exceeding 500 ppmv above background as determined by instantaneous monitoring at any location on the landfill, except at the outlet of any control device.

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H. Operate the gas collection and control system so that there are no leaks that exceed 500 ppmv TOC measured as methane at any component under positive pressure.

I. Collect monthly, or as per the approved Rule 1150.1 alternative, landfill gas samples for analysis of TOC and TAC from the main gas collection header line entering the gas treatment and/or gas control system.

J. Collect monthly, or as per the approved Rule 1150.1 alternative, ambient air samples for analysis of TOC and TAC from the landfill property boundary.

K. Operate the gas collection and control system at all times for landfills with active collection systems.

L. Operate all wellheads so the gauge pressure is under a constant vacuum, except during well head raising and/or repair and temporary shutdown due to a catastrophic event.

[Rule 1150.1]

5. The owner/operator of a MSW landfill shall comply with the following:

A. Operate the collection system such that the gas is collected from each area, cell or group of cells of the landfill in which the initial solid waste has been in place for a period of;
   1. 5 years or more if active; or
   2. 2 years or more if closed or at final grade

B. Operate the collection system with negative pressure at each well-head except under the following conditions:
   1. During a fire or increased well temperature – the owner/operator shall record the instances when positive pressure occurs in efforts to prevent a fire. This report shall be submitted with the annual reports as provided in §60.757(f)(1).
   2. Whenever a geomembrane or synthetic cover is in place- the owner/operator shall develop acceptable pressure limits in the design plan.
   3. When a well is decommissioned – a well may experience a static positive pressure after shut down to accommodate for declining flows. All design changes shall be approved by the Administrator.

C. Operate each interior wellhead in the collection system with a landfill gas temperature less than 55 degrees Celsius and with either a nitrogen level less than 20% or an oxygen level less than 5% as determined by methods described in §60.753(c).

D. Operate the collection system so that the methane concentration is less than 500 ppm above background at the surface of the landfill as determined in accordance with monitoring procedures specified in §60.753 and 60.754.

E. Operate the collection system such that all collected gases are vented to a control system designed and operated in compliance with §60.752(b)(2)(iii).

F. Operate the collection and control system in compliance with test methods and procedures of §60.754

G. Operate the collection and control system in compliance with compliance provisions of §60.755

H. Operate the collection and control system in compliance with monitoring procedures of §60.756

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I. Operate the collection and control system in compliance with reporting requirements of §60.757

J. Operate the collection and control system in compliance with record keeping requirements of §60.758
[Gaseous Emissions: 40CFR60 Subpart WWW]

6. This facility is subject to the applicable requirements of the following rules and regulations:

Gaseous Emissions: Rule 1150.1
Gaseous Emissions: 40 CFR 60 Subpart WWW, 40 CFR 63 Subpart AAAA
[Rule 1150.1, 40 CFR 60 Subpart WWW, 40 CFR 63 Subpart AAAA]

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PERMIT TO CONSTRUCT/OPERATE

Permit No. G26969
A/N 525693

Equipment Description:

Alteration/modification to landfill condensate/leachate storage system consisting of:

1. One (1) condensate tank, 4000 gallons, HDPE, vented to a 55 gallons activated carbon drum, with a secondary containment tank, HDPE, 4400 gallons, vented to a 55 gallons activated carbon drum.

2. One (1) condensate tank, 4500 gallons, HDPE, vented to a 55 gallons activated carbon drum, with a secondary containment tank, HDPE, 5000 gallons, vented to a 55 gallons activated carbon drum.

3. Two leachate tanks, 5000 gallons each, vented to a carbon canister, with a secondary containment tank, 6000 gallons.

By removal of:

4. Two leachate tanks, 5000 gallons each, vented to a carbon canister, with a secondary containment tank, 6000 gallons.

By addition of:

5. One (1) condensate tank, 3800 gallons, HDPE, vented to a 55 gallons activated carbon drum, with a secondary containment tank, HDPE, 4500 gallons, vented to a 55 gallons activated carbon drum.

6. One (1) leachate tank, 10,500 gallons, vented to a 55 gallons activated carbon drum, with a secondary containment structure.

7. One (1) condensate tank, 10,500 gallons, vented to a 55 gallons activated carbon drum, with a secondary containment structure.

8. One (1) backup overflow tank for the leachate and condensate tank, 10,000 gallons, vented to a 55 gallons activated carbon drum, with a secondary containment structure.

Conditions:

1. Operation of this equipment shall be conducted in accordance with all data and specifications submitted with the application under which this permit is issued unless otherwise noted below.
[Rule 204]

2. This equipment shall be properly maintained and kept in good operating condition at all times.
[Rule 204]

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3. This equipment shall be operated by personnel properly trained in its operation.
[Rule 204]

4. Construction shall not be conducted on days when the AQMD forecasts first, second or third stage episodes for Area No. 29, or when the AQMD requires companies in Area No. 29 to implement their first, second or third stage episode plans. Episode forecasts for the following day can be obtained by calling (800) 242-4666.
[Rule 402, Rule 1150]

5. Construction shall not be conducted between the hours of 5 P.M. and 7 A.M. on weekdays and during all hours on Saturdays, Sundays, and legal holidays unless otherwise approved by the AQMD.
[Rule 402, Rule 1150]

6. Construction shall not be conducted when the wind speed is greater than 15 m.p.h. average (over 15 minutes) or the instantaneous wind speed exceeds 25 m.p.h.
[Rule 402, Rule 1150]

7. The construction of any piping or well trench which exposes landfill trash to the atmosphere shall be staged such that no more than one hundred (100) linear feet of trench is exposed at any time prior to backfilling.
[Rule 402, Rule 1150]

8. Trenches and exposed landfill trash shall be completely covered to prevent emissions of landfill gas to the atmosphere whenever work is not actively in progress. The cover shall include, but may not be limited to, a minimum of 6 inches of clean dirt, approved foam, or heavy-duty plastic sheeting. Foam by itself shall not be used as a night cover if it is raining or when rain is predicted by the national weather service prior to the next scheduled working day.
[Rule 402, Rule 1150]

9. For the purposes of this permit, construction spoils are landfill trash, material that is mixed with landfill trash, material that has been in contact with landfill trash, or odorous material that is removed from well holes or trenches.
[Rule 1150]

10. Construction spoils and all working areas being actively used for truck and construction equipment trafficking shall be maintained in a moist condition to minimize dust and emissions.
[Rule 402, Rule 1150]

11. Construction spoils shall not be stockpiled on site. All construction spoils shall be deposited directly into the truck or trailer bed which will haul it off site for disposal. The truck beds or trailers hauling the construction spoils shall be completely covered with an impermeable cover with such covers tied down. All seams shall be sealed to prevent any material from escaping during transport.
[Rule 402, Rule 1150]

12. During transport of the construction spoils, no material shall extend above the sides or rear of the vehicle hauling the material.
[Rule 402, Rule 1150]

13. The exterior of the vehicle (including the tires) hauling the construction spoils shall be cleaned off prior to leaving the working site.
[Rule 402, Rule 1150]

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14. If a distinct odor level (Level III or greater) resulting from the construction is detected at or beyond the property line, all work shall cease until the odor sources are determined and eliminated. Odor levels shall be determined by AQMD personnel or on-site safety coordinator in the absence of AQMD personnel.
[Rule 402, Rule 1150]

15. During construction, if a considerable number of complaints are received, all work shall cease and approved mitigation measures shall be implemented immediately. Work shall not resume until the emissions causing the complaints are mitigated and the approval to resume work is granted by the AQMD.
[Rule 402, Rule 1150]

16. Mitigation measures, other than those indicated in these conditions, which are deemed appropriate by AQMD personnel as necessary to protect the comfort, repose, health or safety of the public shall be implemented upon request.
[Rule 1150.1]

17. The AQMD shall be notified in writing when work on this system commences and when it is completed. Such notification shall occur at least two days prior to the commencement and within five days after the completion of the work.
[Rule 1150.1]

18. All condensate/leachate collected shall be disposed of and/or treated properly.
[Rule 402, Rule 1150]

19. Emissions from the outlets of any carbon canister shall not exceed 50 ppm total organic compounds measured as methane. Measurements shall be made at least monthly using approved methods.
[Rule 1303(a)(1)-BACT]

20. All connections, valves and openings shall be properly sealed or closed so as to prevent raw landfill gas and/or condensate/leachate vapors from entering into the atmosphere.
[Rule 402, Rule 1150]

21. All records required to verify compliance with the conditions of this permit shall be kept for a period of at least two years and shall be made available to AQMD personnel upon request.
[Rule 1150.1]

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PERMIT TO CONSTRUCT/OPERATE

Permit No. G47426
A/N 581381

Equipment Description:

Material Screening System, Extec, Model S-5 (self-propelled), consisting of:
1. Receiving hopper with 40-in wide conveyor
2. Double deck screen box, 8' W. x 5' L. upper box (fines) , 8' W. x 5' L. lower box (grader)
3. Main conveyor, 3'- 3" W. x 36'-6" L.
4. Tail conveyor, 3'-11" W. x 23'-5" L.
5. Side conveyor, 2'-4" W. x 31'-10" L.

Conditions:

1. Operation of this equipment shall be conducted in accordance with all data and specifications submitted with the application under which this permit is issued unless otherwise noted below.
[Rule 204]

2. This equipment shall be properly maintained and kept in good operating condition at all times.
[Rule 204]

3. The total volume of material processed through this system shall not exceed 1000 cubic yards in any one day, and 21,667 cubic yards in any one month.
[Rule 405, Rule 1303(b)(2)-Offset, Rule 1313(g)-Emission Limitation]

4. The water sprayer shall be adequately utilized in order to maintain the moisture of the material processed to prevent excessive dust emissions.
[Rule 403, Rule 1303(a)(1)-BACT]

5. There shall be no visible emissions beyond the property line on which the equipment is being operated.
[Rule 403]

Periodic Monitoring:

6. A daily operational log for material processed shall be maintained and shall include the date of operation and the weight of material processed. All records shall be kept for a minimum of five years and shall be made readily available to SCAQMD personnel upon request.
[Rule 3004(a)(4)-Periodic Monitoring]

Emissions and Requirements:

7. This equipment is subject to the applicable requirements of the following rules and regulations:

PM: Rule 405, see Appendix B for emission limits

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PERMIT TO CONSTRUCT/OPERATE

Permit No. G48761
A/N 595802

Equipment Description:

Modification of an existing landfill gas collection system consisting of:

1. Forty-Two (42) Vertical Gas Extraction Wells, ranging from 30 to 180 feet deep, 3 to 6 inches diameter, perforated PVC or HDPE.

2. Twenty-Seven (27) Horizontal Gas Extraction wells, 6"-8" diameter, perforated PVC or HDPE, ranging from 400 to 1650 feet in length.

3. Laterals and Headers, 3 to 16 inches diameter, HDPE, connecting the vertical and horizontal wells to a gas treatment facility.

4. Landfill Gas Collection from the leachate collection system

By the addition of:

1. Fifty (50) Vertical Gas Extraction Wells, ranging from40 to 220 feet deep, 3 to 6 inches diameter, perforated PVC or HDPE.

2. Seventy-four (74) Horizontal Gas Extraction Wells, 6 to 8 inches diameter, perforated PVC or HDPE.

3. Laterals and Headers, 3 to 24 inches diameter, HDPE, connecting the vertical and horizontal wells to a gas treatment facility.

Conditions:

1. Operation of this equipment shall be conducted in accordance with all data and specifications submitted with the application under which this permit is issued, unless otherwise noted below.
[Rule 204]

2. This equipment shall be properly maintained and kept in good operating condition at all times.
[Rule 204]

3. This equipment shall be operated and maintained by personnel properly trained in its operation.
[Rule 204]

4. All gases collected by this system shall be vented to a gas processing system which is in full use, can adequately process the volume of gas collected, and has been issued a valid permit to construct or operate by the AQMD.
[Rule 1150.1, Rule 1303(a)(1)-BACT]

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5. Prior to connecting any vapor extraction line to the collection system, each piping line shall be sealed at both ends to prevent landfill gas from escaping from the line into the atmosphere.
[Rule 1150, Rule 1150.1]

6. During vertical well drilling, an approved emission control box shall be placed over the well hole to collect landfill gas. The collected gas shall either be directed to an operating flare system which has a valid permit issued by the AQMD or vented to a carbon adsorption unit which has sufficient capacity to remove odors when there is no operational gas collection/flaring system available nearby.
[Rule 1150.1, Rule 1303(a)(1)-BACT]

7. Each vertical and/or horizontal well head shall be equipped with a shut-off valve and a sampling port.
[Rule 1150.1, Rule 1303(a)(1)-BACT]

8. Until connected to an operating landfill gas collection system, each completed well shall be capped and its gas control valve closed to avoid venting landfill gas to the atmosphere.
[Rule 1150.1, Rule 1303(a)(1)-BACT]

9. Each well shall be securely sealed to prevent any emissions of landfill gas from around the well casing.
[Rule 1150, Rule 1150.1]

10. As-built drawings showing the trench locations, vertical well locations, and line sizes shall be provided to the AQMD within 30 days after construction is completed.
[Rule 1150.1]

11. The AQMD shall be notified in writing when work on this system commences and when it is completed. Such notification shall occur at least two days prior to the commencement and within five days after the completion of the work.
[Rule 1150.1]

12. Well drilling, driving, and/or trenching shall not be conducted between the hours of 5 P.M. and 7 A.M. or on Saturdays, Sundays or legal holidays, unless otherwise approved by the AQMD.
[Rule 402, Rule 1150]

13. Well drilling, driving, and/or trenching shall not be conducted on days when the AQMD forecasts first, second or third stage episodes for Area No. 29, or when the AQMD requires companies in Area No. 29 to implement their first, second or third stage episode plans. Episode forecasts for the following day can be obtained by calling (800)242-4666.
[Rule 402, Rule 1150]

14. Well drilling, driving, and/or trenching shall not be conducted on days when the wind speed is greater than 15 M.P.H. average (over 15 minutes) or the wind speed instantaneously exceeds 25 M.P.H.
[Rule 402, Rule 1150]

15. During well drilling, driving, and/or trenching, all working areas, excavated material, and unpaved roadways shall be maintained in a moist condition to minimize dust and emissions.
[Rule 402, Rule 1150]

16. During well drilling, driving, and/or trenching, if a considerable number of complaints are received, all work shall cease and approved mitigation measures shall be implemented immediately. Work shall not resume until

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the emissions causing the complaints are mitigated and the approval to resume work is received from the AQMD.
[Rule 402, Rule 1150]

17. Well holes, trenches and exposed landfill trash shall be completely covered to prevent any emission of landfill gas to the atmosphere whenever work is not actively in progress. The cover shall include, but may not be limited to, a minimum of 6 inches of clean dirt, approved foam, or heavy-duty plastic sheeting. Foam by itself shall not be used as a night cover if it is raining or rain is predicted by the national weather service prior to the next scheduled working day.
[Rule 402, Rule 1150]

18. Each well shall be completed and capped the same day its construction commences unless the well hole is completely sealed and the well casing is connected to the operating gas collection header to prevent any landfill gas from escaping into the atmosphere.
[Rule 402, Rule 1150]

19. No more than 100 linear feet of trench, which exposes landfill trash to the atmosphere, shall be open at any time prior to backfilling, unless otherwise noted below.
[Rule 402, Rule 1150]

20. Excavated refuse may be placed along the trench edge upon removal from the trench. All excavated refuse shall be transferred to the working face within one hour of removal from the trench, unless otherwise noted below.
[Rule 402, Rule 1150]

21. If a distinct odor level (Level III or greater) resulting from the construction is detected at or beyond the property line, all work shall cease until the odor sources are determined and eliminated. Odor levels shall be determined by AQMD personnel or on-site safety coordinator in the absence of AQMD personnel.
[Rule 402, Rule 1150]

22. For purposes of this permit, construction spoils are landfill trash, material that is mixed with landfill trash, material that has been in contact with landfill trash, or odorous material that is removed from well holes or trenches.
[Rule 1150]

23. All construction spoils shall be transported to the active working face of the landfill within one hour of generation or as deemed necessary by the district personnel. If the landfill is closed and the working face is unavailable, all construction spoils shall be deposited directly into the truck or trailer bed which will haul it off site for disposal at the end of each working day. The truck beds or trailers hauling the construction spoils shall be completely covered with an impermeable cover with such covers tied down. All seams shall be sealed to prevent any material from escaping during transport.
[Rule 402, Rule 1150]

24. During transport of the construction spoils, no material shall extend above the sides or rear of the vehicle hauling the material.
[Rule 402, Rule 1150]

25. The exterior of the vehicle (including the tires) hauling the construction spoils shall be cleaned off prior to leaving the working site.
[Rule 402, Rule 1150]

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26. All condensate shall be disposed of properly.
[Rule 402, Rule 1150]

27. All openings of the gas collection system shall be properly sealed to prevent escape of gas into the atmosphere.
[Rule 402, Rule 1150]

28. Mitigation measures, other than those indicated in these conditions, which are deemed appropriate by AQMD personnel as necessary to protect the comfort, repose, health or safety of the public shall be implemented upon request.
[Rule 1150.1]

29. Within 30 days after construction of a well or a set of wells and their associated piping is complete, as-built drawings shall be submitted to the AQMD.
[Rule 1150.1]

30. All records shall be kept for at least five years in a form approved by the AQMD and made available upon request.
[Rule 1150.1]

31. The operation of this equipment shall not result in the release of any raw landfill gas or condensate into the atmosphere.
[Rule 402, Rule 1150]

32. The AQMD shall be notified in writing at least one (1) week in advance when an additional well or set of wells and their associated piping will be installed. The proposed well locations and connecting piping shall be identified on a drawing which show the entire gas collection system, and described. Estimated gas collection volume, well depths, pipe lengths, diameters and layouts shall be supplied to the AQMD in this advance notification.
[Rule 1150.1]

Emissions and Requirements:

33 This equipment is subject to the applicable requirements of the following rules and regulations:

Gaseous emissions: Rule 1150.1

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PERMIT TO CONSTRUCT/OPERATE

Permit No. G63525
A/N 601900

Equipment Description:

Landfill Gas Flaring (LFG) System, consisting of:

1. One (1) skid mounted HDPE moisture separator, with demister.
2. Two (2) landfill gas extraction blowers (one stand-by), maximum capacity 5,500 scfm each.
3. Two (2) thermal mass flow meters, insertion type, one each for landfill gas flow and combustion air flow.
4. One (1) flare inlet flame arrestor, 16" Dia.
5. One (1) combustion air blower, 34,500 scfm capacity, VFD.
6. Enclosed flare, Perennial Energy (PEI), Model Fl-164-50-EPN, 13' Dia. x 50' H., 5,500 scfm capacity, 150 MMBtu/hr (HHV), with four combustion air dampers (automatic combustion air control), one (1) biogas burner, a propane gas or natural gas fired pilot.
7. Automated shutoff/restart ignition system, one (1) self-checking ultraviolet flare scanner, one (1) burner flashback thermocouple, three (3) flare temperature monitoring thermocouples.

Conditions:

1. Construction and operation of this equipment shall be conducted in accordance with all data and specifications submitted with the applications under which this permit is issued, unless noted below otherwise.
[Rule 204]

2. This equipment shall be properly maintained and kept in good operating condition at all times.
[Rule 204]

3. This equipment shall be operated and maintained by personnel properly trained in its operation.
[Rule 204]

4. Identification tag(s) or nameplate(s) shall be displayed on the equipment to show manufacturer, model number, and the rated heat input capacity (HHV). The tag(s) or plate(s) shall be issued by the manufacturer and shall be affixed to the equipment in a permanent and conspicuous position.
[Rule 204, Rule 1118.1, Rule 1303(b)(1)-Modeling, Rule 1303(b)(2)-Offsets]

5. The flare shall be designed and operated so that the flame in the flare remains below the height of the flare's operating thermocouple at all times.
[Rule 1303(a)(1)-BACT]

6. Four (4) sampling ports shall be provided in the flare stack at least five (5) feet upstream of the flare outlet. Each sampling port shall consist of a four inch coupling. All ports shall be properly centered. An equivalent method of emission sampling may be used upon approval by the Executive Officer. Adequate and safe access to all source test ports shall be provided within 48 hours of notice by South Coast AQMD.
[Rule 217]

7. A sampling port shall be installed and maintained at the inlet gas line to the flare to allow landfill gas sampling and flow measurement.
[Rule 217, Rule 431.1, Rule 1150.1]

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8. The skin temperature of the flare stack within four feet of all the source test ports shall not exceed 250 degrees Fahrenheit. If a heat shield is required to meet this requirement, its design shall be approved by South Coast AQMD prior to construction. The heat shield, if required to meet the temperature requirement, shall be in place whenever a source test is conducted by South Coast AQMD.
[Rule 217]

9. The flare shall be equipped with a sufficient number of view ports to allow for visual inspection of the flare height within the flare at all times. The view ports shall be located at the elevation of the temperature sensor locations. Safe and adequate access shall be provided for all view ports upon request by South Coast AQMD personnel.
[Rule 217, Rule 1303(a)(1)-BACT]

10. The flare shall be equipped with an automatic shut-down system with a failure alarm, which has been approved by South Coast AQMD, to automatically isolate the flare from the landfill gas supply line, shut off the blower and immediately notify a responsible party of the shut-down.
[Rule 1303(a)(1)-BACT]

11. The automatic shutdown safety system shall be tested monthly for proper operation of this flare and the results recorded.
[Rule 1303(a)(1)-BACT]

12. A pressure differential indicator shall be maintained across the moisture separator demister pad.
[Rule 1303(a)(1)-BACT]

13. A pressure differential indicator shall be maintained across the flame arrestor.
[Rule 1303(a)(1)-BACT]

14. All recording devices shall be synchronized with respect to the time of day.
[Rule 1303(b)(2)-Offset]

15. This equipment shall be operated in compliance with all the applicable requirements of Rule 1118.1.
[Rule 1118.1]

16. The flare shall be equipped with a continuous temperature indicator and recorder which measures and records the gas temperature in the flare stack. The temperature indicator and recorder shall operate whenever the flare is in operation. The temperature shall be measured at a location above the flame zone at least 0.6 seconds downstream of the burner and not less than five (5) feet from the top of the stack.
[Rule 1150.1, Rule 1303(a)(1)-BACT, 40 CFR 60.756(b)(1)]

17. Whenever the flare is in operation, a temperature of not less than 1,400 degrees Fahrenheit, 15 minute average, as measured by the temperature indicator and recorder shall be maintained except during periods of startup and shutdown. Startup is defined as the period from flare ignition to the time when 1,400 degrees Fahrenheit is achieved, not to exceed 30 minutes. Shutdown is the period from when the gas valve begins to be shut and completely shuts off, not to exceed 30 minutes.
[Rule 1303(a)(1)-BACT]

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18. A flow indicator and recorder shall be maintained in the landfill gas supply line to the flare to measure and record the gas flow rate (in scfm) to the flare at least every fifteen minutes and shall operate whenever the flare is in operation.
[Rule 1150.1, Rule 1303(b)(2)-Offset, 40 CFR 60.756(b)(2)(i)]

19. The maximum LFG flowrate entering the flare shall not exceed 5,500 scfm.
[Rule 1303(b)(2)-Offset]

20. Weekly readings of the methane content and higher heating value (HHV) in the landfill gas shall be determined using an instrument and/or method approved by South Coast AQMD. Results shall be recorded and provided to South Coast AQMD upon request.
[Rule 1303(b)(1)-Modeling, Rule 1303(b)(2)-Offset]

21. The maximum heat input rate to flare shall not exceed 150 MMBtu per hour (HHV). A log shall be kept indicating the total heating value of landfill gas burned in each flare based on the recorded flow rate (scfm) and the latest weekly Btu content (Btu/scf) reading.
[Rule 1303(b)(1) and (b)(2)–Modeling and Offset, Rule 1401]

22. The flare shall be operated to reduce methane by at least 99% by weight.
[Rule 1150.1]

23. Emissions resulting from the flare shall not exceed the following:

Pollutant	lbs/day
NMOC	36.00
NOx	90.00
SOx as SO2	113.76
CO	216.00
PM10	47.52

[Rule 1303(a)(1)-BACT, Rule 1303(b)(1)-Modeling, Rule 1303(b)(2)-Offset]

24. The operator shall conduct an initial source test on flare within 60 days after the flare is completely operational but not later than 180 days after initial startup, in accordance with South Coast AQMD approved source test procedures, unless otherwise approved by South Coast AQMD. A source test protocol shall be submitted to South Coast AQMD for approval at least 30 days prior to the scheduled initial source test. All source testing shall be conducted in accordance with a valid South Coast AQMD approved source test protocol. Written notification of the scheduled test date shall be provided to South Coast AQMD at least seven (7) days prior to the date of testing so that the testing may be observed by South Coast AQMD personnel. The initial testing shall be conducted when the equipment is in full operation, and shall include, but not limited to, a test of the inlet to the flare and the flare exhaust for:

A. Methane.
B. Total Non-Methane Organic Compounds (TNMOC).
C. Toxic Air Contaminants (TAC) including, but not limited to Acrolein, Acetaldehyde, Formaldehyde, total PAHs, Naphthalene, Benzene, Benzyl Chloride, Chlorobenzene, Ethyl Benzene, 1,1,2,2–Tetrachloroethane, Acrylonitrile, 1,2 Dibromoethane, Dichlorobenzene, 1,2-Dichloroethane, 1,1-Dichoroethene, 1,1, Dichloroethylene, Dichloromethane, Tetrachloroethylene, Tetrachloromethane, Toluene, 1,1,1-Trichloroethane, Trichloroethylene, Trichloromethane, Vinyl Chloride, and Xylene Isomers (exhaust only).
D. NOx, as NO2 (exhaust only).

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E. CO (exhaust only).
F. Total Particulates (PM10) (exhaust only).
G. Total Sulfur Compounds as Hydrogen Sulfide (inlet only).
H. Oxygen and Carbon Dioxide.
I. Moisture Content.
J. Temperature.
K. Flowrates (inlet and exhaust).
L. Btu value (inlet only).
M. NMOC Destruction Efficiency.

[Rule 204, Rule 1150.1, Rule 1303(b)(1)-Modeling, Rule 1303(b)(2)-Offset, Rule 1401, Rule 3004(a)(4)-Periodic Monitoring, 40 CFR 60 Subpart WWW]

25. The operator shall conduct annual source tests subsequent to the initial test in accordance with South Coast AQMD approved source test procedures in accordance with Rule 1150.1 or other schedule according to an approved Rule 1150.1 Alternative Monitoring Plan, but at least once every five (5) years. All source testing shall be conducted in accordance with a valid South Coast AQMD approved source test protocol. Written notification of the scheduled test date shall be provided to South Coast AQMD at least seven (7) days prior to the date of testing so that the testing may be observed by South Coast AQMD personnel. The testing shall be conducted when the equipment is in full operation and shall include but not limited to a test of the inlet to the flare and the flare exhaust for:

A. Methane.
B. Total Non-Methane Organic Compounds (TNMOC).
C. Toxic Air Contaminants (TAC) (Rule 1150.1 Core List).
D. NOx as NO2 (exhaust only).
E. CO (exhaust only).
F. Total Particulates (PM10) (exhaust only).
G. Total Sulfur Compounds as Hydrogen Sulfide (inlet only).
H. Oxygen and Carbon Dioxide.
I. Moisture Content.
J. Temperature.
K. Flowrates (inlet and exhaust).
L. Btu value (inlet only).
M. NMOC Destruction Efficiency.

[Rule 204, Rule 1150.1, Rule 1303(b)(1)-Modeling, Rule 1303(b)(2)-Offset, Rule 1401, Rule 3004(a)(4)-Periodic Monitoring, 40 CFR 60 Subpart WWW]

26. The source test report, for the flare shall include:

A. Emissions of CO, NOx, TNMOC, methane, total PM (PM10), and SOx, reported in units of lbs/hr and ppmv (except particulates/PM10 which shall be in lbs/hr and gr/scf), overall TNMOC & methane destruction efficiency (wt%), speciated organic emissions (lbs/hr and ppmv), oxygen and carbon dioxide (volume%), total sulfur compounds as H2S (lbs/hr and ppmv), and TNMOC emissions (ppmv dry basis as hexane at 3% oxygen).
B. The test shall be performed by a testing laboratory certified to meet the criteria in South Coast AQMD Rule 304(k) (No Conflict of Interest).
C. Sampling facilities shall comply with South Coast AQMD "Guidelines for Construction of Sampling and Testing Facilities" pursuant to Rule 217.

[Rule 204, Rule 217, Rule 1150.1, Rule 1303(b)(1)-Modeling, Rule 1303(b)(2)-Offset, Rule 1401, 40 CFR 60 Subpart WWW]

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27. The exhaust stack shall have an inner diameter of 13 feet and the height shall be a minimum of 50' H.
[Rule 1401]

28. Operation of this equipment shall not result in the release of raw landfill gas into the atmosphere. Any breakdown or malfunction of this equipment resulting in the emission of raw landfill gas shall be reported to South Coast AQMD pursuant to Rule 430 requirements and immediate remedial measures shall be undertaken to correct the problem and prevent further emissions into the atmosphere.
[Rule 430]

29. All collected landfill gas shall be directed to the flare for combustion or to an adequately sized treatment system which has a valid Permit to Operate or does not require a written permit per South Coast AQMD Rule 219.
[Rule 1150.1, Rule 1303(a)(1)-BACT]

30. The exhaust temperature shall be maintained at a minimum of 1,400 degrees Fahrenheit averaged over 15-minute period whenever the equipment is in operation, excluding start up and shutdown. Startup is defined as the period from flare ignition to the time when 1,400 degrees Fahrenheit is achieved, not to exceed 30 minutes. Shutdown is the period from when the gas valve begins to be shut and completely shuts off, not to exceed 30 minutes.

The flare shall be equipped with a continuous exhaust temperature monitoring and recording system pursuant to the operation and maintenance requirements specified in 40 CFR 64.7 and the recording system shall be in operation when the flare is operating. Such a system shall have an accuracy of within ± 1% of the temperature being monitored and shall be inspected, maintained, and calibrated on an annual basis in accordance with the manufacturer's specifications using an applicable South Coast AQMD or EPA approved method.

For the purpose of this condition, a deviation shall be defined as when a 15-minute average temperature of less than 1,400 degrees Fahrenheit occurs during operation excluding start up and shutdown. The exhaust temperature shall be recorded at least once in every 15-minute period. The operator shall review the records of temperature on a daily basis to determine if a deviation occurred or shall install an alarm system to alert the operator when a deviation occurs.

For each semi-annual reporting period specified in Condition No. 23 in Section K, whenever an deviation occurs from 1,400 degrees Fahrenheit, the operator shall take immediate corrective action, and keep records of the duration and cause (including unknown cause, if applicable) of the deviation and the corrective action taken.

All deviations shall be reported to South Coast AQMD on a semi-annual basis pursuant to the requirements specified in 40 CFR 64.9 and Condition Nos. 22 and 23 in Section K of this permit.

The operator shall submit an application with a Quality Improvement Plan (QIP) in accordance with 40 CFR 64.8 to South Coast AQMD if an accumulation of deviation exceeds 5 percent duration of this equipment's total operating time for any semi-annual reporting period specified in Condition No. 23 in Section K of this permit. The required QIP shall be submitted to South Coast AQMD within 90 calendar days after the due date for the semi-annual monitoring report.

The operator shall keep adequate records in a format that is acceptable to South Coast AQMD to demonstrate compliance with all applicable requirements specified in this condition and 40 CFR 64.9 for a minimum of five years.
[40 CFR 64]

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31. This permit shall expire if construction of this equipment is not complete within one year from the date of issuance of this permit unless an extension is granted by the Executive Officer.
[Rule 205]

32. Within 30 days of construction completion of the flare, the owner or operator of this equipment shall provide to the South Coast AQMD the final equipment specifications (make, model, dimensions, size and maximum capacity), final flare system P&I diagrams, control diagrams, and other vendor data. The report shall indicate equipment location, start-up date, and application number. The report shall be submitted to:

South Coast AQMD
Toxics and Waste Management
Engineering and Permitting
21865 Copley Drive
Diamond Bar, CA 91765
[Rule 204]

33. All records shall be kept for a period of at least five (5) years and shall be made available to South Coast AQMD upon request. A record of the hours of flare operation shall be included.
[Rule 204, Rule 1118.1, Rule 1150.1]

Emissions and Requirements:

34. This equipment is subject to the applicable requirements of the following rules and regulations:

NMOC:	20 ppmv or 98% weight reduction, Rule 1150.1, 40 CFR 60 Subpart WWW, 40 CFR 63 Subpart AAAA
NMOC:	0.010 lb/MMBtu (HHV), Rule 1303(a)(1)-BACT/LAER
NMOC:	0.038 lb/MMBtu (HHV), Rule 1118.1
CO:	2000 ppmv, Rule 407
CO:	0.06 lb/MMBtu (HHV), Rule 1118.1, Rule 1303(a)(1)-BACT/LAER
NOx	0.025 lb/MMBtu (HHV), Rule 1118.1, Rule 1303(a)(1)-BACT/LAER
PM10:	6 lbs/MMscf, Rule 1303(a)(1)-BACT/LAER
PM:	0.1 gr/dscf, Rule 409
PM:	Rule 404, See Appendix B for emission limits
SOx:	150 ppmv in inlet, total sulfur as H2S, Rule 431.1
SOx:	60 ppmv (averaged monthly) & 85 ppmv (averaged daily) in inlet, total sulfur as H2S, Rule 1303(a)(1)-BACT/LAER

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PERMIT TO OPERATE

Permit No. G63527
A/N 604470

Equipment Description:

Landfill Gas Flaring System consisting of:

1. Liquid knockout/particulate removal vessel, John Zink, with demister.
2. Two (2) blowers, Houston Service Industries, Model 82, multistage centrifugal, each with a 60 HP motor, and one common VFD and pressure transmitter for VFD vacuum control, one blower as standby.
3. Flare No. 1, John Zink, 8'-8" Dia. x 40'-0" H., 46.6 MMBtu/hr (HHV), with a multi jet burner, a propane gas pilot, electric igniter, UV flame sensor, thermocouple with temperature indicator and recorder, automatic shutdown/restart and alarm system, automatic combustion air regulating system, temperature controller and a flame arrestor.

Conditions:

1. Operation of this equipment shall be conducted in accordance with all data and specifications submitted with the application under which this permit is issued, unless otherwise noted below.
[Rule 204]

2. This equipment shall be properly maintained and kept in good operating condition at all times.
[Rule 204]

3. This equipment shall be operated by personnel properly trained in its operation.
[Rule 204]

4. The flare shall be designed and operated so that the flame in the flare remains below the height of the flare's operating thermocouple at all times.
[Rule 1303(a)(1)-BACT]

5. The flare shall be equipped with a sufficient number of view ports to allow visual inspection of the flame height within each flare at all times. All view ports shall be located at the elevation of the temperature sensor location. Safe and adequate access to all view ports shall be provided upon request by South Coast AQMD personnel.
[Rule 217, Rule 1303(a)(1)-BACT]

6. All recording devices shall be synchronized with respect to the time of day.
[Rule 1303(b)(2)-Offset]

7. Four sampling ports shall be maintained in the flare stack at least one half duct diameter upstream of the flare outlet, 90 degrees apart. Each sampling port shall consist of a four-inch coupling with plug. All ports shall be properly centered. An equivalent method of emission sampling may be used upon approval by the South Coast AQMD. Adequate and safe access to all source test ports shall be provided within 48 hours' notice by the South Coast AQMD.
[Rule 217]

8. A sample port shall be installed at the inlet gas line to the flare to allow the collection of a landfill gas sample.
[Rule 217, Rule 431.1, Rule 1150.1]

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9. The flare shall be equipped with at least one temperature indicator and a recording device which measures and records the gas temperature in the flare stack. The temperature indicator and recorder shall operate whenever the flare is in operation. The temperature shall be measured at a location above the flame zone, at least 0.6 second downstream of the burner and not less than five feet from the top of the stack.
[Rule 1303(a)(1)-BACT]

10. Whenever a flare is in operation, a temperature of not less than 1,400 degrees Fahrenheit, as measured by the temperature indicator and recorder, shall be maintained in the flare stack.
[Rule 1303(a)(1)-BACT]

11. The automatic shut-down safety system shall be tested monthly for proper operation and results recorded.
[Rule 1303(a)(1)-BACT]

12. The flare shall be equipped with an automatic shut-down system with a failure alarm, which has been approved by the South Coast AQMD, to automatically isolate the flare from the landfill gas supply line, shut off the blower and immediately notify a responsible party of the shut-down.
[Rule 1303(a)(1)-BACT]

13. A flow indicating and recording device shall be installed in the landfill gas supply line to the flare to measure and record the quantity of landfill gas (in scfm) being burned in the flare.
[Rule 1303(b)(2)-Offset]

14. A flow indicating and recording device shall be installed in the condensate line to measure and record the condensate injection rate (in GPM) into the flare.
[Rule 1303(b)(2)-Offset]

15. The total volume of landfill gas burned in the flare shall not exceed 2,000 standard cubic feet per minute.
[Rule 1303(b)(2)-Offset, 1401]

16. The heat input to the flare shall not exceed 42.0 MMBtu/hr (LHV) and 46.6 MMBtu/hr (HHV).
[Rule 1303(b)(2)-Offset]

17. Weekly readings of Btu content of the gas at the inlet to the flare shall be taken using an instrument approved by the South Coast AQMD. All results shall be recorded.
[Rule 1303(b)(2)-Offset]

18. All landfill gas collected shall be directed either to the flare for combustion or to a treatment facility which has a valid Permit to Construct or Operate from the South Coast AQMD.
[Rule 1150.1, Rule 1303(a)(1)-BACT, 1401, 40 CFR 60 Subpart WWW, 40 CFR 63 Subpart AAAA]

19. The maximum skin temperature at any location shall not exceed 250 degrees Fahrenheit.
[Rule 217]

20. Operation of this equipment shall not result in the release of any raw landfill gas or condensate into the atmosphere. Any breakdown or malfunction which results in emissions of raw landfill gas shall be reported to the South Coast AQMD within one hour after occurrence, and immediate remedial measures shall be undertaken to correct the problem and prevent further emissions into the atmosphere.
[Rule 430]

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21. Emissions resulting from the flare shall not exceed the following:

Pollutant	lbs/day
NMHC as CH4 (Method 25.3)	11.28
NOx	25.20
SOx	41.28
CO	60.48
PM10	17.28

[Rule 1118.1, Rule 1303(a)(1)-BACT, Rule 1303(b)(2)-Offset]

22. This equipment shall be operated in compliance with all the applicable requirements of Rule 1118.1. [Rule 1118.1]

23. The applicant shall conduct annual source test and submit results in accordance with South Coast AQMD Rule 1150.1 requirements. Written notice of the tests shall be provided to the South Coast AQMD seven (7) days prior to the testing so that an observer may be present. All source testing and analytical methods shall be submitted to the South Coast AQMD for approval at least sixty (60) days prior to start of tests.

The tests shall be conducted at the maximum flow rates allowed by this permit, or the maximum flow rates achievable, and shall include, but may not be limited to, a test of the inlet gas to the flare(s) and the flare exhaust(s) for:

A. Methane
B. Total non-methane organics
C. Oxides of nitrogen (exhaust only)
D. Carbon monoxide (exhaust only)
E. Total particulates (exhaust only)
F. Hydrogen sulfide (inlet only)
G. C1 through C3 sulfur compounds (speciated, inlet only)
H. Carbon dioxide
I. Rule 1150.1 Table 1 compounds
J. Oxygen
K. Nitrogen
L. Moisture content
M. Temperature
N. Flow rates (inlet and exhaust)
O. NMOC destruction efficiency

[Rule 1118.1, Rule 1150.1, Rule 1303(a)(1)-BACT, Rule 1303(b)(2)-Offset, Rule 1401, 40 CFR Subpart WWW, 40 CFR 63 Subpart AAAA]

24. The exhaust temperature shall be maintained at a minimum of 1,400 degrees Fahrenheit averaged over 15-minute period whenever the equipment is in operation, excluding start up and shutdown. Startup is defined as the period from flare ignition to the time when 1,400 degrees Fahrenheit is achieved, not to exceed 30 minutes. Shutdown is the period from when the gas valve begins to be shut and completely shuts off, not to exceed 30 minutes.

The flare shall be equipped with a continuous exhaust temperature monitoring and recording system pursuant to the operation and maintenance requirements specified in 40 CFR Part 64.7 and the recording system shall be in operation when the flare is operating. Such a system shall have an accuracy of within ± 1% of the temperature being monitored and shall be inspected, maintained, and calibrated on an annual basis in accordance with the manufacturer's specifications using an applicable South Coast AQMD or EPA approved method.

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For the purpose of this condition, a deviation shall be defined as when a 15-minute average temperature of less than 1,400 degrees Fahrenheit occurs during operation excluding start up and shutdown. The exhaust temperature shall be recorded at least once in every 15-minute period. The operator shall review the records of temperature on a daily basis to determine if a deviation occurred or shall install an alarm system to alert the operator when a deviation occurs.

For each semi-annual reporting period specified in Condition No. 23 in Section K, whenever an deviation occurs from 1,400 degrees Fahrenheit, the operator shall take immediate corrective action, and keep records of the duration and cause (including unknown cause, if applicable) of the deviation and the corrective action taken.

All deviations shall be reported to the South Coast AQMD on a semi-annual basis pursuant to the requirements specified in 40 CFR Part 64.9 and Condition Nos. 22 and 23 in Section K of this permit.

The operator shall submit an application with a Quality Improvement Plan (QIP) in accordance with 40 CFR Part 64.8 to the South Coast AQMD if an accumulation of deviation exceeds 5 percent duration of this equipment's total operating time for any semi-annual reporting period specified in Condition No. 23 in Section K of this permit. The required QIP shall be submitted to the South Coast AQMD within 90 calendar days after the due date for the semi-annual monitoring report.

The operator shall keep adequate records in a format that is acceptable to the South Coast AQMD to demonstrate compliance with all applicable requirements specified in this condition and 40 CFR Part 64.9 for a minimum of five years.
[Rule 3004, 40 CFR Part 64]

25. All records shall be kept for a period of at least five years and shall be made available to the South Coast AQMD upon request.
[Rule 204, Rule 1118.1, Rule 1150.1, 40 CFR 60 Subpart WWW, 40 CFR 63 Subpart AAAA]

Emissions and Requirements:

26. This equipment is subject to the applicable requirements of the following rules and regulations:

NMOC:	20 ppmv at 3% O2 or 98% weight reduction, Rule 1150.1, 40 CFR WWW, & 40 CFR 63 Subpart AAAA
NMOC:	Rule 1118.1
NMOC:	0.010 lb/MMBtu (HHV), Rule 1303(a)(1)-BACT/LAER
NOX:	Rule 1118.1
NOX:	0.025 lb/MMBtu, Rule 1303(a)(1)-BACT/LAER
CO:	2,000 ppmv, Rule 407
CO:	Rule 1118.1
CO:	0.06 lb/MMBtu, Rule 1303(a)(1)–BACT/LAER
PM:	0.1 gr/dscf, Rule 409
PM:	Rule 404, see Appendix B for emission limits
PM10:	6 lbs/MMscf, Rule 1303(a)(1)-BACT/LAER
SOx:	60 ppmv (averaged monthly) & 85 ppmv (averaged daily) in inlet, total sulfur as H2S, Rule 1303(a)(1)-BACT/LAER

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RULE 219 EQUIPMENT

Equipment Description:

Rule 219 exempt equipment, coating equipment, portable, architectural coatings.

Periodic Monitoring:

1. The operator shall keep records, in a manner approved by the South Coast AQMD, for the following parameter(s) or item(s):

   For architectural applications where no thinners, reducers, or other VOC containing materials are added, maintain semi-annual records of all coatings consisting of:

   A. Coating type,
   B. VOC content as supplied in grams per liter (g/L) of materials for low-solids coatings,
   C. VOC content as supplied in g/L of coating, less water and exempt solvent, for other coating.

   For other architectural applications where thinners, reducers, or other VOC containing materials are added, maintain daily records for each coating consisting of:

   A. Coating type,
   B. VOC content as applied in grams per liter (g/L) of materials used for low-solids coatings,
   C. VOC content as applied in g/L of coating, less water and exempt solvent, for other coating.
   [Rule 3004(a)(4)]

Emissions and Requirements:

2. This equipment is subject to the applicable requirements of the following rules and regulation:

   VOC: Rule 1113, see Appendix B for emission limits

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RULE 219 EQUIPMENT

Equipment Description:

Rule 219 exempt equipment, hand wiping operations.

Emissions and Requirements:

1. This equipment is subject to the applicable requirements of the following rules and regulation:

   VOC: Rule 1171, see Appendix B for emission limits

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RULE 219 EQUIPMENT

Equipment Description:

Rule 219 exempt equipment, fire extinguishing equipment.

Emissions and Requirements:

1. This equipment is subject to the applicable requirements of the following rules and regulation:

   Halon: Rule 1418
   VOC: Rulw 1171, See Appendix B for emission limits

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SECTION E: ADMINISTRATIVE CONDITIONS

The operating conditions in this section shall apply to all permitted equipment at this facility unless superseded by condition(s) listed elsewhere in this permit.

1. The permit shall remain effective unless this permit is suspended, revoked, modified, reissued, denied, or it is expired for nonpayment of permit processing or annual operating fees. [201, 203, 209, 301]
   a. The permit must be renewed annually by paying annual operating fees, and the permit shall expire if annual operating fees are not paid pursuant to requirements of Rule 301(d). [301(d)]
   b. The Permit to Construct listed in Section H shall expire one year from the Permit to Construct issuance date, unless a Permit to Construct extension has been granted by the Executive Officer or unless the equipment has been constructed and the operator has notified the Executive Officer prior to the operation of the equipment, in which case the Permit to Construct serves as a temporary Permit to Operate. [202, 205]
   c. The Title V permit shall expire as specified under Section K of the Title V permit. The permit expiration date of the Title V facility permit does not supercede the requirements of Rule 205. [205, 3004]
2. The operator shall maintain all equipment in such a manner that ensures proper operation of the equipment. [204]
3. This permit does not authorize the emissions of air contaminants in excess of those allowed by Division 26 of the Health and Safety Code of the State of California or the Rules and Regulations of the AQMD. This permit cannot be considered as permission to violate existing laws, ordinances, regulations, or statutes of other governmental agencies. [204]
4. The operator shall not use equipment identified in this facility permit as being connected to air pollution control equipment unless they are so vented to the identified air pollution control equipment which is in full use and which has been included in this permit. [204]

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SECTION E: ADMINISTRATIVE CONDITIONS

5. The operator shall not use any equipment having air pollution control device(s) incorporated within the equipment unless the air pollution control device is in full operation. [204]

6. The operator shall maintain records to demonstrate compliance with rules or permit conditions that limit equipment operating parameters, or the type or quantity of material processed. These records shall be made available to AQMD personnel upon request and be maintained for at least five years. [204]

7. The operator shall maintain and operate all equipment to ensure compliance with all emission limits as specified in this facility permit. Compliance with emission limits shall be determined according to the following specifications, unless otherwise specified by AQMD rules or permit conditions: [204]

   a. For internal combustion engines and gas turbines, measured concentrations shall be corrected to 15 percent stack-gas oxygen content on a dry basis and be averaged over a period of 15 consecutive minutes; [1110.2, 1134]

   b. For other combustion devices, measured concentrations shall be corrected to 3 percent stack-gas oxygen content on a dry basis and be averaged over a period of 15 consecutive minutes; [1146, 1146.1, 204]

   c. For non-combustion sources, compliance with emission limits shall be determined and averaged over a period of 60 minutes; [204]

   d. For the purpose of determining compliance with Rule 407, carbon monoxide (CO) shall be measured on a dry basis and be averaged over 15 consecutive minutes, and sulfur compounds which would exist as liquid or gas at standard conditions shall be calculated as sulfur dioxide (SO2) and be averaged over 15 consecutive minutes; [407]

   e. For the purpose of determining compliance with Rule 409, combustion contaminant emission measurements shall be corrected to 12 percent of carbon dioxide (CO2) at standard conditions and averaged over a minimum of 15 consecutive minutes. [409]

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SECTION E: ADMINISTRATIVE CONDITIONS

f. For the purpose of determining compliance with Rule 475, combustion contaminant emission measurements shall be corrected to 3 percent of oxygen (O2) at standard conditions and averaged over 15 consecutive minutes or any other averaging time specified by the Executive Officer. [475]

8. The operator shall, when a source test is required by AQMD, provide a source test protocol to AQMD no later than 60 days before the proposed test date. The test shall not commence until the protocol is approved by AQMD. The test protocol shall contain the following information: [204, 304]

   a. Brief description of the equipment tested.

   b. Brief process description, including maximum and normal operating temperatures, pressures, throughput, etc.

   c. Operating conditions under which the test will be performed.

   d. Method of measuring operating parameters, such as fuel rate and process weight. Process schematic diagram showing the ports and sampling locations, including the dimensions of the ducts and stacks at the sampling locations, and distances of flow disturbances, (e.g. elbows, tees, fans, dampers) from the sampling locations (upstream and downstream).

   e. Brief description of sampling and analytical methods used to measure each pollutant, temperature, flow rates, and moisture.

   f. Description of calibration and quality assurance procedures.

   g. Determination that the testing laboratory qualifies as an "independent testing laboratory" under Rule 304 (conflict of interest).

9. The operator shall submit a report no later than 60 days after conducting a source test, unless otherwise required by AQMD rules or equipment-specific conditions. The report shall contain the following information: [204]

   a. The results of the source test.

SECTION E: ADMINISTRATIVE CONDITIONS

b. Brief description of the equipment tested.

c. Operating conditions under which the test was performed.

d. Method of measuring operating parameters, such as fuel rate and process weight. Process schematic diagram showing the ports and sampling locations, including the dimensions of the ducts and stacks at the sampling locations, and distances of flow disturbances, (e.g. elbows, tees, fans, dampers) from the sampling locations (upstream and downstream).

e. Field and laboratory data forms, strip charts and analyses.

f. Calculations for volumetric flow rates, emission rates, control efficiency, and overall control efficiency.

10. The operator shall, when a source test is required, provide and maintain facilities for sampling and testing. These facilities shall comply with the requirements of AQMD Source Test Method 1.1 and 1.2. [217]

11. Whenever required to submit a written report, notification or other submittal to the Executive Officer, AQMD, or the District, the operator shall mail or deliver the material to: Deputy Executive Officer, Engineering and Compliance, AQMD, 21865 E. Copley Drive, Diamond Bar, CA 91765-4182. [204]

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SECTION F: RECLAIM MONITORING AND SOURCE TESTING REQUIREMENTS

NOT APPLICABLE

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SECTION G: RECORDKEEPING AND REPORTING REQUIREMENTS FOR RECLAIM SOURCES

NOT APPLICABLE

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SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

NONE

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SECTION I: PLANS AND SCHEDULES

This section lists all plans approved by AQMD for the purposes of meeting the requirements of applicable AQMD rules specified below. The operator shall comply with all conditions specified in the approval of these plans.

Documents pertaining to the plan applications listed below are available for public review at AQMD Headquarters. Any changes to plan applications will require permit modification in accordance with Title V permit revision procedures.

List of approved plans:

Application	Rule
522345	1150.1
557928	3003

NOTE: This section does not list compliance schedules pursuant to the requirements of Regulation XXX - Title V Permits; Rule 3004(a)(10)(C). For equipment subject to a variance, order for abatement, or alternative operating condition granted pursuant to Rule 518.2, equipment specific conditions are added to the equipment in Section D or H of the permit.

South Coast Air Quality Management District
21865 Copley Drive, Diamond Bar, CA 91765-4178

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RULE 1150.1 COMPLIANCE PLAN

Plan No. 522345

Condition(s):

1. This plan shall be followed in accordance with all data and specifications submitted with the application under which this plan is issued, unless otherwise noted below.

2. A copy of this plan including its attachment shall be present at the facility at all times and shall be made available to SCAQMD personnel upon request.

3. This plan shall be followed in compliance with all applicable provisions of Rule 1150.1.

4. Notifications required per Rule 1150.1 and this Plan shall be submitted to Rule1150Notifications@aqmd.gov with the subject line "Rule 1150.1 Notification". This is separate from and not intended as a replacement for Rule 430/Title V Section K notification and reporting requirements.

5. This plan cannot be considered as permission to violate existing laws, ordinances, regulations or statutes of other government agencies.

6. The following proposed alternatives to Rule 1150.1 have been approved:

A	*Previous Boundary Probes*
	Rule 1150.1(d)(9) Requirement: If the District has not issued prior written approval for subsurface refuse boundary sampling probes, the owner or operator shall design and install subsurface refuse boundary sampling probes as specified in Section 1.1 Attachment A, to determine whether landfill gas migration exists. Installation of the refuse boundary probes shall be no later than 18 months after the submittal of the gas collection and gas control systems design plan as specified in paragraph (d)(1).
	Approved Alternative: Subsurface refuse boundary probes installed submitted in the 2017 Q3 Report are approved. Except for like replacement of existing approved probes, all future designs and installations not meeting the rule requirement shall be submitted to SCAQMD for approval with a compliance plan application.

B	*Integrated Landfill Surface Sampling*
	Rule 1150.1(d)(17) Requirement: Design, install, and operate a wind speed and direction monitoring system with a continuous recorder of the requirements in subparagraphs (d)(17)(A) and (d)(17)(B), at a site which is representative of the wind speed and direction in the areas being sampled. The wind velocity shall be recorded throughout the sampling period. The wind direction transmitter shall be oriented to true north using a compass. Rule 1150.1(e)(2) Requirement: Collect monthly integrated samples for analysis as specified in Section 2.0, Attachment A, to determine the concentrations of TOC and TAC from the landfill surface, and to assure continued compliance. Any reading of 25 ppmv or greater shall be recorded as an exceedance and the actions specified in subparagraphs (e)(2)(A) through (e)(2)(C) shall be taken.

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	Attachment A 2.1 Requirement: The number of samples collected will depend on the area of the landfill surface. The entire landfill disposal area shall be divided into individually identified 50,000 square foot grids. One monthly sample shall be collected from each grid for analysis. Any area that the Executive Officer deems inaccessible or dangerous for a technician to enter may be excluded from the sampling grids monitored by the landfill owner or operator. To exclude an area from monitoring, the landfill owner or operator shall file a written request with the Executive Officer. Such a request shall include an explanation of the requested exclusion and photographs of the area. The Executive Officer shall notify the landfill owner or operator in writing of the decision. Any exclusion granted shall apply only to the monitoring requirement. The 25 ppmv limit specified in paragraph (d)(11) of Rule 1150.1 applies to all areas. Attachment A 2.2.1 Requirement: The average wind speed during this sampling procedure shall be five miles per hour or less. Surface sampling shall be terminated when the average wind speed exceeds five miles per hour or the instantaneous wind speed exceeds ten miles per hour. Average wind speed is determined on a 15-minute average. Attachment A 2.2.2 Requirement: Surface sampling shall be conducted when the landfill is dry. The landfill is considered dry when there has been no measurable precipitation for the preceding 72 hours prior to sampling. Most major newspapers report the amount of precipitation that has fallen in a 24-hour period throughout the Southern California area. Select the nearest reporting station that represents the landfill location or provide for measurable precipitation collection at the MSW landfill wind monitoring station. Attachment A 2.5.4 Requirement: Walk through a course of approximately 2,600 linear feet over a continuous 25-minute period. Figure 2 shows a walk pattern for the 50,000 square foot grid. Attachment A 2.6.2 Requirement: Two samples if all samples are 25 ppmv or less of TOC or two samples if there are less than 20 samples above 25 ppmv.
	Approved Alternative: The wind speed may be measured with a SCAQMD approved hand-held anemometer during integrated surface sampling. (alternative for (d)(17) and Attachment A 2.2.1) Collect quarterly integrated samples for analysis to determine concentrations of TOC and TAC. Sampling is not required on landfill surfaces that are inaccessible or dangerous for a technician to enter. Such areas of exclusion may include, but are not limited to: portions of slopes 30 degrees and greater, active haul roads, active working faces, and paved surfaces except for cracks. Every effort to make sure areas are accessible and safe shall be taken. Excluded areas shall be documented in each quarterly report. The following precipitation in inches and waiting period criteria shall be used to determine whether the landfill is dry: Precipitation (inches) — Waiting Period 0.01 to 0.10 — 24 hours 0.11 to 0.25 — 48 hours > 0.25 — 72 hours Route sampling shall be an alternative for integrated surface sampling procedure with the following conditions: A. Routes within each 50,000 sq. foot grid, are as indicated on the ISS Route Map. B. Each grid shall have four different routes between 100 and 250 feet long. A sampling sequence for the four routes within each grid shall be established, such that every quarter pursuant to (e)(2) one of the four

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	routes of each grid shall be sampled. The determined routes shall be adhered to for a minimum of four quarters, such that all four routes of every grid of the landfill surface shall be sampled every four quarters. After the four routes have been sampled, subsequent sampling of the grid shall follow the same route sequence except when meeting follow-up compliance for (e)(2) exceedances. C. Each route shall be walked at a minimum, over a consecutive 2.5 minute period. D. If the integrated sampling results in a reading equal to or greater than 25 ppm within a given route, the instantaneous monitoring shall be conducted to find the areas of high emissions. Repairs shall be made where emissions are found to be greater than 500 ppm. No TAC analysis shall be required if all integrated samples are less than 5 ppmv TOC, except for one annual bag sample analysis. Two samples if all samples are between 5 and 25 ppmv of TOC or two samples if there are less than 20 samples above 25 ppmv.

C	*Subsurface Boundary Probe Sampling*
	Rule 1150.1(e)(1) Requirement: Monitor and collect samples for analysis as specified in Section 1.0, Attachment A, to determine the concentrations of TOC and TAC each month from the subsurface refuse boundary sampling probes, to assure continued compliance. Any measurement of 5 percent TOC by volume or greater shall be recorded as an exceedance and the actions specified in subparagraphs (e)(1)(A) through (e)(1)(C) shall be taken. Attachment A.1.1.2 Requirement: Wherever accessible, the probes shall be located no further than 100 feet from the refuse boundary. Attachment A 1.2.1 Requirement: If the TOC concentration measured with the FID does not exceed 5% by volume in any of the probes, collect one bag sample from one probe with the highest concentration, or Attachment A 1.3.2 Requirement: The constant TOC concentration shall be measured using an FID that meets the requirements in Section 3.2.
	Approved Alternative: Determine concentrations of TOC quarterly for probes greater than 1,320 feet away from any receptor with an FID or approved alternative analyzer and determine the concentrations of TAC annually. Wherever accessible and the probes are greater than 100 ft. from the refuse, monitor instantaneously from the refuse boundary to the probe, using the grid method or Attachment A 3.3.3 Approved Alternative method in Section D of this plan when probes exceed 2% TOC. If the TOC concentration measured with the FID or approved alternative does not exceed 5% by volume in any of the probes, collect one bag sample for a quarterly TOC/TAC analysis from one probe with the highest TOC concentration between 1% and 5%. At a minimum, if the annual TOC concentration is less than 1% for all probes, collect one bag sample for an annual TOC/TAC analysis. Portable analyzers on an approved list of equipment maintained by the SCAQMD may be used as alternatives to an FID.

D	*Instantaneous Landfill Surface Monitoring*
	Attachment A 3.1 Requirement: The entire landfill disposal area shall be monitored once each calendar quarter. Any area of the landfill that the Executive Officer deems as inaccessible or dangerous for a technician to enter may be excluded from the area to be monitored by the landfill owner or operator. To exclude an area from monitoring, the landfill owner or operator shall file a petition with the Executive

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	Officer. Such a request shall include an explanation of why the area should be excluded and photographs of the area. Any excluded area granted shall only apply to the monitoring requirement. The 500 ppmv limit specified in paragraph (d)(12) of Rule 1150.1 applies to all areas. Attachment A 3.3.3 Requirement: At a minimum, an individually identified 50,000 square foot grid shall be used and a walk pattern as similar to that illustrated in Figure 2 shall be implemented including areas where visual observations indicate elevated concentrations of landfill gas, such as distressed vegetation and cracks or seeps in the cover
	Approved Alternative: Monitoring is not required on landfill surfaces that are inaccessible or dangerous for a technician to enter. Such areas of exclusion may include, but are not limited to: portions of slopes 30 degrees and greater, active haul roads, active working faces, and paved surfaces except for cracks. Every effort to make sure areas are accessible and safe shall be taken. Excluded areas shall be documented in each quarterly report. A walk pattern not to exceed a 100 foot wide path across the entire landfill shall be walked for instantaneous surface monitoring with the following procedures: A. The path shall be drawn on to a topographical map showing the gas collection system layout. B. All readings above 200 ppm shall be placed on the topographical map. C. All areas of greater than 500 ppm shall be repaired.

E	*Landfill Gas Sampling*
	Rule 1150.1(e)(5) Requirement: Collect a monthly landfill gas sample for analysis as specified in Section 4.0, Attachment A, to determine the concentrations of TOC and TAC from the main gas collection header line entering any gas control system. Attachment A 4.1 Requirement: Collect one monthly sample of landfill gas for analysis from the main gas collection header line entering the gas treatment and/or gas control system(s).
	Approved Alternative: Collect a monthly landfill gas sample for TOC analysis. Collect an annual landfill gas sample for TAC analysis. (alternative for (e)(5) and Attachment A 4.1)

F	*Ambient Air Sampling*
	Rule 1150.1(e)(6) Requirement: Collect monthly ambient air samples for analysis as specified in Section 5.0. Attachment A, to determine the concentrations of TOC and TAC from the landfill property boundary. Attachment A 5.1 Requirement: Monthly ambient air samples shall be collected for analysis at the landfill property boundary from both an upwind and downwind sampler sited to provide good meteorological exposure to the predominant offshore (drainage land breeze) and onshore (sea breeze) wind flow patterns. The upwind and downwind samples shall be collected simultaneously over two 12 hour periods beginning between 9:00 a.m. and 10:00 a.m., and 9:00 p.m. and 10:00 p.m. on the same day or different days. Attachment A 5.2.5 Requirement: Continuously recorded on-site wind speed and direction measurements required in paragraph (d)(17) of Rule 1150.1 will characterize the micrometeorology of the site and serve to verify that the meteorological criteria have been met during sampling. Attachment A 5.3 Requirement: An ambient air sampling unit consists of a 10-liter Tedlar bag, a DC-operated pump, stainless steel capillary tubing to control the sample rate to the bag, a bypass valve to control the sample flow rate (and minimize back pressure on the pump), a Rotameter for flow indication to aid in setting the flow, a 24-hour clock timer to shut off the sampler at the end of the 24-hour sampling

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	period, and associated tubing and connections (made of stainless steel, Teflon, or borosilicate glass to minimize contamination and reactivity). The physical layout of the sampler is shown in Figure 5. An alternate ambient air sampler may be used, provided that the landfill owner or operator can show an equivalency with the sampler specifications in Section 5.3 and shown in Figure 5. All alternatives shall be submitted as specified in subdivision (i) of Rule 1150.1.
	Approved Alternative: Collect quarterly ambient air samples for TOC analysis and annual air samples for TAC analysis. (alternative for (e)(6) and Attachment A 5.1) The wind speed may be measured with a SCAQMD approved hand-held anemometer during ambient air sampling. The sampling unit may use appropriate Summa canisters with a flow control device.

G	*Recordkeeping*
	Rule 1150.1(f) Requirement: The MSW landfill owner or operator shall keep all records on paper, electronic or in other suitable data formats approved by the Executive Officer, kept up-to-date, readily accessible and maintained for at least a period of 5 years. Such records shall be made available to the Executive Officer upon request. Records older than 2 years may be maintained off-site, if they are retrievable no later than 4 hours after request.
	Approved Alternative: Records may be stored offsite, if the records are provided within 4 hours after request.

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SECTION J: AIR TOXICS
[40CFR 63 Subpart AAAA 01-16-2003]

NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS - MUNICIPAL SOLID WASTE LANDFILLS

(1) The owner/operator of a municipal solid waste (MSW) landfill shall comply with all applicable requirements of 40 CFR 63, Subpart AAAA and of 40 CFR 63, Subpart A – General Provisions by the compliance date(s) that are specified in these subparts.

(2) The owner/operator of a MSW landfill system shall comply with all applicable requirements for installation and operation of a landfill gas collection and/or control system as specified in 40 CFR 60, subpart Cc or WWW.

(3) The operator shall keep all records pursuant to Section 63.1980 of this subpart or Subpart A to demonstrate compliance with all applicable requirements. All records including data, calculations and any supporting documentation shall be prepared in a format which is acceptable to the AQMD.

(4) The operator shall submit all reports, notifications, plans, submittals and other communications required by Section 63.1980 of this subpart or Subpart A to the AQMD and, unless notified to the contrary by AQMD or US EPA, to US EPA Region IX (See Sections E and K of this permit for addresses).

(5) Alternative plans, compliance plans, and the construction and operation of new or modified air pollution control equipment that are required by this subpart shall be approved through the AQMD permit system.

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GENERAL PROVISIONS

1. This permit may be revised, revoked, reopened and reissued, or terminated for cause, or for failure to comply with regulatory requirements, permit terms, or conditions. [3004(a)(7)(C)]

2. This permit does not convey any property rights of any sort or any exclusive privilege. [3004(a)(7)(E)]

Permit Renewal and Expiration

3. (A) Except for solid waste incineration facilities subject to standards under section 129(e) of the Clean Air Act, this permit shall expire five years from the date that this Title V permit is issued. The operator's right to operate under this permit terminates at midnight on this date, unless the facility is protected by an application shield in accordance with Rule 3002(b), due to the filing of a timely and complete application for a Title V permit renewal, consistent with Rule 3003. [3004(a)(2), 3004(f)]

   (B) A Title V permit for a solid waste incineration facility combusting municipal waste subject to standards under Section 129(e) of the Clean Air Act shall expire 12 years from the date of issuance unless such permit has been renewed pursuant to this regulation. These permits shall be reviewed by the Executive Officer at least every five years from the date of issuance. [3004(f)(2)]

4. To renew this permit, the operator shall submit to the Executive Officer an application for renewal at least 180 days, but not more than 545 days, prior to the expiration date of this permit. [3003(a)(6)]

Duty to Provide Information

5. The applicant for, or holder of, a Title V permit shall furnish, pursuant to Rule 3002(d) and (e), timely information and records to the Executive Officer or designee within a reasonable time as specified in writing by the Executive Officer or designee. [3004(a)(7)(F)]

Payment of Fees

6. The operator shall pay all required fees specified in Regulation III - Fees. [3004(a)(7)(G)]

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Reopening for Cause

7. The Executive Officer will reopen and revise this permit if any of the following circumstances occur:

   (A) Additional regulatory requirements become applicable with a remaining permit term of three or more years. Reopening is not required if the effective date of the requirement is later than the expiration date of this permit, unless the permit or any of its terms and conditions has been extended pursuant to paragraph (f)(4) of Rule 3004.

   (B) The Executive Officer or EPA Administrator determines that this permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of this permit.

   (C) The Executive Officer or EPA Administrator determines that the permit must be revised or revoked to assure compliance with the applicable requirements. [3005(g)(1)]

COMPLIANCE PROVISIONS

8. The operator shall comply with all regulatory requirements, and all permit terms and conditions, except:

   (A) As provided for by the emergency provisions of condition no. 17 or condition no. 18, or

   (B) As provided by an alternative operating condition granted pursuant to a federally approved (SIP-approved) Rule 518.2.

   Any non-compliance with any federally enforceable permit condition constitutes a violation of the Federal Clean Air Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or revision; or denial of a permit renewal application. Non-compliance may also be grounds for civil or criminal penalties under the California State Health and Safety Code. [3004(a)(7)(A)]

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9. The operator shall allow the Executive Officer or authorized representative, upon presentation of appropriate credentials to:

   (A) Enter the operator's premises where emission-related activities are conducted, or records are kept under the conditions of this permit;

   (B) Have access to and copy, at reasonable times, any records that must be kept under the conditions of the permit;

   (C) Inspect at reasonable times, any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under the permit; and

   (D) Sample or monitor at reasonable times, substances or parameters for the purpose of assuring compliance with the facility permit or regulatory requirements. [3004(a)(10)(B)]

10. All terms and conditions in this permit, including any provisions designed to limit a facility's potential to emit, are enforceable by the EPA Administrator and citizens under the federal Clean Air Act, unless the term or condition is designated as not federally enforceable. Each day during any portion of which a violation occurs is a separate offense. [3004(g)]

11. A challenge to any permit condition or requirement raised by EPA, the operator, or any other person, shall not invalidate or otherwise affect the remaining portions of this permit. [3007(b)]

12. The filing of any application for a permit revision, revocation, or termination, or a notification of planned changes or anticipated non-compliance does not stay any permit condition. [3004(a)(7)(D)]

13. It shall not be a defense for a person in an enforcement action, including those listed in Rule 3002(c)(2), that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit, except as provided for in "Emergency Provisions" of this section. [3004(a)(7)(H)]

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14. The operator shall not build, erect, install, or use any equipment, the use of which, without resulting in a reduction in the total release of air contaminants to atmosphere, reduces or conceals an emission which would otherwise constitute a violation of Chapter 3 (commencing with Section 41700) of Part 4, of Division 26 of the California Health and Safety Code or of AQMD rules. This rule shall not apply to cases in which the only violation involved is of Section 41700 of the California Health and Safety Code, or Rule 402 of AQMD Rules. [408]

15. Nothing in this permit or in any permit shield can alter or affect:

    (A) Under Section 303 of the federal Clean Air Act, the provisions for emergency orders;

    (B) The liability of the operator for any violation of applicable requirements prior to or at the time of permit issuance;

    (C) The applicable requirements of the Acid Rain Program, Regulation XXXI;

    (D) The ability of EPA to obtain information from the operator pursuant to Section 114 of the federal Clean Air Act;

    (E) The applicability of state or local requirements that are not "applicable requirements", as defined in Rule 3000, at the time of permit issuance but which do apply to the facility, such as toxics requirements unique to the State; and

    (F) The applicability of regulatory requirements with compliance dates after the permit issuance date. [3004(c)(3)]

16. For any portable equipment that requires an AQMD or state permit or registration, excluding a) portable engines, b) military tactical support equipment and c) AQMD-permitted portable equipment that are not a major source, are not located at the facility for more than 12 consecutive months after commencing operation, and whose operation does not conflict with the terms or conditions of this Title V permit: 1) the facility operator shall keep a copy of the AQMD or state permit or registration; 2) the equipment operator shall comply with the conditions on the permit or registration and all other regulatory requirements; and 3) the facility operator shall treat the permit or registration as a part of its Title V permit, subject to recordkeeping, reporting and certification requirements. [3004(a)(1)]

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EMERGENCY PROVISIONS

17. An emergency[1] constitutes an affirmative defense to an action brought for noncompliance with a technology-based emission limit only if:

    (A) Properly signed, contemporaneous operating records or other credible evidence demonstrate that:

        (1) An emergency occurred and the operator can identify the cause(s) of the emergency;

        (2) The facility was operated properly (i.e. operated and maintained in accordance with the manufacturer's specifications, and in compliance with all regulatory requirements or a compliance plan), before the emergency occurred;

        (3) The operator took all reasonable steps to minimize levels of emissions that exceeded emissions standard, or other requirements in the permit; and,

        (4) The operator submitted a written notice of the emergency to the AQMD within two working days of the time when the emissions limitations were exceeded due to the emergency. The notice shall contain a description of the emergency, any steps taken to mitigate emissions, and corrective actions taken; and

    (B) The operator complies with the breakdown provisions of Rule 430 – Breakdown Provisions, or subdivision (i) of Rule 2004 – Requirements, whichever is applicable. [3002(g), 430, 2004(i)]

18. The operator is excused from complying with any regulatory requirement that is suspended by the Executive Officer during a state of emergency or state of war emergency, in accordance with Rule 118 - Emergencies. [118]

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1 "Emergency" means any situation arising from sudden and reasonably unforeseeable events beyond the control of the operator, including acts of God, which: (A) requires immediate corrective action to restore normal operation; and (B) causes the facility to exceed a technology-based emission limitation under the permit, due to unavoidable increases in emissions attributable to the emergency; and (C) is not caused by improperly designed equipment, lack of preventative maintenance, careless or improper operation, or operator error.

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RECORDKEEPING PROVISIONS

19. In addition to any other recordkeeping requirements specified elsewhere in this permit, the operator shall keep records of required monitoring information, where applicable, that include:

    (A) The date, place as defined in the Title V permit, and time of sampling or measurements;

    (B) The date(s) analyses were performed;

    (C) The company or entity that performed the analyses;

    (D) The analytical techniques or methods used;

    (E) The results of such analyses; and

    (F) The operating conditions as existing at the time of sampling or measurement. [3004(a)(4)(B)]

20. The operator shall maintain records pursuant to Rule 109 and any applicable material safety data sheet (MSDS) for any equipment claimed to be exempt from a written permit by Rule 219 based on the information in those records. [219(t)]

21. The operator shall keep all records of monitoring data required by this permit or by regulatory requirements for a period of at least five years from the date of the monitoring sample, measurement, report, or application. [3004(a)(4)(E)]

REPORTING PROVISIONS

22. The operator shall comply with the following requirements for prompt reporting of deviations:

    (A) Breakdowns shall be reported as required by Rule 430 – Breakdown Provisions or subdivision (i) of Rule 2004 - Requirements, whichever is applicable.

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(B) Other deviations from permit or applicable rule emission limitations, equipment operating conditions, or work practice standards, determined by observation or by any monitoring or testing required by the permit or applicable rules that result in emissions greater than those allowed by the permit or applicable rules shall be reported within 72 hours (unless a shorter reporting period is specified in an applicable State or Federal Regulation) of discovery of the deviation by contacting AQMD enforcement personnel assigned to this facility or otherwise calling (800) CUT-SMOG.

(C) A written report of such deviations reported pursuant to (B), and any corrective actions or preventative measures taken, shall be submitted to AQMD, in an AQMD approved format, within 14 days of discovery of the deviation.

(D) All other deviations shall be reported with the monitoring report required by condition no. 23. [3004(a)(5)]

23. Unless more frequent reporting of monitoring results are specified in other permit conditions or in regulatory requirements, the operator shall submit reports of any required monitoring to the AQMD at least twice per year. The report shall include a) a statement whether all monitoring required by the permit was conducted; and b) identification of all instances of deviations from permit or regulatory requirements. A report for the first six calendar months of the year is due by August 31 and a report for the last six calendar months of the year is due by February 28. [3004(a)(4)(F)]

24. The operator shall submit to the Executive Officer and to the Environmental Protection Agency (EPA), an annual compliance certification. For RECLAIM facilities, the certification is due when the Annual Permit Emissions Program (APEP) report is due and shall cover the same reporting period. For other facilities, the certification is due on March 1 for the previous calendar year. The certification need not include the period preceding the date the initial Title V permit was issued. Each compliance certification shall include:

(A) Identification of each permit term or condition that is the basis of the certification;

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(B) The compliance status during the reporting period;

(C) Whether compliance was continuous or intermittent;

(D) The method(s) used to determine compliance over the reporting period and currently, and

(E) Any other facts specifically required by the Executive Officer to determine compliance.

The EPA copy of the certification shall be sent to: Director of the Air Division Attn: Air-3 USEPA, Region IX 75 Hawthorne St. San Francisco, CA 94105 [3004(a)(10)(E)]

25. All records, reports, and documents required to be submitted by a Title V operator to AQMD or EPA shall contain a certification of accuracy consistent with Rule 3003(c)(7) by a responsible official (as defined in Rule 3000). [3004(a)(12)]

PERIODIC MONITORING

26. All periodic monitoring required by this permit pursuant to Rule 3004(a)(4)(c) is based on the requirements and justifications in the AQMD document "Periodic Monitoring Guidelines for Title V Facilities" or in case-by-case determinations documented in the TitleV application file. [3004(a)(4)]

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FACILITY RULES

This facility is subject to the following rules and regulations

With the exception of Rule 402, 473, 477, 1118 and Rules 1401 through 1420, the following rules that are designated as non-federally enforceable are pending EPA approval as part of the state implementation plan. Upon the effective date of that approval, the approved rule(s) will become federally enforceable, and any earlier versions of those rules will no longer be federally enforceable.

RULE SOURCE	Adopted/Amended Date	FEDERAL Enforceability
RULE 104	1-9-1976	Federally enforceable
RULE 106	1-9-1976	Federally enforceable
RULE 109	5-2-2003	Federally enforceable
RULE 1113	11-8-1996	Federally enforceable
RULE 1113	9-6-2013	Non federally enforceable
RULE 1122	10-1-2004	Federally enforceable
RULE 1122	12-6-2002	Non federally enforceable
RULE 1150	10-15-1982	Non federally enforceable
RULE 1150.1	3-17-2000	Federally enforceable
RULE 1150.1	4-1-2011	Non federally enforceable
RULE 1171	5-1-2009	Non federally enforceable
RULE 118	12-7-1995	Non federally enforceable
RULE 1303(a)(1)-BACT	12-6-2002	Non federally enforceable
RULE 1303(a)(1)-BACT	5-10-1996	Federally enforceable
RULE 1303(b)(1)-Modeling	12-6-2002	Non federally enforceable
RULE 1303(b)(2)-Offset	12-6-2002	Non federally enforceable
RULE 1309.1	1-8-2010	Non federally enforceable
RULE 1309.1	5-3-2002	Federally enforceable
RULE 1401	9-10-2010	Non federally enforceable
RULE 1402	3-4-2005	Non federally enforceable
RULE 204	10-8-1993	Federally enforceable
RULE 217	1-5-1990	Federally enforceable

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RULE SOURCE	Adopted/Amended Date	FEDERAL Enforceability
RULE 218	5-14-1999	Federally enforceable
RULE 218	8-7-1981	Federally enforceable
RULE 219	5-3-2013	Non federally enforceable
RULE 219	9-4-1981	Federally enforceable
RULE 3002	11-14-1997	Federally enforceable
RULE 3002	11-5-2010	Federally enforceable
RULE 3003	11-14-1997	Federally enforceable
RULE 3003	11-5-2010	Federally enforceable
RULE 3004	12-12-1997	Federally enforceable
RULE 3004(a)(4)-Periodic Monitoring	12-12-1997	Federally enforceable
RULE 3005	11-14-1997	Federally enforceable
RULE 3005	11-5-2010	Non federally enforceable
RULE 3007	10-8-1993	Federally enforceable
RULE 301	6-1-2012	Non federally enforceable
RULE 304	6-1-2012	Non federally enforceable
RULE 306	6-1-2012	Non federally enforceable
RULE 401	11-9-2001	Non federally enforceable
RULE 401	3-2-1984	Federally enforceable
RULE 402	5-7-1976	Non federally enforceable
RULE 403	4-2-2004	Federally enforceable
RULE 403	6-3-2005	Federally enforceable
RULE 404	2-7-1986	Federally enforceable
RULE 405	2-7-1986	Federally enforceable
RULE 407	4-2-1982	Federally enforceable
RULE 408	5-7-1976	Federally enforceable
RULE 409	8-7-1981	Federally enforceable
RULE 430	7-12-1996	Non federally enforceable
RULE 431.1	6-12-1998	Federally enforceable
RULE 701	6-13-1997	Federally enforceable
40CFR 60 Subpart WWW	10-17-2000	Federally enforceable
40CFR 63 Subpart AAAA	1-16-2003	Federally enforceable
40CFR 63 Subpart AAAA	4-20-2006	Federally enforceable

FACILITY PERMIT TO OPERATE
RIV CO, WASTE RESOURCES MGMT DIST, LAMB

APPENDIX A: NOX AND SOX EMITTING EQUIPMENT EXEMPT FROM WRITTEN PERMIT PURSUANT TO RULE 219

NONE

FACILITY PERMIT TO OPERATE
RIV CO. WASTE RESOURCES MGMT DIST. LAMB

APPENDIX B: RULE EMISSION LIMITS

[RULE 1113 11-08-1996]

(1) Except as provided in paragraphs (c)(2), (c)(3), and (c)(4) of Rule 1113, the operator shall not supply, sell, offer for sale, apply, or solicit the application of, any architectural coating which, at the time of sale or manufacture, contains more than 250 grams of VOC per liter of coating (2.08 pounds per gallon), less water, less exempt compounds, and less any colorant added to tint bases, or manufacture, blend, or repackage such a coating for use within the District.

(2) Except as provided in paragraphs (c)(3) and (c)(4) of Rule 1113, the operator shall not supply, sell, offer for sale, apply, solicit the application of, manufacture, blend, or repackage, for use within the District, any architectural coating listed in the Table of Standards which contains VOC (excluding any colorant added to tint bases) in excess of the corresponding VOC limit specified in the table, after the effective date specified.

TABLE OF STANDARDS

VOC LIMITS

**Grams of VOC Per Liter of Coating,
Less Water And Less Exempt Compounds**

COATING	Limit*	Effective Date of Adoption	Effective 1/1/1998	Effective 1/1/1999	Effective 7/1/2001	Effective 1/1/2005	Effective 7/1/2008
Bond Breakers	350						
Clear Wood Finishes							
Varnish	350						
Sanding Sealers	350						
Lacquer	680		550			275	
Concrete-Curing Compounds	350						
Dry-Fog Coatings	400						
Fire-proofing Exterior Coatings	350	450		350			
Fire-Retardant Coatings							
Clear	650						
Pigmented	350						
Flats	250				100		50
Graphic Arts (Sign) Coatings	500						

FACILITY PERMIT TO OPERATE
RIV CO. WASTE RESOURCES MGMT DIST. LAMB

APPENDIX B: RULE EMISSION LIMITS
[RULE 1113 11-08-1996]

Industrial Maintenance Primers and Topcoats							
Alkyds	420						
Catalyzed Epoxy	420						
Bituminous Coatings	420						
Materials							
Inorganic Polymers	420						
Vinyl Chloride Polymers	420						
Chlorinated Rubber	420						
Acrylic Polymers	420						
Urethane Polymers	420						
Silicones	420						
Unique Vehicles	420						
Japans/Faux Finishing	350	700		350			
Coatings							
Magnesite Cement Coatings	600			450			
Mastic Coatings	300						
Metallic Pigmented Coatings	500						
Multi-Color Coatings	420		250				
Pigmented Lacquer	680		550			275	
Pre-Treatment Wash Primers	780						
Primers, Sealers, and Undercoaters	350						
Quick-Dry Enamels	400						
Roof Coatings	300						
Shellac							
Clear	730						
Pigmented	550						
Stains	350						
Swimming Pool Coatings							
Repair	650						
Other	340						
Traffic Coatings	250		150				
Waterproofing Sealers	400						
Wood Preservatives							
Below-Ground	350						
Other	350						

* The specified limits remain in effect unless revised limits are listed in subsequent columns in the Table of Standards

TABLE OF STANDARDS (cont.)

VOC LIMITS

Grams of VOC Per Liter of Material

COATING	Limit
Low-Solids Coating	120

FACILITY PERMIT TO OPERATE
RIV CO. WASTE RESOURCES MGMT DIST. LAMB

APPENDIX B: RULE EMISSION LIMITS
[RULE 1113 09-06-2013]

(1) Except as provided in paragraphs (c)(3), (c)(4), and designated coatings averaged under (c)(6), no person shall supply, sell, offer for sale, market, manufacture, blend, repackage, apply, store at a worksite, or solid the application of any architectural coating within in the District:

(A) That is listed in the Table of Standards 1 and contains VOC (exclusing any colorant added to tint bases) in excess of the corresponding VOC limit specified in the table, after the effective date specified; or

(B) That is not listed in the Table of Standards 1, and contains VOC (excluding any colorant added to tint bases) in excess of 250 grams of VOC per liter of coating (2.08 pounds per gallon), less water, less exempt compounds, until January 1, 2014, at which time the limit drops to 50 grams of VOC per liter of coating, less water, less exempt compounds (0.42 pounds per gallon).

(2) No person within the District shall add colorant at the point of sale that is listed in the Table of Standards 2 and contains VOC in excess of the corresponding VOC limit specified in the Table of Standards 2, after the effective date specified.

FACILITY PERMIT TO OPERATE
RIV CO. WASTE RESOURCES MGMT DIST. LAMB

~~APPENDIX B: RULE EMISSION LIMITS~~
[RULE 1113 09-06-2013]
TABLE OF STANDARDS 1
VOC LIMITS

Grams of VOC Per Liter of Coating, Less Water and Less Exempt Compounds

COATING CATEGORY	Ceiling Limit[1]	Current Limit[2]	Effective Date		
			7/1/08	1/1/12	1/1/14
Bond Breakers		350			
Clear Wood Finishes		275			
Varnish	350	275			
Sanding Sealers	350	275			
Lacquer		275			
Concrete-Curing Compounds		100			
Concrete-Curing Compounds For Roadways and Bridges[3]		350			
Concrete Surface Retarder		250			50
Driveway Sealer		100		50	
Dry-Fog Coatings		150			50
Faux Finishing Coatings					
Clear Topcoat		350		200	100
Decorative Coatings		350			
Glazes		350			
Japan		350			
Trowel Applied Coatings		350		150	50
Fire-Proofing Coatings		350			150
Flats	250	50	50		
Floor Coatings	100	50			
Form Release Compound		250			100
Graphic Arts (Sign) Coatings		500			150
Industrial Maintenance (IM) Coatings	420	100			
High Temperature IM Coatings		420			
Non-SacrificialAnti-Graffiti Coatings		100			
Zinc-Rich IM Primers		100			
Magnesite Cement Coatings		450			
Mastic Coatings		300			100
Metallic Pigmented Coatings	500	500			150
Multi-Color Coatings		250			
Nonflat Coatings	150	50			
Pre-Treatment Wash Primers		420			
Primers, Sealers, and Undercoaters		100			
Reactive Penetrating Sealers		350			

FACILITY PERMIT TO OPERATE
RIV CO. WASTE RESOURCES MGMT DIST. LAMB

APPENDIX B: RULE EMISSION LIMITS
[RULE 1113 09-06-2013]

Recycled Coatings		250			
Roof Coatings		50			
Roof Coatings, Aluminum		100			
Roof Primers, Bituminous		350			
Rust Preventative Coatings	400	100			
Sacrificial Anti-Graffiti Coatings		100		50	
Shellac					
Clear		730			

FACILITY PERMIT TO OPERATE
RIV CO. WASTE RESOURCES MGMT DIST. LAMB

~~APPENDIX B: RULE EMISSION LIMITS~~
[RULE 1113 09-06-2013]

COATING CATEGORY	Ceiling Limit[1]	Current Limit[2]	Effective Date		
			7/1/08	1/1/12	1/1/14
Pigmented		550			
Specialty Primers		100			
Stains	350	100			
Stains, Interior	250	250			
Stone Consolidant		450			
Swimming Pool Coatings					
Repair		340			
Other		340			
Traffic Coatings		100			
Waterproofing Sealers		100			
Waterproofing Concrete/Masonry Sealers		100			
Wood Preservatives		350			

1 The specified ceiling limits are applicable to products sold under the Averaging Compliance Option.

2 The specified limits remain in effect unless revised limits are listed in subsequent columns in the Table of Standards.

3. Does not include compounds used for curbs and gutters, sidewalks, islands, driveways and other miscellaneous concrete areas.

TABLE OF STANDARDS 1 (cont.)
VOC LIMITS

Grams of VOC Per Liter of Material

COATING	Limit
Low-Solids Coating	120

TABLE OF STANDARDS 2
VOC LIMITS FOR COLORANTS

Grams of VOC Per Liter of Colorant
Less Water and Less Exempt Compounds

COLORANT ADDED TO	Limit[4]
Architectural Coatings, excluding IM Coatings	50
Solvent-Based IM	600
Waterborne IM	50

4. Effective January 1, 2014.

FACILITY PERMIT TO OPERATE
RIV CO. WASTE RESOURCES MGMT DIST. LAMB

APPENDIX B: RULE EMISSION LIMITS
[RULE 1171 11-07-2003]

(1) Solvent Requirements

A person shall not use a solvent to perform solvent cleaning operations unless the solvent complies with the applicable requirements set forth below:

SOLVENT CLEANING ACTIVITY	CURRENT LIMITS VOC g/l (lb/gal)
(A) Product Cleaning During Manufacturing Process Or Surface Preparation For Coating, Adhesive, Or Ink Application	
(i) General	25 (0.21)
(ii) Electrical Apparatus Components & Electronic Components	500 (4.2)
(iii) Medical Devices & Pharmaceuticals	800 (6.7)
(B) Repair and Maintenance Cleaning	
(i) General	25 (0.21)
(ii) Electrical Apparatus Components & Electronic Components	900 (7.5)

FACILITY PERMIT TO OPERATE
RIV CO. WASTE RESOURCES MGMT DIST. LAMB

~~APPENDIX B: RULE EMISSION LIMITS~~
[RULE 1171 11-07-2003]

SOLVENT CLEANING ACTIVITY	CURRENT LIMITS VOC g/l (lb/gal)
(iii) Medical Devices & Pharmaceuticals	
(A) Tools, Equipment, & Machinery	800 (6.7)
(B) General Work Surfaces	600 (5.0)
(C) Cleaning of Coatings or Adhesives Application Equipment	550 (4.6)
(D) Cleaning of Ink Application Equipment	
(i) General	25 (0.21)
(ii) Flexographic Printing	25 (0.21)
(iii) Gravure Printing	
(A) Publication	750 (6.3)
(B) Packaging	25 (0.21)
(iv) Lithographic or Letter Press Printing	

FACILITY PERMIT TO OPERATE
RIV CO. WASTE RESOURCES MGMT DIST. LAMB

~~APPENDIX B: RULE EMISSION LIMITS~~
[RULE 1171 11-07-2003]

SOLVENT CLEANING ACTIVITY	CURRENT LIMITS VOC g/l (lb/gal)
(A) Roller Wash – Step 1	600 (5.0)
(B) Roller Wash-Step 2, Blanket Wash, & On-Press Components	800 (6.7)
(C) Removable Press Components	25 (0.21)
(v) Screen Printing	750 (6.3)
(vi) Ultraviolet Ink/ Electron Beam Ink Application Equipment (except screen printing)	800 (6.7)
(vii) Specialty Flexographic Printing	600 (5.0)
(E) Cleaning of Polyester Resin Application Equipment	25 (0.21)

FACILITY PERMIT TO OPERATE
RIV CO. WASTE RESOURCES MGMT DIST. LAMB

~~APPENDIX B: RULE EMISSION LIMITS~~
[RULE 1171 05-01-2009]

(1) Solvent Requirements

A person shall not use a solvent to perform solvent cleaning operations unless the solvent complies with the applicable requirements set forth below:

	CURRENT LIMITS*	EFFECTIVE 1/1/2010
SOLVENT CLEANING ACTIVITY	**VOC g/l (lb/gal)**	**VOC g/l (lb/gal)**
(A) Product Cleaning During Manufacturing Process Or Surface Preparation For Coating, Adhesive, Or Ink Application		
(i) General	25 (0.21)	
(ii) Electrical Apparatus Components & Electronic Components	100 (0.83)	
(iii) Medical Devices & Pharmaceuticals	800 (6.7)	
(B) Repair and Maintenance Cleaning		
(i) General	25 (0.21)	
(ii) Electrical Apparatus Components & Electronic Components	100 (0.83)	

FACILITY PERMIT TO OPERATE
RIV CO. WASTE RESOURCES MGMT DIST. LAMB

APPENDIX B: RULE EMISSION LIMITS
[RULE 1171 05-01-2009]

	CURRENT LIMITS*	EFFECTIVE 1/1/2010
SOLVENT CLEANING ACTIVITY (cont.)	**VOC g/l (lb/gal)**	**VOC g/l (lb/gal)**
(iii) Medical Devices & Pharmaceuticals		
(A) Tools, Equipment, & Machinery	800 (6.7)	
(B) General Work Surfaces	600 (5.0)	
(C) Cleaning of Coatings or Adhesives Application Equipment	25 (0.21)	
(D) Cleaning of Ink Application Equipment		
(i) General	25 (0.21)	
(ii) Flexographic Printing	25 (0.21)	
(iii) Gravure Printing		
(A) Publication	100 (0.83)	
(B) Packaging	25 (0.21)	
(iv) Lithographic (Offset) or Letter Press Printing		
(A) Roller Wash, Blanket Wash, & On-Press Components	100 (0.83)	

FACILITY PERMIT TO OPERATE
RIV CO. WASTE RESOURCES MGMT DIST. LAMB

~~APPENDIX B: RULE EMISSION LIMITS~~
[RULE 1171 05-01-2009]

	CURRENT LIMITS*	EFFECTIVE 1/1/2010
SOLVENT CLEANING ACTIVITY (cont.)	**VOC g/l (lb/gal)**	**VOC g/l (lb/gal)**
(B) Removable Press Components	25 (0.21)	
(v) Screen Printing	100 (0.83)	
(vi) Ultraviolet Ink/ Electron Beam Ink Application Equipment (except screen printing)	650 (5.4)	100 (0.83)
(vii) Specialty Flexographic Printing	100 (0.83)	
(E) Cleaning of Polyester Resin Application Equipment	25 (0.21)	

* The specified limits remain in effect unless revised limits are listed in subsequent columns.

FACILITY PERMIT TO OPERATE
RIV CO. WASTE RESOURCES MGMT DIST. LAMB

~~APPENDIX B: RULE EMISSION LIMITS~~
[RULE 404 02-07-1986]

The operator shall not discharge into the atmosphere from this equipment, particulate matter in excess of the concentration at standard conditions, shown in Table 404(a). Where the volume discharged is between figures listed in the Table, the exact concentration permitted to be discharged shall be determined by linear interpolation.

For the purposes of this rule, emissions shall be averaged over one complete cycle of operation or one hour, whichever is the lesser time period.

TABLE 404(a)

Volume Discharged Calculated as Dry Gas At Standard Conditions		Maximum Concentration of Particulate Matter"Allowed in Discharged Gas Calculated as Dry Gas at Standard Conditions		Volume Discharged Calculated as Dry Gas At Standard Conditions		Maximum Concentration of Particulate Matter Allowed in Discharged Gas Calculated as Dry Gas at Standard Conditions	
Cubic meters Per Minute	Cubic feet Per Minute	Milligrams per Cubic Meter	Grains per Cubic Foot	Cubic meters Per Minute	Cubic feet Per Minute	Milligrams per Cubic Meter	Grains per Cubic Foot
25 or less	883 or less	450	0.196	900	31780	118	0.0515
30	1059	420	.183	1000	35310	113	.0493
35	1236	397	.173	1100	38850	109	.0476
40	1413	377	.165	1200	42380	106	.0463
45	1589	361	.158	1300	45910	102	.0445

FACILITY PERMIT TO OPERATE
RIV CO. WASTE RESOURCES MGMT DIST. LAMB

~~APPENDIX B: RULE EMISSION LIMITS~~
[RULE 404 02-07-1986]

Volume Discharged Calculated as Dry Gas At Standard Conditions		Maximum Concentration of Particulate Matter" Allowed in Discharged Gas Calculated as Dry Gas at Standard Conditions		Volume Discharged Calculated as Dry Gas At Standard Conditions		Maximum Concentration of Particulate Matter Allowed in Discharged Gas Calculated as Dry Gas at Standard Conditions	
Cubic meters Per Minute	Cubic feet Per Minute	Milligrams per Cubic Meter	Grains per Cubic Foot	Cubic meters Per Minute	Cubic feet Per Minute	Milligrams per Cubic Meter	Grains per Cubic Foot
50	1766	347	.152	1400	49440	100	.0437
60	2119	324	.141	1500	52970	97	.0424
70	2472	306	.134	1750	61800	92	.0402
80	2825	291	.127	2000	70630	87	.0380
90	3178	279	.122	2250	79460	83	.0362
100	3531	267	.117	2500	88290	80	.0349
125	4414	246	.107	3000	105900	75	.0327
150	5297	230	.100	4000	141300	67	.0293
175	6180	217	.0947	5000	176600	62	.0271
200	7063	206	.0900	6000	211900	58	.0253
250	8829	190	.0830	8000	282500	52	.0227
300	10590	177	.0773	10000	353100	48	.0210
350	12360	167	.0730	15000	529700	41	.0179
400	14130	159	.0694	20000	706300	37	.0162
450	15890	152	.0664	25000	882900	34	.0148

FACILITY PERMIT TO OPERATE
RIV CO. WASTE RESOURCES MGMT DIST. LAMB

APPENDIX B: RULE EMISSION LIMITS

[RULE 404 02-07-1986]

Volume Discharged Calculated as Dry Gas At Standard Conditions		Maximum Concentration of Particulate Matter"Allowed in Discharged Gas Calculated as Dry Gas at Standard Conditions		Volume Discharged Calculated as Dry Gas At Standard Conditions		Maximum Concentration of Particulate Matter Allowed in Discharged Gas Calculated as Dry Gas at Standard Conditions	
Cubic meters Per Minute	Cubic feet Per Minute	Milligrams per Cubic Meter	Grains per Cubic Foot	Cubic meters Per Minute	Cubic feet Per Minute	Milligrams per Cubic Meter	Grains per Cubic Foot
500	17660	146	.0637	30000	1059000	32	.0140
600	21190	137	.0598	40000	1413000	28	.0122
700	24720	129	.0563	50000	1766000	26	.0114
800	28250	123	.0537	70000 or more	2472000 or more	23	.0100

FACILITY PERMIT TO OPERATE
RIV CO. WASTE RESOURCES MGMT DIST. LAMB

APPENDIX B: RULE EMISSION LIMITS

[RULE 405 02-07-1986]

The operator shall not discharge into the atmosphere from this equipment, solid particulate matter including lead and lead compounds in excess of the rate shown in Table 405(a).

Where the process weight per hour is between figures listed in the table, the exact weight of permitted discharge shall be determined by linear interpolation.

For the purposes of this rule, emissions shall be averaged over one complete cycle of operation or one hour, whichever is the lesser time period.

TABLE 405(a)

Process Weight Per Hour		Maximum Discharge Rate Allowed for Solid Particulate Matter (Aggregate Discharged From All Points of Process		Process Weight Per Hour		Maximum Discharge Rate Allowed for Solid Particulate Matter (Aggregate Discharged From All points of Process	
Kilograms Per Hour	Pounds Per Hour	Kilograms Per Hour	Pounds Per Hour	Kilograms Per Hour	Pounds Per Hour	Kilograms Per Hour	Pounds Per Hour
100 or less	220 or less	0.450	0.99	9000	19840	5.308	11.7
150	331	0.585	1.29	10000	22050	5.440	12.0
200	441	0.703	1.55	12500	27560	5.732	12.6
250	551	0.804	1.77	15000	33070	5.982	13.2
300	661	0.897	1.98	17500	38580	6.202	13.7
350	772	0.983	2.17	20000	44090	6.399	14.1
400	882	1.063	2.34	25000	55120	6.743	14.9
450	992	1.138	2.51	30000	66140	7.037	15.5
500	1102	1.209	2.67	35000	77160	7.296	16.1
600	1323	1.340	2.95	40000	88180	7.527	16.6

FACILITY PERMIT TO OPERATE
RIV CO. WASTE RESOURCES MGMT DIST. LAMB

~~APPENDIX B: RULE EMISSION LIMITS~~
[RULE 405 02-07-1986]

Process Weight Per Hour		Maximum Discharge Rate Allowed for Solid Particulate Matter (Aggregate Discharged From All Points of Process		Process Weight Per Hour		Maximum Discharge Rate Allowed for Solid Particulate Matter (Aggregate Discharged From All points of Process	
Kilograms Per Hour	Pounds Per Hour	Kilograms Per Hour	Pounds Per Hour	Kilograms Per Hour	Pounds Per Hour	Kilograms Per Hour	Pounds Per Hour
700	1543	1.461	3.22	45000	99210	7.738	17.1
800	1764	1.573	3.47	50000	110200	7.931	17.5
900	1984	1.678	3.70	60000	132300	8.277	18.2
1000	2205	1.777	3.92	70000	154300	8.582	18.9
1250	2756	2.003	4.42	80000	176400	8.854	19.5
1500	3307	2.206	4.86	90000	198400	9.102	20.1
1750	3858	2.392	5.27	100000	220500	9.329	20.6
2000	4409	2.563	5.65	125000	275600	9.830	21.7
2250	4960	2.723	6.00	150000	330700	10.26	22.6
2500	5512	2.874	6.34	175000	385800	10.64	23.5
2750	6063	3.016	6.65	200000	440900	10.97	24.2
3000	6614	3.151	6.95	225000	496000	11.28	24.9
3250	7165	3.280	7.23	250000	551200	11.56	25.5
3600	7716	3.404	7.50	275000	606300	11.82	26.1
4000	8818	3.637	8.02	300000	661400	12.07	26.6
4500	9921	3.855	8.50	325000	716500	12.30	27.1
5000	11020	4.059	8.95	350000	771600	12.51	27.6
6000	13230	4.434	9.78	400000	881800	12.91	28.5
7000	15430	4.775	10.5	450000	992100	13.27	29.3
8000	17640	5.089	11.2	500000 or more	1102000 or more	13.60	30.0

APPENDIX C: PROJECT DRAWINGS – BADLANDS AND LAMB CANYON LANDFILLS
SHEETS G0-G10

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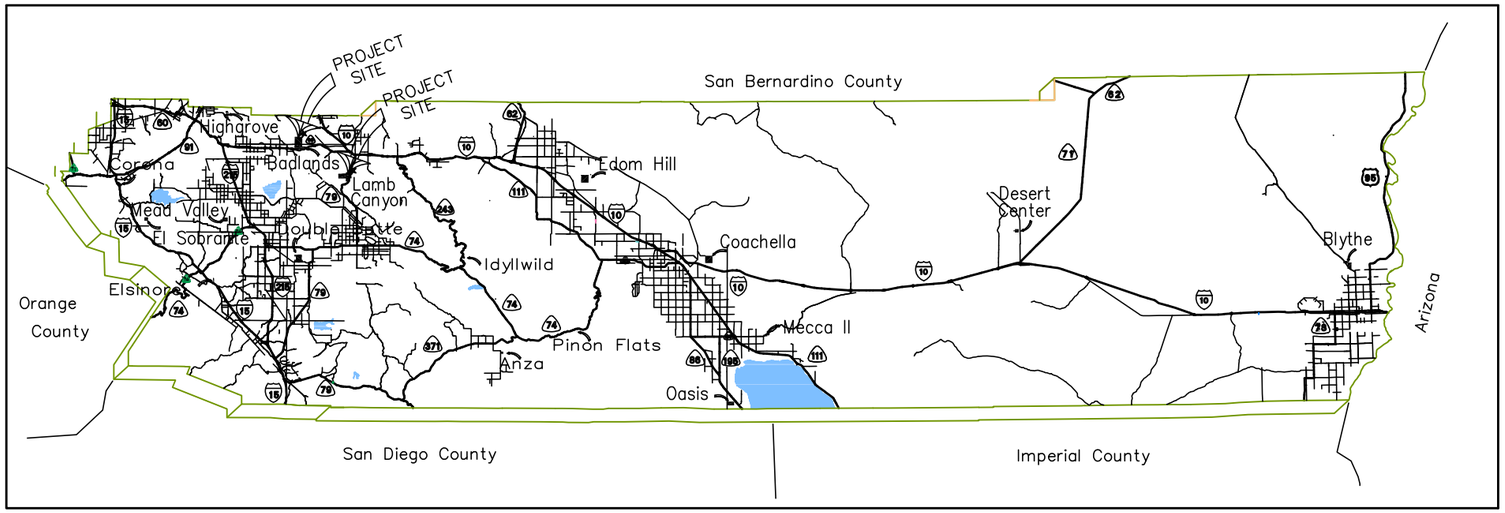
General Project Drawings for

Construction of Landfill Gas Collection Systems at the Badlands and Lamb Canyon Landfills FY26/27 to FY28/29

PREPARED BY
DEPARTMENT OF WASTE RESOURCES
14310 FREDERICK STREET
MORENO VALLEY, CALIFORNIA 92553
TEL. (951) 486-3200 FAX. (951) 486-3250

Andy Cortez, General Manager/ Chief Engineer

File: G0 Cover sheet 2026-2029 LC BL.dwg



LOCATION MAP

N.T.S.

INDEX OF DRAWINGS	
SHEET NO.	TITLE
G1	General Notes and Legends
G2	Lamb Canyon and Badlands Project Vicinity Maps
G3	Landfill Location Map
G4	Badlands Landfill Site Map
G5	Lamb Canyon Landfill Site Map
G6	Well to Lateral and Gas Well Asembly Details
G7	Lateral and Header Detail
G8	Typical Horizontal Well & Gravel Pit Detail
G9	Typical Vertical Well Detail
G10	Multi Level Probe Detail

FILL PATTERNS

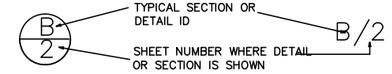
- ASPHALT
- FINAL COVER BLENDED MATERIAL (UPPER 4')
- CONCRETE
- EXISTING EARTHEN MATERIAL
- GROUTED RIP-RAP/OVERSIZE ROCK
- REFUSE
- EXISTING CLEAN DAILY COVER MATERIAL
- CLASS II AGGREGATE BASE ACCESS ROAD
- NON-SELECT FILL
- ON-SITE DAILY COVER MATERIAL STOCKPILED SOURCE

CONVENTIONAL SYMBOLS

- 3153 — MONUMENT POINT
- CHAIN LINK FENCE
- SLOPE (Top / Toe)

ABBREVIATIONS

A.C.	ASPHALT CONCRETE
APPROX.	APPROXIMATE
B.C.	BEGINNING OF CURVE
B.V.C.	BEGINNING OF VERTICAL CURVE
℄	CENTER LINE
CLF	CHAIN LINK FENCE
△	CURVE DELTA
E.	EASTING
E.C.	END OF CURVE
EL.	ELEVATION
E.V.C.	END OF VERTICAL CURVE
F	FILL
FL	FLOW LINE
G.B.	GRADE BREAK
HDPE	HIGH DENSITY POLYETHLENE
HP	HIGH POINT
INV	INVERT OF PIPE, CHANNEL ETC.
L	LENGTH OF CURVE
N.	NORTHING
N.T.S.	NOT TO SCALE
PVC	POLYVINYL CHLORIDE
ℙ	PROPERTY LINE
R	RADIUS
R.C.	REINFORCED CONCRETE
R.C.B.	REINFORCED CONCRETE BOX
R.C.F.C.	RIVERSIDE COUNTY FLOOD CONTROL
R.P.	RADIUS POINT OF CURVE
SDR	STANDARD DIMENSION RATIO
SIM	SIMILAR
STA.	STATION
T	TANGENCY
TDA	TIRE DERIVED AGGREGATE
TYP.	TYPICAL
TOP	TOP OF SLOPE
TOE	TOE OF SLOPE



Detail Callouts

GENERAL NOTES

1. Details of construction, materials and workmanship not shown in these drawings shall conform to the pertinent requirements of the Standard Specifications and any applicable Contract Specifications.
2. Contractor shall provide all utilities (water, electrical, and telephone service) as necessary to successfully complete any and all construction activities.
3. All existing utilities such as fences, monitoring wells, pipe lines, gas lines, probes, etc. shall be protected from damage or replaced at Contractor's expense.
4. All existing and proposed dimensions shall be verified by the Contractor prior to starting work. The Department shall be notified of all discrepancies immediately.
5. Topography is developed by digital photogrammetric methods and field topographic survey.
6. Grid ticks are based on North American datum of 1983 (NAD 83). California coordinate system Zone VI NAVD 88 is to be used for all on-site survey work.
7. Topographic features, both contours and plan data, are based on R.C.F.C. photogrammetric mapping dated December 2010.
8. All elevations are in feet, based on U.S.C. & G.S. Datum.

WASTE RESOURCES DEPARTMENT

APPROVED:
GENERAL MANAGER-CHIEF ENGINEER R.C.E. C-45868

RECOMMENDED:
ASSISTANT CHIEF ENGINEER R.C.E. C-51694

RECOMMENDED:
PRINCIPAL ENGINEER R.C.E. C-56765

SUBMITTED:
SENIOR CIVIL ENGINEER R.C.E. C-74686

NO.	REVISIONS	BY	APPROVED	DATE

DESIGNED BY:	ACC
DRAWN BY:	EAA
CHECKED BY:	ACC
DATE:	May 18, 2026
DATE OF PHOTOGRAPHY:	N/A
PEN/QUEUE	laser

RIVERSIDE COUNTY DEPARTMENT OF WASTE RESOURCES
Andy Cortez, General Manager/Chief Engineer

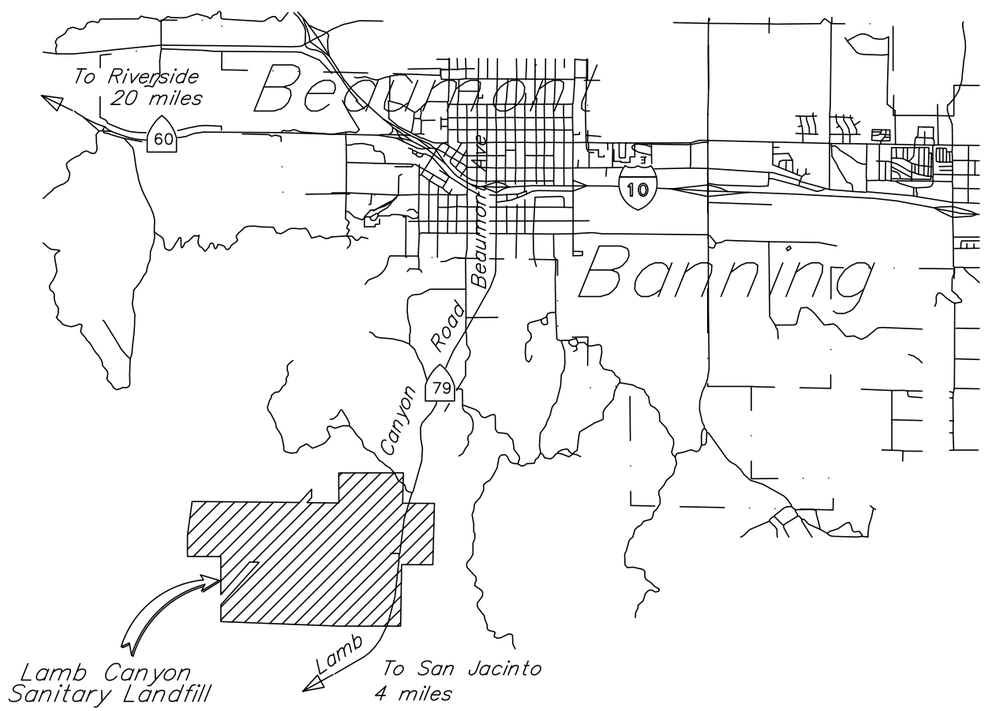
G1

Construction of Landfill Gas Collection Systems at the Badlands and Lamb Canyon Landfills FY26/27 to FY28/29

General Notes and Legends

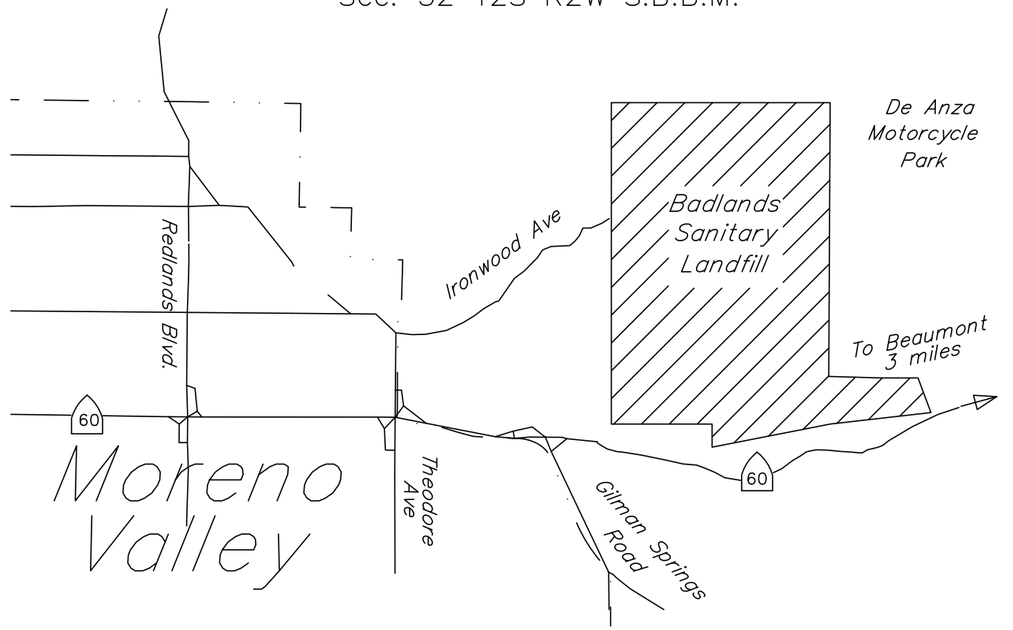
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DIRECTORY:	2026\LFG Exp. CY26-29
DIRECTORY:	
FILE:	G1 general notes 2026 2029 LC BL.dgn
SHEET:	1 OF 10

Lamb Canyon Sanitary Landfill
Vicinity Map
Por. Secs. 21, 28 & 29 T3S R1W S.B.B.M.



Legend	
Paved Access Roads	——
Freeways (Hwys 60 & I–10)	——
Other Roads	——
City Boundaries	——
Sanitary Landfill	▨

Badlands Sanitary Landfill
Vicinity Map
Por. Secs. 4 & 5 T3S R2W &
Sec. 32 T2S R2W S.B.B.M.



Legend	
Paved Access Roads	——
Freeway (Highway 60)	——
Other Roads	——
City Boundary	——
Sanitary Landfill	▨

NO.	REVISIONS	BY	APPROVED	DATE

DESIGNED BY:	ACC
DRAWN BY:	EAA
CHECKED BY:	ACC
DATE:	May 18, 2026
DATE OF PHOTOGRAPHY:	N/A
PEN/QUEUE:	laser

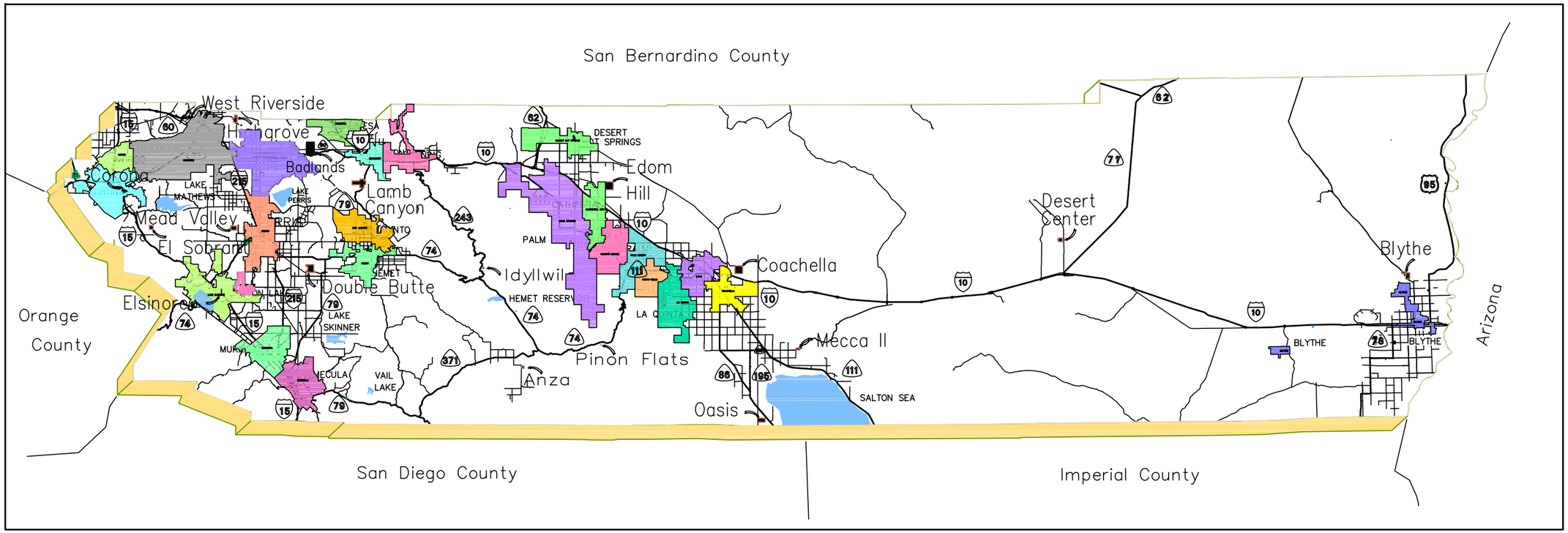
RIVERSIDE COUNTY DEPARTMENT OF WASTE RESOURCES
Andy Cortez, General Manager/Chief Engineer

G2

Construction of Landfill Gas Collection Systems at the Badlands and LambCanyon Landfills FY26/27 to FY28/29
Project Vicinity Maps

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DIRECTORY:	environ\sites\badlands\air\gassystem
DIRECTORY	2026\LFG Exp. CY26–29
FILE:	G2 Vicinity maps 26–29.dgn
SHEET	2 OF 10

Riverside County Sanitary Landfills Location Map



NO.	REVISIONS	BY	APPROVED	DATE

DESIGNED BY:	
DRAWN BY:	
CHECKED BY:	
DATE:	May 18, 2026
DATE OF PHOTOGRAPHY:	N/A
PEN/QUEUE:	laser

RIVERSIDE COUNTY DEPARTMENT OF WASTE RESOURCES

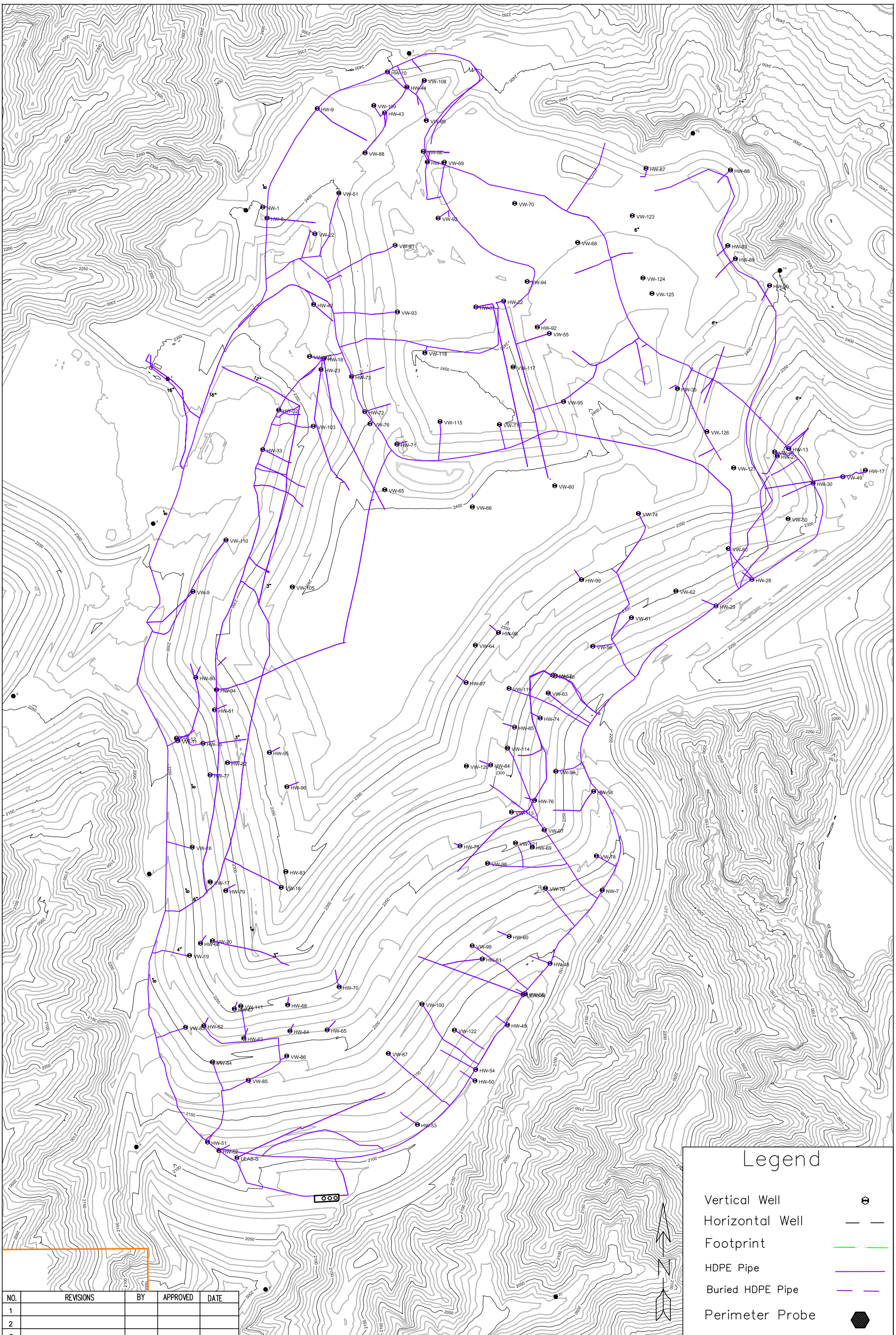
Andy Cortez, General Manager/Chief Engineer

G3

Construction of Landfill Gas Collection Systems at the Badlands Lamb Canyon Landfills FY26/27 to FY28/29

Location Map

SCALE:	1" = 14 miles
SERVER:	wastefs-1
DIRECTORY:	environ\sites\badlands\air\gassystem
DIRECTORY	2026\LFG Exp. CY26-29
FILE:	G3 Landfill Location Maps.dgn
SHEET 3 OF 10	



Legend

- Vertical Well
- Horizontal Well
- Footprint
- HDPE Pipe
- Buried HDPE Pipe
- Perimeter Probe

NO.	REVISIONS	BY	APPROVED	DATE
1				
2				
3				

SCALE: 1" = 150'	DESIGNED BY:
NODE: web2k-06	DRAWN BY: ACC
DIRECTORY: environ/sites/badlands/air/	CHECKED BY: ACC
DIRECTORY: gassystem/2026/LFG Exp CY26-29	DATE: July 2020
FILE: G4 BL site map.dgn	DATE OF PHOTOGRAPHY: june 2020
Sheet: 4 OF 10	PEN TABLE: /fs_usr3/tables/nofill.pen

RIVERSIDE COUNTY DEPARTMENT OF WASTE RESOURCES

Andy Cortez, General Manager/Chief Engineer

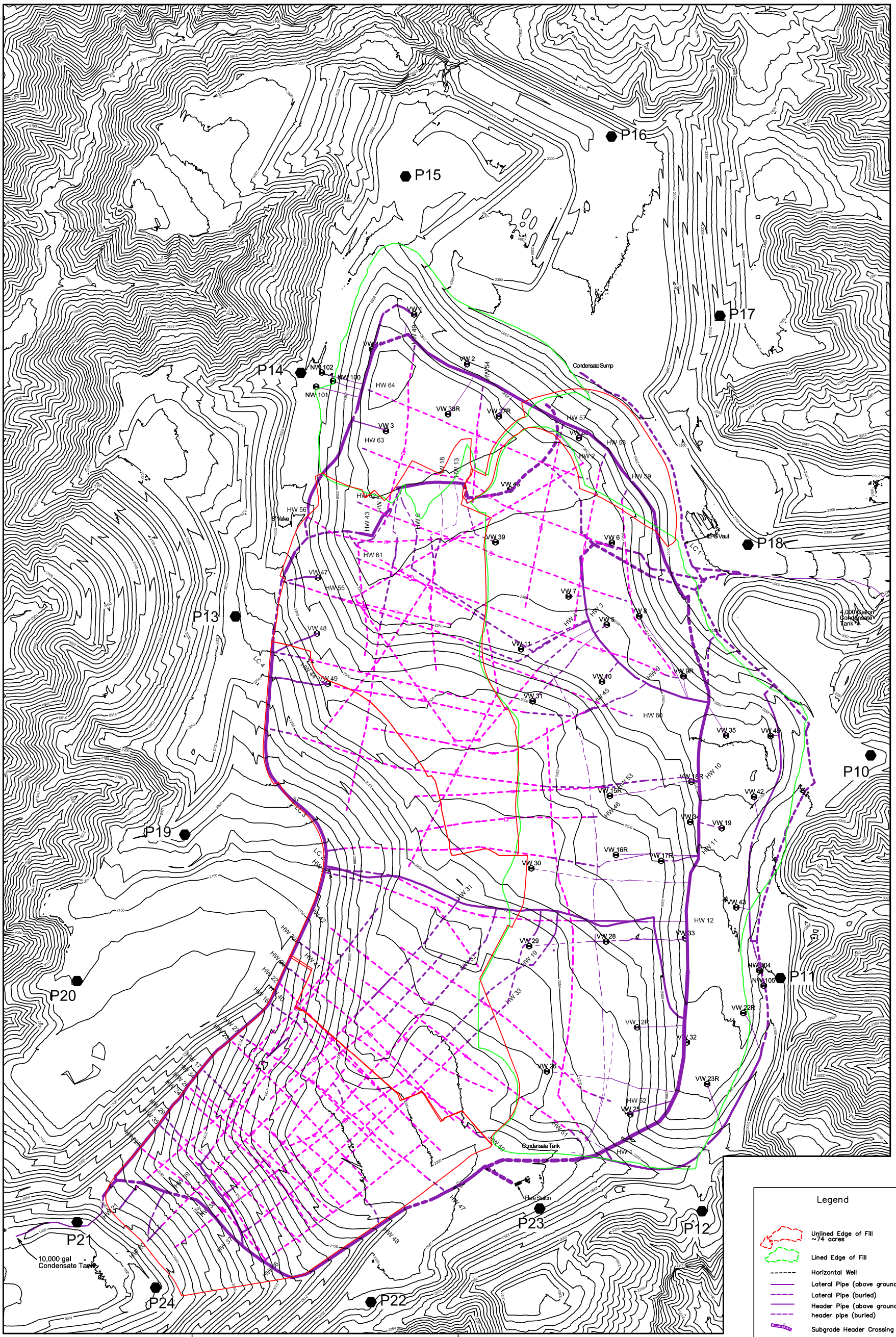
0 75 150 225 300 375

Datum is mean sea level

G4

Construction of Landfill Gas Collection Systems at the Badlands and Lamb Canyon Landfills FY26/27 to FY28/29

Badlands Sanitary Landfill Site Map



REVISIONS	BY	APPRVD	DATE

RIVERSIDE COUNTY DEPARTMENT OF WASTE RESOURCES

Andy Cortez, General Manager/Chief Engineer

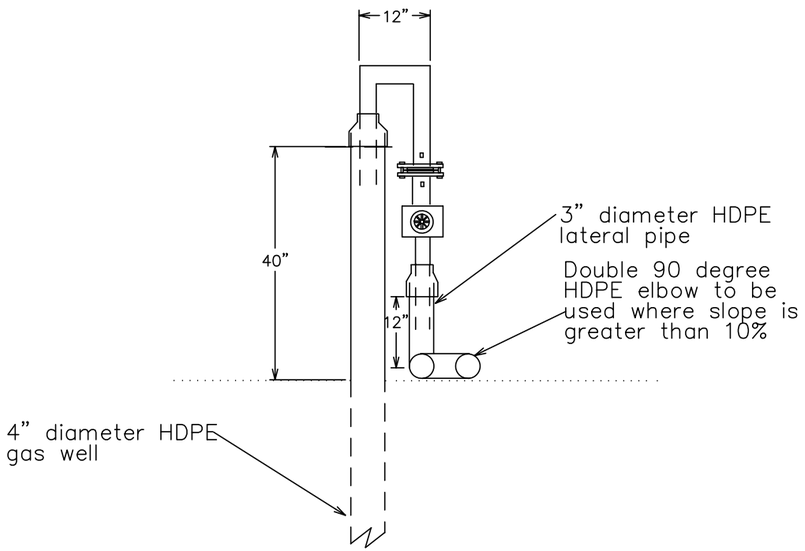
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DRAWN BY:	ACC
CHECKED BY:	ACC
DRAWING DATE:	March 2020
PHOTO DATE:	March 2020
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PATH:	gassystem/2026/LFG Exp. CY26-29
PATH/FILE:	G5 LC Site Map.dgn

G5

SHEET: 5 OF 10

Construction of Landfill Gas Collection Systems at the Badlands and Lamb Canyon Landfills FY26/27 to FY28/29

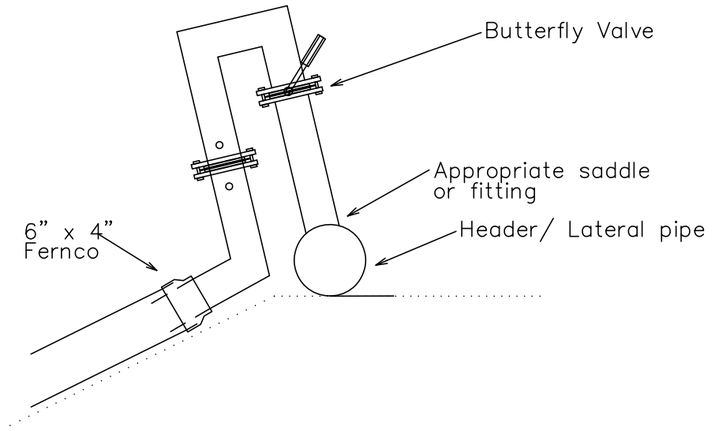
Lamb Canyon Sanitary Landfill
Site Map



GAS WELL ASSEMBLY DETAIL (2") — A / G6

CROSS SECTION (perpendicular to slope)

NTS



GAS WELL ASSEMBLY DETAIL (4") — B / G6

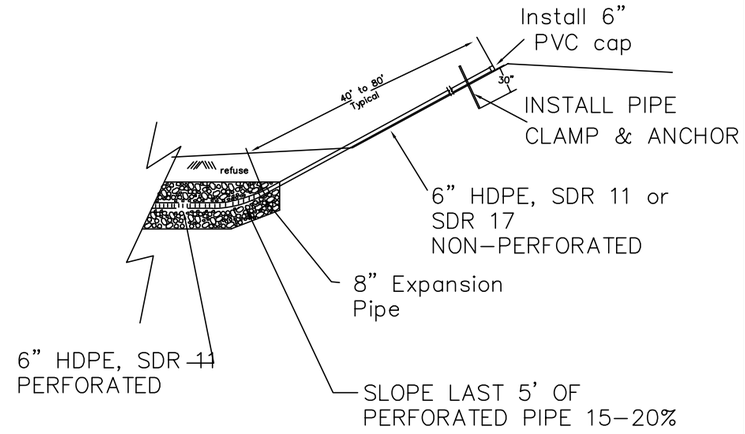
CROSS SECTION (parallel to slope)

NTS

Notes:

1.) Pipe clamp to be installed on 1 1/4" steel pipe driven 30" into soil.

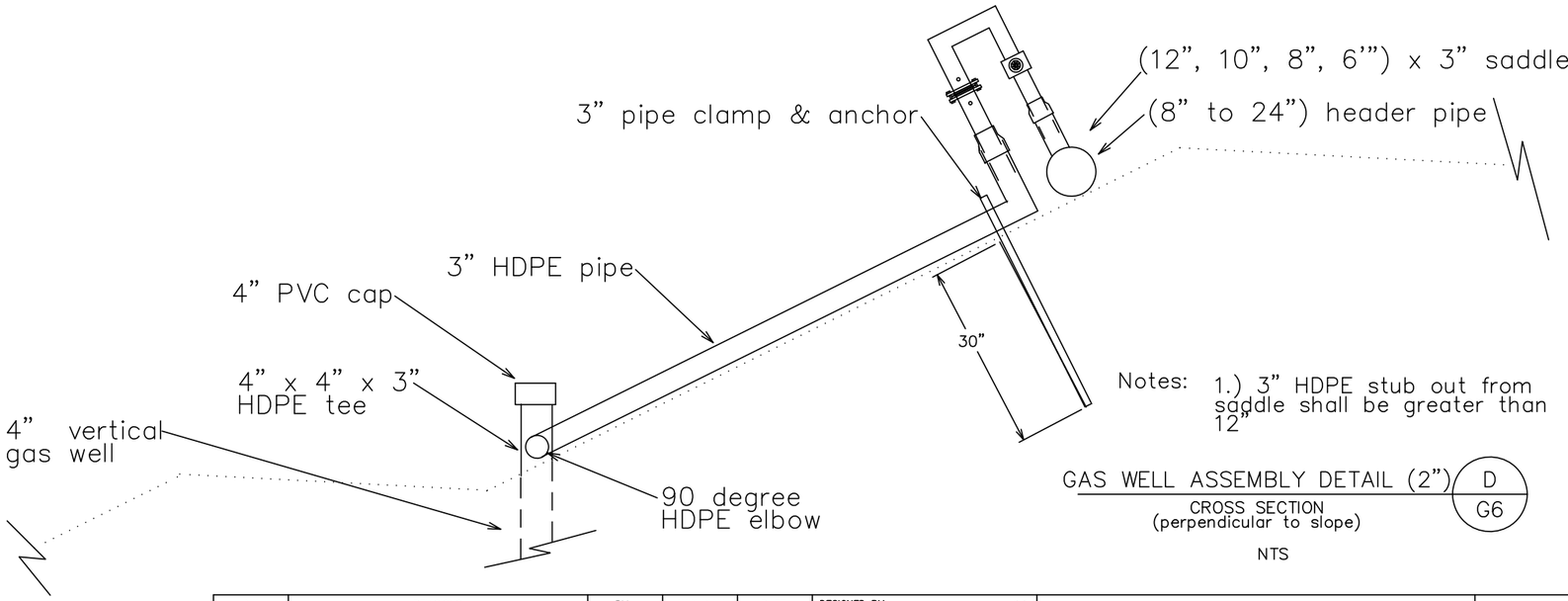
2.) 6" diameter pipe clamps to be supplied by the County



HW TO LATERAL DETAIL — C / G6

CROSS SECTION

NTS

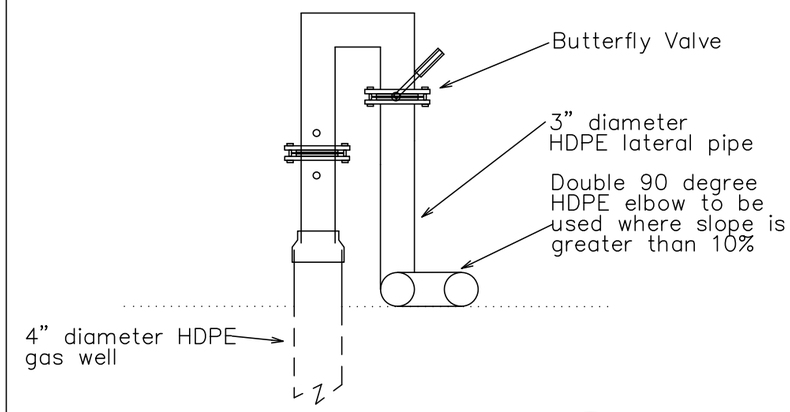


Notes: 1.) 3" HDPE stub out from saddle shall be greater than 12"

GAS WELL ASSEMBLY DETAIL (2") — D / G6

CROSS SECTION (perpendicular to slope)

NTS



GAS WELL ASSEMBLY DETAIL (3") — E / G6

CROSS SECTION (perpendicular to slope)

NTS

NO.	REVISIONS	BY	APPROVED	DATE

DESIGNED BY:	ACC
DRAWN BY:	ACC
CHECKED BY:	ACC
DATE:	May 18, 2026
DATE OF PHOTOGRAPHY:	N/A
PEN/QUEUE:	laser

RIVERSIDE COUNTY DEPARTMENT OF WASTE RESOURCES

Andy Cortez, General Manager/Chief Engineer

G6

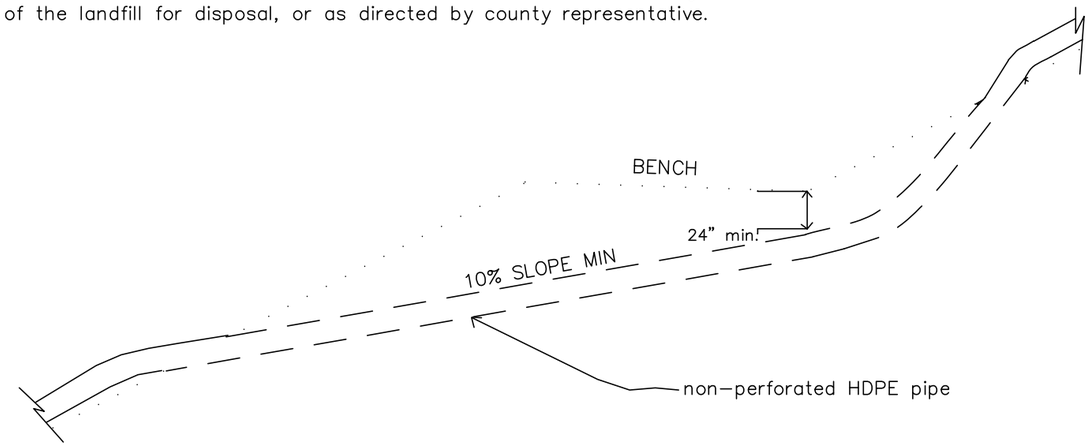
Construction of Landfill Gas Collection Systems at the Badlands and Lamb Canyon Landfills FY26/27 to FY28/29

Gas Well to Lateral and Gas Well Assembly Details

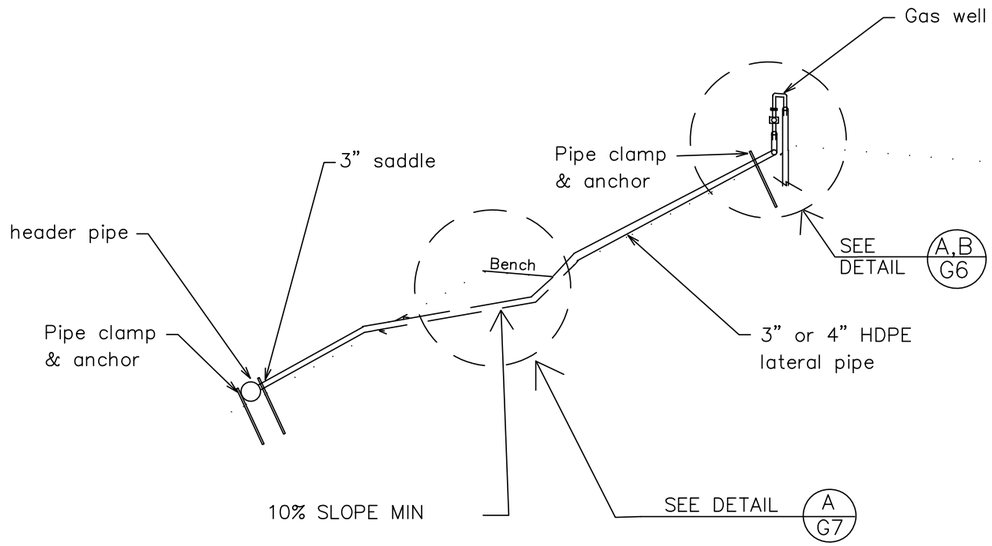
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DIRECTORY:	environ\sites\badlands\air\gassystem
DIRECTORY:	2026\LFG Exp. CY26-29
FILE:	G6 typical gas well assembly 26-29.dgn
SHEET	6 OF 10

Notes:

1.) Trench to be backfilled with clean soil in 6" lifts to 90% compaction
2.) Refuse might be encountered during trenching on deeper part of trench.
3.) All excavated refuse must be removed and taken to the working face of the landfill for disposal, or as directed by county representative.

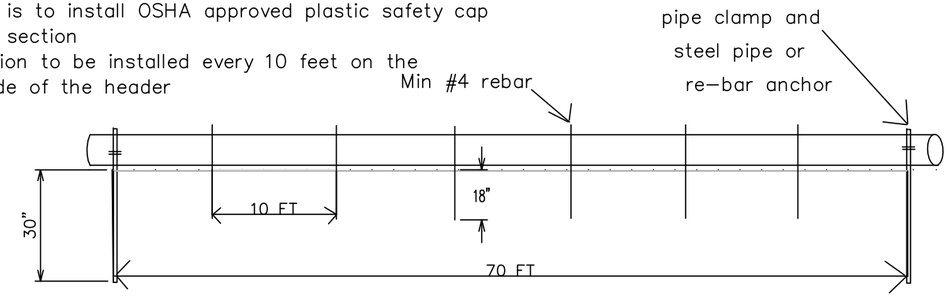


WELL LATERAL & HEADER BENCH CROSSING DETAIL (A / G7)
CROSS SECTION NTS

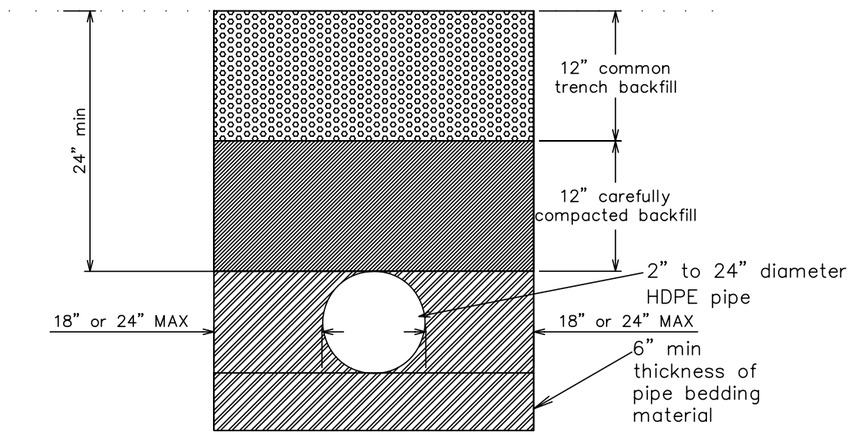


WELL LATERAL DETAIL (B / G7)
CROSS SECTION NTS

Notes:
1.) Pipe clamps & anchors to be installed every 70 feet.
2.) Pipe clamps & anchors to be installed within one foot of each saddle connection
3.) Rebar to be driven 18" into ground and extend several inches above the header.
4.) Contractor is to install OSHA approved plastic safety cap on each rebar section
5.) Rebar section to be installed every 10 feet on the down–slope side of the header



HEADER PIPE DETAIL (C / G7)
CROSS SECTION NTS



TRENCH DETAIL FOR BURIED PIPE (D / G7)
CROSS SECTION NTS

NO.	REVISIONS	BY	APPROVED	DATE

DESIGNED BY:	ACC/TDS
DRAWN BY:	ACC/EAA
CHECKED BY:	TDS
DATE:	May 18, 2026
DATE OF PHOTOGRAPHY:	N/A
PEN/QUEUE:	laser

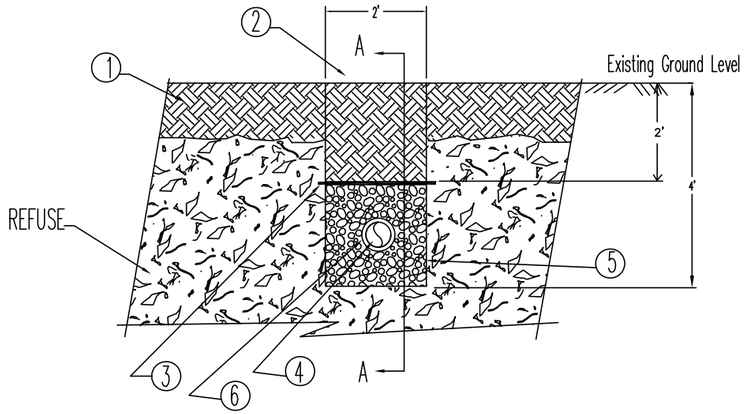
RIVERSIDE COUNTY DEPARTMENT OF WASTE RESOURCES
Andy Cortez, General Manager/ Chief Engineer

G7

Construction of Landfill Gas Collection Systems at the Badlands and Lamb Canyon Landfills

Lateral and Header Details

SCALE:	NTS
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DIRECTORY:	environ\sites\badlands\air\gassystem
DIRECTORY:	2026\LFG Exp. CY26–29
FILE NAME:	G7 typical header lateral detail 26–29.dgn
SHEET:	7 OF 10

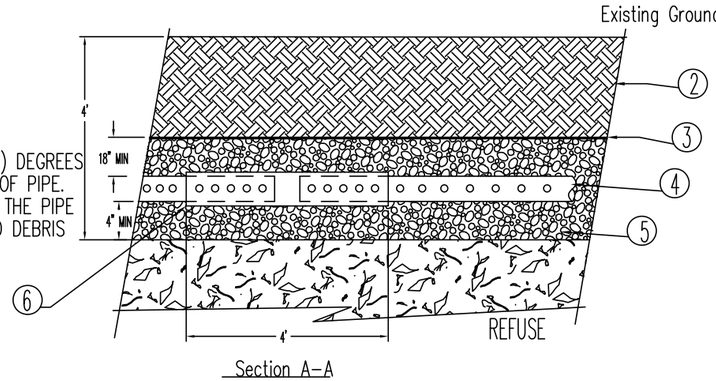


TYPICAL LANDFILL GAS HORIZONTAL WELL CROSS SECTION (A / G8)
NTS

NOTES:

A. WELL PIPE AND ROCK/TDA CROSSECTION SHALL BE PLACED BELOW THE COVER SOIL AND WITHIN TRASH.

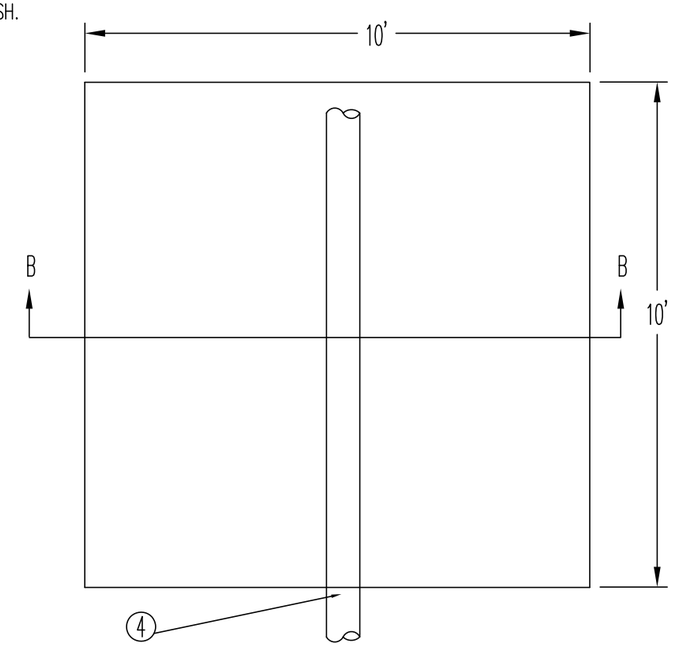
B. PERFORATION SHALL BE: 1/2" DIA HOLES DRILLED IN ROWS OF FOUR (4), NINETY (90) DEGREES APART, EVERY 6" PER LENGTH OF PIPE. HOLES MUST FULLY PENETRATE THE PIPE AND BE FREE OF CUTTINGS AND DEBRIS

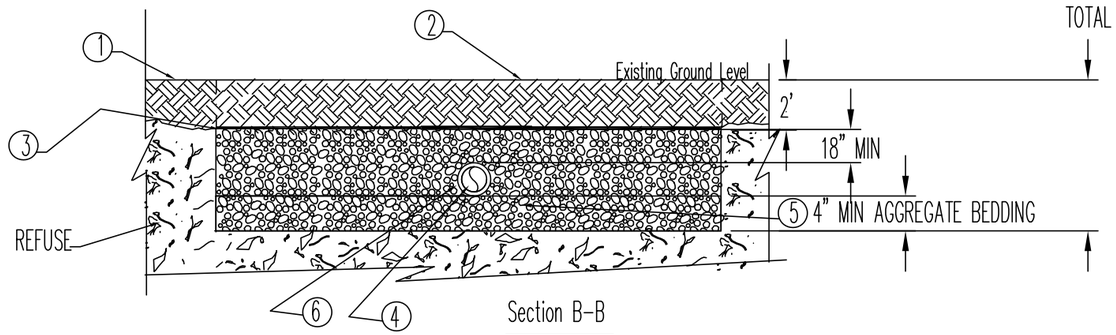


Section A–A

NOTES:

A. WELL PIPE AND TDA CROSSECTION SHALL BE PLACED BELOW THE COVER SOIL AND WITHIN TRASH.





Section B–B

TYPICAL TDA PIT DETAIL (B / G8)
NTS

1. EXISTING COVER SOIL
2. CLEAN TRENCH/PIT BACKFILL
3. GEOTEXTILE
4. 6" HDPE, SDR 11, PERFORATED, 40' SECTION, SEE NOTE A
5. 4" MIN BEDDING MATERIAL AND CAREFULLY COMPACTED BACKFILL SURROUNDING AND ABOVE THE PIPE (18" MIN ON TOP OF THE PIPE)
6. 8" HDPE, SDR 11, PERFORATED, EXPANSION PIPE (4' LENGTH EVERY 40')

NO.	REVISIONS	BY	APPROVED	DATE

DESIGNED BY:	TDS
DRAWN BY:	EAA
CHECKED BY:	TDS
DATE:	May 18, 2026
DATE OF PHOTOGRAPHY:	
PEN/QUEUE:	laser

RIVERSIDE COUNTY DEPARTMENT OF WASTE RESOURCES

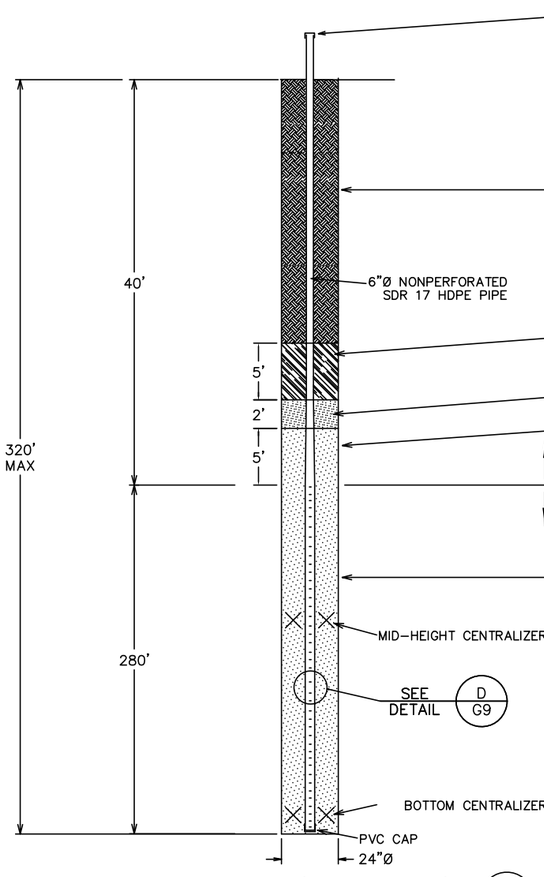
Andy Cortez, General Manager/Chief Engineer

G8

Construction of Landfill Gas Collection Systems at the Badlands and Lamb Canyon Landfills

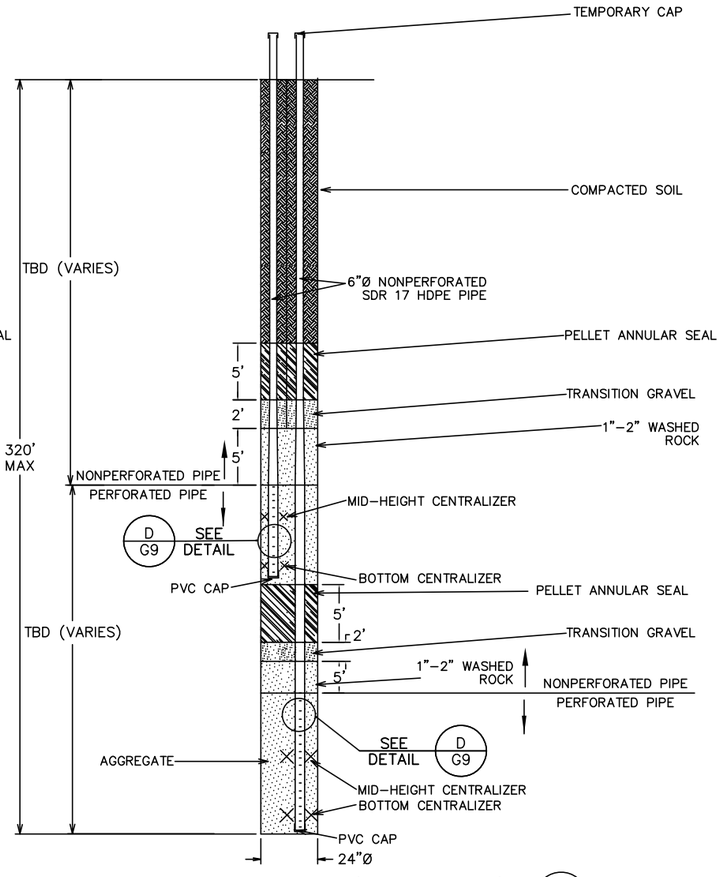
Typical Horizontal Well & TDA Pit Detail

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DIRECTORY:	environ\sites\badlands\air\gassystem
DIRECTORY:	2026\LFG Exp. CY26–29
FILE:	G8 bl_lc Horiz Well dtl
SHEET:	8 OF 10



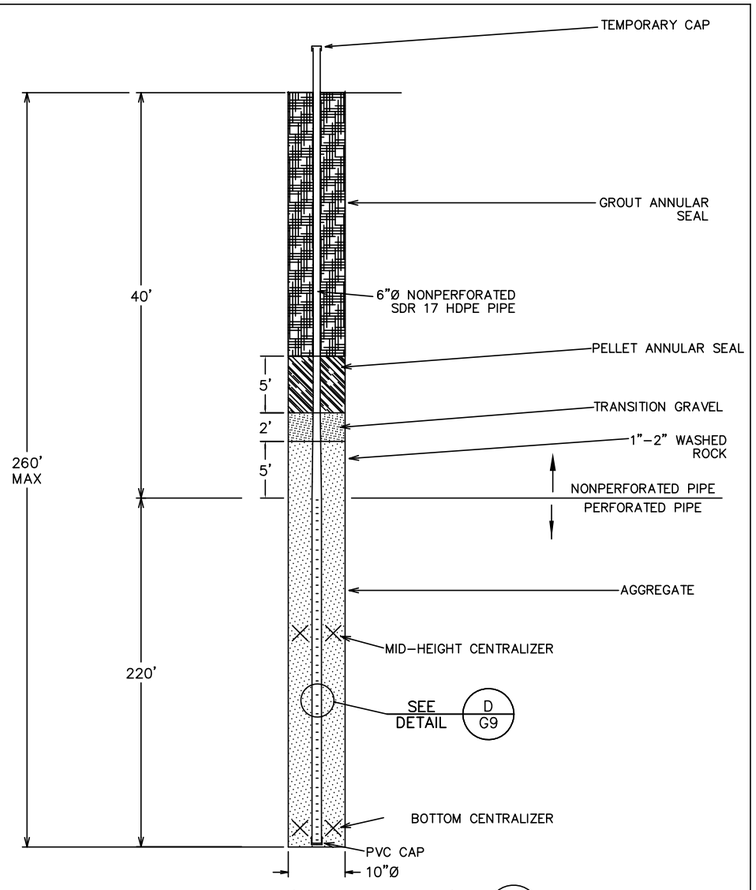
LFG WELL DETAIL (WITHIN WASTE) A G9

NTS



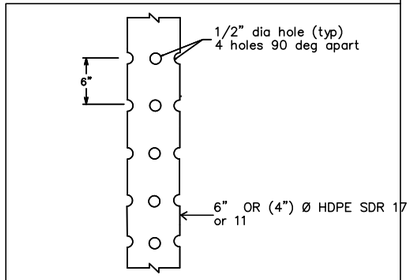
TWO CASING LFG WELL DETAIL (WITHIN WASTE) B G9

NTS



NATIVE WELL DETAIL (OUTSIDE WASTE) C G9

NTS



SECTION VIEW

PIPE PERFORATIONS D G9

NTS

NOTES:
1. THE CONTRACTOR SHALL MAINTAIN A LOG FOR EACH HOLE DRILLED.
2. DRILLING SHALL BE PERFORMED ACCORDING TO THE APPLICABLE CONDITIONS OF THE SCAQMD PERMIT TO CONSTRUCT/OPERATE.
3. ALL HDPE PIPE SHALL BE SDR 11 OR 17.

NO.	REVISIONS	BY	APPROVED	DATE

DESIGNED BY:	TDS
DRAWN BY:	EAA
CHECKED BY:	TDS
DATE:	May 18, 2026
DATE OF PHOTOGRAPHY:	N/A
PEN/QUEUE:	laser

RIVERSIDE COUNTY DEPARTMENT OF WASTE RESOURCES

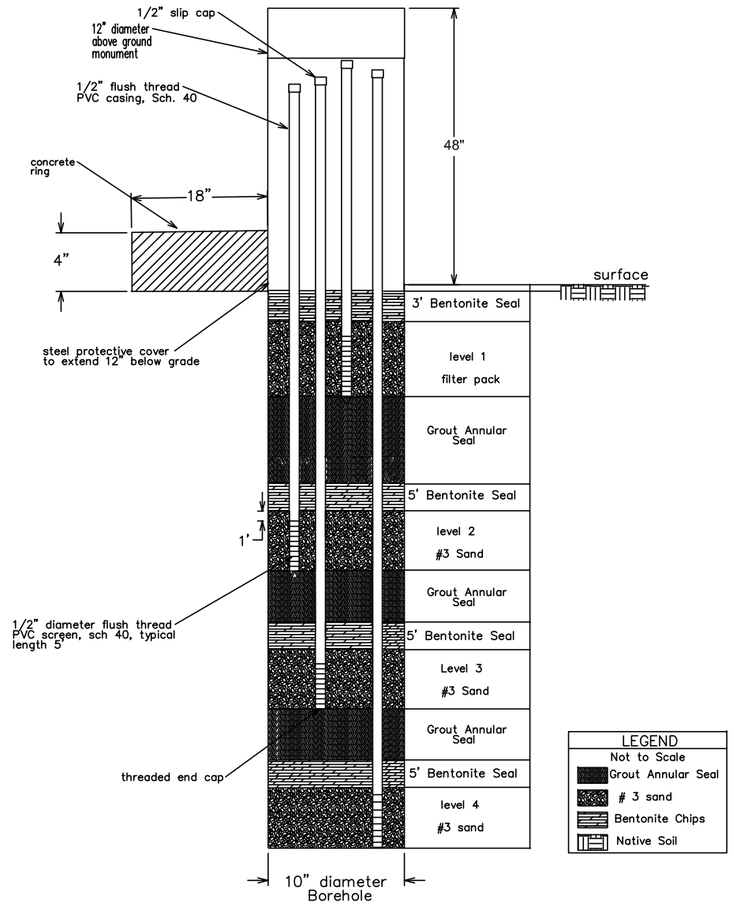
Andy Cortez, General Manager/Chief Engineer

G9

Construction of Landfill Gas Collection Systems at the Badlands and Lamb Canyon Landfills

Typical Vertical Well Detail

SCALE:	NTS
SERVER:	wastefs–1
DIRECTORY:	environ\sites\badlands\air\gassystem
DIRECTORY:	2026\LFG Exp. CY26–29
FILE:	G9 typical vertical well detail 26–29.dgn
SHEET: 9 OF 10	



NOTES:
1. Depths of the Probes will be location specific.

NO.	REVISIONS	BY	APPROVED	DATE

DESIGNED BY:	TDS
DRAWN BY:	EAA
CHECKED BY:	TDS
DATE:	May 18, 2026
DATE OF PHOTOGRAPHY:	N/A
PEN/QUEUE:	laser

RIVERSIDE COUNTY DEPARTMENT OF WASTE RESOURCES
Andy Cortez, General Manager/Chief Engineer

G10

Construction of Landfill Gas Collection Systems at the Badlands and Lamb Canyon Landfills

Multi-Level Probe Detail

SCALE:	NTS
SERVER:	wastefs-1
DIRECTORY:	environ\sites\badlands\air\gassystem
DIRECTORY:	2026\LFG Exp. CY26-29
FILE:	G10 multi level probe detail 26-29.dgn
SHEET:	10 OF 10

RIVERSIDE COUNTY
DEPARTMENT OF
WASTE RESOURCES

Andy Cortez, General Manager-Chief Engineer

NOTICE OF EXEMPTION

DATE: June 15, 2026

TO: County Clerk, County of Riverside (County)

PROJECT CASE NO/TITLE: NOE 26-04: On-Call Gas Collection Systems Construction Project

PROJECT LOCATION: Badlands Landfill, located at 31125 Ironwood Avenue, Moreno Valley, CA; and, Lamb Canyon Landfill, located at 16411 Lamb Canyon Road, Beaumont, CA.

PROJECT DESCRIPTION: The proposed Project involves the County of Riverside (County) approving contract documents for an on-call contract to provide necessary construction enhancements to gas collection systems at the Badlands Landfill and Lamb Canyon Landfill.

PUBLIC AGENCY APPROVING PROJECT: County of Riverside (County)

PROJECT SPONSORS: Department of Waste Resources (RCDWR)

The Project is exempt from the provisions of CEQA, specifically by the State CEQA Guidelines as identified below. The Project will not result in any specific or general exceptions to the use of categorical exemptions as detailed under State CEQA Guidelines section 15300.2. The Project will not cause any impacts to scenic resources, historic resources, or unique sensitive environments. Further, no unusual circumstances or potential cumulative impacts would occur that may reasonably create a direct or reasonably foreseeable indirect physical environmental impact.

EXEMPT STATUS:

☐ Ministerial
☐ Declared Emergency
☐ Emergency Project
☐ Statutory Exemption:
☒ Categorical Exemption — **Section 15301, Existing Facilities; 15302, Replacement and Reconstruction; 15303, New Construction or Conversion of Small Structures; 15304, Minor Alterations to Land**
☒ Other Exemption: — **Section 15061(b)(3), General Rule Exemption**

REASONS FOR EXEMPTION:

Section 15061(b)(3) - General Rule Exemption
The activity is covered by the general rule that CEQA applies only to projects which have the potential for causing a significant effect on the environment. Where it can be seen with certainty that there is no possibility that the activity in question may have a significant effect on the environment, the activity is not subject to CEQA.

This project is exempt under Section 15061(b)(3) because:
The Project proposes necessary construction enhancements to gas collection systems on an on-call basis at the Badlands Landfill and Lamb Canyon Landfill. The Badlands and Lamb Canyon landfills gas collection systems are an integral part of the RCDWR's efforts to comply with landfill air quality regulations. The RCDWR is responsible for the construction and installation of gas collection systems that enable effective and efficient gas collection. Furthermore, the proposed contract work is located within permitted landfill disturbance areas. The Project would not have a direct, indirect, or cumulatively significant effect on the environment or environmental resources. As such, the Project meets the scope and intent of Section 15061(b)(3), General Rule Exemption.

This determination is an issue of fact and sufficient evidence exists in the record that the activity will not have a significant effect on the environment. As such, the exemption applies and no further evaluation under CEQA is required. See Muzzy Ranch Co. v. Solano County Airport Land Use Comm'n (2007) 41 Cal. 4th 372.

Section 15301, Existing Facilities
Class 1 consists of the operation, repair, maintenance, permitting, leasing, licensing, or minor alteration of existing public or private structures, facilities, mechanical equipment, or topographical features, involving negligible or no expansion of use beyond that existing at the time of the lead agency's determination.

This project is exempt under Section 15301 because:
The Project proposes to provide construction enhancements to gas collection systems of existing facilities on an on-call basis at the Badlands Landfill and Lamb Canyon Landfill. As such, the Project is found not to affect any environmental resources; therefore, the Project meets the scope and intent of Section 15301, Categorical Exemption.

Section 15302, Replacement and Reconstruction
Class 2 consists of replacement or reconstruction of existing structures and facilities where the new structure will be located on the same site as the structure replaced and will have substantially the same purpose and capacity as the structure replaced.

This project is exempt under Section 15302 because:
The Project proposes to provide construction enhancements to gas collection systems of existing facilities on an on-call basis at the Badlands Landfill and Lamb Canyon Landfill. Construction enhancements include new and replacement gas collection wells, gas collection piping, gas condensate drain piping, and perimeter monitoring probes. Construction enhancements at the Lamb Canyon and Badlands Sanitary Landfills will occur within an existing permitted area. Therefore, the Project as proposed meets the scope and intent of the Class 2 Categorical Exemption.

15303, New Construction or Conversion of Small Structures
Class 3 consists of construction and location of limited numbers of new, small facilities or structures; installation of small new equipment and facilities in small structures; and the conversion of existing small structures from one use to another where only minor modifications are made in the exterior of the structure.

This project is exempt under Section 15303 because:
The Project proposes to request on-call construction enhancements to gas collection systems at the Badlands Landfill and Lamb Canyon Landfill where repairs or new construction is required to enable effective and efficient gas collection. Construction enhancements would include new and replacement gas collection wells, gas collection piping, gas condensate drain piping, and perimeter monitoring probes. This work would not have a direct, indirect, or cumulatively significant effect on the environment. The Project as proposed meets the scope and intent of the Class 3 Categorical Exemption.

15304, Minor Alterations to Land
Class 4 consists of minor public or private alterations in the condition of land, water, and/or vegetation which do not involve removal of healthy, mature, scenic trees except for forestry or agricultural purposes.

This project is exempt under Section 15304 because:
The Project proposes to request on-call construction enhancements to gas collection systems that may require trenching, backfilling and compacting which may result in minor alterations to existing land conditions within and existing permitted area. Due to the previous disturbance and current use of the site, no healthy, mature, scenic trees are present in the Project area. Therefore, the Project as proposed meets the scope and intent of the Class 4 Categorical Exemption.

FINDINGS:

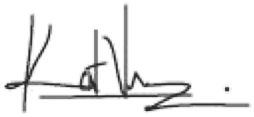
1. Based upon the identified exemptions and justifications above, the RCDWR, on behalf of the County, hereby concludes that no physical environmental impacts are anticipated to occur and the Project as proposed is exempt under CEQA. No further environmental analysis is warranted.

2. The proposed Project is exempt from CEQA pursuant to Section 15061(b)(3), and categorically exempt from CEQA pursuant to Section 15301, 15302, 15303, and 15304.

3. It can be seen with certainty that there is no possibility that this Project would have a direct, indirect, or cumulatively significant effect on the environment; therefore, the activity is exempt under CEQA as previously identified.

If there are any questions regarding the above matter, I can be reached at (951) 486-3200.

Andy Cortez, General Manager - Chief Engineer
Riverside County Department of Waste Resources

By: 
Katherine Veliz

Title: Senior Planner

Date: June 15, 2026

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