

INVITATION FOR BIDS



FOR CONSTRUCTING

NORTHERLY SLOPE PROTECTION PONDS C & D AND POND B SLOPE REPAIR

CONTRACT NUMBER
C01909

ISSUED BY
CAPITAL PROJECTS ENGINEERING DIVISION
CITY OF SANTA ROSA, CALIFORNIA

2019

ATTENTION
Prebid Conference
See Page 1



STATE OF CALIFORNIA

INVITATION FOR BIDS

CONTAINING:

NOTICE TO BIDDERS

SPECIAL PROVISIONS

BID FORMS

CONTRACT

FOR

**NORTHERLY SLOPE PROTECTION
PONDS C & D
AND POND B SLOPE REPAIR**

Contract No. C01909

NORTHERLY SLOPE PROTECTION PONDS C & D AND POND B SLOPE REPAIR

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CITY OF SANTA ROSA
STATE OF CALIFORNIA

NOTICE TO BIDDERS

➤	For technical questions regarding this project, contact Andrew Wilt at (707) 543-3878.
➤	For direct access to plans, specifications and planholders' lists, go to www.srcity.org/bids and click on <u>Bid/Proposal Opportunities</u> or call (707) 543-3800.
➤	For direct access to bid results, go to www.srcity.org/bids . Under Link to Capital Projects, click on <u>Capital Projects Contracts</u> or call (707) 543-3835.

- IMPORTANT -

Bid Acceptance Deadline

Sealed bids will be accepted at the Transportation and Public Works Department, 69 Stony Circle, Santa Rosa, California 95401 until 3:00 p.m., May 2, 2019, for Northerly Slope Protection Ponds C & D and Pond B Slope Repair, Contract No. C01909. (Engineer's Estimate: \$1,450,000.00 .)

Bids tendered after this deadline will not be accepted. The official time clock for accepting bids will be an electric date and time stamping clock, located in the Transportation and Public Works Department, 69 Stony Circle, Santa Rosa, California. In order to be accepted, bids must be received prior to 3:00 p.m. Therefore, a bid stamped in at **2:59 p.m.** will be accepted, but one delivered at or after **3:00 p.m.** is late and will not be accepted.

Pre-Bid Meeting

Prospective bidders, subcontractors, and material suppliers are invited to attend an on-site pre-bid meeting scheduled to be held at **1:00 p.m.**, April 24, 2019, at the **north end of Pond C** (across the street from 4300 Llano Road).

Subcontractor Information; Department of Industrial Relations Registration

Bidders shall provide the names, business addresses and license numbers of all subcontractors listed on bidder's List of Subcontractors. No contractor or subcontractor may be listed on a bid for this public works project unless registered with the Department of Industrial Relations (DIR) pursuant to Labor Code section 1725.5. No contractor or subcontractor may be awarded a contract for this public works project unless registered with the DIR pursuant to Labor Code section 1725.5. This public works project is subject to compliance monitoring and enforcement by the DIR.

CITY OF SANTA ROSA
NORTHERLY SLOPE PROTECTION PONDS C & D AND POND B SLOPE REPAIR
ESTIMATED QUANTITIES

Item No.	Description	Quantity	Units
1	MOBILIZE, DEMOBILIZE, AND SITE PREPARATION	1	LS
2	STRIPPING AND DISPOSING OF ORGANICS (F)	47,275	SY
3	EMBANKMENT EXCAVATION (F)	16,495	CY
4	POND BOTTOM FILL (F)	11,655	CY
5	EMBANKMENT FILL (F)	1,155	CY
6	RIPRAP KEYWAY EXCAVATION (F)	1,370	CY
7	OVER EXCAVATION	3,300	CY
8	GRAVEL ROADWAY CONSTRUCTION	29,200	SF
9	ROCK RIPRAP	21,950	SY
10	GEOTEXTILE	21,950	SY
11	DEWATERING, TRENCHING SHORING, AND BRACING	1	LS
12	INTERIOR EMBANKMENT EMERGENCY SLOPE REPAIR ALLOWANCE	1	FA

The foregoing quantities are approximate only, being given as a basis for the comparison of bids, and the City of Santa Rosa does not expressly or by implication, agree that the actual amount of work will correspond therewith, but reserves the right to increase or decrease the amount of any class or portion of the work, as may be deemed necessary or expedient by the Engineer.

Bids shall be made in accordance with the prevailing hourly rate of per diem wages for this locality and project as determined by the Director of the DIR pursuant to Labor Code sections 1770 *et seq.*

Contractor shall be responsible for compliance with the Immigration Reform Control Act of 1986.

If the project requires the employment of workers in any apprenticeable craft or trade, once awarded, Contractor and subcontractors must apply to the Joint Apprenticeship Council unless already covered by local apprentice standards (see Labor Code section 1777.5).

All bids are to be compared on the basis of the Engineer's estimate of the quantities of work to be performed. No bid will be awarded to a contractor who is not licensed in accordance with the provisions of Chapter 9 of Division 3 of the Business and Professions Code. Contractor must hold a Class A license for this project.

Project plans, bid and contract forms for C01909 Northerly Slope Protection Ponds C & D and Pond B Slope Repair may be obtained through PlanetBids at www.srcity.org/bids. These documents can no longer be obtained at the Transportation and Public Works Department.

No bid will be accepted unless it is made on the contract bid forms furnished by the Transportation and Public Works Department through PlanetBids. The original of the completed bid forms bearing original signatures must be submitted. A bid will not be accepted unless the bidder registers as a vendor through PlanetBids at www.srcity.org/bids, downloads documents/attachments, and is added to the prospective bidders list for this project. If there is an addendum, bidders must log into PlanetBids and acknowledge the addendum to be eligible for bidding.

The successful bidder will be required to hold a current City of Santa Rosa business tax certificate issued pursuant to Chapter 6.04 of the Santa Rosa City Code before commencing work on this project. For information regarding the business tax, contact Revenue and Collections at (707) 543-3170.

For any moneys earned by Contractor and withheld by the City of Santa Rosa to ensure the performance of the Contract, Contractor may, at its request and expense, substitute securities equivalent to the amount withheld in the form and manner and subject to the conditions provided in Section 22300 of the California Public Contract Code.

The City of Santa Rosa reserves the right to reject any or all bids and the right to waive minor irregularities or informalities in any bid or bonds.



TRACY DUENAS
Supervising Engineer

4/22/19

Date

SPECIAL PROVISIONS

General Specifications

CITY OF SANTA ROSA, CALIFORNIA

NORTHERLY SLOPE PROTECTION PONDS C & D AND POND B SLOPE REPAIR

1 GENERAL

The work described herein shall be done in accordance with the "Contract Documents," which are the:

1. Special Provisions
2. Project Plans, consisting of 15 sheets entitled Northerly Slope Protection Ponds C & D and Pond B Slope Repair, 2019-0012
3. City of Santa Rosa Design and Construction Standards (City Standards)
4. City of Santa Rosa Construction Specifications for Public improvements (City Specifications)
5. State of California Department of Transportation Standard Specifications 2010 (Standard Specifications), and
6. State of California Department of Transportation Standard Plans 2010 (Standard Plans).

In the event of a conflict in any of these documents, the order of precedence shall be determined by Section 5-1.02 of these Special Provisions.

Whenever the Standard Specifications use the terms State of California, Department of Transportation, Director, Engineer, or Laboratory, the following terms shall be substituted therefor, and any reference to any of the foregoing terms shall be understood and interpreted to mean and refer to such substituted terms as follows:

For State of California - the City of Santa Rosa;

For Department - the City of Santa Rosa Department of Transportation and Public Works or the City of Santa Rosa Water Department;

For Director - the City Engineer of the City of Santa Rosa;

For Engineer - the City Engineer of the City of Santa Rosa or the City Engineer's authorized agents;

For Laboratory – Materials Engineering of the City of Santa Rosa Water Department, or such other laboratory as may be authorized by the City.

Unless otherwise provided, whenever in these Special Provisions attention is directed to specific provisions in the Standard Specifications, such direction shall not be interpreted as excluding other applicable provisions of the Standard Specifications.

Unless otherwise provided, when sections and subsections of the Standard Specifications are used in these Special Provisions, such use is not exclusive and shall not be interpreted as excluding other applicable provisions of said sections and subsections, but is only intended to add to or modify such sections or subsections.

Unless otherwise provided, full compensation for compliance with these Special Provisions is included in the contract price and no additional allowance will be made to Contractor therefor.

The Standard Specifications are hereby modified to delete any reference or incorporation of provisions providing for or requiring arbitration of any and all claims and disputes arising under this contract.

2 BIDDING

2-1.06 Bid Documents: Prospective bidders will be furnished with an Invitation for Bids which will state the location and description of the contemplated public works project and will show the approximate estimate of the various quantities and kinds of work to be performed and materials to be furnished with a schedule of items for which unit prices are requested.

2-1.07 Approximate Estimate: The quantities given in the Contract Documents are approximate only, being given as a basis for the comparison of bids, and the City does not, expressly or by implication, agree that the actual amount of work will correspond therewith, but reserves the right to increase or decrease the amount of any class or part of the work or to omit parts of the work, as may be deemed necessary or advisable by the Engineer.

2-1.31 Examination of Project Plans, Specifications, City Standards, Invitation for Bids and Work Site: Prior to submitting a bid, the bidder shall carefully examine the Project Plans, Invitation for Bids, City Standards and the proposed work site. If any person contemplating submitting a bid for this public works project is in doubt as to the meaning of any part of the Contract Documents, or finds discrepancies in or omissions from the Contract Documents, he or she may submit a written request for interpretation or correction to the Engineer. The written request must be received by the Engineer a minimum of 96 hours prior to bid opening. Any interpretation or correction of the Contract Documents prior to bid opening will be made only by written addendum issued by the City. Notification of addenda will be handled through PlanetBids: the listed primary contact will receive an e-mail generated by PlanetBids informing them of a recently uploaded addendum. The City will not be bound by any other explanations or interpretations of the Contract Documents.

2-1.33 Bid Document Completion: Any references to Opt Out of Payment Adjustments for Price Index Fluctuations in the Standard Specifications are deleted in their entirety.

2-1.33A Bid Forms: All bids shall be made on bid forms obtained from PlanetBids at www.srcity.org/bids. The bidder shall submit its bid on the original bid forms furnished by the City. Bids submitted on forms other than the forms furnished to the bidder by the City will not be considered.

The bid forms to be submitted at the time of and with the bid are:

1. Unit Price Schedule
2. List of Subcontractors
3. List of Previous Similar Jobs
4. Noncollusion Declaration
5. Bid Guaranty Information and Bidder's Information and Signature
6. Bid Guaranty (Bid Bond or alternate security)

All bids shall give the proposed prices and must bear the original signature of the bidder. Bidders shall fill in all blanks on the bid forms where required. A bid will not be accepted unless the bidder registers as a vendor through PlanetBids at www.srcity.org/bids, downloads documents/attachments, and is added to the prospective bidders list for this project. If there is an addendum, bidders must log into PlanetBids and acknowledge the addendum to be eligible for bidding.

2-1.33B Registration with DIR: No contractor or subcontractor may be listed on a bid for this public works project unless registered with the Department of Industrial Relations (DIR) pursuant to Labor Code section 1725.5. No contractor or subcontractor may be awarded a contract for this

public works project unless registered with the DIR pursuant to Labor Code section 1725.5. This public works project is subject to compliance monitoring and enforcement by the DIR.

2-1.33C Subcontractors: The Subletting and Subcontracting Fair Practices Act, Public Contract Code sections 4100-4113, inclusive (the "Act") shall apply to all subcontracts in excess of one-half of one percent of the total amount of a bid. The Act requires subcontractors, if used for such work, to be listed in the contractor's bid and prohibits the substitution of subcontractors, except as authorized by the Act. Each bidder shall, with respect to the work of any subcontractor in excess of one-half of one percent of the total amount of the bid, include as part of the bid on the bid form provided:

1. The name, business address and DIR registration number of each subcontractor who will perform work or labor or render services to the Contractor in or about the construction of the work or improvement, or a subcontractor licensed by the State of California who, under subcontract to the Contractor, specially fabricates and installs a portion of the work or improvement according to detailed drawings contained in the Project Plans or other Contract Documents in an amount in excess of one-half of one percent of the Contractor's total bid; and
2. The portion of the work that will be done by each subcontractor. Only one subcontractor shall be listed for each portion.

The purchase of sand, gravel, crushed rock, batched concrete, aggregate, ready-mixed concrete, and/or any other materials produced and furnished by established and recognized commercial plants, together with the delivery of such materials to the work site by the source of the materials or by recognized commercial hauling companies, is not considered as subcontracting under this section.

2-1.33E Rejection of Bids Containing Alterations, Erasures or Irregularities: Bids may be rejected if they show any alterations of forms, additions not called for, conditional bids, incomplete bids, erasures or irregularities of any kind.

2-1.34 Bid Guaranty: All bids shall be presented under sealed cover and shall be accompanied by cash, cashier's or certified check, or by a bidder's bond made payable to the City of Santa Rosa and executed as surety by a corporate surety authorized and admitted to transact a surety business in the State of California in an amount equal to ten percent of the amount of the bid. No bid shall be considered unless such cash, cashiers or certified check, or bidder's bond is enclosed with the bid. Any bidder's bond shall contain provisions for forfeiture consistent with California Public Contract Code section 20172.

2-1.40 Withdrawal of Bid: A bid may be withdrawn prior to, but not after, the hour fixed in the public notice for the opening of bids, provided that a written request to withdraw the bid, executed by the bidder or the bidder's authorized representative, is filed with the Engineer before this deadline. The withdrawal of a bid shall not prejudice the right of a bidder to submit a new bid.

2-1.43 Public Opening of Bids: Bids will be opened and read publicly at the time and place indicated in the Notice to Bidders. Bidders or their authorized agents are invited to be present.

2-1.46 Disqualification of Bidders: Serial bids from the same bidder will not be accepted. This section shall not be interpreted to mean that the same contractor may not be the contractor in one bid and listed as a subcontractor in another bid, provided that no collusion exists.

2-1.48 Competency of Bidders: No bid will be accepted from or contract awarded to a contractor that is not licensed in accordance with the law, that does not hold a license qualifying it to perform work under this contract, to whom a bid form has not been issued by the Engineer, or that has not

successfully completed projects of similar character, scope and cost to the proposed project. Bidders will be required to provide a list of previous similar jobs with their bids.

3 CONTRACT AWARD AND EXECUTION

3-1.04 Contract Award: The City reserves the right to reject any or all bids. Bids are required for the entire work described herein. All bids will be compared with the Engineer's estimate of the quantities of work to be completed. Contract award, if any, will be made to the lowest responsible bidder within sixty days from the date bids are opened.

It is anticipated that the City will Award the contract on May 16, 2019.

3-1.05 Contract Bonds: Within ten days after receipt of the Notice of Award, the successful bidder shall provide the following bonds to the City:

- a. Performance Bond: A performance bond to guarantee the faithful performance of the terms and conditions of the Contract by Contractor, which shall be executed in a sum of not less than one-half of the Contract price;
- b. Labor and Materials Bond: A labor and materials bond (payment bond) in accordance with Part 6 of Division 4, sections 8000 *et seq.* of the California Civil Code, to guarantee against any and all claims of subcontractors or other third parties furnishing labor, materials, or supplies for the Contract, which shall be executed in a sum of 100% of the Contract price; and
- c. Material Guaranty Bond: A material guaranty bond (warranty bond) to serve as surety for the guarantee requirements outlined in Section 6-3.01B, which shall be executed in a sum of not less than one-half of the Contract price.

The bond(s) shall be provided in a form acceptable to the City and issued by a corporate surety in good financial standing and authorized and admitted to transact a surety business in the state of California for the purposes and in the amount(s) stated above.

Whenever the financial or legal status of any surety on any such bond(s) is/are unacceptable to the City, it may make a demand to Contractor for further bond(s) or additional surety, not exceeding the sums originally required. Thereafter, no payment shall be made upon the Contract to Contractor or any assignees of Contractor until such bond(s) or additional surety has/have been provided to the City.

3-1.07 Indemnification and Insurance: Indemnification: Contractor shall defend, hold harmless and indemnify City, its officers, agents and employees, and each and every one of them, from and against any and all actions, damages, costs, liabilities, claims, demands, losses, judgments, penalties, costs and expenses of every type and description, including, but not limited to, any fees and/or costs reasonably incurred by City's staff attorneys or outside attorneys and any fees and expenses incurred in enforcing this provision (hereafter collectively referred to as "Liabilities"), including but not limited to Liabilities arising from personal injury or death; damage to personal, real or intellectual property or the environment; contractual or other economic damages, or regulatory penalties, arising out of or in any way connected with the performance of or the failure to perform the Contract by Contractor, any subcontractor or agent, anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable, whether or not such Liabilities are caused in part by a party indemnified hereunder, or such Liabilities are litigated, settled or reduced to judgment; provided, that the foregoing indemnity does not apply to liability for any damage or expense for death or bodily injury to persons or damage to property to the extent arising from (i) the sole negligence, or willful misconduct of, or defects in design furnished by City, its agents, servants, or independent contractors who are directly responsible to City (excluding Contractor), or (ii) the active negligence of City.

The existence of any of the insurance policies or coverages described in this Contract shall not affect or limit any of City's rights hereunder, nor shall the limits of such insurance limit Contractor's liability to the City hereunder. The provisions of this section shall survive any expiration or termination of the Contract.

Insurance: Contractor shall maintain in full force and effect all of the insurance coverage described in and in accordance with the insurance requirements set forth below. Maintenance of such insurance coverage during the entire performance of the Contract is a material element of the Contract. Failure by Contractor to (i) maintain or renew coverage, (ii) provide notice of any changes, modifications, or reductions in coverage, or (iii) provide evidence of renewal, if necessary, may be deemed a material breach of the Contract by Contractor, whereas the City shall be entitled to all rights and remedies at law or in equity. Notwithstanding the foregoing, any failure by Contractor to maintain required insurance coverage shall not excuse or alleviate Contractor from any of its other duties or obligations under the Contract. In the event Contractor retains or utilizes any subcontractors or sub-consultants in performance of the work, Contractor shall assure that any such subcontractor has first obtained, and shall maintain, all of the insurance coverage requirements herein set forth below.

Insurance Requirements:

A. Insurance Policies: Contractor shall maintain and keep in full force and effect, the following policies of insurance with minimum coverage as indicated below and issued by insurers with an AM Best rating of no less than A:-VI or a rating otherwise acceptable to the City.

	Insurance	Minimum Coverage Limits	Additional Coverage Requirements
1.	Commercial general liability	\$5 million per occurrence \$5 million aggregate	Coverage must be at least as broad as ISO CG 00 01 and must include products liability and completed operations coverage which shall continue for a period of three years after acceptance of the work by the City. If insurance applies separately to a project/location, aggregate may be equal to per occurrence amount. Coverage may be met by a combination of primary and umbrella or excess insurance but umbrella and excess shall provide coverage at least as broad as specified for underlying coverage. Completed Operations Coverage can be provided in the form of an endorsement to Contractor's insurance (at least as broad as ISO Form CG 20 37 04 13. See endorsements below for other Additional Insured Requirements. Coverage shall not exclude subsidence. Coverage at least as broad as ISO Form Number CA 00 01 covering any auto (Code 1). Insurance shall cover owned, non-owned and hired autos.
2.	Business auto coverage	\$3 million	

3.	Workers' compensation and Employer's Liability	\$1 million	As required by the State of California, with Statutory Limits and Employer's Liability Insurance with limit of no less than \$1 million per accident for bodily injury or disease. The Workers' Compensation policy shall be endorsed with a waiver of subrogation in favor of the City for all work performed by Contractor, its employees, agents and subcontractors.
5.	Course of construction/builders' risk	Amount of completed value of project without co-insurance provisions	Required for construction projects over \$3 million. The City shall be named as loss payee.

B. Endorsements:

1. All policies shall provide or be endorsed to provide that coverage shall not be canceled by either party, except after prior written notice has been provided to the City in accordance with the policy provisions.
2. Liability policies shall provide or be endorsed to provide the following:
 - a. For any claims related to this Contract, Contractor's insurance coverage shall be primary and any insurance or self-insurance maintained by City shall be in excess of Contractor's insurance and shall not contribute with it. Endorsements at least as broad as 20 01 04 13 or evidence of policy language will be required in non ISO CGL policies.
 - b. **The City of Santa Rosa, its officers, agents and employees are to be covered as additional insureds on the CGL policy.** Additional Insured Endorsements at least as broad as 20 10 04 13 or 20 38 04 13 are required.

C. Verification of Coverage and Certificates of Insurance: Contractor shall furnish City with original certificates and endorsements effecting coverage required above. Certificates and endorsements shall make reference to policy numbers. All certificates and endorsements are to be received and approved by the City before work commences and must be in effect for the duration of the Contract. The City reserves the right to require complete copies of all required policies and endorsements during the duration of the Contract and for a period of three years following City's acceptance of the work.

D. Other Insurance Provisions:

1. No policy required by this Contract shall prohibit Contractor from waiving any right of recovery prior to loss. Contractor hereby waives such right with regard to the indemnitees.
2. All insurance coverage amounts provided by Contractor and available or applicable to this Contract are intended to apply to the full extent of the policies. Nothing contained in this Contract limits the application of such insurance coverage. Coverage for an additional insured shall NOT be limited to the insured's vicarious liability. Defense costs must be paid in addition to coverage amounts.
3. Self-insured retentions above \$10,000 must be approved by the City. At the City's option, Contractor may be required to provide financial guarantees.

4. City 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.

3-1.18 Contract Execution: The fully executed Contract, original bonds and insurance certificates and endorsements required under the Contract shall be delivered to the City within ten calendar days of Contractor's receipt of the Notice of Award.

The Engineer will supply Contractor with up to ten sets of the Invitation for Bids and Project Plans. At least one complete set of the Invitation for Bids and Project Plans shall be kept at the construction site in good condition and made available to the Engineer at all times. Additional copies of the Invitation for Bids and Project Plans will be provided by the Engineer at Contractor's cost.

3-1.20 Failure to Execute Contract: Contractor's failure to deliver to the City the fully executed Contract within ten calendar days of Contractor's receipt of the Notice of Award shall be cause for the cancellation of the award and the forfeiture of the bid guaranty to the City. If the successful bidder refuses or fails to execute the Contract, the City may award the Contract to the second lowest responsible bidder. If the second lowest responsible bidder refuses or fails to execute the Contract, the City may award the Contract to the third lowest responsible bidder. The refusal or failure by the second or third lowest responsible bidder to deliver to the City the fully executed Contract within ten calendar days of receipt of the Notice of Award to the respective bidder shall likewise be cause for the cancellation of the award and the forfeiture of the bid guaranty of the respective bidder. In its discretion, the City may then re-advertise the project or construct it by day labor.

3-1.21 Return of Bid Guarantees: Within ten days after the opening of bids, the City will return the bid guarantees to all bidders except the three lowest responsible bidders. The bid guarantees of the three lowest responsible bidders will be retained until the Contract has been fully executed. In the event all bids are rejected, all bid guarantees will be returned to the respective bidders.

3-1.22 Subcontractors: The successful bidder shall furnish a list of all subcontractors as required under Sections 2-1.33C. The list shall include the name, business address, DIR registration number and the state contractor's license number of each subcontractor on the list and the names of the responsible managing employees whose names appear on the subcontractors' licenses.

4 SCOPE OF WORK

4-1.05 Changes and Extra Work: All changes to the Contract shall be made by written change order only.

All extra work shall be recorded by Contractor on a daily report signed by both the City and Contractor. The “daily reports” shall thereafter be considered the true record of extra work performed. A copy of the daily reports will be furnished to Contractor. Contractor is directed to Section 9-1.04 of this Invitation for Bids.

4-1.05C Compensation for Altered Quantities: Payment and compensation for altered quantities shall conform to the provisions of Section 9-1.06 of the Standard Specifications, except as modified herein.

5 CONTROL OF WORK

5-1.02 Contractor's Copies of Contract Documents: In the event of a conflict in any of the Contract Documents, the order of precedence from highest to lowest shall be as follows:

1. Special Provisions
2. Project Plans, consisting of 15 sheets entitled Northerly Slope Protection Ponds C & D and Pond B Slope Repair, 2019-0012
3. City Standards
4. City Specifications
5. Standard Specifications
6. Standard Plans

5-1.05 Order of Work: The work as shown on the Project Plans and as specified in the Invitation for Bids shall be constructed in a sequence that is satisfactory to and approved by the Engineer.

Contractor shall prepare a work schedule per Section 8-1.02 of the Standard Specifications.

Contractor shall be advised Interior Embankment Emergency Slope Repair (FA) work potentially will be performed concurrent with the primary work associated with Pond C and D.

With the exception of trenching, all existing street, street light base, curb and gutter, storm drain, water line, and sewer line work shall be completed before any existing street paving is removed.

Full compensation for the conformance to the requirements of this section is included in the Contract price and no additional allowance will be made to Contractor for this work.

5-1.17 Character of Workers: Contractor is directed to Section 5-1.17 of the Standard Specifications which states:

"If any subcontractor or person employed by the Contractor shall appear to the Engineer to be incompetent or to act in a disorderly or improper manner, he shall be discharged immediately on the request of the Engineer, and such person shall not again be employed on the work."

No additional compensation shall be granted to Contractor in the event City exercises any part of its rights under this section and any and all costs related to such exercise shall be borne by Contractor.

5-1.20 Cooperation with Other Entities: Attention is directed to Section 5-1.20 of the Standard Specifications.

Other construction including but not limited to utility, power, and pipe line relocation, may be in progress by other forces within and adjacent to the project area at the same time work is being performed under this Contract by Contractor.

Contractor shall cooperate with the forces performing other work, to the end that such forces may conduct their operations with as little inconvenience and delay as possible. Contractor shall grant such forces access to the project area as is reasonable and necessary to transport materials and equipment to the site of operations by the other forces.

5-1.20B(4)(a) Offsite Staging Areas and Construction Yards: Attention is directed to Santa Rosa City Code section 20-52.040, Temporary Use Permit.

A Temporary Use Permit shall be obtained for any offsite construction yard on private property to be used for any of the following:

- a. Stockpiling of equipment and/or materials;
- b. Staging of construction;
- c. Placement of work trailers or mobile offices;
- d. Storage of trench spoils; or
- e. Other construction related activities not specifically enumerated above.

5-1.26 Lines and Grades: Contractor shall carefully preserve all bench marks, grade stakes, and all other survey markers. In the case of willful or careless destruction, Contractor shall bear the cost of replacing the markers.

Contractor shall contact the Engineer directly for coordination of survey staking. Written staking requests must be submitted at least two working days in advance of the date and time stakes are needed.

5-1.27B Examination and Audit: Pursuant to California Government Code section 8546.7, any contract with the City involving expenditures in excess of \$10,000 shall be subject to the examination and audit of the California State Auditor for a period of three years after final payment is made to Contractor by City under this Contract. Any such examination and audit will be confined to those matters connected with the performance of this Contract.

5-1.30A Inspection: Contractor shall bear all costs associated with the re-inspection of any defective, rejected or unauthorized work as determined by the Engineer in Engineer's sole discretion. Such costs of re-inspection, including any costs incurred by the City for additional staff time or fees for third-party consultant inspectors, will be deducted from one or more progress payments hereunder.

5-1.36A Property and Facility Preservation: Attention is directed to Section 5-1.36 of the Standard Specifications.

At Contractor's sole expense, all fences, gates, landscaping, drainage ditches, sidewalks, irrigation systems, and any other improvements that are damaged, removed or destroyed because of Contractor's operations, shall be replaced in accordance with City Standards at a minimum and restored to the same or better condition. Concrete surface treatment and score marks shall match adjacent existing concrete improvements.

5-1.36E Obstructions: Attention is directed to Section 5-1.36 of the Standard Specifications and to the possible existence of underground gas mains, high voltage lines, telephone ducts, storm drains and water and sewers systems, the locations of which are not shown on the Project Plans. The determination of the location of these facilities and the cost of repair or replacement in the event of damage to such facilities are the sole responsibility of Contractor.

Should Contractor alter any public utility or private improvements to facilitate its operations or for its sole benefit, which alteration would not be otherwise required, Contractor shall make whatever arrangements are necessary with the owner or controlling authorities, and shall bear all expenses in connection therewith. Any damages to any public utility or private improvement caused by Contractor shall be repaired by Contractor at its sole expense and to the full satisfaction of the Engineer or the controlling authority.

Any subsurface information and data furnished under any part of this Contract are not intended as a representation or warranty but are furnished for information only. It is expressly understood that the City will not be responsible for the accuracy thereof or for any deduction, interpretation or conclusion

drawn therefrom by Contractor. The information is made available so that Contractor may have ready access to the same information available to the City and is not part of this Contract.

PRIOR TO STARTING ANY EXCAVATION, CONTRACTOR SHALL (AT LEAST TWO WORKING DAYS IN ADVANCE) CALL UNDERGROUND SERVICE ALERT (USA) toll free at (800) 227-2600 and provide USA with all necessary data relative to the proposed excavation. USA will accept calls and process information to participating agencies who have underground facilities in the area between the hours of 7:30 a.m. and 5:00 p.m. daily, except Saturdays, Sundays, and holidays. Between the hours of 5:00 p.m. and 7:30 a.m., calls will be recorded and then processed after 7:30 a.m. For emergency situations, after hours, and on Saturdays, Sundays and holidays, Contractor shall contact the owner of the affected facility.

Contractor shall coordinate all work with the appropriate City field personnel. When City work forces are required at the job site to perform Contract items of work, Contractor shall give a minimum of two working days advanced notification to the appropriate field office:

Water Division:	(707) 543-4200
Sewer Division:	(707) 543-4200
Street Division:	(707) 543-3880
Survey Division:	(707) 543-3834

5-1.43 Potential Claims and Dispute Resolution: "Claim" means a separate demand by 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 City under the Contract; (B) Payment by the City of money or damages arising from work done by, or on behalf of, Contractor pursuant to the Contract and payment for which is not otherwise expressly provided or to which the claimant is not otherwise entitled; or (C) Payment of an amount that is disputed by the City.

Upon receipt of a Claim, the City shall conduct a reasonable review of the Claim and, within a period not to exceed 45 days, shall provide Contractor a written statement identifying what portion of the Claim is disputed and what portion is undisputed, provided, the parties may extend the 45 day time period by mutual agreement.

If the City needs approval from the City Council to provide the claimant a written statement identifying the disputed portion and the undisputed portion of the Claim, and the Council does not meet within the 45 days or within the mutually agreed to extension of time following receipt of a Claim, the City shall have up to three days following the next duly publicly noticed meeting of the City Council after the 45-day period, or extension expires to provide Contractor a written statement identifying the disputed portion and the undisputed portion.

Any payment due on an undisputed portion of the Claim shall be processed and made within 60 days after the City issues its written statement. If the City fails to issue a written statement, the Claim shall be deemed rejected in its entirety.

If a Contractor disputes the City's written response, or if the City fails to respond to a Claim within the time prescribed, the Contractor may demand in writing an informal conference to meet and confer for settlement of the issues in dispute. Upon receipt of a demand in writing sent by registered mail or certified mail, return receipt requested, the City shall conduct a meet and confer conference within 30 days for settlement of the dispute. Within 10 business days following the conclusion of the meet and confer conference, if the Claim or any portion of the Claim remains in dispute, the City shall provide the Contractor a written statement identifying the portion of the Claim that remains in dispute and the portion that is undisputed. Any payment due on an undisputed portion of the Claim shall be processed and made within 60 days after the City issues its written statement. Any disputed portion of the Claim, as identified by Contractor in writing, shall be submitted to nonbinding mediation, with

the City and the Contractor sharing the associated costs equally. The City and Contractor shall mutually agree to a mediator within 10 business days after the disputed portion of the Claim has been identified in writing. If the parties cannot agree upon a mediator, each party shall select a mediator and those mediators shall select a qualified neutral third party to mediate with regard to the disputed portion of the Claim. Each party shall bear the fees and costs charged by its respective mediator in connection with the selection of the neutral mediator.

6 CONTROL OF MATERIALS

6-2.01 Source of Supply and Quality of Materials: All materials required to complete the work under the Contract shall be furnished by Contractor and shall be free of hazardous substances.

6-3.01 General: Statistical means will not be used by the City for determination of Standard Specification compliance. Whenever both operating range test results and Contract compliance requirements are specified in these special provisions, the operating range requirements shall apply to the individual test results.

6-3.01A Material Submittals: Upon award of the Contract by City, Contractor shall submit to the Engineer a list of all materials proposed to be used on this project and any supporting documentation and/or samples required and source of supply.

For material listed on the "Engineer's List of Approved Items" which is located in the Sewer and Water sections only of the City Standards, the Engineer shall be provided with the name of the manufacturer and model/part number for all material proposed for this project, unless that item has been replaced as shown on the Project Plans or in the Invitation for Bids.

For all other materials used on this project, regardless of the type of work, Contractor shall provide to the Engineer the name of the manufacturer and model/part number along with supporting documentation and/or samples that will allow the Engineer to determine the material's acceptability.

The Engineer reserves the right to reject any proposed material, whether on the City's "Engineer's List of Approved Items" or not. If the City obtains information indicating that a listed item is not performing satisfactorily or is found to be defective, that item will be rejected and Contractor shall submit a replacement for review at no additional cost to the City.

6-3.01B Material Guarantee: Before any contract is awarded, the bidder may be required to furnish samples of materials and detailed descriptions of equipment to be used in the construction of the project. The materials samples may be subjected to the tests provided for in the Standard Specifications or in this Invitation for Bids to determine their quality and fitness for the project. The successful bidder shall unconditionally guarantee project materials and workmanship for a period of one year from the date of recording of the Notice of Completion. The guarantee shall cover 100% of all costs of repairs within the one year period, including all costs of labor, materials, equipment, and incidentals. Except as may be otherwise provided in Section 3-1.05, the successful bidder shall provide a surety bond executed by a corporate surety authorized and admitted to transact a surety business in the state of California in the minimum amount of one-half of the Contract price to cover this guarantee.

6-3.05 Quality Assurance: California Test 216 (Relative Compaction) testing will be modified as follows: A mechanical compactor (Ploog Engineering Co. Model M 100 or equivalent) with 10-pound hammer and split compaction molds shall be used in lieu of the specified manual compaction equipment.

California Test 231 (Nuclear Gage Determination of In-Place Density) will be modified as follows: In-place density and relative compaction may be determined on the basis of individual test sites in lieu of the area concept, at the discretion of the Engineer.

6-4 Water Utility

6-4.01A Construction Water: All water required for the performance of the work shall be provided by Contractor. Prior to obtaining water from the City's water system, Contractor shall obtain a Water

Use Permit from the City of Santa Rosa Water Department and rent a hydrant or bridge meter. Contractor is responsible for the cost of all water and the cost of all deposits, permits and fees.

Contractor is prohibited from operating gate valves or fire hydrants on the City system.

The acquisition of water from the City's water system through un-metered hydrants or other facilities is a violation of City ordinance and State law. The use of water from sources other than the City's water system must be approved by the Engineer in advance of the use.

Citations and fines will be levied for violation of these and other utility regulations and deductions will be made from payments consistent with Section 7-1.02A(1) of the Standard Specifications.

6-4.01B Water Utility Notification: Contractors or parties requiring work of any kind by the City of Santa Rosa Water Department forces shall request such services a minimum of 48 hours in advance of the time such services are desired. Work requests which will involve the City of Santa Rosa Water Department forces for more than eight hours or an extensive number of City parts shall be requested a minimum of seven calendar days in advance.

If it is necessary to terminate or disrupt utility service to any customer, Contractor shall make the request for such work by City forces an additional 72 hours (three additional working days for a total of five working days advance notice) in advance of the time such services are desired to allow affected customers a minimum of 72 hours' notice. Contractors who fail to keep field appointments will be billed for scheduled City of Santa Rosa Water Department crew standby time which was used and the Contractor shall bear the costs incurred by the City of Santa Rosa's Water Department for re-notification of customers.

City of Santa Rosa Water Department crews work a 9/80 schedule. This schedule may prohibit shutdowns for tie-ins on alternating Fridays. After hours work or weekend work may be performed if prior authorization from the Engineer is obtained.

Other than the hours specified in this Invitation for Bids, requests by Contractor for after hours or weekend work is to be avoided whenever possible. Any overtime costs incurred by City for such work shall be borne by Contractor.

Interruption of utilities service to commercial customers shall be coordinated with the customer to minimize disruption to the enterprise to the greatest extent practicable. After notification by the Contractor of the need, the City of Santa Rosa Water Department will contact all commercial customers and inform Contractor accordingly.

6-4.01C Water Facility Damage: All damage caused to the City's water system shall be immediately reported to the Engineer.

Damage caused to the City's water system by Contractor's operations shall be repaired by the Contractor at Contractor's sole expense in a manner satisfactory to the City of Santa Rosa Water Department. Such repairs shall not be charged to the City or any City project. All repair work shall be witnessed and approved by the City of Santa Rosa Water Department prior to backfilling the excavation. The City will require re-excavation if backfilling occurs prior to inspection, which costs shall be borne by Contractor.

Contractor is responsible for, at its sole cost and expense, the repair and remediation of damage to property and facilities caused by any of the following circumstances:

- a. Contractor fails to make a written request for a markout or begins excavation without providing the City of Santa Rosa Water Department a reasonable opportunity to mark facilities;

- b. Contractor destroys markouts;
- c. Contractor fails to perform hand digging or probing for utilities near markouts; or
- d. Contractor fails to use reasonable caution, regardless of whether markouts are present or clear. Reasonable caution includes any efforts to avoid damaging existing facilities, such as when excavating in the vicinity of water mains.

City may, in its discretion, opt to make the repairs for which Contractor is responsible with its own forces. In such cases, the repairs will be made at Contractor's expense in accordance with the emergency repair rate schedule of the City of Santa Rosa Water Department. The City may make repairs whenever restoration of service requires extraordinary speed or special equipment. Contractor will be billed accordingly and City shall have the right and option to withhold payment hereunder, or a portion thereof, for any such costs billed but not promptly paid by Contractor.

6-4.02 Salvage: All valves, hydrants, and other appurtenances of the water system that are the property of City and removed by Contractor shall be delivered to the City's Municipal Services Center (55 Stony Point Road) unless Contractor has obtained specific written approval from the City of Santa Rosa Water Department to otherwise dispose of the materials.

6-4.03 Trade Names and Alternatives: Unless otherwise specified, material and equipment specifications that identify a particular patent, trade name or manufacturer, may be satisfied through substitute materials and equipment accepted by the City. Contractor may offer substitute materials and equipment of equal or better quality to the City. Any such offer shall be made in writing to the Engineer at least four weeks in advance of the time Contractor wishes to order the materials or equipment. Contractor shall include sufficient data which, together with any other information the Engineer may require, will enable the Engineer to determine the acceptability of the materials and equipment. When the substitute materials or equipment necessitate changes to any part of the work, the information shall include drawings and details showing all such changes and Contractor shall perform these changes as a part of any acceptance of substitute materials or equipment. The use of substituted materials and equipment will be permitted only after written acceptance of the materials and equipment by the Engineer. Such acceptance shall not relieve the Contractor from full responsibility for the sufficiency, quality and performance of the substitute materials and equipment.

The City will not, under any circumstances, acknowledge or consider any offers to accept substitute materials or equipment between the dates of public notice of advertisement and the bid opening.

7 LEGAL RELATIONS AND RESPONSIBILITY TO THE PUBLIC

7-1.02A(1) Forfeitures for Health and Safety Violations: Contractor shall comply with all applicable provisions of the Santa Rosa City Code and any failure to do so shall constitute a breach of the Contract. In the event of any violation of the Santa Rosa City Code that may impact public health and safety, including, but not limited to Chapter 17-12, "Storm Water" and Chapter 13-04, "Street Encroachments," City shall have the right to impose a charge against Contractor in an amount equal to \$500.00 per violation per day. Prior to the imposition of any charge hereunder, City shall first provide a written notice to Contractor of the violation and setting forth a reasonable period of time for Contractor to cure the violation(s). In the event Contractor fails to cure any such violation within the time provided, City shall have the right, in addition to all other rights and remedies available to City, to deduct and withhold as a permanent forfeiture by Contractor the appropriate amounts from any payment otherwise due Contractor under this Contract.

7-1.02K(2) Wages: Pursuant to Labor Code sections 1770 *et seq.*, each laborer or mechanic of Contractor or any subcontractor engaged in work on the project under this contract shall be paid not less than the hourly wage rate of per diem wages set forth in the prevailing wage rate schedule published by the Director of Industrial Relations, regardless of any contractual relationship which may be alleged to exist between Contractor or any subcontractor and such laborers and mechanics. A copy of the schedule of prevailing wage rates can be obtained online at www.dir.ca.gov or from the Department of Transportation and Public Works at 69 Stony Circle, Santa Rosa.

Any laborer or mechanic employed to perform work on the public works project under this Contract, which work is not covered by any of the foregoing classifications, shall be paid not less than the prevailing wage rate of per diem wages specified herein for the classification which most nearly corresponds to the work to be performed by the worker.

The foregoing specified prevailing wage rates are minimum rates only, and Contractor may pay any wage rate in excess of the applicable rate.

Pursuant to Labor Code Section 1775, Contractor as a penalty to the owner shall forfeit not more than \$200.00 for each calendar day, or a portion thereof, for each worker paid less than the prevailing wage rate established by the Department of Industrial Relations for such work or craft in which such worker is employed. The difference between such prevailing wage rates and the amount paid to each worker for each calendar day or portion thereof for which the worker was paid less than the prevailing wage rate shall be paid to each worker by Contractor.

Contractor shall only provide prevailing wage reports upon written request from City.

7-1.02K(4) Apprentices: Contractor agrees to comply with Chapter 1, Part 7, Division 2, sections 1777.5 *et seq.* of the California Labor Code. These sections require contractors and subcontractors to employ apprentices in apprenticeable occupations in a ratio of not less than one hour of apprentice work for each five hours of journeyman work (unless an exception is granted in accordance with Section 1777.5), and the contractors and subcontractors shall not discriminate among otherwise qualified employees as apprentices solely on the ground of sex, race, religion, creed, national origin, ancestry, or color. Only apprentices as defined in Labor Code section 3077, who are in training under apprenticeship standards and who have written apprentice agreements will be employed on public works in apprenticeable occupations. The responsibility for compliance with these provisions is fixed with the prime contractor for all apprenticeable occupations.

7-1.02K(6)(a)(1) Notice to Vendors: Attention is directed to the current OSHA Standards. All equipment, tools and materials which are furnished and/or installed as part of this Contract shall meet or exceed the aforementioned standards in order to be considered acceptable.

7-1.02K(6)(b) Excavation Safety: When the digging or excavation occurs during project construction, Contractor shall:

- a. Promptly notify City in writing of the following conditions before any such conditions are disturbed:
 1. Material that the Contractor believes may be hazardous waste as defined in Health and Safety Code section 25117 that is required to be removed to a Class I, Class II or Class III disposal site in accordance with provisions of existing law;
 2. Subsurface or latent physical conditions at the site differing from those indicated in the Invitation for Bids; and
 3. Physical conditions at the site of any unusual nature, materially different from those ordinarily encountered and generally recognized as inherent in the type of work under the Contract.
- b. The City will investigate the conditions and will issue a change order under the terms of the Contract if it finds that the conditions warrant it.
- c. If a dispute arises between City and Contractor as to whether a change order is warranted, Contractor shall not be excused from any scheduled completion date provided for in the Contract, but shall proceed with all work to be performed under the Contract.

7-1.02K(6)(b)(1) Trench Excavation Safety Plans: When the estimated cost for the excavation of any trench or trenches five feet or more in depth will exceed \$25,000.00, Contractor shall submit to the Engineer 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. If such plan varies from the shoring system standards established by the construction safety orders, or if the trench is anticipated to be greater than 20 feet, the plan shall be prepared by a registered civil or structural engineer.

A permit to do the above described work shall be obtained from the State of California, Division of Industrial Safety. Proof of such permit shall be submitted to the Engineer prior to starting the trench work.

Full compensation for complying with the provisions of this section shall be considered as included in the Contract price and no additional allowance will be made for the work.

7-1.02K(6)(d) Confined Space Safety: Any confined space entry for this project, including but not limited to manhole or water storage tank entry, will require a confined space entry permit pursuant to Cal/OSHA regulations as set forth in title 8 California Code of Regulations (CCR) sections 5157 or 5158. Confined space entry shall have the meaning ascribed in title 8 CCR sections 5157 and 5158. For any confined space entry for construction operations regulated by title 8 CCR section 1502, Contractor shall comply with title 8 CCR section 5158, "Other Confined Space Operations." For any other confined space operations, Contractor shall comply with title 8 CCR section 5157, "Permit-Required Confined Spaces."

Attention is directed to the technical specifications in the Special Provisions for information regarding entry to any City maintained confined space. Pursuant to title 8 CCR section 5157, Contractor is required to obtain any available information regarding hazards and operations for any City maintained confined spaces. The City maintained Confined Space Entry Manual is available

for viewing at the City of Santa Rosa Water Department or Transportation and Public Works Department office at 69 Stony Circle, Santa Rosa.

Contractor shall immediately inform the Engineer of any previously unidentified hazards confronted or created during confined space entry.

7-1.02L(2)(a) Patents and Royalties: All fees, royalties, or claims for any patented invention, article, process or method that may be used upon or in any manner connected with the work under this Contract shall be paid by Contractor. Contractor and its sureties shall protect and hold harmless City and its officers, agents, and employees from any and all demands made for such fees royalties or claims brought or made by any third party, and before the final payment is made on the account of the Contract, Contractor shall, if requested by City, furnish acceptable proof of a proper release from all such claims and liabilities.

Should Contractor, its officers, agents, or employees, or any one of them be enjoined from furnishing or using any invention, article, material, or plans supplied or required to be supplied or used under the Contract, Contractor shall promptly substitute other articles, materials, or appliances in lieu thereof of equal efficiency, quality, finish, suitability, and market value, and satisfactory in all respects to the Engineer. In the event that the Engineer elects, in lieu of such substitution, to have supplied and to retain and use any such invention, article, materials, or plans as may be required to be supplied by the Contract, Contractor shall pay such royalties and secure such valid licenses as may be requisite and necessary for City, its officers, agents, and employees, or any one of them to use such invention, article, materials, or appliance without being disturbed or in any way interfered with by any proceeding in law of equity on account thereof. Should Contractor neglect or refuse to make the substitution promptly or to pay such royalties and secure such licenses as may be necessary, then in that event the Engineer shall have the right to make such substitutions or City may pay such royalties and secure such licenses and charge Contractor even though final payment under the Contract may have been made.

7-1.02M(3) Mined Materials: California Public Contract Code section 20676 prohibits surface mining operators which are subject to the Surface Mining and Reclamation Act of 1975 (SMARA) from selling California mined construction material to the City unless the operator is identified in a list referred as the **3098 List**. The List, which is maintained by the Department of Conservation's Office of Mine Reclamation (OMR), changes throughout the year and can be viewed at the OMR website: http://www.consrv.ca.gov/OMR/ab_3098_list/index.htm. To confirm whether or not a specific operator is on the List at any given time, Contractor shall call the OMR at (916)323-9198.

7-1.03A Maintaining Traffic: Attention is directed to Sections 7-1.04 of the Standard Specifications and to the following modifications thereof.

If construction is within City owned right-of-way, provisions shall be made for the safe passage of public traffic through the work site at all times consistent with the requirements of Santa Rosa City Code Chapter 13-04.

Except for projects to be performed under a minor contract, Contractor shall install and maintain project identification signs at each end of the project or as directed by the Engineer two weeks prior to any construction activity. City shall furnish the appropriate sign panels upon request from Contractor. To mount the sign panels, Contractor shall furnish and install 4" X 4" posts or mount by other appropriate methods as approved by the Engineer. These sign panels shall be returned to the City Corporation Yard at 55 Stony Point Road after completion of the project.

Two weeks prior to any construction activity, advance notice signs for road closures shall be furnished and installed by Contractor at each end of the project and shall remain in place throughout the duration of the subject closure. Details of panel construction and lettering shall be approved by the Engineer.

Contractor shall furnish, install, and maintain at its expense all barricades, signs, lights, and other devices necessary to adequately warn of any obstructions to the traveled and pedestrian way and provide flaggers as necessary for the safety of public traffic and pedestrians and to provide access to property adjacent to the work site and Contractor shall comply with the Americans with Disabilities Act of 1990 (42 U.S.C. 12101, *et seq.*) (ADA) and any regulations and guidelines issued pursuant to the ADA.

Contractor shall comply with the current edition of the California Manual of Uniform Traffic Control Devices (CA MUTCD) for all items related to traffic within the work site.

Rain and other occurrences that may cause the suspension or delay of the work shall in no way relieve Contractor of its responsibility to provide traffic control and public access through the work site as specified herein. At all times, Contractor shall keep at the work site such materials, forces and equipment as may be necessary to keep roads, streets, and driveways within the work site open to traffic and in good repair and shall expedite the passage of such traffic, using such forces and equipment as may be necessary.

Should Contractor fail, in the opinion of the Engineer, to provide all the materials, forces and equipment necessary to maintain traffic through the work site as set forth herein, City may take steps necessary to remedy any such failure, including but not limited to causing such work to be performed and/or suspending any further work under the Contract. Any such remedial cost and expense incurred by the City, plus an administrative charge of 15%, shall be immediately due and payable by Contractor and may be deducted from any amounts owed to Contractor hereunder. In the event there are insufficient sums owed to Contractor hereunder to cover the foregoing costs and charges, City shall have the right to pursue any other remedy to recover the same, including but not limited to, proceeding against any surety or bond in favor of City. City's rights under Section 7-1.02 are intended to be in addition to and not in lieu of any charges imposed by City against Contractor under Section 7-1.02A(1) above for violations of the Santa Rosa City Code.

Contractor shall be responsible for informing emergency response agencies operating within the area of the work of obstructions to either public or private roads caused by reason of Contractor's operations hereunder.

Contractor shall make provisions for the safe passage of pedestrians around the project work site at all times.

8 PROSECUTION AND PROGRESS

8-1.01A Assignments: Once awarded, this Contract shall not be transferred, assigned, or sub-contracted, except as herein expressly provided without the prior written consent of the City in the City's sole and absolute discretion. See Section 5-1.12 of the Standard Specifications.

8-1.04B Standard Start: Contractor shall begin work within ten calendar days after the date authorized in the Notice to Proceed and shall diligently prosecute the contract work within each pond to completion before the expiration of:

POND C AND D WORK: Ponds C and D will be taken out of service and lowered by City forces as indicated in Section 01 35 13 – Part 1.04 of the technical specifications, after which time the Contractor shall commence construction.

POND B WORK: Pond B will be taken out of service and lowered by City forces within 10 calendar days following completion of the Pond C and D work as indicated in Section 01 35 13 – Part 1.04 of the technical specifications, after which time the Contractor shall commence construction.

8-1.05 Time:

PONDS C AND D WORK: All work (including FA) shall be completed by **September 20, 2019**.

POND B WORK: All work shall be completed by **October 15, 2019**.

Unless otherwise directed by Engineer, Contractor shall not conduct any activities that generate noise earlier than 7:00 a.m. or later than 7:00 p.m.

Contractor may work 6 days per week upon approval from the Engineer. No work on Sundays will be allowed.

8-1.10 Liquidated Damages: Contractor hereby agrees that Contractor shall pay to the City liquidated damages for each and every calendar day delay over and above the prescribed above for finishing the work in the amount shown in Section 8-1.10 of the Standard Specifications.

9 MEASUREMENT AND PAYMENT

9-1.04 Force Account Work: All work done on a force account basis shall be recorded daily on report sheets prepared by Contractor and signed by both the Engineer and Contractor. Such reports shall thereafter be considered the true record of force account work performed during the project. Such reports shall be furnished to the Engineer and a copy retained by Contractor.

All extensions of labor, equipment, and material costs shall be completed by Contractor and submitted to the Engineer within 30 days of the completion of the extra work. Completed and extended extra work reports received later than the times herein prescribed may be deemed invalid and rejected without payment at the discretion of the Engineer.

9-1.07 Payment Adjustments For Price Index Fluctuations: Any references to Opt Out of Payment Adjustments for Price Index Fluctuations in the Standard Specifications are deleted in their entirety.

9-1.16 Progress Payments: Once each month for progress pay purposes, the City will prepare a written estimate of the total amount of completed work and accepted materials purchased by Contractor but not installed. The City shall retain five percent of such estimated value of the completed work and the unused materials and pay Contractor the balance after deducting all previous payments and all sums to be retained under the provisions of the Contract. No such estimate or payment shall be required to be made when, in the judgment of the Engineer, the work is not proceeding in accordance with the provisions of the Contract or when, in the Engineer's judgment, the total value of the completed work since the last estimate is less than \$500.00. No such estimate or payment shall be construed to be an acceptance of any defective work or improper materials.

After Contract acceptance, the Engineer will prepare a written proposed final estimate of the proposed final quantities of work completed under the Contract and the value of such work and will submit such estimate to Contractor. The City shall retain five percent of such estimated value of the work done and shall pay to Contractor the balance after deducting all amounts to be retained under the provisions of the Contract.

The City may, at its option and at any time, retain out of any amounts due Contractor sums sufficient to cover any unpaid claims of City or others, provided that sworn statements of all non-City claims shall have been filed with the Director of Finance.

9-1.16E(6) Substitution of Securities for Withheld Amounts: Pursuant to Public Contract Code section 22300, securities may be substituted for any moneys withheld by City to ensure performance under this Contract, provided that substitution of securities provisions shall not be required in contracts in which there will be financing provided by the Farmer's Home Administration of the United States Department of Agriculture pursuant to the Consolidated Farm and Rural Development Act (7 USC sections 1921 *et seq.*), and where federal regulations or policies or both do not allow the substitution of securities. At the request and expense of Contractor, securities equivalent to the amount withheld shall be deposited with the City, or with a state or federally chartered bank as the escrow agent, which shall then pay such moneys to Contractor. The Director of Finance is authorized to execute substitution of securities agreements on behalf of the City. The City will return the securities to Contractor upon satisfactory completion of the Contract as determined by City in its sole discretion and the resolution of all outstanding claims against the securities. Contractor shall be the beneficial owner of any securities substituted for moneys withheld and shall receive any interest thereon.

Securities eligible for investment under this section shall include those listed in Government Code section 16430, bank or savings and loan certificates of deposit, interest bearing demand deposit accounts, standby letters of credit or any other security mutually agreed to by Contractor and the City, provided that the substituted security is equal to or not less than five percent of the Contract amount.

Security substitutions must be submitted by Contractor and approved by City prior to the time of the first progress payment to be made under the Contract. No other method of substituting securities for retention will be accepted. The security substitution shall be done only upon execution of an agreement satisfactory to City which includes the following provisions:

- a. The amount of securities to be deposited;
- b. The terms and conditions of conversion to cash in case of the default of Contractor;
and
- c. The procedure for return of securities upon completion of the Contract.

9-1.17D Final Payment and Claims: The processing of payment of the final estimate shall not be commenced less than 35 days after the date of recording of the Notice of Completion with the County Recorder's Office. Contractor is advised that it takes approximately ten days for a check to be issued following a request for payment.

Contractor shall submit its written statement of all claims for additional compensation under the Contract to the Engineer within 15 days after submission to Contractor of the proposed final estimate.

If Contractor does not file a claim within the 15 day period, or upon Contractor's approval, the Engineer will issue a final written estimate and the City shall pay to Contractor the entire sum due after deducting all previous payments, if any, and all amounts to be retained under the provisions of the Contract.

If Contractor files a claim within the 15 day period, the Engineer will furnish a semi-final estimate and pay the amount due under the semi-final estimate within 30 days. The semi-final estimate is conclusive as to the amount payable except as may be affected by claims and any amount retained. The Engineer shall then consider and investigate such claim, and shall make such revision in the final quantities as the Engineer may find to be due, and shall then make and issue a final written estimate. The City will pay the amount due, after deducting all previous payments, if any, and amounts to be retained under the provisions of the Contract.

Any and all prior partial estimates and payments shall be subject to correction in the final estimate and payment.

The final estimate shall be conclusive and binding against both parties to the Contract on all questions relating to the performance of the Contract and the amount of work done thereunder and compensation therefor, except in the case of gross error.

9-1.17D(3) Final Determination of Claims: Claims filed by Contractor shall be in sufficient detail to enable the Engineer to determine the basis and amount of the Claims. Contractor shall also furnish reasonable documentation to the City to support Claims. If additional information is required by the Engineer, Contractor shall provide such information to the Engineer no later than the 15th day after receipt of the written request from the Engineer. If the 15th day falls on a weekend, holiday, or day City offices are closed, then the information shall be provided to the Engineer no later than close of the next business day. Failure to submit the requested information to the Engineer within the time specified will be sufficient cause for denying the Claim.

Contractor shall keep full and complete records of the costs and additional time incurred for any work for which a claim for additional compensation is made. The Engineer or any designated Claim

investigator or auditor shall have access to those records and any other records as may be reasonably required by the Engineer to determine the facts or contentions in each Claim. Failure to grant access to such records shall be sufficient cause for denying the Claims.

9-1.22 Arbitration: Any references to Arbitration in the Standard Specifications are deleted in their entirety.

Claims submitted by Contractor shall be accompanied by a notarized certificate containing the following language:

Under the penalty of law for perjury or falsification and with specific reference to the California False Claims Act, Government Code sections 12650 *et seq.*, the undersigned,

_____,
(Name)

_____ of
(Title)

(Contractor)

hereby certifies that the claim for additional compensation made herein is supported by a true statement of the actual costs incurred and time expended on this project, and is fully documented by records maintained by Contractor.

Dated _____

/s/ _____

Subscribed and sworn before me this _____ day of

Notary Public

My Commission Expires _____

Failure to submit the notarized certificate will be sufficient cause for denying the claim.

Any claim for overhead expenses, in addition to being certified as stated above, shall be supported by an audit report of an independent Certified Public Accountant. Any such overhead claim shall also be subject to audit by the City at its discretion.

Any costs or expenses incurred by the City in reviewing or auditing any claims that are not supported by Contractor's cost accounting or other records shall be deemed to be damages incurred by the City within the meaning of the California False Claims Act.



TECHNICAL SPECIFICATIONS
FOR
NORTHERLY SLOPE PROTECTION
PONDS C & D AND POND B SLOPE REPAIR
CONTRACT NO. C01909



Brelje & Race
CONSULTING ENGINEERS

APRIL 2019

SECTION 01 10 00

SUMMARY OF WORK

PART 1 GENERAL

1.01 SUMMARY

- A. Section includes:
 - 1. Project Description
 - 2. Description of Bid Items
 - 3. Partial Occupancy/Utilization Requirements
 - 4. Contractor Use of Site
 - 5. List of Project Plans

1.02 RELATED SECTIONS

- A. Contract General Specifications
- B. Section 01 35 13 – Special Project Procedures
- C. Section 01 50 00 – Temporary Facilities and Controls

1.03 PROJECT DESCRIPTION

- A. The work to be performed under these specifications is located at the City of Santa Rosa's Meadow Lane Effluent Storage Facilities - 4301 Llano Road, Santa Rosa, California. The Effluent Storage Facility is southwest of Santa Rosa on the west side of Llano Road, adjacent to the City's Laguna Regional Wastewater Treatment Plant. Access to the project is from Llano Road.
- B. The project is generally described as trimming and protection of the wave eroded northerly interior slopes of Ponds C and D. The primary elements of this work are described as follows:
 - 1. Trimming of the existing interior embankment slopes to provide a uniform interior slope for the placement of slope protection thru the removal of existing embankment materials, including the existing gravel roadway.
 - 2. Placement of pond bottom fill material at the toe of the trimmed interior slopes.
 - 3. Placement of geotextile underlayment and riprap rock slope protection on top of the rehabilitated interior slope.
 - 4. Gravel roadway construction along the top of the rehabilitated interior embankment.
- C. The project also includes the repair of a failed interior slope of Pond B. The primary elements of the work are described as follows:
 - 1. Removal of existing failed embankment material, including existing rock riprap.
 - 2. Replacement of embankment material.
 - 3. Placement of geotextile underlayment and riprap rock slope protection on top of the rehabilitated interior slope.

- D. The project also includes the interior embankment emergency slope repair (FA) work for failed areas of Ponds C and D where the scope of work is currently unknown and will be directed in the field by the Engineer. The primary elements of the work are anticipated to be as follows:
1. Removal of existing failed embankment material.
 2. Replacement of embankment material.
 3. Placement of geotextile underlayment and riprap rock slope protection on top of the rehabilitated interior slope, or alternative erosion control method as directed by the Engineer.
 4. All work shall be in accordance with Standard Specifications Section 9-1.04 Force Account, at the direction of the Engineer.

1.04 DESCRIPTION OF BID ITEMS

- A. Bid Items are presented to indicate major categories of the work for purposes of comparative bid analyses and payment breakdown for monthly progress payments. Bid items are not intended to be exclusive descriptions of work categories and the Contractor shall determine and include in its pricing all materials, labor, and equipment necessary to complete each Bid Item (work phase) as shown and specified.

B. Bid Item Descriptions:

1. **Mobilize, Demobilize, and Site Preparation** shall be paid for at the contract **lump sum** fixed price which shall include preparatory work and operations necessary for the movement of personnel, equipment, supplies and incidentals to the project site; for the establishment of facilities and construction access ramps as necessary; demobilization and final clean-up, and for all other work and operations which must be performed or costs incurred prior to beginning and required for finishing work on the various contract items in the Bid Schedule, and no additional allowance will be made therefor.

The bid item amount for Mobilize, Demobilize, and Site Preparation shall not exceed 3% (three percent) of the total bid price. The first payment for Mobilize, Demobilize, and Site Preparation shall be no more than fifty percent (50%) of the bid item amount indicated, contingent upon site mobilization of equipment, an approved Construction Schedule, and proof of acquisition of all required bonds, insurance, and permits. The second payment for Mobilize, Demobilize, and Site Preparation shall be the remainder of the bid item amount and shall be paid after completion of all contract items of work and completion of the final punch list.

2. **Stripping and Disposing of Organics** shall be paid for at the contract **square yard** unit price which shall include all labor, materials, and equipment necessary to remove topsoil, organic material, and unsuitable surface material from the pond bottom and embankment slope areas where grading activities will occur, dispose of by spreading, grading, and compacting on the bottom of the pond, and other work incidental thereto, complete in accordance with the Project Plans and as specified herein, and no additional allowance will be made therefor.

Stripping and Disposing of Organics is a **Final Pay Item (F)** as defined in the Standard Specifications. The Contractor shall perform his own calculations based upon his methods of operation and adjust the unit price per square yard accordingly.

3. **Embankment Excavation** shall be paid for at the in-situ bank **cubic yard** unit price which shall include all labor, materials, and equipment necessary to excavate the embankment to the depths indicated on the Project Plans including, but not limited to excavating, loading, hauling, stockpiling, scraping, protecting existing utilities, and other work incidental thereto, complete to the lines and grades shown on and in accordance with the Project Plans and as specified herein, and no additional allowance will be made therefor.

Embankment Excavation is a **Final Pay Item (F)** as defined in the Standard Specifications. The Contractor shall perform his own calculations based upon his methods of operation and adjust the unit price per cubic yard accordingly.

4. **Pond Bottom Fill** shall be paid for at the contract in-place compacted **cubic yard** unit price which shall include all labor, materials, and equipment necessary to prepare and place pond bottom fill to the lines and grades shown on the Project Plans with on-site material, including but not limited to moisture conditioning, scraping, transporting, placing, grading, compacting, trimming, foundation preparation, disposing of excess excavated material on the bottom of the pond, and other work incidental thereto, complete in accordance with the Project Plans and as specified herein, and no additional allowance will be made therefor.

Pond Bottom Fill is a **Final Pay Item (F)** as defined in the Standard Specifications. The Contractor shall perform his own calculations based upon his methods of operation and adjust the unit price per cubic yard accordingly.

5. **Embankment Fill** shall be paid for at the contract in-place compacted **cubic yard** unit price which shall include all labor, materials, and equipment necessary to prepare and place embankment fill to the lines and grades shown on the Project Plans with suitable on-site material, including but not limited to moisture conditioning, scraping, transporting, placing, grading, compacting, trimming, foundation preparation, disposing of excess excavated material on the bottom of the pond, and other work incidental thereto, complete in accordance with the Project Plans and as specified herein, and no additional allowance will be made therefor.

Embankment Fill is a **Final Pay Item (F)** as defined in the Standard Specifications. The Contractor shall perform his own calculations based upon his methods of operation and adjust the unit price per cubic yard accordingly.

6. **Riprap Keyway Excavation** shall be paid for at the in-situ bank **cubic yard** unit price which shall include all labor, materials, and equipment necessary to excavate the a riprap keyway trench to the depths indicated on the Project Plans including, but not limited to excavating, loading, hauling, stockpiling, disposing of excess excavated material on the bottom of the pond, and other work incidental thereto, complete to the lines and grades shown on and in accordance with the Project Plans and as specified herein, and no additional allowance will be made therefor.

Riprap Keyway Excavation is a **Final Pay Item (F)** as defined in the Standard Specifications. The Contractor shall perform his own calculations based upon his methods of operation and adjust the unit price per cubic yard accordingly.

7. **Over-Excavation** shall be paid for at the contract **cubic yard** unit price which shall include all labor, materials, and equipment necessary to over-excavate and fill over-excavations, including but not limited to excavation beyond the limits of sub-excavation indicated on the Project Plans at the direction and as determined necessary by the Engineer in the field, stockpiling, mixing, replacement with approved embankment fill materials, moisture conditioning, and compacting, and no additional allowance will be made therefor.

The estimated quantity of Over-Excavation is for bidding purposes only. This quantity may be increased, decreased or eliminated in its entirety based on field condition evaluation by the Engineer, and no adjustment in the contract bid price or other contract items will be made therefor. In the event of an increase or a decrease in the amount of the Engineer's estimated quantity of Over-Excavation, such increase or decrease shall not be considered an alteration in excess of the 25 percent of the contract amount of such items under provisions of Section 4-1.03B of the Standard Specifications and no adjustment of the contract price for Over-Excavation will be made by reason of such increase or decrease.

8. **Gravel Roadway Construction** shall be paid for at the contract **square foot** price which shall include all labor, materials, and equipment necessary to construct the compacted crushed stone dike roadway on the top of the embankments using aggregate to the thicknesses indicated on the Project Plans including but not limited to excavation, importing, placing, fine grading, compaction, materials testing, and other work incidental thereto, complete in accordance with the Project Plans and as specified herein, and no additional allowance will be made therefor.
9. **Rock Riprap** shall be paid for at the contract **square yard** price, which shall include full compensation for furnishing all labor, materials, tools, and equipment, and doing all the work involved in furnishing and placing the loose rock riprap including, but not limited to hauling, placing, grading and other work incidental thereto, complete in accordance with the Project Plans, as specified herein, and as directed by the Engineer, and no additional allowance will be made therefor.
10. **Geotextile** shall be paid for at the contract **square yard** price, which shall include full compensation for furnishing all labor, materials, tools, equipment, and doing all the work involved in placing and anchoring geotextile fabric, in accordance with the Project Plans and as specified herein, and no additional allowance will be made therefor.

Quantities of geotextile to be paid for shall be computed on the basis of the exact amount of area covered in the field.

11. **Dewatering, Trench Shoring, and Bracing** shall be paid for at the contract **lump sum** fixed price which shall include all labor, material, and equipment necessary to furnish sheeting, shoring, bracing, and dewatering for the protection of life and limb conforming to applicable safety orders, including but not limited to a bracing and shoring plan *if required*, securing Cal/OSHA permit *if required*, pond water and groundwater disposal plan, pumping of pond water and groundwater, disposal of residual material, cleaning, coordination with City for testing, disposal of pond water and groundwater, and compliance with discharge permit, and no additional allowance will be made therefor.

12. **Interior Embankment Emergency Slope Repair Allowance** will be paid for at the Stripping and Disposing of Organics, Embankment Excavation, Embankment Fill, Riprap Keyway Excavation, Over Excavation, Rock Ripap, and Geotextile contract unit prices included in the Contractors bid schedule, and/or on a Force Account (FA) basis up to the contract allowance price to repair additional interior embankment slope failures where the scope of work is currently indeterminate at the time of bid and which work shall include full compensation for furnishing all labor, materials, and equipment necessary to perform additional slope repairs, as directed by the Engineer, and no additional allowance will be made therefor.

1.05 PARTIAL OCCUPANCY/UTILIZATION REQUIREMENTS

- A. The City may take possession of and use any completed, or partially completed, portion of the Work during the progress of the Work provided possession and use does not interfere with the remaining Work.
- B. Possession, use of Work, and placement and installation of equipment by the City shall not in any way evidence the completion of the Work or any part of it.
- C. Use and occupancy by the City prior to acceptance of Work does not relieve Contractor of its responsibility to maintain insurance and bonds required under the Contract until entire Work is completed and accepted by the City.

1.06 CONTRACTOR USE OF SITE

- A. Confine operations at Site to those areas so designated by Contract Documents, permits, ordinances, and laws.
- B. Do not unreasonably encumber Site with materials or equipment.
 - 1. Coordinate parking, storage, staging, and Work areas with the City.
- C. It is imperative that all other existing Meadow Lane Pond facilities continue to operate in compliance with permit requirements throughout the duration of the Work. Contractor shall carry out construction activities in a manner that does not disrupt facility operations.
- D. Schedule all construction activities that affect the operation of the facilities with the City. Scheduling of all such activities shall be subject to the approval of the City.

1.07 WORK SEQUENCING AND CONSTRAINTS

- A. The work shall be sequenced in accordance with Section 01 35 13 – Part 1.04 of these Technical Specifications prior to the expiration of the working days indicated in Section 8-1.04B of these Contract Special Provisions.
- B. Other construction projects may be in progress on-site during this Project. The Contractor shall coordinate his activities with the requirements of the concurrent activities.
- C. All work sequencing should be included in the Progress Schedule.

1.08 LIST OF PROJECT PLANS

- A. The Contract Project Plans, prepared by Brelje & Race Consulting Civil Engineers, as a basis for the preparation of proposals and for the performance of the work under this contract for the City of Santa Rosa, Northerly Slope Protection Ponds C & D and Pond B Slope Repair include:

DWG. NO.	TITLE
1	Cover Sheet
2	Abbreviations, Legend, Notes, Sheet Layout & Survey Control Data
3	Overall Site & Layout Plan
4	Pond D Grading Plan
5	Pond D Typical Sections
6	Pond D Cross Sections
7	Pond D Cross Sections
8	Pond C Grading Plan STA.1+00 – STA.10+00
9	Pond C Grading Plan STA.10+00 – STA.18+50
10	Pond C Typical Sections
11	Pond C Cross Sections
12	Pond C Cross Sections
13	Pond B Grading Plan
14	Pond B Typical Sections
15	Pond B Cross Sections

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

END OF SECTION

SECTION 01 31 19

PROJECT MEETINGS

PART 1 GENERAL

1.01 RELATED SECTIONS

- A. Contract General Specifications.
- B. Section 01 32 00 – Construction Progress Documentation

1.02 PRECONSTRUCTION CONFERENCE

- A. A meeting will be scheduled by the Engineer immediately prior to Contractor move-in. Representatives of the Engineer, the Contractor, selected Subcontractors, and the California Department of Water Resources Division of Safety of Dams (DSOD) will be present as needed. Job site procedures and the following items will be discussed.
 - 1. Contact information
 - 2. Responsibilities
 - a. Engineer
 - b. Construction Inspector(s)
 - c. Contractor
 - d. Any other agency contributing to the project
 - 3. General discussion of contract
 - a. Completion time
 - b. Submittals
 - c. Order of Work
 - d. Permits
 - e. Payment procedures
 - f. Final acceptance
 - g. Other requirements of contract
 - 4. Contractor's schedule
 - 5. Sub-contracts
 - 6. Project observation
 - 7. Safety

1.03 PROGRESS MEETINGS

- A. A progress meeting will be conducted weekly, by the Engineer. The Contractor's Representative and the Contractor's Superintendent shall be in attendance.
- B. The meeting will be held in the job office or other designated location on a regularly scheduled basis. The date and hour will be announced by the Engineer.
- C. Standard Site-Meeting Agenda

1. Job Status / Schedule
 - a. Construction schedule
 - b. Contract schedule / time
 - c. Budget status
 2. Status of Contractor Base Schedule
 - a. Long-lead procurement items affecting schedule
 - b. City induced delays, if any
 - c. Contractor caused delays, if any
 - d. RFIs - review responses affecting schedule
 - e. Shop drawing - review submittals and/or responses affecting schedule
 - f. Change Order items, if any.
 3. Old Business
 4. New Business
 5. Non-conformance Items / Work
 6. Status of Record Drawings
 7. Other Current Problem Areas / Resolutions
 8. Environmental / Safety Considerations
 9. Change Order Meeting
- D. The essence of the discussion of each meeting will be entered into the minutes and copies will be furnished by the Engineer to all interested parties within one week.

1.04 PROJECT CLOSE-OUT MEETING

- A. Approximately two (2) to six (6) weeks prior to the scheduled completion of the Project, for the convenience of the contractor, the City's Representative will include in the standard meeting agenda a Project Close-out meeting.
- B. The purpose is to produce an action-list of major items required to be completed prior to the issuance of the Notice of Completion.
 1. The action-list shall assign an action-responsibility and a projected action-completion date to each item.
 2. The contractor shall be solely responsible for the timely completion of all required close-out items.
 3. Items to be considered include:
 - Punch list
 - Keys/Keying
 - Record drawings and specifications
 - Test record documentation
 - Inspections
 - Removal of temporary facilities
 - Final cleaning
 - Acceptance
 - Notice of completion
 - Final payment
 - Other close-out items

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

END OF SECTION

SECTION 01 32 00

CONSTRUCTION PROGRESS DOCUMENTATION

PART 1 GENERAL

1.01 SUMMARY

- A. Section includes a description of the construction progress documentation required of the Contractor.

1.02 RELATED SECTIONS

- A. Contract General Specifications.
- B. Section 01 31 19 – Project Meetings
- C. Section 01 33 00 – Submittals
- D. Section 01 35 13 – Special Project Procedures

1.03 PROGRESS SCHEDULE

- A. Submit a detailed Progress Schedule that includes all work associated with the project from the initial Notice to Proceed to the Final Completion. This includes all phases of the work.
- B. Show the duration and sequencing of activities required for complete performance of the Work.
- C. The schedule must be approved by the Engineer and updates to the schedule will be required throughout the project to reflect actual progress and occurrences to date.
 - 1. Updates shall show work that has been completed prior to submission.
 - 2. Updates shall show at a minimum all approved changes, delays, modified sequencing, and progress projection changes.
- D. Detailed sub-schedules shall be available upon request of the Engineer to further define critical portions of the Work such as facility shutdowns.
- E. The schedule shall be presented in digital Bar Chart format from Microsoft Project or an approved equal program.

1.04 SCHEDULE SUBMITTAL AND CONTENTS

- A. Format:
 - 1. Submitted in 11 x 17 sheet size in paper format and electronically.
 - 2. Title block shall show the name of the project, owner, and date submitted.
 - 3. Timeline shall be identified horizontally across the top of the schedule; the timeline shall include the year, month, and day.
 - 4. Each activity shall have a unique number and bar associated.
 - 5. Each schedule shall include a legend describing all standard and special

symbols used.

B. Contents:

1. The contents shall include, in a chronological timeline order, in conformance with the Contractor's Work Plan, the activities reasonably required to complete the Work within each Pond and all Work required by the Contract Documents, including, but not limited to:
 - a. Submittals
 - b. Mobilization
 - c. Specific Work
 - d. Completion Dates
 - e. Subcontract Work
 - f. Milestones
 - g. Delivery Dates
 - h. Site Preparation
 - i. Dewatering
 - j. Pond Bottom Drying
 - k. Excavation Work
 - l. Pond Bottom Fill
 - m. Embankment Fill
 - n. General Earthwork Operations
 - o. Geotextile Installation
 - p. Rip-Rap Installation
 - q. Gravel Roadway Construction
 - r. Closeout and Cleanup
 - s. Demobilization
 - t. Critical Path

C. Acceptance of Schedules:

1. If a schedule is not accepted by the Engineer a revised schedule must be resubmitted within ten days.
2. All submittal criteria must be present for the schedule to be accepted.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

END OF SECTION

SECTION 01 33 00

SUBMITTALS

PART 1 GENERAL

1.01 SUMMARY

- A. Section includes the administrative and procedural requirements for submittals required for performance of the Work:
 - 1. Submittal schedule
 - 2. Submittal procedures
 - 3. Shop drawings
 - 4. Product data
 - 5. Samples
 - 6. Engineer's action
- B. Shop Drawings, Product Data, Calculations, and Samples shall be submitted by the Contractor for review by the Engineer prior to delivery to the job site. Materials and services requiring submittals shall include but not be limited to the following:
 - 1. Contractor's Construction Schedule
 - 2. Submittal Schedule
 - 3. Shop Drawings
 - 4. Product Data
 - 5. Samples
 - 6. Work Plan(s)
 - 7. Quality Control Plan
 - 8. Schedule and Sequence of Operations
 - 9. Reports
 - 10. Dewatering Plan
 - 11. Shoring and Bracing
 - 12. Rock Riprap
 - 13. Geotextile
 - 14. Crushed Stone (Shale) Surfacing
- C. Administrative Submittals: Refer to the General Specifications and other Contract Documents for requirements for administrative submittals. Such submittals include, but are not limited to:
 - 1. Permits
 - 2. Applications for payment
 - 3. Performance and payment bonds
 - 4. Insurance certificates
 - 5. List of subcontractors
- D. DSOD Submittals:
 - 1. Various submittals may require the approval of the DSOD.
 - 2. The Contractor shall allow 10 working days for review of submittals requiring DSOD approval.

1.02 RELATED SECTIONS

- A. General Specifications
- B. Section 01 32 00 – Construction Progress Documentation
- C. Section 01 35 13 – Special Project Procedures
- D. Section 31 23 19 – Dewatering
- E. Section 31 35 19 – Geosynthetics
- F. Section 31 37 00 – Rock Riprap
- G. Section 31 40 00 – Shoring and Bracing
- H. Section 32 15 40 – Crushed Stone (Shale) Surfacing

1.03 SUBMITTAL PROCEDURES

- A. Coordination
 - 1. Coordinate preparation and processing of submittals with performance of construction activities. Transmit each submittal sufficiently in advance of performance related construction activities to avoid delay.
 - 2. Coordinate each submittal with fabrication, purchasing, testing, delivery, other submittals and related activities that require sequential activity.
 - 3. Coordinate transmittal of different types of submittals for related elements of the Work so processing will not be delayed by the need to review submittals concurrently for coordination.
 - a. The Engineer shall return without action any submittals requiring coordination with other submittals until related submittals are coordinated.
 - 4. Allow sufficient review time so that installation will not be delayed because of the time required to process submittals, including time for resubmittals:
 - a. See General Specifications for additional requirements.
 - b. If an intermediate submittal is necessary, process the same as the initial submittal.
 - c. No extension of Contract Time will be authorized because of failure to transmit submittals to the Engineer sufficiently in advance of the Work to permit processing.
- B. Place a permanent label or title block on each submittal for identification.
 - 1. Provide a space approximately 4" x 5" on the label or beside the title block on Shop Drawings to record the Contractor's review and approval markings and the action taken.
 - 2. Include the following information on the label for processing and recording action taken:
 - a. Project name
 - b. Date
 - c. Name and address of Engineer
 - d. Name and address of Contractor

- e. Name and address of subcontractor
 - f. Name and address of supplier
 - g. Name of manufacturer
 - h. Number and title of appropriate Specification Section
 - i. Drawing number and detail references, as appropriate.
- C. Submittal Transmittal:
- 1. Submittals may be delivered electronically (exceptions include samples and test samples, etc.).
 - 2. Transmit each submittal from Contractor to Engineer using a transmittal form.
 - a. Record relevant information and requests for data.
 - b. Record deviations from Contract Document requirements, including minor variations and limitations.
 - c. Include Contractor's certification that information complies with Contract
 - 3. Submittals received from sources other than the Contractor will be returned without action.

1.04 SHOP DRAWINGS

- A. Submit newly prepared information, drawn to accurate scale.
- B. Highlight, encircle, or otherwise indicate deviations from the Contract Documents.
- C. Do not reproduce Contract Documents or copy standard information as the basis of Shop Drawings. Standard information prepared without specific reference to the Project is not considered Shop Drawings.
- D. Shop Drawings include fabrication and installation drawings, setting diagrams, schedules, patterns, templates and similar drawings. Include the following information:
 - 1. Dimensions
 - 2. Identification of products and materials included
 - 3. Compliance with specified standards
 - 4. Notation of coordination requirements
 - 5. Notation of dimensions established by field measurement.
- E. Except for templates, patterns and similar full- size Drawings, submit Shop Drawings electronically formatted at least 8-1/2" x 11" but no larger than 22" x 34".
- F. Do not use Shop Drawings without an appropriate final stamp indicating action taken in connection with construction.

1.05 PRODUCT DATA

- A. Collect Product Data into a single submittal for each element of construction or system. Product Data includes printed information such as:
 - 1. Manufacturer's installation instructions
 - 2. Catalog cuts
 - 3. Standard color charts
 - 4. Roughing-in diagrams and templates

- 5. Performance curves
- B. Where Product Data must be specially prepared because standard printed data is not suitable for use, submit as "Shop Drawings."
- C. Mark each copy to show applicable choices and options. Where printed Product Data includes information on several products, some of which are not required, mark to indicate the applicable information. Include the following information:
 - 1. Manufacturer's printed recommendations,
 - 2. Compliance with recognized trade association standards,
 - 3. Compliance with recognized testing agency standards,
 - 4. Application of testing agency labels and seals,
 - 5. Notation of dimensions verified by field measurement,
 - 6. Notation of coordination requirements.
- D. Do not submit Product Data until compliance with requirements of the Contract Documents has been confirmed.

1.06 SCHEDULE AND SEQUENCE OF OPERATIONS

- A. The Contractor shall submit a detailed schedule and sequence of operations in a bar chart format as specified in Section 01 32 00 – Construction Progress Documentation.
- B. The Contractor shall submit a detailed work plan as specified in Section 01 35 13 – Special Project Procedures.

1.07 REPORTS

- A. The following information shall be submitted to the Engineer on a regular schedule during the progress of the work:
 - 1. Daily reports shall be submitted by noon of the day following the date of the report.
 - 2. Laboratory test results shall be submitted within two days of receipt of the report from the laboratory.
 - 3. Final reports shall be submitted within two to four weeks of the completion of work.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

END OF SECTION

SECTION 01 35 13

SPECIAL PROJECT PROCEDURES

PART 1 GENERAL

1.01 SUMMARY

- A. The requirements for the following subjects are included in this Section:
 - 1. Inspectors
 - 2. Existing System Operation
 - 3. Work Plan
 - 4. General Environmental Protections
 - 5. Unused Material

1.02 RELATED DOCUMENTS

- A. General Specifications
- B. Section 01 10 00 – Summary of Work
- C. Section 01 50 00 – Temporary Facilities and Controls
- D. Section 31 23 00 – Excavation and Fill

1.03 INSPECTORS

- A. Representatives from DSOD may periodically inspect the work in progress during construction, including the materials being incorporated into the works, as well as the test results and documentation associated with the project. Upon completion of any excavation, DSOD approval of the foundation surface may be required before embankment fill starts. The contractor shall allow DSOD representatives access to all locations within project boundaries. All communications with DSOD pertaining to the project shall be coordinated through the City's designated representative. The contractor shall cooperate with the City's representative by giving 72 hours notice of any inspection or review that is required to be performed by DSOD to avoid delaying the work and assure that the City's representative has sufficient time to coordinate DSOD's involvement.

1.04 EXISTING SYSTEM OPERATION

- A. The Ponds will be lowered and taken out of service in accordance with the following, at which time the Contractor may commence with the work within that Pond"
 - 1. Pond D will be taken out of service and the water level in the pond lowered to elevation 72.0 by July 1, 2019. This elevation corresponds to a depth of approximately 1 foot and a volume of approximately 14 million gallons. The remaining pond water may be dewatered into the adjacent Pond B during construction.
 - 2. Pond C will be taken out of service and the water level in the pond lowered to elevation 73.2 by July 1, 2019. This elevation corresponds to a depth of approximately 1 foot and a volume of approximately 8 million gallons. The

remaining pond water may be dewatered into the adjacent Pond B during construction.

3. Pond B will be taken out of service and the water level in the pond lowered to elevation 84.0 within 10 calendar days of the completion of the work within Ponds C and D. This elevation corresponds to a depth of approximately 1 foot and a volume of approximately 8 million gallons. The remaining pond water may be dewatered into the adjacent Pond C during construction.
 - a. The City will resume operation of Pond C prior to taking Pond B out of service.
 - b. The City reserves the right to direct the Contractor to perform Force Account work in Pond C and D prior to taking Pond B out of service.
- B. The work within each pond shall be completed prior to the expiration of the working days indicated in Section 8-1.04B of these Contract Special Provisions.

1.05 WORK PLAN

- A. The Contractor shall submit a detailed work plan that includes a complete written description of the procedure(s) to be used in construction. The work plan shall describe the proposed operating procedures, construction equipment, sequencing, and schedules. This shall include, but not be limited to, the Contractor's plan for:
1. Coordinating the construction, maintenance and removal of temporary construction access, working areas, staging and blending areas, and haul roads with the Engineer, or other contractors on site.
 2. Site preparation procedures
 3. Embankment excavation, staging and blending areas, foundation preparation, pond bottom fill, embankment fill and finished grading.
 4. Geotextile installation procedures.
 5. Riprap installation procedures.
 6. Material properties, sources, and (manufacturer's) certificates of quality.
 7. Clean-up.
 8. Sequencing of the work.
- B. The contractor's work plan shall schedule construction activities in a sequence approved by the Engineer. The following work plan sequence may be useful in establishing the Contractor's Work Plan:
1. Potholing to verify the location, conditions, and depth of existing facilities as indicated on the plans.
 2. Pond dewatering and drying as required to perform the work.
 3. Prepare the embankment for excavation according to Section 31 10 00 – Site Preparation.
 4. Excavate the existing embankment materials.
 5. Construct pond bottom fill, or stockpile the excavated material on the pond bottom as required to uniformly mix the material with other on-site soils.
 6. Uniformly mix suitable excavated on-site fill materials according to Section 31 23 00 – Excavation and Fill.
 7. Prepare the embankment foundation and place, compact, trim, and finish the embankment according to Section 31 23 00 – Excavation and Fill.
 8. Excavate and compact a keyway for the installation of geotextile and rock riprap.
 9. Install geotextile as shown on the Project Plans and according to Section 31 35

19 – Geosynthetics

10. Install rock riprap as shown on the Project Plans and according to 31 37 00 – Rock Riprap.

11. Repair the shale surfacing on the top of the dike and along the access road.

1.06 UNUSED MATERIAL

- A. Unused material shall be uniformly spread, graded, and compacted to a minimum 85% relative compaction on the pond bottom as directed by the Engineer.
- B. Material shall be placed and spread at locations as directed by the Engineer within the pond bottom at a maximum slope of 2% and with a finished thickness of not greater than 1-foot.
- C. Material placed on the pond bottom shall be graded to a surface profile that will not cause water to puddle or pond and promotes drainage towards the center of the pond bottom.
- D. No existing material shall be removed from the site.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

END OF SECTION

SECTION 01 42 15

ABBREVIATIONS, ACRONYMS, AND DEFINITIONS

PART 1 GENERAL

1.01 RELATED SECTIONS

- A. Contract General Specifications

1.02 DEFINITIONS

- A. General: Basic Contract definitions are included in the Contract Documents and General Specifications.
- B. Indicated: The term indicated refers to graphic representations, notes, or schedules on the Project Plans, or other Paragraphs or Schedules in the Specifications, and similar requirements in the Contract Documents. Terms such as shown, noted, scheduled, and specified are used to help the reader locate the reference. There is no limitation on location.
- C. Directed: Terms such as directed, requested, authorized, selected, approved, required, and permitted mean directed by the Engineer, requested by the Engineer, and similar phrases.
- D. Approve: The term approved, when used in conjunction with the Engineer's action on the Contractor's submittals, applications, and requests, is limited to the Engineer's duties and responsibilities as stated in the Conditions of the Contract.
- E. Regulation: The term regulations includes laws, ordinances, statutes, and lawful orders issued by authorities having jurisdiction, as well as rules, conventions, and agreements within the construction industry that control performance of the Work.
- F. Furnish: The term furnish means supply and deliver to the project site, ready for unloading, unpacking, assembly, installation, and similar operations.
- G. Install or Construct: The terms install or construct describe operations at the Project site including the actual unloading, unpacking, assembly, erection, placing, anchoring, applying, working to dimension, finishing, curing, protecting, cleaning, and similar operations.
- H. Provide: The term provide means to furnish and install, complete and ready for the intended use.
- I. Installer: An Installer is the Contractor or an entity engaged by the Contractor, either as an employee, subcontractor, or contractor of lower tier, to perform a particular construction activity, including installation, erection, application, and similar operations. Installers are required to be experienced in the operations they are engaged to perform.

- J. The Site is the space available to the Contractor for performing construction activities, either exclusively or in conjunction, with others performing other work as part of the Project.
- K. Testing Agencies: A testing agency is an independent entity engaged to perform specific inspections or tests, either at the Project Site or elsewhere, and to report on and, if required, to interpret results of those inspections or tests.

1.03 SPECIFICATION CONTENT EXPLANATION

- A. Specification Format: These Specifications are organized into Divisions and Sections based on the Construction Specifications Institute's 17-Division format.
- B. Abbreviations and Names: Trade association names and titles of general standards are frequently abbreviated. The following acronyms or abbreviations, as referenced in Contract Documents, are defined to mean the associated names. Names and addresses are subject to change and are believed, but not assured, to be accurate and up to date as of date of Contract Documents.

1. Abbreviations used to identify Reference Standards and Departments:

ACI	American Concrete Institute
AI	Asphalt Institute
AIA	American Institute of Architects
ANSI	American National Standards Institute
ASME	American Society of Mechanical Engineers
ASTM	ASTM International (Formerly American Society for Testing and Materials. Still occasionally used in specifications.)
AWS	American Welding Society
AWWA	American Water Works Association
CCR	California Code of Regulations
CSI	Construction Specifications Institute
CTM	California Department of Transportation Test Method
DSOD	California Department of Water Resources Division of Safety of
CDFW	State of California Department of Fish and Wildlife
IAPMO	International Association of Plumbing and Mechanical Officials
ICBO	International Conference of Building Officials
NEC	National Electrical Code
NFPA	National Fire Protection Association
PCA	Portland Cement Association
RWQCB	State of California Regional Water Quality Board
SSPC	Steel Structures Painting Council
UBC	Uniform Building Code (ICBO)
UL	Underwriters Laboratories, Inc.

2. Abbreviations and units of measurement used in the Specifications in addition to those outlined in the Standard Specifications:

Symbols as used in the Specifications	Symbols as used in the Engineer's Estimate	Definitions
atm	—	atmosphere
bcy	BCY	bank or in-situ cubic yard or yards
Btu	—	British thermal unit or units
cu.ft. or cf	CF	cubic foot or feet
C	—	degrees Celsius
CB	—	Cement -Bentonite
cfm	—	cubic feet per minute
CL	—	center line
cu	—	cubic
cu.yd or cy	CY	bank or in-situ cubic yard or yards
db	—	decibels
F	—	degrees Fahrenheit
ft	—	feet or foot
gal	—	gallon or gallons
gpm	—	gallons per minute
hp	—	horsepower
hr	—	hour or hours (english units)
Hz	—	hertz
ID	—	inside diameter
lb or lbs	LB	pound or pounds (weight)
mfr	—	manufacturer
mg	—	milligram or milligrams
mgd	—	million gallons per day
mg/l	—	milligrams per liter
min	—	minute
oc	—	on center
OD	—	outside diameter
ppm	—	parts per million
psf	—	pounds per square foot
psi	—	pounds per square inch
psia	—	pounds per square inch absolute
psig	—	pounds per square inch gauge
PVC	—	polyvinyl chloride
R	—	radius
sq	—	square
sq.ft. or sf	SF	square foot or feet
sq.sy. or sy	SY	square yard or yards

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

END OF SECTION

SECTION 01 50 00

TEMPORARY FACILITIES AND CONTROLS

PART 1 GENERAL

1.01 SUMMARY

- A. Section includes furnishing all labor, materials, equipment, tools and incidentals and performing all operations necessary to perform and conform to the following:
 - 1. Construction Staking and Control
 - 2. Rights-of-way and Contractor's access
 - 3. Public Convenience and Safety
 - 4. Temporary Utilities

1.02 RELATED SECTIONS

- A. Contract General Specifications

1.03 CONSTRUCTION STAKING AND CONTROL

- A. The City will provide staking within two business days of Contractor's request for staking. The City will provide engineering surveys to establish construction stakes that in the City's judgment are necessary to enable Contractor to proceed with the work.
- B. The City will provide the following set of stakes:
 - 1. Control Alignment Centerline Staking
 - 2. Excavation Staking
 - 3. Pond Bottom Fill Staking
 - 4. Embankment Fill Staking
- C. If the Contractor finds any additional staking or corrections necessary, notify the City in writing within two business days of the discovery.
- D. Contractor shall be responsible for laying out the Work, shall protect and preserve the established construction stakes and control, and shall make no changes or relocations without the prior written approval of the City.
- E. Whenever Contractor knows or reasonably should know that any Work activity is likely to damage or destroy any construction stakes or control, or require relocation because of necessary changes in grades or locations, provide 2 Business Days advance notice to the City.
- F. Notify the City whenever any construction stakes or property monuments are lost or destroyed or require relocation because of necessary changes in grades or locations. The City shall replace or repair construction stakes or property

monuments at Contractor's expense. Lost, destroyed or relocation of stakes and monuments shall not constitute a basis for claim for damages or extension of time.

1.04 RIGHTS-OF-WAY AND CONTRACTOR'S ACCESS

- A. Contractor's access is available to the project site from Llano Road at the entrance shown on the Project Plans.
- B. The Contractor shall allow access to the existing dike roads where work is not taking place.
- C. All areas of the compost area pavement shall be kept free of construction equipment and materials.

1.05 PUBLIC CONVENIENCE AND SAFETY

- A. Traffic and circulation
 - 1. If any applicable permits require the Contractor to notify residents or any agency of traffic detours and/or delays, then Contractor shall provide the Engineer a copy of all such notices.
- B. Maintaining through traffic
 - 1. The fact that rain or other causes, either within or beyond the control of the Contractor, may force suspension or delay of the work, shall in no way relieve the Contractor of responsibility for maintaining traffic and providing local access as specified herein.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

END OF SECTION

SECTION 01 70 00 PROJECT CLOSE-OUT

PART 1 GENERAL

1.01 SUMMARY

- A. This Section specifies administrative and procedural requirements for project close-out, including but not limited to the following:
 - 1. Punch-list inspection procedures
 - 2. Record Drawing submittals
 - 3. Submittal of permits and regulatory inspection reports
 - 4. Final completion

1.02 RELATED DOCUMENTS

- A. Contract General Specifications
- B. Section 01 10 00 – Summary of Work
- C. Section 01 31 19 – Project Meetings
- D. Section 01 33 00 – Submittals
- E. Section 01 74 10 – Cleanup

1.03 PUNCH-LIST INSPECTION

- A. When each portion of the Work is, in the opinion of the Contractor, complete in all respects, the Contractor shall call for a punch-list inspection.
- B. Inspection Procedures: On receipt of a request for inspection, the City's Engineer will schedule the Inspection. The Engineer will then perform a preliminary, walk-through. If, in the judgment of the Engineer, the project is not sufficiently complete in all respects, the Engineer will so advise the Contractor and discontinue the inspection.
 - 1. The Engineer will repeat inspection when requested and assured that the work has been completed.
 - 2. Results of the completed inspection will form the basis of requirements for final acceptance punch-list.

1.04 RECORD DOCUMENT SUBMITTALS

- A. General: Do not use record documents for construction purposes; protect from deterioration and loss in a secure, fire-resistive location; provide access to record documents for the City's and the Engineer's reference during normal working hours.
- B. Record Project Plans: Maintain a clean, undamaged set of blue or black line white-prints of Contract Project Plans and Shop Drawings. Mark the set to show the actual installation where the installation varies substantially from the Work as originally shown. Mark whichever drawing is most capable of showing conditions fully and

accurately; where Shop Drawings are used, record a cross-reference at the corresponding location on the Contract Project Plans. Give particular attention to concealed elements that would be difficult to measure and record at a later date.

1. Mark record sets with red erasable pencil; use other colors to distinguish between variations in separate categories of the work.
 2. Mark new information that is important to the City, but was not shown on Contract Project Plans or Shop Drawings.
 3. Note related Change Order numbers where applicable.
 4. Organize record drawing sheets into manageable sets, bind with durable paper cover sheets, and print suitable titles, dates, contact information and other identification on the cover of each set.
 5. Upon completion of the work, submit Record Project Plans to the Engineer for further processing.
- C. Spare Parts/Materials: Submit all required spare parts and material required by the Contract Documents.
- D. Submittal of Warranties: Submit all equipment and material warranties required by the Contract Documents.
- E. Permits and Regulatory Inspection Reports: Submit a copy of each permit obtained for the project with all associated information including, but not limited to permit application forms, inspection reports, regulatory authorizations, Notice of Intent, and notice of completions.
- F. Commissioning/equipment testing and startup: Conduct all required equipment testing and startup to the satisfaction of the City and provide all testing and startup reports and forms.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION

3.01 FINAL COMPLETION

- A. Preliminary Procedures: Before requesting final inspection for certification of acceptance of final completion submit a certified copy of the Engineer's final inspection list of items to be completed or corrected, stating that each item has been completed or otherwise resolved for acceptance, and the list has been endorsed and dated by the Engineer.
- B. Re-inspection Procedure: The Engineer will re-inspect the work upon receipt of notice that the work, including inspection list items from earlier inspections, (punch-list), has been completed, except items whose completion has been delayed because of circumstances acceptable to the City.
1. Upon completion of re-inspection, the Engineer will prepare and submit to the City, a recommendation of final acceptance, or advise the Contractor of work that is incomplete or of obligations that have not been fulfilled but are required for final completion.

C. See additional requirements for final completion in the General Specifications.

END OF SECTION

SECTION 01 74 10 CLEANUP

PART 1 GENERAL

1.01 SUMMARY

- A. Section includes furnishing all labor, materials, equipment, tools, and incidentals and performing all operations to conduct clean-up activities and responsibilities during construction and prior to final acceptance.

1.02 RELATED SECTIONS

- A. Section 01 35 13 – Special Project Procedures
- B. Section 01 70 00 – Project Close-Out
- C. Section 31 25 13 – Erosion Controls

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION

3.01 GENERAL PROCEDURES

- A. The construction area shall be kept free of rubbish, waste materials, and packing materials. All waste materials shall be disposed of as soon as possible.
- B. Easements, rights-of-way and temporary access routes shall be kept free of all waste materials, unused pipe, excessive dirt and dust. Fences shall be protected during construction and repaired to the City's satisfaction immediately following Site work and underground construction. All large rocks, clods, broken pipe and unused materials shall be removed from the work Site during construction and during final cleanup.
- C. The Site shall be completely cleaned prior to final acceptance.
- D. Final cleanup shall include the removal and disposal of all foreign material, paper, rubbish, rocks, clods, excess pipe, asphalt, wood, metal, and all other excess miscellaneous construction material.
- E. All asphalt pavement shall be swept clean.
- F. All cut and fill slopes, trenches, stockpiles and area where the natural ground has been disturbed shall be left with a smooth, clean appearance.
- G. Drainage ditches shall be kept open during times rain is expected.

- H. Excavated on-site materials not suitable for backfilling shall be uniformly spread on the pond bottom as indicated in Section 31 23 00 – Excavation and Fill, Part 3 – Execution, Unused Earthwork Material.

END OF SECTION

SECTION 31 10 00 SITE PREPARATION

PART 1 GENERAL

1.01 SUMMARY

- A. Section includes furnishing all labor, materials, equipment, tools and incidentals and performing all operations necessary to prepare the Site for excavation, backfill and related construction activities.
- B. Site preparation shall include clearing, grubbing, stripping and disposal of objectionable material within the Site area where grading is proposed as indicated on the Project Plans. Where used in this section, objectionable material is defined as trash, rubbish and junk; lumber, sheet metal, concrete and oversize rubble; and trees, stumps, roots, brush, and other organic matter, whether alive, dead or decaying.

1.02 PROTECTION

- A. Adequate protection measures shall be provided to protect workers and visitors at the Site. Adjacent property shall be fully protected throughout the operations.
- B. In accordance with generally accepted construction practices, the Contractor shall be solely and completely responsible for working conditions at the Site, including safety of all persons and property during performance of the work. This requirement shall apply continuously and shall not be limited to normal working hours.
- C. Any construction review of the Contractor's performance conducted by the Engineer is not intended to include review of the adequacy of the Contractor's safety measures, in or near the construction site.
- D. Access streets shall be kept free of mud, dirt or similar nuisances resulting from earthwork operations.
- E. Surface drainage provisions shall be made during the period of construction in a manner to avoid creating a nuisance to adjacent areas.
- F. The Site and adjacent influenced areas shall be watered as required to suppress dust nuisance and for uniform compaction.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION

3.01 CLEARING

- A. Clearing shall consist of removal of interfering or objectionable material lying on or protruding above the ground surface from the Site as shown on the Project Plans.

3.02 STRIPPING

- A. After clearing and grubbing, the Site areas designated for excavation shall be stripped to a depth necessary to remove all objectionable material below the existing ground surface. The organic or unsuitable materials shall be removed to expose a firm surface of undisturbed embankment materials.
- B. The strippings shall be placed along the interior toe of the pond at a location and as directed by the Engineer.
- C. The strippings shall be spread, graded, and compacted to a minimum of 85% relative compaction by track or wheel rolling to a surface profile that will not cause water to pond.

END OF SECTION

SECTION 31 23 00 EXCAVATION AND FILL

PART 1 GENERAL

1.01 SUMMARY

- A. Section includes furnishing all labor, materials, equipment, tools, and incidentals and performing all operations necessary to perform the following:
 - 1. Excavate, and/or over-excavate if needed earth and rock, regardless of character and subsurface condition
 - 2. Prepare foundation and subgrade materials for the placement of other material thereon
 - 3. Mix, blend and moisture condition materials as required
 - 4. Remove and replace unsuitable materials
 - 5. Dewater or otherwise control and remove groundwater
 - 6. Dispose of surplus excavated material on site at locations designated by the Engineer.

1.02 RELATED SECTIONS

- A. Section 31 10 00 – Site Preparation
- B. Section 31 23 19 – Dewatering
- C. Section 31 41 00 – Shoring and Bracing
- D. Section 32 15 40 – Crushed Stone (Shale) Surfacing

1.03 DEFINITIONS

- A. Whenever used in this Section or in the Project Plans, the following terms shall have the primary meaning given herein:
 - 1. Excavation – Removal of native materials below the plane established by the stripping operations to the lines and grades shown on the Project Plans from those areas upon which fill materials will be placed or as directed by the Engineer.
 - 2. Embankment fill or fill – Suitable materials meeting the requirements and handled in accordance with these contract documents.
 - 3. Over excavation – Unforeseen removal of native materials beyond the limits of excavation shown on the Project Plans as indicated and directed by the Engineer. Over excavations shall be replaced with embankment fill meeting the requirements of these contract documents.
 - 4. Suitable material – Material which meets the requirements for fill or embankment fill as described in this Section.

1.04 PROTECTION

- A. Adequate protection measures shall be provided to protect workmen and passers-by at the site. Streets and adjacent property shall be fully protected throughout the operations.
- B. In accordance with generally accepted construction practices, the Contractor shall be solely and completely responsible for working conditions at the job site, including safety of all persons and property during performance of the work. This requirement shall apply continuously and shall not be limited to normal working hours.
- C. Any construction review of the Contractor's performance conducted by the Engineer is not intended to include review of the adequacy of the Contractor's safety measures in, or near the construction site.

PART 2 PRODUCTS

2.01 MATERIALS

- A. Fill materials shall be of approved on-site materials from required excavations. Approved on-site materials are defined as local soils free of rubble, rubbish and vegetation.
- B. Fill shall conform to the following requirements:
 - 1. Plasticity Index of less than 20.
 - 2. The percentage composition by weight of the soil materials shall conform to the following gradation:

Sieve size (U.S. Standard)	Percent passing (By Dry Weight)
1-1/2" (See Subsection C)	100
3/4"	75–100
No. 4	20–100
No. 40	0–60
No. 200	0–50

- C. All fill materials must be approved by the Engineer prior to use. The maximum dimension of rock fragments and lumps shall be 4 inches, provided that any such fragments are isolated and fully surrounded by fine-grained material. Rock fragments and lumps larger than 1-1/2 inches shall be approved by the Engineer in the field prior to incorporation into the fill.
- D. Material containing brush, roots and other organic matter or otherwise deleterious material is not considered suitable for placement as fill and shall be disposed of as directed by the Engineer.

PART 3 EXECUTION

3.01 GENERAL

- A. After being properly mixed and moisture conditioned, the materials removed from excavations areas are generally considered suitable for use in constructing the proposed fills indicated on the Project Plans.
- B. The Contractor shall give a minimum of 24-hours notice to the Engineer prior to commencing or recommencing any earthwork operations; additional time may be required for review/testing of materials proposed for placement. No materials shall be placed prior to favorable field review of subgrade or previously graded surface by the Engineer DSOD.
- C. Preparation of subgrade and placement of materials shall be observed by the Engineer so that a professional opinion can be rendered as to the conformance of the completed fill to the specifications.

3.02 LAYOUT AND PREPARATION

- A. The Contractor shall lay out all work, establish grades, locate existing underground utilities, set markers and stakes, set up and maintain barricades and protect all utilities prior to beginning actual earthwork operations.
- B. Excavation shall begin only after, site preparation and stripping of organic materials.

3.03 EXCAVATION

- A. Excavation shall extend downward from the existing ground surface to remove in-situ soils in their entirety and construct pond bottom fill, or stockpile the excavated material on the pond bottom as required to uniformly mix the material with other on-site soils
- B. The excavation depth shall be as shown on the Project Plans or at the discretion of the Engineer.
- C. When completed, the average plane of excavation slopes shall conform to the lines and grades shown on the Project Plans and no point on the completed slopes shall vary from these designated slopes by more than 0.5 feet measured at right angles to the slope.
- D. All cut slopes shall be periodically examined during and at the completion of excavation by the Engineer, who shall evaluate the excavated soils and determine the need for additional excavation beyond plan finished grade.
- E. Should unstable or permeable areas of the cut be exposed during excavation, they shall be removed by over excavating as directed by the Engineer. Any granular pocket(s) shall be over-excavated and replaced with embankment fill as directed by the Engineer.
- F. Excavation beyond the limits indicated, unless approved by the Engineer, will be at the Contractor's expense.

- G. Any material excavated in the project area that are discovered during construction to exhibit signs of contamination (including, but not limited to staining and/or odor) shall be considered property of the City and shall only be disposed of at the direction of the City. Under such conditions, costs beyond normal disposal costs for uncontaminated material will be paid on a force account basis. Prior to disposal of any excess material from the work site, the Contractor shall submit to the Engineer written authorization for such disposal and entry permission signed by the approved disposal site. Contractor shall comply with all disposal regulations such as City, County, and/or State permits and licenses, as may be required.

3.04 FOUNDATION PREPARATION

- A. The soils exposed by the excavation or areas where fill will be placed shall be scarified to a depth of at least 6-inches, moisture conditioned to, and maintained at, a uniform moisture content of 0% to +3% above optimum while fill is being placed.
- B. The compacted foundation surface shall have an in-place field density equal to the field density of the compacted fill proposed to be placed thereon.

3.05 PLACING AND RECOMPACTING FILL MATERIAL

- A. Embankment fill shall be moisture conditioned to within a range of 0% to +3% of the optimum moisture content to achieve a minimum average 92% relative compaction per ASTM D1557.
- B. Pond bottom fill shall be moisture conditions to within a range of 0% to +3% of the optimum moisture content to achieve a minimum average 90% relative compaction per ASTM D1557.
- C. Fill should be placed in 8-inch loose lifts and compacted with a minimum of 8 passes. Where hand compaction work is required, fill should be placed in 4-inch loose lifts and compacted with a minimum of 8 passes.
- D. On-site soils available for use as fill are frequently saturated and drying will likely be necessary to achieve specified moisture content before placement.
- E. Water may be sprinkled on the embankment if necessary. If, in the opinion of the Engineer, the top or contact surfaces of a fill section become too dry or smooth to permit suitable bond between these surfaces and the additional fill to be placed thereon, it shall be moistened and/or worked with a harrow, scarifier, disc, sheeps-foot roller, or other suitable equipment in an approved manner to a sufficient depth to provide satisfactory bonding before the next succeeding layer of earth fill material is placed.

3.06 FILL TEST METHODS AND REQUIREMENTS

- A. Moisture content and compaction testing shall be made in conformance with ASTM D 1557.
- B. All soil evaluations and tests shall be performed by the Engineer. Tests shall be for the purpose of determining compliance with these Specifications and the frequency and locations of tests shall be at the discretion of the Engineer. The Contractor may conduct independent tests for his convenience and control purposes at his sole

expense; however, such tests will not be recognized for the purpose of establishing compliance with Specification requirements.

- C. Record density and field density tests will be made throughout the fill for quality assurance and quality control of the compaction.
 - 1. Record density tests shall be taken by the Sand Cone Method per ASTM D 1556.
 - 2. Field density tests shall be taken by the Nuclear Method per ASTM D 6938.
 - 3. A minimum of one record density test shall be taken for every 200 feet of fill placed along the embankment as specified by the Engineer. A field density test shall be taken adjacent to the location of any record density test for correlation purposes.
 - 4. Field density tests shall be taken for every 2 feet of vertical fill placed at intervals of approximately 200 feet apart along the embankment and at randomly staggered locations specified by the Engineer.
- D. When a density test, or group of tests, indicates that the specified compaction has not been achieved, that portion of the fill shall be reworked until the required density has been attained. Rework may require additional moisture conditioning and compaction or complete removal and replacement.

3.07 FINISHING AND TOLERANCES

- A. Fill slopes shall be overfilled and then trimmed back to a dense, uniform surface at the final grade. All loose material shall be removed from the slopes and excess spread on the bottom of the pond. When completed, the average plane of the slope shall conform to the slopes shown on the Project Plans and no point on the completed slopes shall vary from these designated slopes more than 0.5 ft measured at right angles to the slope.
- B. Excavations to remain as the finished grade surface shall be trackwalked prior to placement of geotextile, riprap, or other finished surfacing as indicated on the Project Plans.
- C. Finished grade surfaces shall be maintained to the grades and cross sections shown on the Project Plans until final acceptance of the Contract.
- D. If work has been interrupted by weather, scheduling, or for any other reason, the Engineer shall be notified by the Contractor at least 24 hours prior to the intended resumption of grading. It may be necessary to re-affirm suitability of placed compacted fill soils or fill materials that have been exposed to adverse weather conditions.

3.08 UNUSED MATERIAL

- A. Unused and unsuitable material shall be uniformly spread and graded along the interior toe of the pond at a location and as directed by the Engineer.
- B. Material shall be compacted to a minimum 85% relative compaction.
- C. Material shall be placed as directed by the Engineer and spread at a maximum slope of 2% with a finished thickness not greater than 6-inches.

- D. Material placed on the pond bottom shall be graded to a surface profile that will not cause water to puddle or pond and promotes drainage towards the existing pump station.
- E. No earthen material shall be removed from the site.

END OF SECTION

SECTION 31 23 19

DEWATERING

PART 1 GENERAL

1.01 SUMMARY

- A. Section Includes: Installation and maintenance of dewatering systems. Handling and disposal of excess pond water and water encountering and entering excavations or other parts of the work.

1.02 RELATED SECTIONS:

- A. Section 01 33 00 – Submittals
- B. Section 31 23 00 – Excavation and Fill
- C. Section 31 41 00 – Shoring and Bracing

1.03 SUBMITTALS

- A. A dewatering plan for each occurrence shall be approved by the Engineer prior to implementation.
- B. Dewatering Plan Requirements:
 - 1. Submit design and shop drawings prepared, stamped, and signed by a Professional Civil Engineer registered in the State of California.
 - 2. The dewatering water conveyance system shall be detailed.
 - 3. Detail of how sediment removal will occur.
 - 4. The analysis shall include an evaluation of the anticipated subsurface conditions.
 - 5. Dewatering analysis and design shall be fully coordinated with excavation and shoring design. The shoring and excavation design shall recognize the changes in groundwater conditions and earth pressures.

1.04 GENERAL

- A. The Contractor shall comply with all City, County, and State permit and license requirements.

1.05 SITE CONDITIONS

- A. The Ponds will be lowered and taken out of service in accordance and in the sequencing information indicated in Section 01 35 13 – Part 1.04.
- B. Groundwater may be encountered during the course of excavation. If it is encountered, the Contractor shall immediately notify the Engineer.
- C. The proposed project is located in an area that contains no **known** subsurface petroleum hydrocarbon contamination.

- D. The contractor shall maintain awareness of potential signs of soil and groundwater contamination throughout the project limits and shall notify the City immediately upon discovery. Conditions indicative of contamination may be either visual (staining in soil, sheen on water surface) or olfactory (petroleum hydrocarbon odors.)
- E. Upon the discovery of suspected contaminated materials, the Contractor shall immediately provide 40 hour OSHA-HAZWOPER certified workers in the contaminated area. The Contractor shall also provide a field Site Safety Officer that is also an 8-hour OSHA-HAZWOPER Supervisor trained to directly oversee the contaminated materials removal and handling operation. All workers in this circumstance must have their initial and annual renewal refresher training, medical clearance and personal protection equipment in accordance with 8CCR Section 5192.
- F. Lower static water and dewater excavations, as required, to process and compact subgrade in accordance with Section 31 23 00 – Excavation and Fill.
- G. Prior to release of groundwater to its static level, all pressure relief devices shall be fully operational.
- H. Release of groundwater to its static level shall be controlled to prevent disturbance of the natural foundation soils or compacted fill and to prevent flotation or movement of structures or pipelines.

1.06 SEQUENCING AND SCHEDULING

- A. Locate dewatering facilities where they will not interfere with utilities and construction work to be performed on the site.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION

3.01 GENERAL

- A. Excess pond water and water accumulated in excavations shall be discharged into an adjacent pond where work is not occurring in accordance with Section 01 35 13 – Part 1.04 of these Technical Specifications. Water may also be spread on an adjacent area of the pond bottom where it will not impact the proposed work, if appropriate.
- B. No water from dewatering operations shall be released to, or drain to a creek, wetland, channel, drainage feature, storm drain, or waters of the state.
- C. No water from dewatering operations shall be disposed of in a manner as to cause injury to public or private property, or be a menace to public health.
- D. Do not drain water into work built or under construction, except as noted.

3.02 CONTAMINATION

- A. The discharge shall be monitored to verify the lack of contamination. **If any odor, sheen or other visual discrepancy is noted during excavation or discharge, stop pumping and immediately notify the Engineer.**

3.03 INSTALLATION

- A. Contractor shall be responsible for constructing, operating and maintaining all necessary features to complete the work including furnishing, installing and maintaining all pumping and other equipment required to dewater the remaining pond water and any trenches containing water that may be encountered during performance of the work. Dewatering plan for each occurrence shall be approved by the Engineer prior to implementation. At the permanent conclusion of dewatering operations, all dewatering equipment shall be removed from the job site.
- B. The Contractor shall have a minimum of two working pumps available for immediate use at all times. The amount and size of pumps onsite shall be adequate to keep ahead of demand, with adequate backup.
- C. There is no electric utility at the project site. The Contractor shall provide a power generator capable of supplying power to all dewatering pumps. The Contractor shall be able to respond and reach the site within one hour (anytime of the day) to activate the generator.
- D. Intercept and divert precipitation and surface water away from excavations through the use of dikes, curb walls, ditches, pipes, sumps, or other means.
- E. Runoff is prohibited during dewatering to ensure that sediment is not transported from the immediate work area, and that the operation does not result in erosion.

3.04 CLEANUP

- A. At the permanent conclusion of dewatering operations, all dewatering equipment shall be removed from the job site.

END OF SECTION

SECTION 31 35 19

GEOTEXTILE UNDERLAYMENT

PART 1 GENERAL

1.01 SUMMARY

- A. Geotextile shall be installed at the locations indicated on the Project Plans, as directed by the Engineer, in conformance with the manufacture's written instructions, and as required herein.
- B. Geotextile shall be installed under all riprap locations.

1.02 RELATED SECTIONS:

- A. Section 31 23 00 – Excavation and Fill
- B. Section 31 37 00 – Riprap

1.03 REFERENCES

- A. American Society for Testing and Materials (ASTM)
 - 1. ASTM D 5261, Standard Test Method for Measuring Mass per Unit Area of Geotextiles
 - 2. ASTM D 4632, Standard Test Method for Grab Breaking Load and Elongation of Geotextiles
 - 3. ASTM D 6241, Standard Test Method for Static Puncture Strength of Geotextiles and Geotextile-Related Products Using a 50-mm Probe
 - 4. ASTM D 4533, Standard Test Method for Index Trapezoidal Tearing Strength of Geotextiles
 - 5. ASTM D 4751, Standard Test Method for Determining Apparent Opening Size of a Geotextile
 - 6. ASTM D 4491, Standard Test Method for Water Permeability of Geotextiles by Permittivity
 - 7. ASTM D 4355, Standard Test Method for Deterioration of Geotextiles by Exposure to Light, Moisture and Heat in a Xenon Arc Type Apparatus
 - 8. ASTM D 4354, Standard Practice for Sampling of Geosynthetics for Testing
 - 9. ASTM D 4759, Standard Practice for Determining the Specifications Conformance of Geosynthetics

1.04 QUALIFICATIONS

- A. Manufacturer
 - 1. Manufacturer shall have manufactured a minimum of 10,000,000 square feet of geosynthetic material during the last year.
- B. Installer
 - 1. Installer shall have installed a minimum of 1,000,000 square feet of geosynthetic material in the last 5 years.

2. The Installation Supervisor shall have worked in a similar capacity on projects similar in size and complexity.

1.05 MEASUREMENT

- A. Measurement for the geotextile is in square yards, based upon the locations shown on the contract drawings.
- B. Contractor is responsible for determining actual square yards required accounting for waste, overlaps, damaged materials and repairs.

1.06 MATERIAL LABELING, DELIVERY, STORAGE AND HANDLING

- A. Each roll delivered to the site shall be wrapped and labeled by the manufacturer. The label shall identify the following:
 1. Manufacturer's name
 2. Product identification
 3. Length
 4. Width
 5. Roll number
 6. Production date
- B. Geosynthetics shall be delivered in rolls wrapped in a UV protective film and packaged to ship by appropriate means to prevent damage to the material and to facilitate off-loading.
- C. The geosynthetics shall be protected from moisture, ultraviolet radiation, puncture, chemicals, temperatures in excess of 140°F, or other damaging or deleterious conditions during shipment, storage, and prior to installation.

1.07 WARRANTY

- A. Geosynthetics shall both warranted against defects in materials and workmanship for a period of 1-year following the date of installation.

PART 2 PRODUCTS

2.01 GEOTEXTILE PROPERTIES

- A. The geotextile shall be a needle-punched nonwoven made of 100% polypropylene staple filaments that resists ultraviolet and biological deterioration, rotting, naturally encountered basics and acids.
- B. Geotextile shall satisfy the requirements as outlined in AASHTO M-288-06 for Class 1 applications.

- C. The geotextile shall have properties that meet or exceed the values listed in the following table:

Property	Test Method	Minimum Value
Grab Tensile Strength	ASTM D4632	200 lbs
Grab Tensile Elongation	ASTM D4632	50%
Trapezoid Tear Strength	ASTM D4533	80 lbs
Puncture Resistance	ASTM D6241	500 lbs
Apparent Opening Size	ASTM D4751	80 US Std. Sieve
Permittivity	ASTM D 4491	1.4 sec-1
Water Flow Rate	ASTM D4491	95 gpm / sq. ft.
UV Resistance	ASTM D4355 (after 500 hours)	70 % strength retained

- D. Geotextile shall be Mirafi 180N, US Fabrics 205NW, Carthage Mills FX-80HS, or approved equivalent.

PART 3 EXECUTION

3.01 PREPARATION

- A. Finished grade surface to receive geotextile materials shall be shaped to an even surface and to required depth and section as indicated on Project Plans.
- B. Remove sharp sticks, stones and trash from finished grade surface that may puncture the geotextile.
- C. All subgrade damaged by construction equipment and deemed unsuitable for geotextile installation shall be repaired prior to placement of the geotextile.

3.02 PREPARATION

- A. Placement of geotextile underlayment shall not commence until the Engineer has accepted the finished grade preparation.
- B. The Geotextile Installer and Engineer shall provide daily written acceptance for the surface to be covered by the geotextile in that day's operations.
- C. The finished grade surface shall be maintained in a firm, clean and dry condition during geotextile installation.

3.03 MATERIAL PLACEMENT

- A. Geotextile shall be placed directly on the finished grade surface indicated on the Project Plans.
- B. Geotextile shall be rolled out and placed in a manner that prevents damage and minimizes folds and creases.
- C. Geotextile shall be installed in the direction of the slope.

- D. In the presence of wind, all geotextile shall be weighted down with sandbags or a similar weight and shall remain in place until installation of riprap has occurred to a sufficient degree.
- E. The geotextile shall be anchored using 18 inch long anchor pins or similar to secure the geotextile in place during riprap installation.
- F. During placement of riprap, no equipment shall drive directly across the geotextile until it has been covered with a layer of riprap.
- G. Riprap placement shall proceed immediately following the placement, installation, inspection and acceptance of the geotextile underlayment. Riprap placement shall begin at the toe and proceed up slope as indicated in Section 31 37 00.
- H. Field monitoring shall be performed to verify that the riprap placement does not damage the geotextile or move the geotextile out of position. Riprap shall not be dropped more than 2 feet onto geotextile or as recommended by the geotextile manufacturer.

3.04 SEAMS AND OVERLAPS

- A. Geotextile shall be overlapped a minimum of 2 feet side-to-side.
- B. Only full length rolls shall be used on the slope. End to end overlapping of rolls will not be allowed.
- C. Curves may be accomplished by folding or cutting the fabric to conform to the curve.

3.05 REPAIR

- A. Prior to covering the deployed geotextile, each roll shall be inspected for damage.
- B. Any rips, tears or damaged areas on the deployed geotextile shall be overlapped a minimum of 3 feet beyond the edges of the damage.

END OF SECTION

SECTION 31 37 00

RIPRAP

PART 1 GENERAL

1.01 SUMMARY

- A. The work covered by this Section includes furnishing all labor, materials, equipment, tools, and incidentals necessary to place riprap slope protection as shown on the Project Plans.

1.02 RELATED SECTIONS

- A. Section 01 33 00 – Submittals
- B. Section 31 23 00 – Excavation and Fill

1.03 SUMITTALS

- A. Submit materials test data and gradation information for riprap material(s) from each source.
- B. Submit riprap placement method(s).

PART 2 MATERIALS

2.01 RIPRAP SLOPE PROTECTION

- A. Interior slope protection shall consist of basalt field stone or rough un-hewn quarry stone of approximate rectangular shape. At least one face of each rock shall be fractured.
- B. Rounded, natural river-run rock will not be permitted.
- C. The percentage composition by weight of the crushed rock use for slope protection shall conform to the following gradation:

Rock Size	Percentage Larger Than
50 lbs	0%
25 lbs	10% - 40%
10 lbs	40% - 75%
5 lbs	75% - 90%
1 lbs	100%

For all rock sizes within a class, the percentage shall be determined on the basis of the ratio of the number of individual rocks larger than the smallest size shown for that class compared to the total number of rocks.

D. The density of individual rocks shall be equal to or greater than 155 lbs/ft³.

Riprap shall conform to the following quality requirements:

Test	California Test	Requirement
Apparent Specific Gravity	206	2.5 min.
Absorption	206	4.2% max.*
Durability Index	229	52 min.*

* Based on the formula listed below, absorption may exceed 4.2 percent if DAR is greater than 10. Durability Index may be less than 52 if DAR is greater than 24.

E.

$$\frac{\text{Coarse Durability Index}}{\% \text{ Absorption} + 1} = \text{Durability Absorption Ratio (DAR)}$$

F. Flat or needle shapes will not be accepted unless the thickness of the individual pieces is greater than 0.33 times the length.

PART 3 EXECUTION

3.01 GENERAL

- A. Riprap rock slope protection shall be placed at locations shown on the Project Plans.
- B. Rocks shall be placed as to provide a minimum number of voids, and the larger rocks shall be placed on the outside surface of the slope protection. The rocks may be placed by dumping and spreading.
- C. Tracked equipment which may damage the rock shall not be used for spreading the rock.
- D. Local surface irregularities of the slope protection shall not vary from the planned slopes by more than one foot measured at right angles to the slope.

END OF SECTION

SECTION 31 41 00

SHORING AND BRACING

PART 1 GENERAL

1.01 SUMMARY

- A. The work covered by this Section includes providing adequate sheeting, shoring and bracing of trenches and other excavations, and/or equipment method, for the protection of life or limb as required by the State of California Construction Safety Orders, the Safety Regulations of the Federal Occupational Safety and Health Administration and by these Special Provisions.
- B. All safety orders, rules and regulations of Cal/OSHA and/or the Federal OSHA applicable to the work to be done under this Contract shall be obeyed and enforced by the Contractor.

1.02 RELATED SECTION

- A. Contract General Specifications
- B. Section 01 33 00 – Submittals
- C. Section 31 23 00 – Excavation and Fill
- D. Section 31 23 19 – Dewatering
- E. Reference Document: Geotechnical Report (by others) is available, as noted in Section 31 23 00.

1.03 SUBMITTALS

- A. At least 15 working days before beginning excavation on a trench 5 feet or more in depth, the Contractor shall submit to the Engineer a detailed plan showing the design of shoring, bracing, sloping or other provisions to be made for work protection from caving ground hazard.
- B. The plan shall be prepared and signed by a registered Professional Civil or Structural Engineer licensed in the State of California.
- C. The excavation and shoring analysis and design shall be fully coordinated with the dewatering plan.
- D. The shoring shall be designed for anticipated earth, water, and surcharge pressures and loading.

1.04 GENERAL

- A. The Contractor shall obtain a permit from Cal/OSHA before starting work.

- B. The Contractor shall ensure that employees entering excavations are protected from cave-ins, failure of protective systems, hazardous atmospheres, vehicular traffic, falling loads, and any other hazardous conditions.
- C. The Contractor shall have a competent person on-site who will make daily inspections of excavations, adjacent areas, and protective systems. The competent person will be responsible for ensuring that the protective system is based upon soil classifications, and that it provides the required protection in accordance with CCT, Title 8, and Section 1541.1.
- D. Sloping or benching of excavations will not be allowed unless otherwise indicated on the Project Plans.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION

3.01 GENERAL

- A. Shoring shall be removed in such a manner as to prevent caving at the walls of the excavation or damage to piping or other structures.
- B. All shored excavations shall be backfilled with controlled density fill before the shoring is removed.

3.02 PROCEDURAL PRACTICES

- A. Excavations shall be so braced and supported that they will be safe, and the ground alongside the excavation will not slide or settle, and all existing improvements of any kind, either on public or private property will be fully protected from damage. If any damage does result to such improvements, the Contractor shall make the necessary repairs or reconstruction at his own expense and as directed by the Engineer.
- B. All excavations and shored pits shall have barricading, fall protection handrails, and access ladders in accordance with Cal/OSHA requirements.

END OF SECTION

SECTION 32 15 40

CRUSHED STONE (SHALE) SURFACING

PART 1 GENERAL

1.01 SUMMARY

- A. Section includes: Grading, compaction, materials quality requirements, placement of aggregate base and shale surfacing within specified tolerances and slopes in the site(s) to lines, transitions, and existing grades indicated on the Project Plans.
- B. Perform necessary grading to achieve final elevations closely approximating those shown on the Project Plans

1.02 RELATED SECTIONS

- A. Section 31 25 13 – Erosion Controls

1.03 REFERENCES

- A. California Department of Transportation Standard Test Method:
 - 1. California Test Method No. 202 – Method of Test for Sieve Analysis of Fine and Coarse Aggregates
 - 2. California Test Method No. 217 – Method of Test for Sand Equivalent
- B. American Society for Testing and Materials:
 - 1. ASTM D 1556 – Standard Test Method for Density and Unit Weight of Soil in Place by the Sand-Cone Method
 - 2. ASTM D2167 – Standard Test Method for Density and Unit Weight of Soil in Place by the Rubber-Balloon Method
 - 3. ASTM 6938 – Standard Test Method for In-Place Density and Water Content of Soil and Soil-Aggregate by Nuclear Methods (Shallow Depth)

1.04 SUMITTALS

- A. Submit materials test data and gradation information for aggregate base and shale surfacing materials.

PART 2 PRODUCTS

2.01 CRUSHED SHALE

- A. The percentage composition by weight of the shale shall conform to the following gradation as determined by California Test Method No. 202:

Sieve Size	Percent Passing
1½ inch	90-100
No. 4	25-40
No. 200	2-9

- B. The minimum sand equivalent value shall be 20 as determined by California Test Method No. 217.
 - 1. No single aggregate grading or Sand Equivalent test shall represent more than 500 cubic yards or one day's production, whichever is smaller.
- C. Shale shall meet the following quality requirements:
 - 1. Shale shall be free from organic matter and other deleterious substances
 - 2. Shale shall be of such nature that it can be compacted readily under watering and rolling to form a firm stable surface.
 - 3. Shale aggregate may include material processed from reclaimed portland cement concrete, lean concrete base, cement treated base or a combination of any of these materials. The amount of reclaimed material shall not exceed 50 percent of the total volume of the aggregate used.
 - 4. The shale aggregate shall have a minimum durability index of 35 and a minimum resistance (R-value) of at least 78.
 - a. The shale shall not be treated with lime, cement or other chemical material before the Durability Index test is performed.
- D. Submit test data to confirm compliance with the above requirements.

PART 3 EXECUTION

3.01 GENERAL

- A. Place and compact shale surfacing to a relative compaction of not less than ninety percent (90%) per ASTM 1557 Test Procedure to a compacted depth of not less than 6-inches, unless shown otherwise on Project Plans.

3.02 TRANSITIONS AND CONFORMANCE

- A. The Contractor shall grade and blend the transitions between new and old shale surfacing as required to promote a smooth transition that prevents the puddling of water.

END OF SECTION

BID FORMS

CITY OF SANTA ROSA

STATE OF CALIFORNIA

NORTHERLY SLOPE PROTECTION PONDS C & D AND POND B SLOPE REPAIR

The work to be performed and referred to herein is in the City of Santa Rosa, California and consists of improvements to be constructed in accordance with the provisions of the Invitation for Bids, containing the Notice to Bidders, the Special Provisions, the Project Plan(s), the Bid Forms and the Contract, all of which are by reference incorporated herein, and each Addendum, if any is issued, to any of the above which is also incorporated by reference herein.

TO THE AWARD AUTHORITY OF THE CITY OF SANTA ROSA

The undersigned, as bidder, declares that the only person or parties interested in this bid as principals are those named herein; that this bid is made without collusion with any other person, firm, or corporation; that Contractor has carefully examined the Project Plans, Invitation for Bids and conditions therefor, and is familiar with all bid requirements, that Contractor has examined this Contract and the provisions incorporated by reference herein, and Contractor hereby proposes, and agrees that if its bid is accepted by the City, Contractor will provide all necessary machinery, tools, apparatuses, and other means of construction, and to do all the work and furnish all the materials and services required to complete the construction in accordance with the Contract, the Special Provisions, the Project Plan(s), and Addenda to any of the above as incorporated by reference, in the time stated herein, for the unit prices and/or lump sum prices as follows:

NAME OF BIDDER:

**CITY OF SANTA ROSA
NORTHERLY SLOPE PROTECTION PONDS C & D AND POND B SLOPE REPAIR
UNIT PRICE SCHEDULE**

Item No.	Description	Quantity	Units	Unit Price	Total Price
1	MOBILIZE, DEMOBILIZE, AND SITE PREPARATION	1	LS	\$_____	\$_____
2	STRIPPING AND DISPOSING OF ORGANICS (F)	47,275	SY	\$_____	\$_____
3	EMBANKMENT EXCAVATION (F)	16,495	CY	\$_____	\$_____
4	POND BOTTOM FILL (F)	11,655	CY	\$_____	\$_____
5	EMBANKMENT FILL (F)	1,155	CY	\$_____	\$_____
6	RIPRAP KEYWAY EXCAVATION (F)	1,370	CY	\$_____	\$_____
7	OVER EXCAVATION	3,300	CY	\$_____	\$_____
8	GRAVEL ROADWAY CONSTRUCTION	29,200	SF	\$_____	\$_____
9	ROCK RIPRAP	21,950	SY	\$_____	\$_____
10	GEOTEXTILE	21,950	SY	\$_____	\$_____
11	DEWATERING, TRENCHING SHORING, AND BRACING	1	LS	\$_____	\$_____
12	INTERIOR EMBANKMENT EMERGENCY SLOPE REPAIR ALLOWANCE	1	FA	\$ 290,000.00	\$ 290,000.00
TOTAL BID					\$_____

In the case of any discrepancy between the unit price and the total set forth for the item, the unit price shall prevail; provided, however, that if the amount set forth as a unit price is ambiguous, unintelligible or uncertain for any reason, or is omitted, or in the case of lump sum items, is not the same amount as the entry in the "Total" column, then the amount set forth in the "Total" column for the item shall prevail in accordance with the following:

1. As to lump sum items, the amount set forth in the "Total" column shall be the unit price;
2. As to unit basis items, the amount set forth in the "Total" column shall be divided by the estimated quantity for the item and the price thus obtained shall be the unit price.

The Total Base Bid shall be the sum of the "Total" column. In case of discrepancy between the sum of the "Total" column and the amount entered as Total Base Bid, the sum of the "Total" column shall prevail. The bid comparison will be based on the sum of the "Total" column for each bidder.

If this Contract Bid is accepted by the City and the undersigned fails to execute the Contract and to give all the bonds required under the Contract, with a surety satisfactory to the Award Authority of the City of Santa Rosa, within ten calendar days after bidder has received the Notice of Award from the Engineer, then the Award Authority may, at its option, determine that the bidder has abandoned the Contract, and thereupon this bid and the acceptance thereof shall be null and void, and the forfeiture of the security accompanying this bid shall be in accordance with California Public Contract Code section 20172.

The undersigned understands and agrees that the City is not responsible for any error or omissions on the part of the undersigned in making this bid.

The bidder to whom the Contract is awarded agrees to execute the Contract in favor of the City, in the form attached, and to deliver any and all required bond(s) and insurance certificates within ten calendar days from the date of Contractor's receipt of the Notice of Award. Following the award of the Contract, Contractor shall commence work within ten calendar days from the day authorized in the Notice to Proceed and diligently prosecute the same to completion in accordance with Section 8-1.04.

LIST OF SUBCONTRACTORS

NAME OF BIDDER: _____

The following is a list of each subcontractor who will perform work or labor or render services to the undersigned for the construction of the project in an amount in excess of ½ of 1% of the total amount of this bid.

The undersigned agrees that any portion of the work in excess of ½ of 1% of the total amount of this bid and for which no subcontractor is designated herein will be performed by the undersigned.

SUBCONTRACTOR NAME	SUBCONTRACTOR LICENSE NUMBER	SUBCONTRACTOR DIR REGISTRATION NUMBER	SUBCONTRACTOR BUSINESS ADDRESS	DESCRIPTION OF WORK (ITEM NO.)

LIST OF PREVIOUS SIMILAR JOBS

NAME OF BIDDER:

[illegible]

NONCOLLUSION DECLARATION
TO BE EXECUTED BY BIDDER AND SUBMITTED WITH BID

The undersigned declares:

I am the _____ of _____, the party making the foregoing bid. The bid is not made in the interest of, or on behalf of, any undisclosed person, partnership, company, association, organization, or corporation. The bid is genuine and not collusive or sham. The bidder has not directly or indirectly induced or solicited any other bidder to put in a false or sham bid. The bidder has not directly or indirectly colluded, conspired, connived, or agreed with any bidder or anyone else to put in a sham bid, or 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].

NOTE: The above Noncollusion Declaration is part of the Contract Bid. Signing this Bid on the signature portion thereof shall also constitute signature of this Noncollusion Declaration.

BID BOND AFFIDAVIT AND BIDDER'S SIGNATURE PAGE

Accompanying this bid is a guaranty in the form of (Notice: Insert the words "cash \$," "Cashier's Check," "Certified Check," or "Bidder's Bond" as the case may be):

in an amount equal to at least ten percent of the total of this bid.

The undersigned further agrees that if Contractor does not execute the Contract and deliver the necessary bonds to the City within the period of time specified in this Invitation for Bids, the proceeds of the security accompanying this bid shall become the property of the City of Santa Rosa, California, and this bid and the acceptance thereof may, at the option of the City, be considered null and void.

The undersigned is licensed in accordance with an act providing for the registration of Contractors, License No. _____, Class _____, expiration date _____.

The undersigned is registered with the Department of Industrial Relations, Registration No. _____.

IMPORTANT NOTICE: If bidder or other interested person is a corporation, state legal name of corporation, also names of the president, secretary, treasurer, and manager of the corporation; if a partnership, state true name of partnership, also the names of all partners in the partnership; if the bidder is a sole proprietor, state the business name and the proprietor's name in full.

Secretary of State Business Entity Number: _____.

Business Address

Telephone Number

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

BIDDER'S SIGNATURE: _____

TITLE: _____

DATE: _____

CONTRACT

CITY OF SANTA ROSA

CALIFORNIA

CONTRACT NO. C01909

NORTHERLY SLOPE PROTECTION PONDS C & D AND POND B SLOPE REPAIR

This Contract is made and entered into as of date to be added upon award at Santa Rosa, California, between the City of Santa Rosa ("City") and _____ of _____ ("Contractor").

ARTICLE I - For and in consideration of the payment and agreement hereinafter mentioned, to be made and performed by City, and under the conditions expressed in the required bonds hereunto annexed, Contractor agrees that for the benefit of City, at its own cost and expense, to do all the work and furnish all the materials, except such as are mentioned in the Special Provisions to be furnished by City, necessary to construct and complete the work herein described in a good, workmanlike, and substantial manner. The work embraced herein shall be done in accordance with the Standard Specifications of the State of California Department of Transportation, dated 2010, insofar as the same may apply (Standard Specifications); in accordance with the City of Santa Rosa Construction Specifications for Public Improvements (City Specifications); in accordance with the City of Santa Rosa Design and Construction Standards, (City Standards); in accordance with the State of California Department of Transportation Standard Plans, dated 2010 (Standard Plans), (collectively, "Contract Documents") and in accordance with the Special Provisions hereinabove set forth, all of which are hereby incorporated into and made part of this Contract.

The work to be performed is further shown upon a plan consisting of 15 sheets entitled, Northerly Slope Protection Ponds C & D and Pond B Slope Repair, File Number 2019-0012, approved by the Deputy Director of Transportation and Public Works, hereinafter referred to as the Project Plan(s).

ARTICLE II - Contractor agrees to receive and accept the following prices as full compensation for furnishing all materials and doing all the work contemplated and embraced in this Contract; also for all loss or damages arising out of the nature of the work aforesaid, or from the acts of the elements, or from any unforeseen difficulties or obstructions which may arise or be encountered in the prosecution of the work until its acceptance by City and for all expenses incurred by or in consequence of the suspension or discontinuance of work, and for well and faithfully completing the work, and the whole thereof in the manner and according to the Project Plans and Invitation for Bids therefor, and the requirements of the Engineer under them to wit:

ITEM NUMBER	QUANTITY	DESCRIPTION	UNIT PRICE	TOTAL
			\$ _____	\$ _____
TOTAL BASE BID (SUM OF "TOTAL" COLUMN)			\$ _____	

**BID ITEMS IN THIS SECTION WILL BE INSERTED
UPON AWARD OF THE CONTRACT AND SHALL BE
THE SAME AS THOSE BID UPON.**

ARTICLE III - City and Contractor hereby promise and agree that Contractor shall provide the materials and do the work according to the terms and conditions herein contained and referred to, for the prices aforesaid, and City hereby agrees to pay for the same at the time, in the manner, and upon the conditions set forth; and the parties for themselves, their heirs, executors, administrators, successors, and assigns, do hereby agree to full performance of the covenants herein stated.

ARTICLE IV - By execution of this Contract, Contractor hereby represents and certifies that Contractor is aware of the provisions of Labor Code section 3700 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 Contractor hereby agrees to comply with such provisions before commencing the performance of the work of this Contract.

ARTICLE V - It is further expressly agreed by and between the parties hereto that the Invitation for Bids, containing the Notice to Bidders including any required Bonds, the Contract Documents, and any Addenda are all essential parts of this Contract and are specially referred to and by such reference made a part hereof. In the event of any conflict in the provisions thereof, the terms of said documents shall control each over the other, in the following order:

1. Special Provisions
2. Project Plans
3. City Standards
4. City Specifications
5. Standard Specifications
6. Standard Plans

ARTICLE VI - Contractor agrees to commence work pursuant to this Contract within ten calendar days from the date authorized in the Notice to Proceed and to diligently prosecute the same to completion in accordance with Section 8-1.04C of the Special Provisions.

This Contract shall not be transferred or assigned without the prior written consent of City, which may be withheld by City in its sole and absolute discretion.

If Contractor is a corporation, two corporate officers of Contractor, one from each of the following two groups shall execute this Contract: a) the chairman of the board, president or any vice-president; b) the secretary, any assistant secretary, chief financial officer, or any assistant treasurer. The name and title of the corporate officers shall be printed under the signature.

In witness whereof, the parties hereto have executed this Contract as of the date first written above.

City:

City of Santa Rosa,
a Municipal corporation

By: _____

Title: _____

ATTEST:

By: _____

Title: _____

Approved as to form:

By: _____

Office of City Attorney

Contractor:

Name of Contractor,
Type of entity

By: _____

Name: _____

Title: _____

By: _____

Name: _____

Title: _____