

INVITATION FOR BIDS



FOR CONSTRUCTING

WEST COLLEGE STORAGE FACILITY PUMPING IMPROVEMENTS

CONTRACT NUMBER

C02284

ISSUED BY

CAPITAL PROJECTS ENGINEERING DIVISION

CITY OF SANTA ROSA, CALIFORNIA

2021

ATTENTION
Prebid Conference
See Page 1



STATE OF CALIFORNIA

INVITATION FOR BIDS

CONTAINING:

NOTICE TO BIDDERS

SPECIAL PROVISIONS

BID FORMS

CONTRACT

FOR

**WEST COLLEGE STORAGE FACILITY PUMPING
IMPROVEMENTS**

Contract No. C02284

WEST COLLEGE STORAGE FACILITY PUMPING IMPROVEMENTS

TABLE OF CONTENTS

NOTICE TO BIDDERS

NOTICE TO BIDDERS	1
-------------------------	---

SPECIAL PROVISIONS

GENERAL SPECIFICATIONS

1 General.....	4
2 Bidding.....	5
3 Contract Award and Execution.....	7
4 Scope of Work	11
5 Control of Work	12
6 Control of Materials.....	15
7 Legal Relations and Responsibility to the Public	18
8 Prosecution and Progress.....	22
9 Measurement and Payment	23

TECHNICAL SPECIFICATIONS

25

Section 10	General Construction	26
Section 12	Temporary Traffic Control	27
Section 13	Water Pollution Control	28
Section 14	Environmental Stewardship	32
Section 15	Existing Facilities	33
Section 16	Clearing and Grubbing.....	34
Section 19	Earthwork	35
Section 26	Aggregate Base	38
Section 39	Hot Mix Asphalt.....	39
Section 44	Manhole Epoxy Lining.....	43
Section 51	Concrete Structures	51
Section 75	Miscellaneous Metal	52
Section 130	Pipe, Appurtenances and Installation	54
Section 200	Diesel Driven Pump	58
Section 201	Diesel Fuel Tank.....	63
Section 202	Fire Extinguishers and Cabinets	65
Section A	Fees and Permits.....	66
Section B	Shop Drawings	70
Section C	Description of Work.....	71
Section D	Test and Inspections.....	72

BID FORMS

Contract Bid	75
Unit Price Schedule	76
List of Subcontractors.....	78
List of Previous Similar Jobs.....	79
Noncollusion Declaration	80
Bid Bond Affidavit and Bidder's Signature.....	81

CONTRACT

Contract	82
----------------	----

CITY OF SANTA ROSA
STATE OF CALIFORNIA

NOTICE TO BIDDERS

➤	For technical questions regarding this project, contact Andy 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> .
➤	For direct access to bid results, go to www.srcity.org/bids . Under Link to Capital Projects, click on <u>Capital Projects Contracts</u> .

- IMPORTANT -
REVISED BIDDING PROCEDURES

All bids shall be submitted and opened according to the following procedure:

Bid Acceptance Deadline

Sealed bids will be accepted at the Transportation and Public Works Department, 69 Stony Circle, Santa Rosa, California 95401 until 2:00 p.m. November 30, 2021, for West College Storage Facility Pumping Improvements, Contract No. C02284. (Engineer's Estimate: \$781,200).

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 2:00 p.m. Therefore, a bid stamped in at 1:59 p.m. will be accepted, but one delivered at or after 2:00 p.m. is late and will not be accepted.

Bid Opening Teleconference Call

Prospective bidders, subcontractors, and materials suppliers are invited to attend the Bid opening teleconference call scheduled to be held at 2:00 p.m., November 30, 2021. The teleconference can be accessed by dialing 1 (707) 543-4700, participant code 977-7005#.

Project Description/Scope of Work

West College Wet Weather Facility storage basins allow the City to temporarily divert storm flows from the local system in order to balance flows in the Laguna Treatment Plant during winter storm events. Currently, the City rents two trailer mounted diesel powered, vacuum assisted pumps and places them in position at the West College Storage Facility. The City plans to purchase two mobile pumps of similar capacity in lieu of renting and desires to construct permanent facilities to house and operate the pumps including a pad (with built-in containment), roof cover and connection to existing bypass piping.

Pre-Bid Meeting Teleconference Call

Prospective bidders, subcontractors, and materials suppliers are invited to attend a pre-bid meeting teleconference call scheduled to be held at 9:30 a.m., November 23, 2021. The teleconference can be accessed by dialing 1 (707) 543-4700, participant code 340-1001#.

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.

Contract #: C02284

Project Title: WEST COLLEGE STORAGE FACILITY PUMPING IMPROVEMENTS

Line #	Description	Units	Quantity
1	MOBILIZATION	LS	1
2	WATER POLLUTION CONTROL	LS	1
3	CLEARING AND GRUBBING	LS	1
4	ROUGH GRADING AND EARTHWORK	LS	1
5	SITE EXCAVATION	CY	178
6	GRAVEL SURFACING	SY	447
7	PUMP CONTAINMENT STRUCTURE	EA	2
8	DISINFECTANT CONTAINMENT STRUCTURE	LS	1
9	BOLLARDS	EA	52
10	REMOVABLE STAIR RAILING	EA	2
11	4' AND 3' PIPING AND APPURTENANCES	LS	1
12	12' PIPING AND APPURTENANCES	LS	1
13	MANHOLE MODIFICATIONS	LS	1
14	DIESEL-POWERED PUMPS	EA	2
15	FUEL TANKS	EA	2
16	FIRE EXTINGUISHER AND CABINET	EA	2

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 C02284 West College Storage Facility Pumping Improvements 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.



November 10, 2021

TRACY DUENAS
Supervising Engineer

SPECIAL PROVISIONS

General Specifications

CITY OF SANTA ROSA, CALIFORNIA

WEST COLLEGE STORAGE FACILITY PUMPING IMPROVEMENTS

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 8 sheets entitled West College Storage Facility Pumping Improvements, 2020-0007
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 Transportation and Public Works 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. A copy of such addendum will be mailed or faxed to each Planholder. 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.

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.
2. Business auto coverage	\$3 million	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.
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.

- | | | | |
|----|---|--|---|
| 4. | Contractor's pollution legal liability and/or asbestos legal liability and/or errors and omission | \$1 million per occurrence or claim

\$2 million aggregate | If the work involves lead-based paint or asbestos identification/remediation, the pollution liability policy must not contain lead-based paint or asbestos exclusions. If the work involves mold identification, the pollution liability policy must not contain a mold exclusion and a definition of "Pollution" in said policy shall include microbial matter including mold. |
| 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 8 sheets entitled West College Storage Facility Pumping Improvements, 2020-0007
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.

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. When requested, these prevailing wage reports must be redacted by the Contractor prior to providing them to 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 to completion before the expiration of:

120 WORKING DAYS

8-1.05 Time: Working days will be counted beginning with the day the Contractor begins work or with the tenth day after the date authorized in the Notice to Proceed, whichever occurs first.

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.

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 number of working days 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.



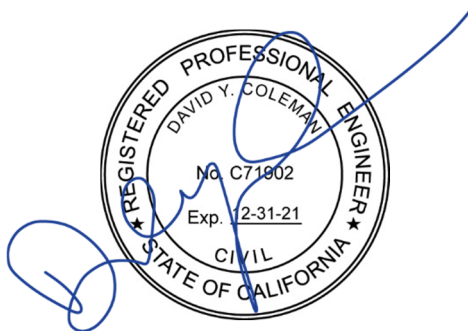
TECHNICAL SPECIFICATIONS

FOR

WEST COLLEGE STORAGE FACILITY PUMPING

IMPROVEMENTS

CONTRACT No. C02284



OCTOBER 2021

10 GENERAL CONSTRUCTION

10-3 Mobilization: Mobilization shall conform to Section 9-1.16D(2) of the Standard Specifications, and any modifications herein.

Mobilization shall include the obtaining of all permits; moving onto the site of all equipment and materials; and other construction facilities as required for the proper performance and completion of the work. Mobilization shall include demobilization as defined herein.

Mobilization shall include but not be limited to the following principal items:

1. Preparation of Contract by the Contractor.
2. Completion of all tasks and submittal of all documents (bonds, insurance, schedule, etc.) required as conditions of issuing the Notice to Proceed.
3. Obtaining all required permits.
4. Installation of project identification signs per Section 7-1.03A of these Special Provisions, *if required*. The Contractor shall consult with the Engineer for placement.
5. Installing temporary construction water supply, power, wiring, and lighting facilities, as required at individual sites.
6. Providing field office trailers if needed by the Contractor.
7. Moving onto the individual sites of all Contractor's equipment required for operations.
8. Having all OSHA required notices and establishment of safety programs.
9. Attendance at Pre-Construction Conference of Contractor's principal construction personnel.

Demobilization shall include, but not limited to, removal of all equipment, unused materials, all temporary utilities, job trailers and all temporary communication facilities.

10-3.02 Payment: Mobilization shall be paid for at the contract **lump sum** price, which price shall not exceed 5% of the total bid price for the work, and shall include full compensation for furnishing all labor, materials, tools and equipment, and doing all work involved in for conforming to the provisions of Section 10, as specified herein, and no additional allowance will be made therefor.

10-5 Dust Control: Dust Control shall conform to Section 14.903 of the Standard Specifications, and any modifications herein.

1. All dust-producing work shall require, at a minimum, watering in the late morning and at the end of the workday; the frequency of watering shall be increased if dust is mobilized by wind or construction activities. Watering shall not produce runoff.
2. Contractor shall maintain dust control to the satisfaction of the City Engineer, 7-days a week, 24-hours per day.
3. At the end of each workday the Contractor shall remove any debris and spent material from the jobsite.
4. At the Engineer's discretion additional sweeping, watering or general site cleanup may be required, including the use of a commercial street sweeping truck equipped with a rear pick up broom, at any time or place.

10-8 Payment: Full compensation for Dust Control shall be considered as included in the prices paid for the various contract items of work involved and no additional compensation will be allowed therefor.

12 TEMPORARY TRAFFIC CONTROL

12-1.01 General: Traffic Control for this project shall conform to Section 12 of the Standard Specifications, any applicable City Standards, Codes and Ordinances, the current Edition of the California Manual on Uniform Traffic Control Devices (CA MUTCD), the Americans with Disabilities Act (ADA) and as directed by the Engineer, and any modifications herein.

12-3.01 General: Prior to commencing construction which will affect existing vehicular and pedestrian traffic, the Contractor shall coordinate with the Engineer for an acceptable construction traffic rout and speed through the City's corporation yard and for the staging of equipment and materials.

Travelled ways that are allowed to be closed, either during the day or for the duration of the work, shall be appropriately signed and secured to other traffic.

Existing pavement, non-paved surfaces or any other facility damaged or otherwise disturbed by the Contractor's operations may be required to be repaired by the Contractor, to the satisfaction of the Engineer, at no additional cost to the City.

12-4.04 Pedestrian and Worker Safety

12-4.04A(1) Summary: The Contractor is directed to Chapter 6D, Pedestrian and Worker Safety, in the CA MUTCD, the improvement plans and these Special Provisions.

The Contractor shall require their personnel to be aware of persons approaching the work zone on foot, and if and when necessary, provide safe passage.

12-5 Payment: Payment to comply with this section shall be considered fully compensated under the various contract items of work and no additional allowance shall be allowed therefor.

13 WATER POLLUTION CONTROL

13-1.01A Summary: Water Pollution Control shall be performed in accordance with Section 13, Water Pollution Control, of the Standard Specifications and these technical specifications. In addition, construction activities shall comply with:

The current California Water Quality Control Board, North Coast Region Order No. National Pollutant Discharge Elimination System Municipal Storm Water Permit, commonly referred to as the “Storm Water Permit”. A copy of the Storm Water Permit is available for review at the City of Santa Rosa Transportation and Public Works Department, 69 Stony Circle, Santa Rosa, CA, and at www.srcity.org/stormwaterpermit.

The California Stormwater Quality Association Storm Water BMP Handbook for Construction (CASQA Handbook). BMPs shall be selected, installed and maintained in accordance with the latest edition. A copy of the handbook can be viewed at the City of Santa Rosa Department of Transportation and Public Works office at 69 Stony Circle or downloaded from CASQA, <http://www.casqa.org/>.

In this technical specification the CASQA Handbook BMP numbers are appended to the associated Standard Specification sections. If a conflict occurs the CASQA Handbook BMP's shall govern.

13-1.01B Definitions: Construction phase: The construction phase starts at the start of job site activities and ends at Contract acceptance.

13-1.01C(4)(c) Water Quality Monitoring Reports: If the project is less than 1 acre the Contractor shall complete and sign the Storm Water Correction Notices (below) with the City as part of the Storm Water Permit.

STORM WATER CORRECTION NOTICE

FAILURE TO CORRECT BY DUE DATE MAY RESULT IN STOP WORK NOTICE!

PROJECT NAME: _____

JOB ADDRESS: _____

PROJECT / PERMIT #: _____ DATE: _____

☐ No storm water deficiencies identified.

I HAVE INSPECTED THIS PROJECT SITE. THE FOLLOWING ISSUES AND DEFICIENCIES HAVE BEEN IDENTIFIED AND REQUIRE CORRECTIVE ACTION:

STORMWATER BMPs:

- | | | | |
|---|--|---------------------------|-------------------------|
| <input type="checkbox"/> Storm Drain Protection: | Install | Maintain | Replace |
| <input type="checkbox"/> Perimeter Controls: | Install | Maintain | Replace |
| <input type="checkbox"/> Housekeeping: | Sweep | Clean | Remove Garbage & Debris |
| <input type="checkbox"/> Stockpiles: | Cover | Perimeter Controls | Remove |
| <input type="checkbox"/> Debris Bins: | Cover | Perimeter Controls | |
| <input type="checkbox"/> Tracking: | Clean-Up | Install Tracking Controls | |
| <input type="checkbox"/> Portable Toilet: | Secondary Containment Required | | |
| <input type="checkbox"/> Concrete: | Install BMPs for Pumper or Concrete Truck | | |
| | Cover / Maintain Concrete Washout Containers | | |
| <input type="checkbox"/> Sediment & Erosion: | Install Appropriate Controls | Dust Controls | |
| <input type="checkbox"/> Other: | | | |

***ALL DEFICIENCIES MUST BE CORRECTED PRIOR TO NEXT RAIN EVENT OR NO LATER THAN DUE DATE, WHICHEVER IS SOONER.**

DATE REQUIRED (SEE NOTE*): _____

INSPECTOR: _____ PH #: () _____

CONTRACTOR SIGNATURE: _____ DATE: _____

- Inspection Type:**
- | | |
|--|--|
| <input type="checkbox"/> Monthly (Oct 1 st -April 30 th) | <input type="checkbox"/> Deficiency Re-Inspection |
| <input type="checkbox"/> Pre-Rain (Sept 1 st -Oct 1 st) | <input type="checkbox"/> Following First 0.25" Rain
(within 2 business days) |

13-2 Water Pollution Control Program

13-2.01C Submittals: The program to control water pollution required to be submitted under this section of the Standard Specifications shall include a spill contingency plan that establishes clean-up procedures that will be followed in the event of a spill of potentially hazardous, toxic, or polluting materials.

13-3 Storm Water Pollution Prevention Plan

13-3.01A Summary: This project is exempt from the State Water Resources Control Board General NPDES Permit for the Discharge of Storm Water related to Construction Activities (Construction General Permit), and not required to have a Storm Water Pollution Prevention Plan (SWPPP), therefore Section 13-3, Storm Water Pollution Prevention Plan, of the Standard Specifications does not apply to this project.

13-4 Job Site Management

13-4.03B: Spill Prevention and Control: The Contractor shall also comply with CASQA Spill Prevention and Control (BMP WM-4). If a spill occurs at the construction site and the Contractor do not take immediate and adequate steps to contain and clean up the spill, especially if rain is threatening or if a discharge to a storm drain or creek could occur, the City shall have the right, in its sole and absolute discretion, to clean up the spill using City forces or an independent contractor. The cost of any such cleanup, in addition to recovery of any penalty or fine imposed upon the City, plus an administrative charge of fifteen percent (15%) of the costs incurred by the City, shall be deducted from any amounts owed to the Contractor hereunder.

In the event there are insufficient amounts owed to the Contractor hereunder to cover the foregoing costs and charges, the City shall have the right to pursue any other remedy to recover same, including, but not limited to, proceeding against any surety or bond in favor of the City. The City's rights under this section are intended to be in addition to and not in lieu of any imposed by the City against Contractor for violations of City Code Chapter 17-12, "Storm Water".

13-4.03C(3): Stockpile Management: The Contractor shall also comply with CASQA Stockpile Management (BMP WM-3). Do not block storm water flows.

13-4.03D(1): General: The Contractor shall also comply with Waste Management/CASQA Solid Waste Management (BMP WM-5). The Contractor shall dispose of all trash, rubbish, and waste materials of any kind generated by the Contractor, subcontractor, or any company hired by the Contractor on a daily basis.

13-4.03D(3): Concrete Waste: The Contractor shall also comply with CASQA Concrete Waste Management (BMP WM-8). Ensure the containment of concrete washout areas and other washout areas that may contain pollutants so there is no discharge into the underlying soil and onto the surrounding areas.

13-4.03D(4): Sanitary and Septic Waste: The Contractor shall also comply with CASQA Sanitary and Septic Waste Management (BMP WM-9). Sanitation facilities must be maintained periodically by a licensed service to keep them in good working order and prevent overflows. Portable toilets are required to have secondary containment.

13-4.03D(5): Liquid Waste: Liquid waste includes water generated from excavation dewatering. Minimize transfer piping by locating containers near the excavation to be dewatered while protecting the containers from moving vehicles and equipment.

13-4.03E(1): Water Control and Conservation: The Contractor shall also comply with CASQA Water Conservation Practices (BMP NS-1 and NS-2).

13-4.03E(3): Vehicle and Equipment Cleaning: The Contractor shall also comply with CASQA Vehicle and Equipment Cleaning (BMP NS-8).

13-4.03E(4): Vehicle and Equipment Fueling and Maintenance: The Contractor shall also comply with CASQA Vehicle and Equipment Fueling (BMP NS-9), and CASQA Vehicle and Equipment Maintenance (BMP NS-10).

13-4.03F: Sweeping: The Contractor shall also comply with CASQA Street Sweeping and Vacuuming (BMP SE-7).

13-6 Temporary Sediment Control

13-6.03C Temporary Drainage Inlet Protection: The Contractor shall also comply with CASQA Storm Drain Inlet Protection (BMP SE-10).

13-7 Temporary Tracking Control

13-7.01A: General: The Contractor shall also comply with Stabilized Construction Entrance and Exit (BMP TC-1), Entrance Outlet Tire Wash (BMP TC-3).

13-7.01C Construction: The Contractor shall also comply with CASQA Stabilized Construction Site Entrance / Exit (BMP TC-1).

13-10 Temporary Linear Sediment Barrier

13-10.01A Summary: The Contractor shall also comply with CASQA Silt Fence and Sand Bag Barrier (BMP SE-1 and SE-8).

13-10.04 – Payment: Full compensation for conforming to the provisions of this section shall be paid for at the contract **lump sum** price for **Water Pollution Control**.

14 ENVIRONMENTAL STEWARDSHIP

14-10.01 General: The Contractor shall dispose of all Portland cement concrete and asphalt concrete, generated from removal or demolition activities on the project, at a recycler for these materials.

All other excess materials from the project shall become the property of the Contractor and shall be disposed of by them, at their expense.

14-10.02 Solid Waste Disposal and Recycling Report: Submit a Solid Waste Disposal and Recycling Report prior to final acceptance of work performed under the Contract. Show the types and amounts of project-generated solid waste taken to or diverted from landfills or reused on the project.

Submit a Solid Waste Disposal and Recycling Report prior to Contract acceptance. Show the types and amounts of project-generated solid waste taken to or diverted from landfills or reused on the project.

The Contractor shall provide receipts verifying delivery and approximate quantity (in tons) of the material delivered to a material recycler.

14-11 Hazardous Waste and Contamination

14-11.01 General: Bidder's attention is directed to the fact that the proposed project is located in an area that contains no **known** subsurface petroleum hydrocarbon contamination, based on communications with the Regional Water Quality Control Board.

The contractor shall maintain awareness of potential signs of soil 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).

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.

Any material excavated in the project area that 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. The Contractor shall comply with all disposal regulations such as City, County and/or State permits and licenses as may be required.

14-12.05 – Payment: Full compensation for conforming to the provisions of Section 14 Environment Stewardship shall be considered as included in the prices paid for under the various contract items of work and no additional allowance will be made therefor.

15 EXISTING FACILITIES

15-1.03A General: Existing facilities disturbed by construction shall conform to the applicable provisions of Section 5-1.36. All existing active utilities found to reside in excavated areas shall be supported in place with service maintained during construction. The Contractor shall be responsible for any damage caused by the Contractor's operations and any needed repairs shall be completed to the Engineer's satisfaction.

Existing utility trenches and/or structures that are in close proximity to proposed excavations shall be safeguarded in an appropriate manner from damage.

15-3.03 Construction: All removed concrete shall become the property of the Contractor and shall be immediately off-hauled. None of the removed concrete shall be dumped or stockpiled on the work site. The Contractor shall dispose of all removed concrete at a recycler for this material. Burying of broken concrete within the limits of the project will not be allowed.

Concrete removal includes removal of any reinforcing steel embedded in the concrete and no additional allowance will be made for the removal of such steel.

Landscaping and other surfaces or structures shall be restored to original condition at no additional cost to the City.

15-7 Utility Clearances: *All items noted in this Section shall take place prior to any other construction activities.*

Contractor shall investigate, confirm and/or determine the exact locations of existing utilities, and verify clearances between existing and proposed utilities at crossings and/or known potential conflicts. The Contractor shall determine elevations and alignments of existing utilities at connection points.

The Contractor shall provide all relevant information in writing to the Engineer immediately upon discovery of any conflict. Any delay in notification to the Engineer may delay direction and/or corrective action and a delay claim due to this reason shall not be considered by the City. The Contractor shall not proceed with any work that is in conflict until direction is provided by the Engineer and shall redirect crews to other contract work. The Engineer shall provide direction to the Contractor to resolve conflicts. If the resolution of the conflict results in additional work to the Contractor beyond the original scope, then the work shall be paid for by force account. All the information required to be obtained per this Section and any other information not noted but relative to the project shall be provided to the Engineer on a set of Plans when the investigative effort is complete.

15-7.01 Payment: Utility Clearances shall be paid for under the various contract items of work and shall include full compensation for furnishing all labor, materials, tools and equipment, and doing all the work involved in verifying utility clearances, including but not limited to: potholing to verify potential conflicts, grades and alignments of existing facilities to be connected to; excavation; backfill; notification; and coordination and redirection of crews to other contract work *if required*, as specified herein, and no additional allowance will be made therefor.

16 CLEARING AND GRUBBING

16-2 Clearing and Grubbing

16-2.01 General: Clearing, grubbing, and access shall be confined to the limits shown on the plans and shall not exceed the minimum necessary to complete operations.

The Contractor shall not remove any trees, brush, shrubs, or other natural objects outside the limits of construction as shown on the plans, unless directed by the Engineer.

Any trees, brush, shrubs, or other natural objects not ordered removed by the Engineer which have been removed, altered, or damaged shall be replaced in kind by the Contractor before completion of the project.

All unsuitable material shall be disposed of away from the site by the Contractor. The Contractor shall make all necessary arrangements for disposal of material.

16-2.03 Construction: The area to be cleared and grubbed shall be the area within the right-of-way shown on the plans, unless otherwise specified in the Special Provisions.

All stumps, large roots and other objectionable material shall be removed to a depth of three feet below finished grade in the area of construction. The resulting spaces shall be backfilled with material suitable for the planned use. Such suitable material shall be placed and compacted in layers as specified in Section 19-6 "Embankment Construction" of the Standard Specifications.

16-2.04 Payment: Site clearing and preparation shall be paid for at the contract **lump sum** price for **Clearing and Grubbing**.

19 EARTHWORK

19-1 General

19-1.01 General: Non-contaminated site: See section 19-2.03B, Surplus Material, of these Technical Specifications.

19-1.01A Summary: Earthwork shall also include excavation for trenching.

19-1.03B(1) Subgrade stabilization: Any area of the subgrade determined by the Engineer to be unsuitable shall be stabilized. Processing of unsuitable subgrade material is not allowed. The areas to be stabilized will be marked in the field by the Engineer after excavation of the area is complete. Unsuitable subgrade material shall be removed and disposed of in accordance with section 19-2.03B. Engineer approved fill shall be placed and compacted in lifts.

19-1.03C Grade Tolerance: When aggregate subbase or aggregate base are to be placed on the grading plane, the grading plane shall not vary more than 0.1' below the grade established by the Engineer.

19-1.04 Payment: Site grading shall be paid for at the contract **lump sum** price for **Rough Grading and Earthwork**.

In the event of an increase or a decrease in the amount of the engineer's estimated quantity of Subgrade Stabilization, 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 4-1.05 of the Standard Specifications and no adjustment of the contract price for Subgrade Stabilization will be made.

No additional compensation will be made for excavation and stabilization beyond the limits of the areas marked by the Engineer or for excavation and stabilization of locations other than those marked by the Engineer. Any excavation for subgrade stabilization done by the Contractor to accommodate equipment width beyond the limits of the areas marked by the Engineer shall be at the Contractor's expense.

19-2 Excavation

19-2.03A General: The Engineer shall provide reference points and cut sheets for the excavation. The Contractor shall furnish an excavation plan and a qualified grade setter to ensure the subgrade conforms to the lines and grades established by the Engineer.

Where tree roots are encountered during excavation, the Contractor shall cut the roots off six inches below the planned subgrade. Each cut shall be clean with no torn bark or splintered wood remaining on the root and shall be accomplished by use of a saw appropriate for the size of the root to be cut.

19-2.03B Surplus Material: The soil on this project is not known to contain any contaminants and has been approved for disposal at the City's Pond 2 Decommissioning and Grading Project at 35 Stony Point Road Santa Rosa, CA. Should the Contractor elect to dispose of surplus soil material that exhibits no signs of contamination at the City's Pond 2 Decommissioning and Grading Project, the Contractor shall notify and coordinate any disposal to this site with the Engineer immediately. A three-working day advanced notice is required. Contractor shall make sure surplus soils are free of debris. Disposal site access is directly affected by weather conditions. The Contractor should anticipate no access during and for some time after rain events, unless wet weather site conditions are

met at the Contractor's expense. Any such wet weather improvements are subject to City inspection and approval and shall become the property of the City of Santa Rosa Utilities Department.

Any debris found in surplus soils disposed of by the Contractor shall be picked up and disposed of properly by the Contractor at the Contractor's expense. Contractor shall not dispose of surplus soils that are not associated with this project at Pond 2 and are restricted to the specific area of Pond 2 designated to the Contractor. Violation will be cause for terminating the Contractor's option to deposit excess soil on City property.

If during construction, the Contractor encounters soil believed to be contaminated, the Contractor shall notify the Engineer immediately. Disposal of contaminated material shall be in accordance with section 14-11.

The following Pond 2 surplus soil transport and placement conditions shall be adhered to:

1. Prior to any dumping taking place, the Contractor's project foreman shall request a Pond 2 site meeting with the City's Engineer, or their designated representative, and will bring with them a company marked barricade(s) to mark their designated dumping area. More than one barricade and additional markings may be needed to delineate driver's route to their proper dump area. It is the Contractor's responsibility to periodically check on their barricades for proper location and legibility.
2. Directions and Pond 2 requirements must be communicated to every driver prior to dumping. Drivers that are unsure as to their proper dumping area shall get confirmation from their project foreman before dumping their load. After dumping, the driver shall get out of the truck and visually inspect the material and remove items from the site that are listed herein, along with any others that are not considered "surplus soil".
3. Material must be free of asphalt concrete; asphalt and soil grindings associated with roadway excavation and reconstruction, concrete, metal, rocks greater than 6" in size, pipe, tubing, vegetation, wires and other deleterious materials.
4. Soil beneath asphalt that was previously oiled for paving is not allowed.
5. The quantity of trucks and the volume of soil deposited in Pond 2 from this project shall be tracked. Truck drivers are required to sign a log and be subject to periodic inspections to ensure that only soil from this project is deposited in Pond 2.
6. The Contractor shall spread and compact all project soils deposited into Pond 2 to 85% relative compaction and testing shall be provided and performed by the City's Materials Engineering Laboratory. The cost of compaction testing will be borne by the City.
7. The Contractor shall comply with all disposal regulations such as City, County, and/or State permits and licenses, as may be required.
8. Soil disposal shall be limited to Monday through Friday between the hours of 7:00 am and 4:30 pm. Advanced, 48-hour notice is required to the City inspector and Water prior to starting.
9. Pond 2 site access is directly affected by weather conditions. The Contractor should anticipate no access during and for some time after rain events, unless wet weather site conditions are met at the Contractor's expense.
10. The haul route shall be through the City Municipal Service Yard. A 15 MPH speed limit shall be observed at all times with stopping at all crosswalks and stop signs. No trucks shall access the site via any other route.
11. Tracking of material from the disposal location onto any and all paved surfaces near the pond is not allowed. Should tracking become evident sweeping shall be required at the Contractor's cost no later than the end of day. Dust control shall be provided at all times in accordance with Section 10.

12. The Idling limits on In-Use Off-Road Diesel Vehicles in section 2449 (d) (3) in Title 13, article 4.8, chapter 9, California Code of Regulations (CCR) shall be effective and enforceable.

The City shall reserve the right to unconditionally suspend or revoke disposal at any time at no cost to the City. Contractors that are notified of unallowed material in a dumped load or that a load was dumped in an area not designated for their project shall correct the issue by the end of the following workday.

19-2.04 Payment: **Site Excavation** shall be a final pay quantity (F) paid for at the contract price per **cubic yard**, which price shall include full compensation for all work as specified herein and no additional allowance will be made therefor.

19-5 Compaction

19-5.03B Relative Compaction: Relative compaction of not less than 95 percent shall be obtained for a minimum depth of 0.5-foot below the grading plane for the entire excavation.

26 AGGREGATE BASE

26-1.01 General

26-1.01A Summary: Aggregate base shall be Class 2 conforming to and placed in accordance with the requirements of Section 26 of the City Specifications.

Compacting shall commence immediately after spreading of the damp material and before the material has dried sufficiently to allow separation between the fine and coarse particles.

26-1.02 Materials

26-1.02B Class 2 Aggregate Base: The minimum sand equivalent shall be 31 for any individual test.

26-1.03 Construction

26-1.03E Compacting: The surface of the finished aggregate base shall be firm and unyielding. Any visible movement vertically or horizontally of the aggregate base under the action of construction equipment or other maximum legal axle loads shall be considered as evidence that the aggregate base does not meet this requirement.

26-1.04 Payment: Aggregate base shall be considered as included in the prices paid for various contract items of work, and no additional compensation will be allowed therefor.

Gravel Surfacing shall be paid for at the contract price per **square yard**. The price shall include full compensation for furnishing all labor, materials, tools, and equipment including furnishing, hauling and applying water as specified and directed by the Engineer and as specified herein is considered as included in the prices paid for various contract items of work and no additional allowance will be made therefor.

39 HOT MIX ASPHALT

39-2.01A(1) Summary: Section 39 includes specific specifications for producing and placing Hot Mix Asphalt (HMA) by mixing aggregate and asphalt binder at a mixing plant and spreading and compacting the HMA mixture.

Asphalt concrete shall be placed in separate lifts as shown on the Project Plans.

Construction vehicles/equipment shall not be allowed on newly placed asphalt concrete until the day after it is placed. All trucks or other construction equipment to be driven on the newly placed asphalt concrete base shall not exceed the surface load bearing capacity and shall not produce rutting or pumping at any time.

The Contractor shall furnish an excavation and paving plan which shall include the following:

1. Requested location for survey staking of reference points
2. Asphalt plant supplying mix including aggregate source
3. Disposal site for spoils
4. Type of trucks and equipment to be used
5. Haul routes through adjacent residential streets
6. Staging locations
7. Sequencing
8. Grind locations

The Contractor shall furnish a grade setter to ensure that the asphalt concrete base and asphalt concrete surface paving conforms to the lines and grades established by the Engineer.

A tack coat of SS-1h or SS-1 emulsified asphalt shall be applied to all asphalt concrete and concrete surfaces and allowed to break immediately in advance of placing all lifts of asphalt concrete. Unless otherwise shown on the Plans, tack coat shall also be applied to all vertical mating surfaces and conforms to existing pavement, curbs, gutters, and construction joints, and allowed to break immediately in advance of placing all lifts of asphalt concrete. The tack coat shall be reapplied 1) where it becomes contaminated, and 2) where it is significantly tracked (removed) from the surface.

The asphalt concrete base and asphalt concrete surface courses shall be allowed to cool to 160° F at mid depth before the roadway is opened to any traffic.

39-2.01A(2) Definitions: For these specifications, HMA and asphalt concrete shall be the same.

Use Section 39-3 Method construction process of these specifications for HMA production and construction.

39-2.01B Materials

39-2.01B(3) Asphalt Binder: Asphalt binder in HMA must comply with the specifications for asphalts.

Asphalt binder to be mixed with aggregate for asphalt concrete surface, leveling and base shall be PG64-16 grade paving asphalt.

The amount of asphalt binder to be mixed with the aggregate shall be specified by the Engineer at the time of paving. Different asphalt binder content may be specified for each lift and each location.

Liquid anti-stripping agent (LAS) shall be added to the asphalt binder at a rate of 0.4 to 1.0% by weight of asphalt binder as specified by the Engineer at the time of paving. The LAS shall be AD-here LOF 65-00 or equivalent, and shall be stored, measured, and blended with the asphalt binder in accordance with the anti-stripping agent manufacture's recommended practice. The LAS can be added at the asphalt plant or at the refinery. When added at the asphalt plant, the equipment shall indicate and record the amount of LAS added. If added at the refinery, the shipping ticket from the refinery shall certify the type and amount of LAS added.

39-2.02B(4) Aggregates

39-2.02B(4)a General: The aggregate grading of the various types of asphalt concrete shall conform to one of the following as directed by the Engineer:

Surface or Leveling Course 3/4-inch HMA Type A, or 1/2-inch Coarse HMA Type A, or 1/2-inch Medium HMA Type A
Base Course..... 3/4-inch HMA Type A

Aggregates should be of high abrasion resistance and durability. Excessively soft and friable aggregates are not allowed.

The specified aggregate gradation must be determined before the addition of asphalt binder and includes supplemental fine aggregate.

Before the addition of asphalt binder and lime treatment, aggregate must have the values for the quality characteristics shown in the following table:

Quality characteristic	Test method	HMA Type A
Percent of crushed particles		
Coarse aggregate (% min.)		
One fractured face		90
Two fractured faces	California Test 205	75
Fine aggregate (% min)		
(Passing no. 4 sieve		
and retained on no. 8 sieve.)		
One fractured face		70
Los Angeles Rattler (% max.)		
Loss at 100 rev.	California Test 211	10
Loss at 500 rev.		45
Sand Equivalent (min.) ^a	California Test 217	50 ^b
Fine aggregate angularity (% min.)	California Test 234	45
Flat and elongated particles	California Test 235	10
(% max. by weight @ 5:1)		

^a Reported value must be the average of 3 tests from a single sample.

^b Minimum Sand Equivalent of 45 for asphalt concrete base.

39-2.02B(4)b Aggregate Gradations: The proposed aggregate gradation must be within the TV limits for the specified sieve sizes shown in the following tables:

**Aggregate Gradation
(Percentage Passing)
HMA Types A**

3/4-inch HMA Type A

Sieve sizes	TV limits	Allowable tolerance
1"	100	--
3/4"	95–100	TV \pm 5
3/8"	65–80	TV \pm 5
No. 4	49–54	TV \pm 5
No. 8	36–40	TV \pm 5
No. 30	18–21	TV \pm 5
No. 200	2.0–8.0	--

1/2-inch Coarse HMA Type A

Sieve sizes	TV limits	Allowable tolerance
3/4"	100	—
1/2"	94–100	--
3/8"	70–90	--
No. 4	55–61	TV \pm 5
No. 8	40–45	TV \pm 5
No. 30	20–25	TV \pm 5
No. 200	2.0–8.0	--

1/2-inch Medium HMA Type A

Sieve sizes	TV limits	Allowable tolerance
3/4"	100	--
1/2"	95–100	--
3/8"	80–95	--
No. 4	59–66	TV \pm 5
No. 8	43–49	TV \pm 5
No. 30	22–27	TV \pm 5
No. 200	2.0–8.0	--

39-2.02B(5)Reclaimed Asphalt Pavement: Reclaimed Asphalt Pavement (RAP) shall not be used.

39-2.02B(6) Smoothness: HMA smoothness will be determined with a straightedge. The completed surfacing shall be thoroughly compacted, smooth and free from ruts, humps, depressions or irregularities. Any ridges, indentations or other objectionable marks left in the surface of the asphalt concrete by blading or other equipment shall be eliminated by rolling or other means. The use of any equipment that leaves ridges, indentations or other objectionable marks in the asphalt concrete shall be discontinued, and acceptable equipment shall be furnished by the Contractor.

39-2.02B(6)(a) Straightedge: The HMA pavement top layer must not vary from the lower edge of a 12-foot long straightedge more than 0.02 foot when the straightedge is laid within 24 feet of a pavement conform.

39-2.02B(6)(c) Smoothness Correction: If the top layer of HMA Type A pavement does not comply with the smoothness specifications, remove, and replace it, or place a layer of HMA. The Engineer must authorize your choice of correction before the work begins.

Corrected HMA pavement areas must be uniform rectangles.

Measure the corrected HMA pavement surface with a 12-foot straightedge.

39-8.02 Payment: Hot mix asphalt shall be considered as included in the prices paid for various contract items of work, and no additional compensation will be allowed therefor.

44 MANHOLE EPOXY LINING

44-1.01 Description: It is the intent of this Specification Section to provide for the rehabilitation of existing sanitary sewer main manholes by the installation of epoxy lining system. Work shall be in accordance with these Special Provisions, the Project Plans, the City Standards and the latest version of the Standard Specifications.

Epoxy lining shall be installed on the new flat top concrete manhole casting slab and new barrel section replacing existing eccentric cone. New epoxy liner shall conform to existing liner. Epoxy lining work shall include, but not limited to, dewatering, cleaning and surface preparation, controlling manhole atmosphere to be coated and by removing manhole lids and mechanically venting nearest upstream manholes both north and east, liner application, touch-up, protection of previously lined and unlined surfaces, containment of debris, waste disposal, cleanup and all appurtenant work.

An epoxy lining system consists of a trowelable epoxy filler, a high tensile elongation elastomeric grout, and an epoxy liner. All references to epoxy lining system within this Section apply to NeoPoxy NPR-5300 Series "PureEpoxy" manufactured by NeoPoxy International, Inc. or approved equivalent. Alternative material submitted shall comply with Standard Specifications Section 6-4.03 "Trade Names and Alternatives".

44-1.02 Submittals: Attention is directed to Section 6-3.01A, "Material Submittals" of these Special Provisions.

The following items shall be submitted:

- A. Technical data sheet on each product used, including required independent third party commercially tested physical and corrosion resistance properties, compressive strength, tensile elongation, flexural modulus, shore hardness, adhesive strength to damp concrete and 10,000-hour flexural creep results. Epoxy manufacturer's certification that the product conforms to and is suitable for its intended use per these specifications.
- B. Material Safety Data Sheets (MSDS) for each product used.
- C. Project specific guidelines and recommendations.
- D. Qualification of Applicator:
 - 1. Manufacturer certification that applicator has been trained and approved in the handling, mixing and application of the products to be used. Applicator must provide current manufacturers signed Certified Applicator certifications or re-certifications shall be considered current when issued within the previous 365 days.
 - 2. Certification that the equipment to be used for applying the products has been manufactured or approved by the epoxy lining material manufacturer and applicator personnel have been trained and certified for the proper use of the equipment and materials.

3. Three references which verify that the lining applicator has demonstrated successful application of the specified lining systems in the past 3 years. Provide the size (area of lining), time of completion, name, the owner's address and telephone number for each installation referenced.
 4. A written certification from the contractor stating that they are qualified and experienced in the application of the specified lining system.
- E. Design details for any additional ancillary systems and equipment to be used on site and surface preparation, application and testing.
- F. Complete contractor plan for cleaning and other surface preparation prior to lining as well as application and testing of the lining after it is installed. Plan shall include materials and equipment to be used, exact steps to be taken, and quality control procedures to be implemented. This plan shall also include minimum time requirements for coating, recoating, and surface patches. Plan shall include application of ventilation equipment.
- G. Abrasive Blast Material Data: For each abrasive blast material to be used, the Contractor shall submit the manufacturer's catalog containing the following data:
1. Technical data sheet for each product used, including statements on the suitability of the material to produce the required surface profile and the percentage mixture of grit/shot, and sieve size.
 2. Material safety data sheet for each product used.
 3. Country and state of origin.

44-1.03 Quality Assurance:

- A. Contractor shall allow and support the Engineer to access and inspect SSMH structures at any time.
- B. Applicator shall initiate and enforce quality control procedures consistent with applicable ASTM, NACE and SSPC standards and the protective coating manufacturer's recommendations.

44-1.04 Delivery, Storage and Handling:

- A. Lining materials shall be sealed in containers that plainly show the designated name, formula or specification number, batch number, color, date of manufacture, manufacturer's directions, and name of manufacturer, all of which shall be plainly legible at the time of use. Any products exceeding the manufacturer's recommended shelf life shall not be used.
- B. Materials are to be kept dry, protected from weather and stored under cover.
- C. Protective lining materials are to be stored between 32° F and 110° F. Do not store near flame, heat or strong oxidants.
- D. Lining materials are to be handled according to their material safety data sheets.

44-1.05 Conditions:

- A. Applicator shall conform to all local, state and federal regulations including those set forth by Cal/OSHA, RCRA and the EPA and any other applicable authorities.
- B. All work shall be executed in a workmanlike manner by skilled personnel and shall present a neat appearance when completed.
- C. Any labor, materials, equipment, and apparatus not specifically mentioned herein or shown on the drawings, which may be necessary to complete any portion of the work in a substantial manner and in compliance with the requirements stated or implied by the contract documents, shall be furnished by the Applicator without additional compensation.

44-2.01 Materials:

- A. All epoxy linings to be installed shall be Neopoxy NPR-5305 trowelable epoxy filler, or approved equivalent.
- B. Neopoxy NPR-3501 high tensile elongation epoxy elastomeric grout and sealant shall be applied to areas that exhibit movement or cracking due to expansion and contraction, such as joints and manhole adjustment rings, or approved equivalent

44-2.02 Manufacturer:

- A. NeoPoxy International, Inc. Hayward, CA. 510-782-1290, Fax 510-782-1292, Internet address <http://www.neopoxy.us>, or approved equivalent.
- B. The manufacturer shall have directly employed, full time, on-staff chemists that interface directly with the in-house manufacturing personnel. The chemists interfacing with the production personnel shall be available to the agency and contractor for technical support.
- C. A record of all quality control tests shall be maintained, and the finished production lot shall meet the manufacturer's standards prior to shipment. A certificate of compliance (C of C)

certifying that the production lot meets the manufacturer's specifications and standards at the time of shipment shall be provided with each lot shipment.
- D. A liquid retain shall be maintained by the manufacturer for each production lot. Each retain shall be properly identified, labeled and stored for future reference. Retains may be properly disposed of six months from the production date.

44-2.03 Repair Materials:

- A. Repair materials shall be used to fill void(s), structurally reinforce and/or rebuild surfaces, etc. Repair materials shall be 100% solids epoxy compatible with the specified lining epoxy and shall be applied in accordance with the manufacturer's recommendations. Epoxy repair materials shall be certified compatible with the epoxy liner material and suitable for municipal sewer use and are preferred over non-epoxy repair materials.
- B. The epoxy manufacturer shall provide instructions for proper application of the repair materials.

44-2.04 Liner Material:

- A. Neopoxy NPR-5300 Series "PureEpoxy", or approved equivalent, a series of rapid curing reactive epoxy polymers made up of a variety of viscosities based upon identical reactive ingredients which exhibit excellent cure properties at low temperatures, in the presence of moisture and underwater. Develops a hard surface in about one hour, or less, under typical ground temperature conditions of 65°F at a liner thickness of **250mils**. Longer cure time will be allowed for lower surface temperatures or underwater conditions. The epoxy manufacturer shall prove cure guidelines to the contractor for lower temperature conditions. The specified physical and chemical properties shall have been demonstrated by independent third-party testing to be resistance to acids, caustics, gasoline and other normal municipal sewage chemicals, biological agents and their byproducts. The product must be resistant to saturated hydrogen sulfide gas as found in municipal sewer systems. The product may either be trowel applied and shall be color-coded light green, similar to what is generally accepted as "sewer pipe green".

Product type	Polyamine cured epoxy resin
Component Colors	Contrasting colors from part A & B
Mixed Color	Light Green
Solids (vol.%)	100
Solvent Content (vol.%)	0
Compressive Strength, psi.	>18,000
Tensile Elongation, %	>5
Flexural Modulus, psi.	>550,000
Shore Hardness, Type D	>86
Adhesion – Concrete	Concrete Fails
Primer required:	None (self-priming)
Chemical Resistance:	City of Los Angeles, Standard Specifications for Public Works Construction, Section 210-2.3.3 and ASTM F1216-98, Table X2.1

44-2.05 Epoxy Liner Application Equipment:

- A. Standard plastic or metal cement working tools of the contractor's may be used when trowel applied.
- B. Wet film thickness gage shall be 10-500 mil range, similar to Paul N. Gardner Company Item Number WF-790020, 800-762-2478.

44-3.01 Execution:

- A. Prep, repair, and lining work shall be completed while the manhole and upstream manholes ventilation systems are operational and running. Lining shall be applied under dry and dust-free conditions and ventilation operations shall continue until epoxy liner is fully cured. Ventilation equipment shall be installed in manhole to be coated and nearest upstream manholes.
- B. Lining shall be applied all at one time for each manhole being rehabilitated. Starting and stopping of work within one manhole shall not be allowed.

- C. Lining shall be done in a workmanlike manner so as to produce an even film of uniform thickness. Edges, corners, crevices, and joints shall receive special attention to ensure that they have been thoroughly cleaned and that they receive an adequate thickness of lining material. The finished surfaces shall be free from runs, ridges, waves, laps, brush marks, roller marks, and variations in color, texture, and finish.

44-3.02 Acceptable Applicators:

- A. Epoxy liner material must be applied by a Certified Applicator of the epoxy manufacturer.

44-3.03 Records:

- A. The contractor shall maintain an accurate, written record of the quantity of lining material applied and the corresponding surface area covered, a description of the area coated, the batch number, surface temperature, ambient temperature, relative humidity, dewpoint, and applicator on a daily basis. The contractor shall furnish a signed copy of said record to the inspector at the beginning of the next working day. These quantities shall be independently verified by the inspector and reported on the inspector's log. The inspector shall immediately investigate and resolve any discrepancies between these reported quantities and the inspector's log.

44-3.04 Examination:

- A. The Applicator shall comply with local, state and federal regulatory and other applicable agencies with regard to environment, health and safety.
- B. All extraneous flows into the manhole or structure, at or above the area to be lined, shall be stopped, plugged and/or diverted until the epoxy has developed and evolved from a liquid to a solid phase. After reaching the solid phase, heat may be added to accelerate the cure.
- C. Temperature of the surface to be coated should be between 45°F and 90°F during application. Prior to and during application, care should be taken to avoid exposure of the uncured liner to any heat source capable of causing the uncured epoxy to exceed 90°F. Where varying surface temperatures exist, care should be taken to apply the coating when the temperature is falling versus rising.

44-3.05 Preparation:

- A. Applicator shall inspect all surfaces specified to receive a protective lining prior to surface preparation. Applicator shall notify Engineer of any noticeable disparity in the surfaces that may interfere with the proper preparation or application of any repair mortar and epoxy liner.
- B. Prior to the start of any work, the contractor shall establish with the inspector, schedules and notification procedures to ensure all surface preparation work has been inspected prior to the application of any lining.
- C. Surfaces shall be repaired by methods required by the epoxy system manufacturer for the intended service and substrate materials.

- D. A false floor / platform shall be construction on the manhole base per Section 130-107A, Existing Manholes, of the Sanitary Sewer System Construction Standard Specification, prior to any manhole modification including existing cone removal, new manhole component installation and epoxy coating, false floor / platform to be removed immediately following curing of new coating.
- E. Infiltration shall be stopped by using chemical grouts or cementitious hydraulic plug material certified compatible with the epoxy repair mortar and liner epoxy.
- F. Loose or unsound concrete or masonry or existing coatings must be removed. Unsound concrete shall be determined by lightly tapping with a hammer and shall be removed to sound, hard concrete. Masonry materials may be thoroughly cleaned out and then re-mortared with epoxy or rapid setting cement and used to fill the area from which they came.
- G. Surface shall be cleaned by removing any laitance, dust, unsound or contaminated materials, plaster, oil, paint, grease, corrosion deposits or bacteriological growths. Chemical cleaning aids may be used with water blast equipment; however, Engineer must approve detergents or degreasers proposed by the contractor and they must be suitable for the water temperature used in any pressure washer system employed. Where breaking out mortar is not required, roughen the surface and remove any laitance by mechanical means, low-pressure hot water blast (minimum 2500 psi. pump pressure at 4 gpm), or high-pressure cold-water blast (>3000 psi. pump pressure at 4gpm) with or without sand injection as is appropriate, abrasive (sand) blasting, acid etching and water cleaning, or shot-blasting to a sound profile surface.
- H. Acceptable surface pH for epoxy grouting repairs and lining shall be not less than six or more than nine.
- I. Prior to lining, surfaces shall be dried by forced air to observe possible infiltration. In the event methods noted within the specification are ineffective stopping infiltration, the Contractor shall immediately notify the Engineer for direction.
- J. Prior to installing liner over surface of existing liners or coatings, mechanical abrade a 6" minimum wide band where new epoxy liner is to overlap existing liner, clean, dry and prepare the existing liner and new concrete surfaces per manufacturer recommendations.
- K. Metal components shall, at the Engineer's option and at the Contractor's expense, be sandblasted to a NACE No. 2 "Near White Blast Cleaning", or high pressure (>5000 psi. pump pressure) water blast, or water with sand injection. Minimum surface profile shall be CSP 3. Residual penetrating oil and grease deposits shall be removed by steam cleaning, detergent scrubbing or by the use of degreaser to ensure optimum epoxy adhesion.
- L. For new concrete surfaces, epoxy lining may not commence until moisture content is 80%, or less, by hygrometer test, or; "no visible moisture" by ASTM D4263-85, or; 15g/24 hr./m (3lb/24hr/1000 ft.) maximum by calcium chloride test. For existing concrete surfaces, see Item I above.
- M. Epoxy lining may not commence until concrete has cured sufficiently to prevent pinholes in the liner due to outgassing. Concrete surfaces that have cured for 28 days or more may be considered sufficiently cured. In lieu of curing for 28 days prior to application of epoxy lining, the Contractor may submit a sample

of cement being used on the project to the epoxy manufacturer for adhesion testing and recommendations on a reduced curing time.

- N. Remove standing water and blow hot air for 15 to 30 minutes to dry the top surface prior to application of epoxy lining.
- O. Fill any voids with epoxy filler and/or grout according to the manufacture's recommendations. For flowing or weeping water conditions, rapid setting cementitious "plug" materials may be used instead of epoxy grouts.
- P. Determination of adequacy of preparation and substrate integrity may be made by ASTM D4541, with scoring.

44-3.06 Application of Epoxy Lining:

- A. Application procedures shall conform to the recommendations of the epoxy lining manufacturer, including material handling, mixing, environmental controls during application, safety, and application equipment.
- B. Areas that exhibit movement or cracking due to expansion and contraction, such as joints and manhole adjustment rings, shall be grouted and sealed with a high tensile elongation epoxy Neopoxy NPR-3501, or equivalent, specifically designed and suitable for the service. Prior to placing the grout, surfaces within the joint shall be sealed to a minimum depth of one-half inch with the specified epoxy liner. Subsequently to placement of the epoxy grout, a bond breaker shall be used to prevent adhesion between the flexible grout and the specified epoxy liner material. If the flexible grout and sealant is to be applied to manhole adjusting rings, no bond breaker or topcoat will be applied.
- C. Specified surfaces shall be coated by trowel application. Minimum application thickness shall be not less than 250 mils above the aggregate topmost surface. A monolithic single wet film application is preferred over multiple thin layers. The epoxy lining shall be applied such that the total specified surfaces can be completed in one day. If sprayed, and cosmetically smoother appearance is specified, the initial application shall be sprayed and troweled level to aggregate tops with sufficient epoxy to completely fill interstitial voids. A subsequent application will be made to achieve the minimum above-aggregate specified thickness. When trowel applied, a single application may be made. The Contractor may elect to first perform the aggregated interstitial filling followed by the final above aggregate lining after the epoxy transition from liquid to solid phase.
- D. Thickness measurement shall be made at the aggregate peaks on three-foot centers, vertically and horizontally, in a grid pattern. A wet film thickness gauge shall be used to ensure that the minimum thickness is applied. See Section 44-2.05.

44-3.07 Testing and Inspection:

- A. When the epoxy liner has cured sufficiently to allow physical contact by applicator personnel, the surface shall be visually inspected for discontinuities. Visible discontinuities shall be marked for subsequent repair. After visible discontinuities are repaired, secondary discontinuity testing will be performed per ASTM D5162 at an inspection voltage of 90 volts per mil to allow for irregularities in the original host surface profile, host surface material and

moisture permeation from groundwater or other sources. Care must be exercised, as excessive voltage will spark through the epoxy causing damage to an otherwise sound lining. Discontinuities shall be mechanically abraded and repaired with the specified lining epoxy. If during spark testing it is determined that excessive voltage has burned holes in the lining, and the liner thickness is of the specified thickness, the voltage may be reduced in increments of 5 volts per mil until burn-through ceases. Burn through is indicated by very small brown-black colored holes that penetrate through to the base material and are generally visible only with optical magnification. Repair of burn holes shall be the Contractors expense.

- B. As an acceptance criterion, measurement of adhesion of the protective coating to the substrate shall be measured in accordance with ASTM D4541, with scoring, by self-alignment adhesion tester type IV. Adhesion testing shall be performed at any time after the liner has cured. However, the minimum adhesion must be obtained within ten (10) days after completion of lining. To shorten the testing procedure, the epoxy cure may be accelerated by application of localized supplemental heat, not to exceed 140 F for not less than one hour. The minimum pull off force shall be 200 psi and not less than 100% of the break shall be of a cohesive nature.
- C. Visual and adhesive strength tests as specified by the Engineer. The Engineer shall choose the lined structures to test. If deficiencies are found, then all lined structures shall be tested at the Contractors expense. Each testing point shall be repaired with the specified lining material. Additional testing may be performed to determine the extent of any potential deficiently adhered area and repairs shall be made by applicator in strict accordance with manufacturer's recommendations.
- D. All Epoxy lined manholes shall also be tested in accordance with Special Provisions Section 71-1.07A.

44-3.08 Payment: Manhole Epoxy Lining shall be considered as included in the prices paid for Manhole Modifications, and no additional compensation will be allowed therefore. Price shall include full compensation for furnishing all labor, materials, tools and equipment, testing and measuring, confined space entry, and doing all the work involved in dewatering the existing manhole; cleaning; surface preparation and repair on all vertical and horizontal surfaces; furnishing and installing epoxy lining system as described herein on all vertical and horizontal surfaces; testing; and any other items necessary for epoxy lining not specifically enumerated in the Standard Specifications and Special Provisions, and no additional allowance will be made therefor.

51 CONCRETE STRUCTURES

51-1.01 Description: Portland cement Concrete structures shall be constructed in accordance with Section 51 of the Standard Specifications, the details and requirements shown on the Project Plans, these Special Provisions, and as directed by the Engineer.

Concrete shall be Class 1 and shall conform to the provisions of Section 90 of the Standard Specifications and the requirements indicated on the Project Plans. Structural reinforcing shall conform to Section 52-1 of the Standard Specifications and requirements indicated on the Project Plans.

Concrete shall be cured in accordance with Section 90-1.03B of the Standard Specifications.

Concrete structures are the Pump Containment Structures.

Placing of concrete under water will not be permitted.

51-7.01D Payment: **Pump Containment Structures** shall be paid for at the contract **each** for the type of structure indicated on the plans. The price shall include full compensation for furnishing all labor, materials, tools, and equipment. Structural reinforcing and structure subbase aggregate base shall be included in the payment for Pump Containment Structures.

The **Disinfectant Containment Structure** shall be paid for at the contract **lump sum** price for the type of structure indicated on the plans. The price shall include full compensation for furnishing all labor, materials, tools, and equipment. Structural reinforcing, structure subbase aggregate base, drain piping, roof structure and pavement restoration shall be included in the payment for the Disinfectant Containment Structure.

75 MISCELLANEOUS METAL

75-1.01 General: The work covered by this section of the specifications consists of furnishing all plant, labor, equipment, appliances, and materials, and in performing all operations in connection with the installation of miscellaneous metal work, complete in accordance with the plans and as specified herein.

Metals shall be free from defects impairing strength, durability and appearance and be of the best commercial quality for the purpose specified.

All exposed fasteners shall be made of the same material, color and finish as the metal to which applied unless otherwise shown.

75-1.02 Bollards: Steel bollards shall be Fair Weather Site Furnishings, Creative Pipe, or approved equal.

Bollards shall be fabricated from 4" diameter schedule 40 galvanized steel pipe, 48 inches height and as specified on the Project Plans. Handles shall be constructed of 1/4-inch minimum round stock. The mounting shall be a removable embedded mounting, pad lockable, with 1 eyelet, with pad lockable hole cover and hot-dipped galvanized receiver. All exposed surfaces shall be prepared and coated as specified on the Project Plans.

75-1.03 Bolts, Nuts and Anchors:

75-1.03.01 General: All bolts, nuts and anchors shall be of adequate size and length for their intended use.

All bolts shall be standard Hex head with cold pressed nuts and locking washers or cut washers, unless otherwise indicated on the plans.

The length of all bolts and anchors shall be such that after joints are made up, the bolt protrudes through the nut on-eight (1/8) to one half (1/2) inch. Bolts protruding through the nut more than on-half (1/2) inch shall be cut back (no torches) and ground smooth.

Anchor bolts shall be imbedded to the depth shown on the plans, or a minimum of 6-inches if specifically shown.

75-1.03.02 Materials: All stainless-steel bolts including anchor bolts shall be ASTM A320 Grade B8M (AISI Type 316). Nuts shall be austenitic alloy nuts conforming to ASTM A194 Grade 8M. Stainless steel concrete anchors shall be Hilti drop-in anchors or approved equivalent.

75-1.04 Removable Stair Railing: Handrails shall be made of seamlessly welded aluminum standard pipe handrail conforming to ASTM B429 of the diameter and size indicated on the Project Plans.

Handrails and railing systems shall be designed to withstand a 200-pound concentrated load applied in any direction at any point on the top rail. Handrails shall also be designed to withstand a load of 50-pounds per foot applied horizontally to the top rail. The 200-pound load will not be applied simultaneously with the 50-pound per foot load. The manufacturer shall submit calculations to the engineer for approval.

Post shall not interrupt the continuation of the top rail at any point along the railing, including corners and end terminations. The top surface of the top railing shall be smooth and shall not be interrupted by projected fittings.

Handrail post bracket shall conform to Cal/OSHA standard. The post bracket shall be a minimum of 5 inches high and shall allow for expansion and contraction between posts.

Precent galvanic action and other forms of corrosion by insulating metals and other materials from direct contact with incompatible materials.

75-1.06 Payment: Bollards shall be paid for at the contract unit price **each**, which shall include full compensation for furnishing all labor, materials, tools, equipment, incidentals, and doing all work involved in installing bollards, including but not limited to: digging, and concrete bollard foundations.

Removable Stair Railing shall be paid for at the contract unit price **each**, which shall include full compensation for furnishing all labor, materials, tools, equipment, incidentals, and doing all work involved in installing the removable stair railing.

Full compensation for bolts, nuts and anchors as specified herein shall be considered as included in the prices paid for various contract items of work, and no additional compensation will be allowed therefor.

130 PIPE, APPURTENANCES AND INSTALLATION

130-1.01 General: Sanitary sewer system components and related appurtenances shall conform to the requirements as specified in either Section 130 or 132 the City of Santa Rosa Sanitary Sewer Standards Specifications Section 130, the Project Plans, and modifications herein. as applicable.

130-1.01A Description: All pipes and related appurtenances shall be installed in accordance with the City Standard Specifications and Standard Plans, the Plans, and these Special Provisions.

The Contractor shall use a single manufacturer for each of the following items supplied for this project unless otherwise approved by the Engineer:

- Pipe
- Fittings
- Valves

The Contractor shall submit the installation location for any proposed use of flange fittings not already specified herein.

130-1.02D Ductile Iron Pipe: Ductile iron sewer pipe and fittings shall comply with Section 130-1.02D of the City's Sanitary Sewer System Construction Standards Specifications.

130-1.02F HDPE Pipe: High Density Polyethylene (HDPE) pipe shall be made from a PE 3408 resin compound as defined in ASTM D3350; meeting Type III, Class C, Category 5, Grade 934 per ASTM D1238.

Pipe shall be furnished in iron pipe sizes meeting the requirements of AWWA C906. HDPE pipe shall meet ASTM D3035 standard specifications for dimension ratio PE, outside diameter-controlled pipe.

HDPE pipe shall be rated to a minimum of 80 psi.

Fittings for HDPE pipe shall be either butt fusion fittings or electrofusion fittings.

Butt fusion fittings shall meet all of the pipe specifications regarding dimensions and materials and conform to ASTM D3261.

Electrofusion fittings shall conform to ASTM F1055 for use with pipe conforming to ASTM D2513/3035. The fittings shall have an ISO compliant barcode label that facilitates the fusion of the fitting with any ISO compliant fusion processor.

Pipe fittings and transitions shall meet ASTM D3261. All molded and fabricated fittings shall be fully pressure rated for the pipe being attached to them. All fittings shall be molded or fabricated by the same manufacturer as the pipe. Contractor fabricated fittings shall not be used.

Sweep 45-degree ell fittings shall be molded and the centerline radius shall be at least three (3) times the pipe diameter.

Above-ground piping shall be labeled in accordance with ASME 13.1. Sanitary sewer pipe labels shall be green and read "Sanitary Sewer" in white letters.

130-1.03 Excavation, Backfill, and Resurfacing: Excavation, backfill and resurfacing for all wastewater work shall conform to all applicable City Standards and any modifications on the Plans or in these Special Provisions.

All excavations shall be able to accommodate any typical compaction and testing equipment and personnel used for to backfilling. If, due to vertical and/or horizontal obstruction, in the opinion of the Engineer, typical methods cannot be used, the Engineer may require the use of a pneumatic Pogo Stick/Powder Puff type compactor at no additional cost to the City.

All excavated material shall be removed from the job site by the end of each workday.

130-1.05 Laying and Handling Pipe Materials: All pipe stockpiled on the job shall be stored with the ends covered to prevent the entrance of foreign matter.

It is the Contractor's responsibility to ensure that components are laid and bedded on sound materials, existing and new. All disturbed native material must be removed from excavations prior to the installation of new material.

130-1.07 Sewer Structures: Precast Manhole Structures shall be constructed in accordance with the details and at the locations shown on the Project Plans and in accordance with the City Specifications.

It is the Contractor's responsibility to ensure the manhole structures are laid and bedded in sound materials, existing and new. Any field conditions that may affect grade shall be brought to the attention of the Engineer prior to installation.

All silt and debris shall be removed from finished structures. This shall include all existing silt and debris plus material caused by the Contractor's operation.

Prior to removal of an existing manhole frame, a platform shall be constructed in the manhole above the top of the sewer flow to prevent any dirt or debris from falling into the sewer. The platform shall remain in place until all work on the manhole and all adjacent work has been completed as much as

Manhole frames and covers shall be 50 inch in diameter with 24 inch inset heavy duty, non-rocking manhole frame and cover. The manhole lid shall be labeled with "SANITARY SEWER". All material used in manufacturing shall conform to A.S.T.M. designation A-48 Class 35 B, or United States Government Specifications QQ1-652b.

130-1.11 Valves and Appurtenances:

130-1.11A Ball Valve: Ball valves shall be non-lubricated and capable of sealing in either direction with threaded end connections for sizes 3 inches and smaller. The stem packing shall be manually adjustable while valve is under pressure. The shaft shall be rigidly connected to the ball by a positive means. The connection shall be designed to transmit torque equivalent to at least 75 percent of the torsional strength of the shaft. The handles shall be stainless steel latch lock handle with vinyl grip and stainless-steel nut designed to open and close the valve under operating conditions. The valve should be suitable for operation from minus -20 to 350 degrees F.

Ball valves shall have stainless steel bodies, with a type 316 stainless steel ball, 1/4 turn full port, with TFE seats, and TFE or Viton stem seals.

130-1.11B Plug Valve: Plug valves shall be designed in accordance with AWWA C517.

Manufacturers shall be one of the following or equal:

1. Milliken Millcentric Series 611611
2. DeZurik Model PEC

Valve body shall be ductile iron, ASTM A536. Elastomer shall be BUNA-N or other approved material suitable for the service intended. Materials for all remaining components shall be as specified in AWWA C517.

The plugs shall be of one piece solid construction with PTFE thrust bearings on the upper and lower bearings journals to reduce torque and prevent dirt and grit from entering the bearing and seal area. Shaft bearings and thrust bearings shall be replaceable sleeve-type bearings.

All valves larger than 6" shall be installed with worm gear actuators and wheel handle. All gearing shall be enclosed in a ductile iron housing, with outboard seals to protect the bearings and other internal components.

All wrench operated valves shall be equipped with a 2" square nut for use with removable levers or extended "T" handles.

Valves shall be designed and manufactured to shut off bubble tight at 175 psi for valves 2-1/2" to 12" and 150 psi for valves 14" and larger.

Each valve shall be given a hydrostatic and seat test with the test results being certified when required by the customer. Certified copies of Proof-of-Design test reports shall be furnished as outlined in AWWA C517 when requested,

130-1.11C Pressure Gauge: The pressure gauge shall be a steel case dry pressure gauge with a 2" face. Gauges shall have a maximum pressure reading of 150 feet (65 psi).

130-1.11D Tapping Saddle: The stainless-steel tapping saddles on HDPE pipe shall be a Ford FS300 or equal.

130-1.11E Valve Box: Precast valve boxes shall be constructed in accordance with the details and at the locations shown on the Project Plans and in accordance with the City Specifications.

130-1.12 Installation:

130-1.12A Pipe Penetrations: Where concrete cannot be poured around a pipe as part of a new structure, or where a manufactured penetration is not feasible, penetrations through a concrete structure shall be by core drilling, sawing, or other approved method that will not crack or otherwise damage the concrete structure. Jackhammering will not be allowed for this purpose. The Contractor shall seal the penetration with StopAQ™ or SealGaurd II, or an approved equivalent. An approved water stop shall be used on all pipe penetrations and the annular space shall be filled with a high-strength non-shrink grout. Pipe penetrations on the outside of a structure shall be stabilized by a concrete collar prior to backfilling.

130-1.13 Payment: Pipe and Appurtenances shall be paid for at the contract **lump sum** price per piping or appurtenance type, which shall include full compensation for furnishing

all labor, materials, tools, equipment, incidentals, and doing all work involved in installing all underground and above ground pipe and appurtenances, including but not limited to: furnishing and placing backfill; compaction; pipe; pipe supports; fittings; valves; concrete valve boxes and covers; or any other work required to install pipe and related appurtenances not specifically enumerated on the plans or in these specifications and no additional allowance will be made therefor.

Piping, valve and appurtenances shall conform to the requirements of Section 130 of these Special Provisions. Trench backfill and compaction shall conform to all applicable City Standard Specifications, as specified on the plans, or as specified elsewhere within these Special Provisions.

Manhole Modifications shall be paid for at the contract **lump sum** which shall include full compensation for furnishing all labor, materials, tools, equipment, incidentals, and doing all the work involved for the modification of sewer manholes, including but not limited to: excavation and disposal of excavated materials; hand digging *if needed*; dewatering and disposal of trench groundwater; contamination awareness; water tight sealing of penetrations; coating and patching; concrete collar; installing and adjusting the cast iron frame and cover to grade after final excavation is complete.

200 DIESEL DRIVEN PUMP

200-1.01 General: Requirements for providing a dry-prime, skid mounted, diesel driven, solids handling pump. The pump shall be delivered to the owner within 16 weeks of contract commencement or as stated in the notice to proceed.

200-1.01A Summary: The specifications herein state the minimum requirements of the City of Santa Rosa. All variances, exceptions, and/or deviations shall be fully described.

200-1.02 Substitution: One make of materials or methods have been specified for use in this installation. This has been done to establish the standards of quality, workmanship, finish, and design required, but other materials or methods equal in design, required quality, workmanship, finish, and guaranteed performance will be accepted. This implies no right on the part of the Contractor to use materials or methods other than those specified, unless approved as equal in writing by the Engineer.

The decision of the Engineer shall govern as to what is equal to the item specified, but the burden of proof as to the equality of the proposed materials or method shall be upon the Contractor. If the Engineer considers it necessary, tests to determine the quality of the proposed materials shall be made, at the expense of the Contractor, by an unbiased laboratory satisfactory to the Engineer.

200-1.03 General Specifications: Units described shall be new, unused and of the current years production. The style of pump being bid must be in production for a minimum of 5 years. (Include users list) Unit shall be of the latest design and in current production completely serviced, ready for work and shall include all standard and optional equipment as specified herein. All bidders must have demonstrated the unit they are bidding prior to bid date.

Manufacturer must have a fully stocked parts and service facility within 200 miles of the City of Santa Rosa. The *City of Santa Rosa* shall have the right to inspect the office and shall be the sole judge of its adequacy to fulfill this requirement.

Manufacturers, on request of the City of Santa Rosa, must be prepared to review their specifications with the City of Santa Rosa and must, if requested, also be prepared to provide a unit for the convenience of the City of Santa Rosa. These services, if needed are considered as part of the bidder's proposal and will be provided without cost or obligation to the *City of Santa Rosa*.

200-1.03A References: ANSI B16.1 – Standard for Cast Iron Pipe Flanges and Flanged Fittings.

200-1.04 System Description: The pump set specified in this section will be used to pump raw sewage. Pump shall be fitted with a fully automatic priming system capable of repeated priming from a completely dry pump casing. The pump, diesel engine, and accessories shall be supplied by the pump manufacturer.

200-1.04A Design Requirements:

OPERATING SPEED (MAXIMUM)	1200 RPM
MINIMUM SOLIDS HANDLING SIZE	3.7 INCHES
IMPELLER DIAMETER	430 MM
SUCTION SIZE	12 INCHES
DISCHARGE SIZE	12 INCHES
MAXIMUM SUCTION LIFT	28 FEET
MINIMUM SHUTOFF HEAD	115 FEET
MINIMUM TDH @ 3500 GPM, 25-FEET SUCTION HEAD AND 1200 RPM	59 FEET
MINIMUM TDH @ 3500 GPM, 25-FEET SUCTION HEAD AND 1000 RPM	47 FEET

200-1.04B Acceptable Manufacturers: The pump shall be a Model DPC300, size 12" x 12" as manufactured by GODWIN PUMPS, Bridgeport, New Jersey or approved equivalent.

200-1.04C Equipment: CASING, SUCTION COVER: Pump castings shall be cast iron. Pump design shall incorporate a direct suction flow path that is in axial alignment with the impeller eye. There shall be no turns, chambers, or valves between the suction flange and the impeller eye.

IMPELLERS: The pump impeller shall be an open, three-bladed, non-clog type with pump-out vanes on the back shroud and fabricated of hardened cast- chromium steel construction (minimum Brinell Hardness 200 HB).

WEARPLATES: Shall be fully adjustable and replaceable, fabricated of cast iron. Wear plate clearances shall have no relationship to the ability of the pump to achieve a prime.

BEARINGS AND SHAFTS: Pump shall be fitted with a bearing bracket to contain the shaft and bearings. Bearings shall be tapered roller bearings of adequate size to withstand imposed loads for sustained pumping at maximum duty points. Minimum ISO L₁₀ bearing life to be 100,000 hours. Impeller shafts shall be fabricated of 1.5% chromium alloy.

SEALS: Seals shall be high pressure, mechanical self-adjusting type with silicon carbide faces capable of withstanding suction pressures to 58 psi. The mechanical seal shall be cooled and lubricated in an oil bath reservoir, requiring no maintenance or adjustment. Pump shall be capable of running dry, with no damage, for periods up to twenty-four hours. All metal parts shall be of stainless steel. Elastomers shall be Viton.

PUMP SUCTION AND DISCHARGE FLANGES: Shall be cast iron ANSI (B16.1) Class 150, flat faced.

PUMP GASKETS: Shall be compressed fiber and/or Teflon.

PUMP O RINGS: Shall be Buna-N.

PRIMING SYSTEM: Pump shall be fitted with a fully automatic priming system incorporating a twin-cylinder compressor and air ejector assembly. No vacuum pumps will be accepted. The self-lubricated, self-cooled compressor shall be mounted on the pump bearing bracket and belt driven by the pump shaft. The priming system shall require no fail-safe protection float gear or any adjusting at high or low suction lifts. Pumps with self-priming chambers modified with vacuum priming systems shall not be accepted as equal. The pump must be capable of running totally dry for periods up to 24 hours, then re-priming and returning to normal pumping volumes. Pump and priming system is capable of priming the pump from a completely dry pump casing. The pump shall be capable of static suction lifts to 28 vertical feet, at sea level. It shall also be capable of operation using extended suction lines. Equipment acceptance shall be contingent upon the pump's ability to run continuously at full speed in a completely dry condition for periods up to 24 hours. The engineer may require a demonstration.

CHECK VALVE: Pump shall be supplied with an integral swing check valve mounted on the discharge of the pump, allowing unrestricted flow from the impeller. The check valve shall prevent in-line return of flow when the pump is shut off. Non-return valve elastomers shall be Nitrile rubber and shall be field replaceable.

PRESSURE GAUGE: Pump shall be supplied with an integral pressure gauge on both the suction and discharge sides of the pump.

DRIVE UNIT: The drive unit shall be a diesel water-cooled engine. The engine shall drive the pump by use of direct-connected intermediate drive plate. Starter shall be 12VDC electric. Safety shut down switches for low oil pressure and high temperature shall be integrated into the engine control panel. Battery shall have 180-amp hour rating. Unit shall include a tachometer and an hour meter. Drive unit shall be a John Deere 4045HFC04 final Tier 4 or equal. A certified continuous-duty engine curve shall be supplied to the owner/engineer.

GOVERNOR: Governor shall be electronic type. Engine speed shall be adjustable to operate the pump between maximum and minimum design operation speeds.

FUEL SOURCE: Integral skid fuel tank capacity shall be sufficient to provide at least twenty hours of operating time at full load. The engines shall be capable of operating satisfactorily on commercial grade of distilled No. 2 fuel oil.

EXHAUST: Exhaust system shall include critical grade silencer.

FACTORY PAINTING: Pump, engine, and base shall be shop primed and finish painted at the place of manufacturer. Materials and dry film thickness for priming and finish paint shall be in accordance with customer specifications.

ENGINE: The unit shall meet all local and Environmental Protection Agency (EPA) emission standards at a Tier 4 level and noise requirements at final inspection. The manufacturer shall provide an EPA certified engine unit. Submit proof that engine unit is EPA certified.

Emissions Permits Required from the Bay Area Air Quality Management District (BAAQMD): Pay permit fees and obtain "Permit to Construct" and "Permit to Operate" (in the City's name) from BAAQMD (phone number (415) 771-6000:

1. Provide engine emissions data sheets demonstrating compliance with the current standards of the BAAQMD.
2. Obtain "Permit to Construct" application forms from BAAQMD and fill in all information pertaining to emissions and engine unit. Forward original copy of

- partially complete application to Engineer. Engineer shall forward to City's Project Manager to complete remaining portion of application and return to Contractor.
3. Contractor shall pay for and obtain BAAQMD approval and shall forward original copy of the "Permit to Construct" to Engineer prior to approval or delivery of diesel driven pump.
 4. Contractor shall install diesel driven pump in compliance with conditions in permit, pay any remaining fees, and obtain field approval of BAAQMD inspector. Contractor shall forward original copy of the "Permit to Operate" to Engineer.

200-1.04D Engine/Pump Control:

The engine shall be started, stopped, and controlled by a high performance state of the art digital controller as supplied by the manufacturer. The controller shall be weather proof enclosed, and contain an external weatherproof 12-position keypad accessible without the need to remove or open any protective cover or enclosure. It shall be designed to start/stop the engine at a signal supplied by high and low level floats or a 4-20 mA transducer. The controller shall provide the following functions without modification, factory recalibration, or change of chips or boards, by simply accessing the keypad.

The keypad shall be a capacitive touch sensing system. No mechanical switches will be acceptable. The keypad shall operate in extreme temperatures, with gloves, through ice, snow, mud, grease, etc. and maintain complete weather-tight sealing of the controller.

In automatic mode, the unit shall conserve energy and go to "sleep".

The controller shall function interchangeably from float switches, pressure switch, or transducer, as well as manual start/stop by selection at the keypad. No other equipment or hardware changes are required.

The start function can be programmed to provide three (3) separate functions each day for seven days (i.e., a start, exercise cycle) OR on three separate days at different times and for a varying length of time all via the keypad.

MANUAL-AUTOMATIC BUTTON: In Manual Mode, manual "Start" button shall start engine and engine shall continue to run until "Stop" button is depressed or an emergency shutdown occurs. In Automatic Mode, start/stop sequencing shall be initiated by either one (1) high-level N/O and one (1) low-level N/C narrow angler float switches, pressure switch, transducer, or a signal from a digital input.

The controller shall integrate the engine safety shut-off for low and high oil temperature and provide over-speed protection.

The controller shall include standard, field-adjustable parameters for engine cycle crank timer, and shutdown time delay.

The controller shall have only one circuit board with eight built-in relays. Three (3) of the relays shall be programmable to output desired parameter on display and to be used as dry-contacts for communication with City of Santa Rosa SCADA system, all via the keypad without changing relays, chips, printed circuits, or any hardware or software.

Standard components shall consist of (24) digital inputs, (7) analog inputs, (1) magnetic pick-up input, (8) 20-amp form "C" relays, (1) RS232 port, (1) RS485 port, (1) RS232/RS485 port, (1) J1939 port, and (1) 64X128 pixel full graphic LCD display with backlight.

The industrially-hardened Controller shall withstand Vibration of 3 g, 3 axis, frequency swept 10-1000 Hz, in an operating temperature Range of 4° to 176°F (-20° to 80°C) and an operating humidity range of 0-95% Non-Condensing.

200-1.05 Execution:

200-1.05A Manufacturers Services: The manufacturer shall furnish the services of a competent factory representative to do the following:

1. Inspect the system prior to delivery, supervise the startup and testing of the system, and certify the system has been properly furnished and is ready for operation.
2. Instruct the owner's operating personnel in the proper operation and maintenance of the system for a period of not less than one-half day.

200-1.05B Tools and Spare Parts: The manufacturer shall furnish the following on delivery of the pumping system.

1. A recommended list of spare parts.
2. An Operations and Maintenance manual for the pump and engine.

200-1.05C Warranty: The manufacturer shall furnish the following to the owner:

1. A copy of the engine manufacturer's parts and labor warranty.
2. A one-year Parts and Labor Warranty issued by the manufacturer on the Portable Pump. This warranty must cover all pump parts, including the mechanical seal.

200-1.06 Payment: **Diesel-Powered Pumps** shall be paid for at the contract unit price **each**, which shall include full compensation for furnishing all labor, materials, tools, equipment, incidentals, and doing all work involved in purchasing and installing the diesel pumps. Any other work required to install the diesel pumps not specifically enumerated on the plans or in these specifications and no additional allowance will be made therefor.

Diesel pumps shall conform to the requirements of Section 200 of these Special Provisions.

201 DIESEL FUEL TANK

201-1.01 General: Requirements for providing a diesel fuel tank for connection to the diesel pump. The tank shall be delivered to the owner within 16 weeks of contract commencement or as stated in the notice to proceed.

201-1.01A Summary: The specifications herein state the minimum requirements of the City of Santa Rosa. All variances, exceptions, and/or deviations shall be fully described.

201-1.01C Submittals: Contractor shall submit an Operating and Maintenance Manual for the fuel tanks to the City for review and approval.

201-1.02 General Specifications: Units described shall be new, unused and of the current years production. Unit shall be of the latest design and in current production completely serviced, ready for work and shall include all standard and optional equipment as specified herein. All bidders must have demonstrated the unit they are bidding prior to bid date.

Fuel tank shall conform to the requirements of NFPA 30.

201-1.03 System Description: The fuel tank specified in this section will be connected to the diesel driven pump. The fuel tank shall be a skid based, double-walled fuel tank for containment equipped with forklift pockets. The fuel tank and accessories shall be supplied by the tank manufacturer.

201-1.03A Design Requirements:

CAPACITY	500 US GAL
FEED LINE	3/8 INCH
CONTAINMENT CAPACITY	110%

201-1.03B Acceptable Manufacturers: The fuel tank shall be a FUEL CUBE Model FCP500, as manufactured by Western Global or approved equivalent.

201-1.03C Accessories:

1. The fuel tank shall be equipped with a float gauge indicating tank level.
2. The secondary containment space shall be equipped with a gauge or other device indicating if it is in use.

201-1.03D Labeling: Provide yellow pipe labels on fuel feed and return lines in accordance with ASME Standard A13.1.

201-1.04A Testing: Following installation of the fuel tank, and prior to placing in service, hydrostatic testing shall be performed on the inner and interstitial space in accordance with NFPA 30 Section 21.5. The pressure shall be held for not less than 1 hour or for the duration recommended by the manufacturer.

Float gauges shall be observed as tanks are filled and emptied to confirm functional operation.

All fuel lines shall be field tested with air pressure at 5 psig for not less than 30 minutes or as required to soap joints and complete visual inspection.

Testing shall be performed in the presence of a Santa Rosa Fire Department Inspector. Contractor shall call the Selectron Automated Request System at (707) 543-3006 to schedule each inspection request at least 48 hours in advance. The required inspection code is "800-AST Installation". Inspections are scheduled Monday through Thursday. Contractor is responsible for all inspection fees.

201-1.04C Warranty: The manufacturer shall furnish the following to the owner:

1. A one-year Parts and Labor Warranty issued by the manufacturer on the fuel tank. This warranty must cover all parts.

201-1.05 Payment: Fuel Tanks shall be paid for at the contract unit price **each**, which shall include full compensation for furnishing all labor, materials, tools, equipment, incidentals, and doing all work involved in purchasing and installing the tanks. Any other work required to install the tanks not specifically enumerated on the plans or in these specifications and no additional allowance will be made therefor.

Fuel tanks shall conform to the requirements of Section 201 of these Special Provisions.

202 FIRE EXTINGUISHERS AND CABINETS

202-1.01 General: A fire extinguisher and cabinet shall be provided and installed for each fuel tank as required by 2019 CFC.

202-1.01C Submittals: Submit manufacturer's technical data and installation instructions for all portable fire extinguishers required. For fire extinguisher cabinets, include dimensions and details showing mounting methods, door hardware, cabinet type and materials.

202-1.01D Quality Assurance: All portable extinguishers shall be installed in accordance with the provisions of NFPA 10. All fire extinguishers shall be UL "Listing Mark" for type, rating and classification of extinguisher indicated.

202-1.02 Materials

202-1.02A Fire Extinguisher: Fire extinguishers shall be multi-purpose dry chemical type, UL-rating 2A:20B:C, 5 lbs. nominal capacity as manufactured by Larsen's Manufacturing Company or approved equal.

202-1.02B Cabinet: Fire extinguisher cabinets and stands shall be outdoor-rated cabinets in red color with visible white lettering. Cabinets shall be AFT Fasteners & Industrial Supply Model FGC26BR or approved equal. Stands shall be AFT Fasteners & Industrial Supply Model FES2BR or approved equal.

202-1.03 Installation: Cabinets shall be installed at heights to comply with applicable regulations of governing authorities.

202-1.04 Payment: **Fire Extinguisher and Cabinets** shall be paid for at the contract unit price **each**, which shall include full compensation for furnishing all labor, materials, tools, equipment, incidentals, and doing all work involved in purchasing and installing the fire extinguisher and cabinets. Any other work required to install the fire extinguishers and cabinets not specifically enumerated on the plans or in these specifications and no additional allowance will be made therefor.

A - FEES AND PERMITS

The Contractor shall obtain all necessary and required permits for the project. All permits issued by the City Building Department will be issued at no cost to the Contractor; these fees will be paid by an appropriate City department. All other required permits shall be obtained at the Contractor's expense.

The City has applied for Hazardous Materials permits and has paid all associated fees.

The Hazardous Materials Permit Numbers are as follows:

W. College Storage Facility F20-0710

W. College Storage Facility F21-0868

Copies of the permits are attached for reference. Approved plans and permits shall be on site and available for review at all times.

The Contractor shall obtain a permit from the Bay Area Air Quality Management District (BAAQMD). The Contractor shall pay permit fees and obtain "Permit to Construct" (in the City's name) from BAAQMD. Attention is directed to Section 200-1.04C of these Special Provisions.

**HAZARDOUS MATERIALS PLAN REVIEW
A CERTIFIED UNIFIED PROGRAM AGENCY
C.U.P.A.**

Project: West College Storage Facilities Improvements
Address: 2100 W College Ave
Type of Review: AST Installation
Permit Number: F20-0710
Review Number: 3
Reviewed by: Kemplen Robbins (707) 543-3545 krobbins@srcity.org
Date: June 15, 2021

City of Santa Rosa

Attn: Andrew Wilt, PE
69 Stony Circle
Santa Rosa, CA 95401

THIS PERMIT HAS BEEN REVIEWED AND DETERMINED TO BE:

- ☐ **APPROVED**
☒ **APPROVED WITH CONDITIONS**
☐ **NOT APPROVED**

NOTE: Please review the comments and make corrections, changes and/or additions as required. Approval of this plan does not approve any omission or deviation from the applicable regulations. Final approval is subject to field inspection. Approved plans and permit shall be on site and available for review at all times.

Item #	Code Section	Comments	Correction
1		Fire extinguisher (2A:20BC) shall be readily available on site at all times and within 10-30 feet) for each tank location.	
2		Field test tanks and components prior to operation. CFC and manufacturer requirements: Primary Tank Manufacturer Specs (or 5 psig) Manufacturer Specs (or 30 mins) Secondary Tank Manufacturer Specs (or 3 psig) Manufacturer Specs (or 30 mins)	
3		Field test all fill lines and any added gravity fill lines. Gravity fed fill pipe – 5 psig for minimum of 10 minutes or as needed to soap joints and complete visual inspection.	
4		Warning signs DANGER – COMBUSTIBLE LIQUID/NO SMOKING within 25 feet required for each tank location.	

5		Label tanks for contents. Provide NFPA 703 (diamond) placards. Label piping per ASME Standard 13.1 for all applicable locations.	
6		The facility must update their CERS (http://cers.calepa.ca.gov/) for storage/use of diesel above reportable quantities on site.	
7		<p>General Health and Safety</p> <p>Owner/Operator acknowledges a comprehensive understanding of proper operating procedures relating to the regulated aboveground tank system(s), as specified by the manufacturer and regulated under CFC.</p> <p>Owner/Operator acknowledges a comprehensive understanding of proper storage and handling procedures relating to hazardous material(s) housed in the tank system(s), as specified in the associated Material Safety Data Sheets and regulated by CFC.</p> <p>Owner/Operator acknowledges a comprehensive understanding of proper response procedures resulting from an uncontrolled material(s) release, fire or explosion, as specified in the facility's Hazardous Materials Management Plan (HMMP).</p> <p>Owner/Operator acknowledges training facility personnel in proper response procedures resulting from an uncontrolled material(s) release, fire or explosion, as specified in the facility's Hazardous Materials Management Plan (HMMP)</p>	
8		<p>A Santa Rosa Fire Department Inspector must witness all tests listed on the PERMIT.</p> <p>Call the Selectron Automated Request System at (707) 543-3006 to schedule each inspection at least 48 hours in advance.</p> <p>Required Inspection – 800 – AST Installation</p> <p><i>Inspections are scheduled Monday through Thursday.</i></p> <p><i>To cancel an inspection request, call the automated system or visit the website at least 24 hours prior to the scheduled inspection time. If you do not call to cancel at least 24 hours in advance, you will be billed for the scheduled inspection; this charge will be in addition to any other inspection fees that may result from other inspections.</i></p>	

Inspector (*signature*)

Date



2373 Circadian Way Santa Rosa, CA 95407
Phone: (707) 543-3500 Fax: (707) 543-3520
www.SantaRosaFD.com

**HAZARDOUS MATERIALS PLAN REVIEW
A CERTIFIED UNIFIED PROGRAM AGENCY
C.U.P.A.**

Project: W. College Storage Facility
Address: 2100 W College Ave (Pfister Rd)
Type of Review: Pond #2 Soil Disposal Approval
Permit Number: F21-0868
Review Number: 1
Reviewed by: Kemplen Robbins (707) 543-3545 krobbs@srcity.org
Date: June 22, 2021


Michael Mirich
City of Santa Rosa
Capital Improvement Project

THIS PERMIT HAS BEEN REVIEWED AND DETERMINED TO BE:

- ☐ **APPROVED**
☒ **APPROVED WITH CONDITIONS**
☐ **NOT APPROVED**

NOTE: Please review the comments and make corrections, changes and/or additions as required. Approval of this plan does not approve any omission or deviation from the applicable regulations. Final approval is subject to field inspection. Approved plans and permit shall be on site and available for review at all times.

Item #	Code Section	Comments	Correction
1		The findings presented in the "W College Storage Facility Pumping Improvements" submittal are acceptable.	
2		The excavated soils as specifically identified from this project may be deposited in Pond #2	
3		Any materials not approved for Pond #2 fill, such as asphalt and other foreign materials listed in the Pond 2 Soil Management Plan, shall be segregated out of the approved spoils.	


Inspector (signature)


Date

B - SHOP DRAWINGS

The Contractor shall submit shop drawings and/or manufacturer's specifications for all mechanical equipment.

The Contractor shall prepare or secure and submit electronic copies of each submittal for review by the Engineer. All submittals shall be approved by the Engineer prior to manufacture, fabrication, or shipment.

After approval of the drawings by the Engineer, the Contractor shall submit copies of purchase orders for items of equipment and material to the Engineer as proof of placing the order. Each copy of a purchase order shall be submitted immediately after the order has been placed and will clearly indicate the date the order was placed. Copies of the purchase orders shall be submitted on the following items:

- A. Diesel Driven Pumps
- B. Diesel Fuel Tanks
- C. Fire Extinguisher and Cabinets
- D. Concrete structures
- E. Handrailing
- F. Pipe and Appurtenances
- G. Aggregate Base
- H. Crushed stone surfacing

Full compensation for preparing, submitting, and obtaining approval for shop drawings and other submittals shall be considered as included in the contract prices paid for the various items of work and no additional allowance will be made therefor.

C - DESCRIPTION OF WORK

The work to be performed consists, in general, of manhole modifications, containment structures, diesel driven pumps, diesel tanks, suction piping modifications, discharge piping modifications, drain piping, miscellaneous metals, site grading and surfacing, and miscellaneous improvements as shown on the plans and indicated herein.

The work to be performed consists of supplying all labor, methods, processes, implements, tools, machinery, equipment, and materials to construct the improvements as shown on the plans and indicated herein, including all incidentals and other work not mentioned herein which, required by the Special Provisions or special instructions, are to be furnished and installed, all as specified herein or as directed by the Engineer to supply complete and working systems to the satisfaction of the City.

D - TEST AND INSPECTIONS

All materials, equipment, installation and workmanship included in this contract, if so required by the Engineer, shall be tested and inspected to prove compliance with the contract requirements.

All mechanical equipment shall be tested by the Contractor to the satisfaction of the Engineer before any facility is put into operation. Tests shall be as specified herein and shall be made to determine whether the equipment has been properly assembled, aligned, adjusted, and connected. Any Changes, adjustments, or replacements required to make the equipment operate as specified shall be carried out by the Contractor as part of the work.

A summary of the equipment to be tested and warranties required for the project are as follows:

1. Diesel Driven Pump 1 Year Warranty
2. Diesel Fuel Tank 1 Year Warranty

At least 60 days before the time allowed in the construction schedule for commencing testing and start-up procedures, the Contractor shall submit to the Engineer, in duplicate, details of the procedures proposed to adopt for testing and start-up of all mechanical equipment to be operated singly and together, excepting when such procedures have been covered in the specifications.

During the testing of mechanical equipment, the Contractor shall make available experienced factory trained representatives of the manufacturers of all the various pieces of equipment, or other qualified persons, who shall instruct the City's personnel in the operation and care thereof. Instruction shall include step-by-step troubleshooting procedures with all necessary test equipment.

If, under test, any portion of the work shall fail to fulfill the contract requirements and is altered, renewed or replaced, tests on that portion when so altered, removed or replaced, together with all other portions of the work as are affected thereby, shall, if so required by the Engineer, be repeated within reasonable time and in accordance with the specified conditions, and the Contractor shall pay to the City all reasonable expenses incurred by the City as a result of the carrying out of such tests.

Where, in the case of an otherwise satisfactorily installed test, any doubt, or difference should arise between the Engineer and the Contractor regarding the test results or the method or equipment used in the carrying out of the test by the Contractor, then the Engineer may order the test to be repeated. If the repeat test, using such modified methods or equipment as the Engineer may require, substantially confirms the previous test, then all costs in connection with the repeat test will be paid by the City; otherwise, the costs shall be borne by the Contractor. Where the results of an installed test fail to comply with the contract requirements for such test, then such repeat tests as may be necessary to achieve the contract requirements shall be made by the Contractor at his own expense.

As soon as possible after each Contractor's submittal for equipment defined herein has been approved by the Engineer, and no later than the time of delivery of that equipment to the job site, a single copy of operating and maintenance instructions and procedures shall be presented to the Engineer for review and acceptance. Since such instructions are considered to be an integral part of the equipment provided, ten percent of the materials

and labor costs for each such item of equipment will be withheld from payment to the Contractor until the instructions have been accepted by the Engineer.

Items or assemblies requiring operating and maintenance instructions shall include all mechanical equipment and instrumentation equipment, and, in addition, any other items specifically noted in the specifications.

The operating and maintenance instructions shall include, as a minimum, the following data for each item of equipment.

- A. An itemized list of all data provided.
- B. Name and location of the manufacturer, the manufacturer's local representative, the nearest supplier, and spare parts warehouse.
- C. Approved submittal information applicable to operation and maintenance.
- D. Recommended installation, adjustment, start-up. Calibration and troubleshooting procedures.
- E. Recommended lubrication and an estimate of yearly quantity needed.
- F. Recommended step-by-step procedures for all modes of operation.
- G. Recommended preventative maintenance procedures and schedule.
- H. Complete parts lists, by generic title and identification number, with exploded views of each assembly.
- I. Recommended spare parts.
- J. Disassembly, overhaul and reassembly instructions.

Following completion of installation of an item of equipment, operating and maintenance instructions and procedures shall be modified by the Contractor to reflect field changes and corrections made by the Engineer. After corrections have been made, four complete copies shall be submitted.

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.

BID FORMS

CITY OF SANTA ROSA

STATE OF CALIFORNIA

WEST COLLEGE STORAGE FACILITY PUMPING IMPROVEMENTS

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: _____

Contract #: C02284

Project Title: WEST COLLEGE STORAGE FACILITY PUMPING IMPROVEMENTS

Line #	Description	Units	Quantity	Unit Price	Total Price
1	MOBILIZATION	LS	1	\$_____	\$_____
2	WATER POLLUTION CONTROL	LS	1	\$_____	\$_____
3	CLEARING AND GRUBBING	LS	1	\$_____	\$_____
4	ROUGH GRADING AND EARTHWORK	LS	1	\$_____	\$_____
5	SITE EXCAVATION	CY	178	\$_____	\$_____
6	GRAVEL SURFACING	SY	447	\$_____	\$_____
7	PUMP CONTAINMENT STRUCTURE	EA	2	\$_____	\$_____
8	DISINFECTANT CONTAINMENT STRUCTURE	LS	1	\$_____	\$_____
9	BOLLARDS	52	52	\$_____	\$_____
10	REMOVABLE STAIR RAILING	EA	2	\$_____	\$_____
11	4' AND 3' PIPING AND APPURTENANCES	LS	1	\$_____	\$_____
12	12' PIPING AND APPURTENANCES	LS	1	\$_____	\$_____
13	MANHOLE MODIFICATIONS	LS	1	\$_____	\$_____
14	DIESEL-POWERED PUMPS	EA	2	\$_____	\$_____
15	FUEL TANKS	EA	2	\$_____	\$_____
16	FIRE EXTINGUISHER AND CABINET	EA	2	\$_____	\$_____
Total: \$_____					

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: _____

This image shows a blank sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

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. C02284

WEST COLLEGE STORAGE FACILITY PUMPING IMPROVEMENTS

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 8 sheets entitled, West College Storage Facility Pumping Improvements, File Number 2020-0007, 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: _____