

SAUSALITO-MARIN CITY SANITARY DISTRICT
Marin County, California

CONTRACT DOCUMENTS

FOR THE CONSTRUCTION OF THE



TREATMENT AND WET WEATHER FLOW UPGRADES

PROJECT NO. 0055-006

Volume 1
Specifications Divisions 00 - 01

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CONFORMED SPECIFICATIONS

MARCH 2017



In Association with

TJC and Associates, Inc.
DTN Engineers

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SUASALITO-MARIN CITY SANITARY DISTRICT
Marin County, California

**TREATMENT AND WET WEATHER FLOW UPGRADE
PROJECT**

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CONFORMED SPECIFICATIONS

Volume 1

RMC Water and Environment
2175 North California Blvd., Suite 315
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SAUSALITO-MARIN CITY SANITARY DISTRICT
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TREATMENT AND WET WEATHER FLOW UPGRADE PROJECT

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Contract Document Clarification (CDC)

Sausalito-Marin City Sanitary District

Treatment and Wet Weather Flow Upgrades



Date Issued: March 31, 2017

CDC No.: 01

Project No.: 0055-012

Prepared By: Shelly Masuda (RMC)
Mark Takemoto (RMC)

Spec. or Dwg. Reference: 01040

Phone: 925-627-4100

Fax: 925-627-4101

Subject: Addendum Clarifications

Signed:


Shelly Masuda

Date

3/31/2017

Description:

The following clarification to the Treatment and Wet Weather Flow Upgrades Contract Documents is issued to the Contractor for execution in the construction of the project. All work shall be performed in accordance with the Contract Documents as modified herein.

1. Clarification: In Specification Section 01040
 - a. Typographical Correction: In Addendum No. 1, Specification Change 1.14, the change was intended to be applied to Paragraph 1.08.C.a.
 - b. Typographical Correction: In Specification 01040, in Paragraph 1.08.C.a., delete "Optional Bid Item 15" and replace with "Optional Bid Item 17."
2. Clarification: Insertion of blank pages for clarity
 - a. Typographical Correction: Blank pages were inserted throughout Specification Volumes 1 and 2 so all Sections start on an odd page.

Contract Document Clarification (CDC)

Sausalito-Marin City Sanitary District

Treatment and Wet Weather Flow Upgrades



Date Issued: March 31, 2017

CDC No.: 02

Project No.: 0055-012

Prepared By: Shelly Masuda (RMC)
Mark Takemoto (RMC)

Spec. or Dwg. Reference: 13475, 13480

Phone: 925-627-4100

Fax: 925-627-4101

Subject: EQ Return Gates

Signed:


Shelly Masuda

Date

3/31/2017

Description:

The following clarification to the Treatment and Wet Weather Flow Upgrades Contract Documents is issued to the Contractor for execution in the construction of the project. All work shall be performed in accordance with the Contract Documents as modified herein.

1. Clarification: In Specification Section 13475

- a. Gate Name Correction: In Addendum No. 1, Specification Change 1.14, the intention was to delete "Primary Influent Return Knife Gate Valve."
 - i. Delete all instances of "Primary Influent Return Knife Gate Valve (EQ-KVLV10-01)" and replace with "EQ Return - Gate No. 1 (EQ-GAT4)"
 - ii. Delete all instances of "Primary Effluent Knife Gate Valve (EQ-KVLV10-01)" and replace with "Primary Effluent Gate 5 (EQ-GAT5)"

2. Clarification: In Specification Section 13480

- a. Gate Name Correction: Delete all instances of "Equalization Gate No. 4" and replace with "EQ Return - Gate No. 1."
- b. Gate Name Correction: Delete all instances of "Equalization Gate No. 5" and replace with "EQ Return - Gate No. 2."

RESPONSE TO BIDDER QUESTIONS ISSUED IN ADDENDUM NO. 2

2.01 **Reference:** Specification "Bidder's Check List"

Question: The Bidder's Check List mentions "Acknowledgement of each addendum issued by the District, if any, with complete, signed and dated copies of each addendum attached?" Please clarify if we must include a hardcopy as mentioned above in our bid package and/or if acknowledging the addenda on the bid form is sufficient?

Response: Contractors must sign and date the cover page (page 1), only, for each addendum issued. It is not necessary to include all pages of each addendum as long as the cover page is acknowledged.

2.02 **Reference:** Specification "Bid"

Question: Please verify the correct value to be used for the cost of the Eutek HeadCell Grit Removal Unit. The Bid form shows \$126,000, but the Hydro International quote shows a value of \$162,000. Please confirm that the pricing includes all sales taxes.

Response: See Specification change 2.07 above for correction to equipment price. Per Addendum No. 1, Attachment No. 5 – Eutek HeadCell Grit Removal Unit scope of Supply, Standard Terms & Conditions of Sale, Paragraph 16. "Taxes", the price of the Eutek HeadCell Grit Removal Unit listed is for the equipment only and does not include sales tax.

2.03 **Reference:** Specification 01014

Question: Specifications 01014, Paragraph 2.07.A. states that Contractor shall salvage, sort, and deliver (at no cost) "Chert" or other valuable earth materials to NPS. Please provide a delivery location to the NPS for any Chert or other valuable materials deliveries requested be salvaged by the Contractor.

Response: The NPS accepts reusable materials on an as-needed basis. Consequently, the quantity and delivery locations are unknown. However, deliveries would be within 3 miles of the project site.

2.04 **Reference:** Specification 01014, Specification 01025

Question: Specification 01014, Paragraph 2.07.A. states that Contractor shall salvage, sort, and deliver (at no cost) "Chert" or other valuable earth materials to NPS. Specification 01025, Bid Item 6, appears to quantify such materials and provides for a payment mechanism for this work. Are we correct in that assumption?

Response: Yes. The referenced Bid Item 6 (Off-Haul of Material for Reuse within the GGNRA), is now Bid Item 5 per Addendum No. 1. Quantities are to be adjusted as necessary based on the bid volume of 804 CY.

2.05 **Reference:** Specification 01025, Specification 09960

Question: As provided in Addendum No. 1, in Specification 01025, Paragraph 3.01.A.21., under Optional Bid Item 20, "Concrete coating shall be performed in accordance with Section 09960, Paragraph 2.2.V." Per section 09960, Paragraph 2.2.V. the finish coat shall be "1 coat at 60 mils DFT." If the FFRs interior concrete is in poor condition, this may not be sufficient.

Response: See Specification changes 2.19, 2.20, 2.21, and 2.22. above.

2.06 **Reference:** Specification 01025, Specification 09960

Question: As provided in Addendum No. 1, in Specification 01025, Paragraph 3.01.A.19., Optional Bid Item 18, calls for the two FFRs to be coated. There is no coating system indicated on the finish schedule for the FFR, on any drawings, or in Specification 09960. Please advise to what coating system is to be used.

Response: See Specification change 2.24 above.

2.07 Reference: Specification 01040

Question: Specifications 01040, Paragraph 1.08.B. states that the existing 12kV Service Line is to be de-energized during soil nail installation work and that the Contractor is to provide temporary power (at Contractor's expense) while the PG&E line is out-of-service. Can the Contractor use the District's existing stand-by generator for plant power during this work? If so, who pays for the District's generator fuel, oil and maintenance during this period?

Response: No, the District's emergency backup generator is not permitted for use during construction. It is permitted for very limited testing and emergency use only. In addition, power redundancy must be maintained at all times.

2.08 Reference: Specification 01040

Question: Specification 01040, Paragraph 1.04.C.1 indicates tree removal. It was discussed and observed at the Mandatory Pre-Bid Meeting that the District has contracted with an outside firm and has removed the existing trees that were interfering with the new construction, however, the stumps and roots currently remain. Under which bid item is the removal and disposal of the remaining roots and stumps to be included in as part of the Contractor's bid?

Response: Tree removal has been removed from the Contract Documents and has been completed in advance of the Project bid. See Specification Changes 2.15, 2.16, and 2.18 above.

Disposal of remaining stumps and roots from tree removal shall be paid for under Bid Item 4 - Off-Haul of Unsuitable Material.

2.09 Reference: Specification 01040

Question: Specification 01040, Paragraph 1.04.C.3 states that the Contractor is to pot-hole existing utilities/structures at the location of the new soil nail walls and to relocate utilities if necessary. Is this work to be paid for as part of Bid Item 12 – Allowance for demolition of unknown pipelines, 6-inch nominal diameter and smaller?

Response: No, these are two separate tasks. Bid Item 12 (now Bid Item 13 per Addendum No. 1) is intended for unknown pipes which have been abandoned in place. This could be within or outside of work zones but shall not include abandoned pipe in soils marked for off-haul. Potholing is intended to identify existing utilities which have not been abandoned so that they can be protected and relocated as necessary. Potholing shall be paid for as part of Bid Item 16 - All Other Work.

2.10 Reference: Specification 01040

Question: Specification 01040, Paragraph 1.04.C.4. states that the Contractor shall provide temporary sewer bypass of flows with the work associated with the Fort Baker and Main Street Sewers. Can the District please provide the flow rate information for these respective sewer pipelines?

Response: See Sheet 38, Dwg. No. C20, Notes 6 and 7.

2.11 Reference: Specification 01040

Question: Specification 01040, Paragraph 3.01 states that the Contractor shall obtain all required permits necessary for the completion of the work. Can the District please provide a listing of known permits that may be required of the Contractor for the construction of this project?

Response: The District has secured a variety of permits, including a BCDC permit. All permit fees have been paid by the District. The only outstanding permit requirement is to finalize a conditional permit from the National Park Service (NPS). For this permit, all fees have been paid and the project is approved pending Traffic Control and SWPPP for which the Contractor is responsible. For traffic control we only need to address any truck and/or equipment staging, and ensure that public access is maintained along East Road. This will

primarily be done during construction on an as needed basis. A SWPPP plan will be required prior to mobilization.

2.12 Reference: Specification 01353

Question: Specification 01353, Paragraph 1.4.A.1.a. requires the Contractor to submit to the National Park Service (NPS) for their approval a Hazardous Materials and Waste Work Plan a minimum of fifteen working days before the expected beginning of site activities. What is the anticipated NPS submittal approval turn-around time for this approval?

Response: Approval time will depend on the number of required submittal iterations. However, NPS review time is anticipated to coincide with the 15 working day review time requirement.

2.13 Reference: Specification 01353

Question: Specification 01353, Paragraph 1.4.A.1.a. requires the Contractor to submit to the National Park Service (NPS) for their approval a Hazardous Materials and Waste Work Plan a minimum of fifteen working days before the expected beginning of site activities. How is the Contractor reimbursed by the District for any (currently unknown) "additional" requirements to the Contractor's initial work plan?

Response: See Specification "General Conditions," Paragraph 4. Where quantities cannot be adjusted based on the bid schedule, cost and schedule impacts shall be negotiated with the Owner. Alternatively, work may proceed on a time and materials basis if agreed upon by the Contractor and Owner. Daily work reports shall be provided for all work performed on a time and materials basis.

2.14 Reference: Specification 01353

Question: Specification 01353, Paragraph 3.1.B alerts the Contractor to the possibility of potentially contaminated soil areas on the project site and requires PID Screenings of the excavated soils at a minimum of 10' intervals in these areas. Can the District please identify or otherwise quantify areas of known or suspected contamination so that the Contractors can estimate the number of screenings and lab tests required?

Response: The District has no knowledge of existing soil contamination. However, there is a potential for contamination in the area around the existing diesel storage tank. The District maintains double containment for the storage tank with leak detectors and performs regular inspections.

2.15 Reference: Specification 01353

Question: Specification 01353, Paragraph 3.1.B alerts the Contractor to the possibility of potentially contaminated soil areas on the project site and requires PID Screenings of the excavated soils at a minimum of 10' intervals in these areas. How will the Contractor be compensated due to delays encountered in handling unknown contaminated soils? Specification 01353, Part 4, is conflicting and confusing as to how/what the Contractor will be reimbursed for this currently undefined scope-of-potential extra work?

Response: In the event contaminated soils are discovered, the Contractor shall appropriately contain all potentially contaminated soil on site. The Contractor will be granted up to 25 calendar days of work stoppage within the area of contamination to support further testing and to coordinate disposal. In the event the Contractor is required to remove additional material to capture contaminated soil, backfill over-excavated soil and/or off-haul and dispose of contaminated soil, the Contractor shall provide a Change Order request to the District for reimbursement.

2.16 Reference: Specification 01500, Drawing G-8

Question: The District has identified four (4) off-site Staging Area Locations for the Contractor's use. Is there any "third-party" coordination or rental/lease/use cost(s) associated with any of these depicted locations? Additionally, are there any time limit constraints associated with any of the listed sites use?

Response: The staging locations shown must be approved in advance and on an as- needed basis. There are additional staging areas within Fort Baker (near the project site) which may be approved through coordination with the National Park Service (NPS). There will be no fees for these staging locations but the NPS will require traffic control and SWPPP plans prior to granting approval. There are no specific time constraints in the park for staging, however, staging within Fort Baker is anticipated to be short term (less than one month) and must be maintained and kept clean/safe. In addition, public access along East Road for foot, bike and vehicle traffic must be maintained at all times. For staging in the City of Sausalito, there is a large dirt lot with a chain link fence approximately 2 miles from the project site. This location will require approval from the City of Sausalito but is generally available and free of charge. Staging at the Army Corps is for temporary laydown only. This location may or may not be available but is generally free of charge.

2.17 Reference: Specification 02200

Question: Specification 02200, Paragraphs 3.6.A, 3.6.B., and 3.6.C. contain conflicting information as to the acceptability of Blasting for the excavation of Rock. Is Controlled Blasting allowed on this project for the removal of rock materials that cannot otherwise be excavated using conventional hydraulic excavation equipment? If not, is the use of a hydraulic breaker (or similar) attachment to a hydraulic excavator to remove Rock materials considered as Rock Excavation?

Response: It is intended that no blasting take place unless there are no other means of removal. All other available means shall be attempted prior to the District allowing blasting. All excavation should initially be performed with a large excavator with rock teeth. Any material that cannot be excavated with equipment per definition of "hard bedrock", would be considered "hard rock excavation" per bid rates and would require a hydraulic breaker or other means of hard rock excavation.

2.18 Reference: Specification 02571, Specification 09960

Question: Please clarify the lining requirement for exposed steel pipe. Specification 02571, Paragraph 2.5 calls for cement mortar lining while Specification 09960, Paragraph 3.13 calls for FBE or E1.

Response: See Specification change 2.23 above.

2.19 Reference: Specification 03200

Question: Specification Section 03200 – Concrete Reinforcement appears to be missing from the Contract Documents. There is, however, a Specification Section 05520 – Metal Stairs in with Division 03. Specifications Section 05520 – Metal Stairs appears in both Division 03 – Concrete as well as Division 05 – Metals. Please provide Specifications Section 03200 – Concrete Reinforcement.

Response: See Addendum No. 1, Attachment No. 4.

2.20 Reference: Specification 09960

Question: Is there a coating requirement for PVC pipe? If so, what system?

Response: See Section 09960, Paragraph 3.13 – Coating Schedule, "Influent Sewer and other PVC or HDPE pipe."

2.21 Reference: Specification 09960

Question: Is there a coating requirement for FRP pipe? If so, what system?

Response: See Specification change 2.24 above.

2.22 Reference: Specification 14700

Question: Specification 14700, Paragraph 2.8.B. states: "The following spare parts shall be provided the shaftless screw conveyor." This appears to be a typographical error as this specifications section is for the Turntable.

Response: See Specification change 2.49 above.

2.23 Reference: Specification 15005

Question: Is there a requirement for piping to be coated for identification purposes?

Response: See Section 15005, Paragraph 3.2.A.

2.24 Reference: Specification 16000, Specification 16262, and Specification 16920

Question: Please provide the complete part number and description of existing VFDs to match existing. Please advise on the type of conduit to use within the electrical room.

Response: See Specification changes 2.49, 2.50, 2.51, 2.52, and 2.53 above.

2.25 Reference: Drawing G-1

Question: Can the District please provide these drawings as soon as possible?

Response: Plans are available on the District's website for free download. See www.SMCSd.net and click the link in the center of the page titled, "Treatment and Wet Weather Flow Upgrade Project Bid Documents."

2.26 Reference: Drawing G-6

Question: For the purpose of determining the outlet reinforcement, please advise on the working and design pressures for the 16" FLE, 16" SE and 10" EQS lines.

Response: On Sheet 7, Dwg. No. G-6 as provided in Addendum No. 1, see "Process Fluid Pipe Schedule."

2.27 Reference: Drawing G-6

Question: Please confirm that the EBI/EBR service shown in the Pipe Schedule on Dwg. No. G-6 is the same as the EQI/EQR service pipe called out on Dwg No. M100-4 and other drawings.

Response: See Sheet 7, Dwg. No. G-6 as provided in Addendum No. 1. See also Drawing change 2.01 above. EQI is an incorrect acronym.

2.28 Reference: Drawing G-6

Question: Will FRP pipe and fittings be acceptable as the containment pipe for the FOS and FOR lines? The Process Fluid Pipe Schedule on Drawing G-6 indicates that the FOS and FOR lines are to be steel, but does not address the containment pipe material. Detail 1 on Reference Drawing M-35 shows a 6" FRP containment pipe for the existing system.

Response: See Sheet 125, Dwg. No. M100-2. Per callout, 3/4" FOS and 1" FOR shall be contained in 6" PVC containment pipe.

2.29 Reference: Drawings G-6 and M100-3

Question: Drawing M100-6 depicts 10-inch diameter "EQR" and 14-inch "EQS" piping systems. These piping systems are not listed as part of the "Process Fluid Pipe Schedule" shown on Drawing G-6. Please advise and provide additional information on these piping systems.

Response: See response to Question 2.27 above.

2.30 Reference: Drawings G-6, M100-11, M100-13, and M100-14

Question: The "Process Fluid Pipe Schedule" on G-6 lists "DG" for digester gas piping, however, the piping materials are list as "N/A." Digester gas piping is also shown on M100-11, Detail F, M100-13, Detail H, and M100-14, Detail I. Will this project require Digester Gas Piping Systems? If so, please provide pipe sizes, points-of-connection, valves, equipment and materials of construction.

Response: See Sheet 7, Dwg. No. G-6 as provided in Addendum No. 1.

2.31 Reference: Drawings D-2 and S030-1

Question: The original as-builts show a 3'-6" x 3'-2" beam in the North/South direction on 30" caissons. The new plan says to match existing. The demo plans do not refer to any beams or caissons in the viewing area, just to demolish concrete platform and road per boundaries on C100-2, but the caissons and beam appear to be under the viewing area and conflicting with the new CIDH piers and beams. Are the caissons and beams shown on sheet S030-1 south of the demo boundary new construction? If so, please consider moving the demo boundary to the south of the items to allow for construction. Are the caissons and beams existing as shown on S030-1? If so, does a portion of Beams 1 need to be demolished? What does (E) B4 represent? Is (E) B4 new construction or just an example of the size of the existing beams? What does the phantom line in Section C on S030-1 represent? Is this a new thickened slab edge or existing? Please provide more detailed information for the work in this area.

Response: See Drawing changes 2.02 and 2.18 above.

The new viewing area encroaches into the existing causeway necessitating the need to demolish the existing 3'-6" x 3'-2" beam and associated (2) 30" caissons. Existing beam, Mark B1, will be shortened (partial demolition) and its steel incorporated into the new construction.

Items identified as "Match (E) B4," "Beam 3'-6"x3'-2"," and "30"Ø Caisson (Typ of 2)" are new and are to be constructed similar to their original 1981 design. Items identified as "(E)B1" are existing (screened back) and will require partial demolition (shortened) to accommodate the new viewing area/causeway.

The "Match (E) B4" beam section is represented in Section D on S030-1. Additional information on the beams called out to match existing can be found in the Beam Schedule on Sheet S-24 from the 1981 Record Drawings.

Assuming "phantom lines" are referring to the screened lines, they represent items identified as "Match (E) B4" within the plan and will be new construction. Note, they are incorrectly identified as existing (screened back) and by callout, e.g., "(E) Slab." See Drawing change 2.18 above.

2.32 Reference: Drawing C100-2 and Geotechnical Report (Miller Pacific Engineering Group, July 15, 2013)

Question: There is little information provided as to the location of concrete construction joints on either Drawing C100-2 or the Geotechnical Report prepared by the Miller Pacific Engineer group, for the new Plant Access Road. Is there a specific requirement for the location (max spacing) of concrete construction joints (not otherwise depicted) for this project?

Response: On Sheet 41. Dwg. No. C100-2, "AC Paving" is called out for the new Plant Access Road adjacent to the new Headworks/EQ structure. Concrete construction joints not applicable to this portion of the Plant Access Road.

For spacing of concrete construction joints pertaining to concrete paving, see revised Note 5 per Drawing change 2.05 above.

2.33 Reference: Drawing C-9

Question: Drawing C-9, Note 4 states that there is an existing wye with a Ductile Iron plug located on the beach. Please provide the distance between this wye and the connection between the existing Force Main and the new 18-inch INF and 20-inch PI lines.

Response: There is a tapping sleeve with a 12" blinded gate valve mounted on the beach force main and adjacent to the wyes. The distance from this 12-inch valve to the existing 20-inch GM line is approximately 80 feet. The final locations of the 20-inch PI and 18-inch INF will be slightly closer than the existing 20-inch GM line as shown in Drawing C-9.

2.34 Reference: Drawings C-9 and C200-2

Question: Section A on Drawing C-9 is not to scale but appears to show that a 3-foot wide and 3-foot deep section of grouted rip rap that must be removed in addition to the existing CLSM. Section A on Drawing C-9 suggests that there is approximately 42.5 inches of cover over the 20" Force Main at the location of the connection. Drawing C200-2 indicates that the invert of the existing 20-inch diameter Beach Force Main is at EL -1.93. This location is underneath the Causeway. Please confirm that the depth of cover over the 20-inch Force Main is about 42.5 inches.

Response: The depth of cover is between 40 - 50 inches.

2.35 Reference: Drawings C-9 and C200-2

Question: On C-9 and C200-2, the existing Beach Force Main is shown under the existing causeway. Please provide information as to whether and to what degree this location is affected by tidal action.

Response: This location is directly affected by tidal action. The location is under water during high tide and exposed during low tide. It will be necessary to perform excavation and tie-in during low tide. Further, a zero (0) to minus tide may be required to minimize ground water and to help prevent large waves from entering the excavation. The Sausalito ferry periodically produce significant waves.

2.36 Reference: Drawings C-9 and C200-2

Question: On C-9 and C200-2, the existing Beach Force Main is shown under the existing causeway. Will it be necessary to install a cofferdam in order to perform work in this area?

Response: If work can be coordinated with low tides, a cofferdam may not be required. However, the use of a coffer dam is acceptable but at no additional cost to the Owner. Note that the beach in this location is primarily rock.

2.37 Reference: Drawings C-9 and C200-2

Question: On C-9 and C200-2, the existing Beach Force Main is shown under the existing causeway. Will the Contractor be allowed to remove a portion of the causeway for access in order to connect the new 18-inch INF and 20-inch PI lines to the existing 20-inch Beach Force Main?

Response: The Causeway may be temporarily modified to facilitate work. However, a submittal of all demo and reconstruction plans would be required prior to initiating any work on the Causeway. Structural design requirements would need to be maintained.

2.38 Reference: Drawings C-9 and C200-2

Question: On C-9 and C200-2, the existing Beach Force Main is shown under the existing causeway. If the work area is affected by tidal action, will the Contractor be allowed to discharge water pumped from the excavation into the existing Primary Clarifier?

Response: Where no sewer contamination is present, ground water may be pumped directly into the bay using a filter sock. If any sewer has been exposed to the excavation, ground water may be pumped from the excavation back into the treatment plant's recycle pump station (located on the South side of the existing clarifier) under the following conditions: 1) a baffled tank shall be used to separate sand and rock, 2) a filter sock will be required on the baffled tank discharge hose to limit silt, and 3) the flowrate shall be limited to 50 GPM max.

2.39 Reference: Drawings C-9 and C200-2

Question: On C-9 and C200-2, the existing Beach Force Main is shown under the existing causeway. If the Contractor is not allowed to discharge water from the excavation into the existing Primary Clarifier, will a special permit be required in order to return the water to the Bay?

Response: No, as long as existing permit requirements are maintained, including the required SWPPP for the National Park Service. In general, storm water silt is not to be delivered to the Bay.

2.40 Reference: Drawings C-9 and C200-2

Question: Drawing C-9, Note 4 states that a filter sock will be required when returning sewage to the Primary Clarifier in order to dewater the Force Main. The Contract Drawings do not show a hot-tap, line stop and bypass for the 20-inch Beach Force Main similar to the one required for the 28-inch Influent Sewer and shown on Drawing C200-4. If it is necessary to bypass the flow of the 20-inch Beach Force Main around the connection point, will this bypass require a filter sock or some other type of filtration?

Response: A bypass is not required on the Beach Force Main. This line has been abandoned as a primary plant influent line and now serves to deliver flow from 19 homes to the District's Main Street pump station. To clarify, this line flows from a point approximately 1,000 feet to the North to Main Street, Sausalito, located about 2,000 feet to the North. There is no flow at the plant location, only standing sewer. After dewatering this end of the line (which is possible due to sags in the line just upstream) it may be isolated using a line stop mounted on the 12-inch gate valve or by using a plug in the upstream wye to facilitate tie-in of the new lines.

2.41 Reference: Drawings C-9 and C200-2

Question: If a temporary bypass is required for the 20-inch Beach Force Main, will the Contractor be allowed to connect the bypass directly to the existing 20-inch PI line that runs from the existing Energy Dissipation Structure to the 20-inch Beach Force Main?

Response: See response to Question 2.40 above.

2.42 Reference: Drawings C-9 and C200-2

Question: Although a hot tap, line stop and bypass is shown on Sheet C-200-4 for the 28-inch Main Street Gravity Main, no such hot tap, line stop and bypass is shown for the 20" Beach Force Main. Will the Contractor be allowed to take the Beach Force Main out of service for the length of time required to complete the connection between the 20-inch Beach Force Main and the new 18-inch INF and 20-inch PI without having to install a temporary bypass?

Response: See response to Question 2.40 above.

2.43 Reference: Drawing C100-1

Question: Note 4 on Drawing C-100-1 indicates that the existing manhole be rehabilitated, yet no coating system is shown or mentioned in Section 09960. Please provide coating system.

Response: See Specification change 2.24 and Drawing change 2.04 above.

2.44 Reference: Drawings C100-2, C200-1, A100-1 through 5, and S100-1 through 10

Question: Please provide termination points for the Caltrans ST-40 Bridge Rail above the Lower Soil Nail Wall shown on C200-1. Will end blocks be required for any of the bridge rail (per Caltrans details)? Elevations on sheets A100-3 and A100-4 suggest so, although all other drawings show none are required. Please provide location and dimensions if end blocks are required.

Response: See Drawing changes 2.03 and 2.05 above.

2.45 Reference: Drawings CP-3 and CP-4

Question: Details 1 - 6 on CP-3 and Details 3 and 5 on CP-4 appear to depict the installation of new T-Lock liner, including the PVC T-Lock Ribs, to be applied to existing concrete structures. T-Lock Liner with T-Lock Ribs is typically only applied on new concrete surfaces as the ribs anchor the PVC Liner to the new concrete. Please clarify your intent with these drawings and details.

Response: See Drawing changes 2.06, 2.07, 2.08, 2.09, 2.10, 2.11, 2.12, 2.13, 2.14, 2.15, and 2.16.

2.46 Reference: Drawings A100-1 A100-3, and E100-7

Question: Drawings A100-1, A100-3 and E100-7 show an Exhaust Fan, but neither a fan schedule or specification was provided for this equipment. Please provide the requirements for the Exhaust Fan.

Response: See Specification change 2.01 above.

2.47 Reference: Drawing L20-3

Question: Please provide a detail and locations for the "Plant Pocket Locations on Shotcrete" referred to on Sheet L20-3.

Response: See Drawing change 2.19 above.

2.48 Reference: Drawing S200-1

Question: There is a callout that the geofoam backfill is to be installed for the full height of the new soil nail wall yet the finished grades of the new compacted earthen fill materials do not extend to the full height of the new soil nail walls. Is it the intent of the District for the Contractor to install the Geofoam backfill materials to only the elevation of finished grade(s) around the new Clarifier and EQ Basin?

Response: The purpose of the geofoam is to prevent any long-term movement of the soil nail wall from inducing a load on the adjacent structures. The theory being that the geofoam compresses, "absorbing" this load. The expectation is that wherever the soil nail wall comes into contact with an adjacent structure, either directly or indirectly via backfill, that geofoam be installed. Geofoam is not required at locations where a natural gap occurs between the soil nail wall and adjacent structure, such as locations where top of backfill is below adjacent structures.

2.49 Reference: Geotechnical Report (Miller Pacific Engineering Group, July 15, 2013)

Question: In the Geotechnical Report (Miller Pacific Engineering Group, July 15, 2013), in Section V. Conclusions and Recommendations, Item B.2 recommends that the bid schedule contain a line item for Rock Excavation. We are assuming that Bid Item 4 – Haul-off Unsuitable Materials handles the off-haul and disposal of "rock" material, however, how is the excavation of rock material to be paid for? Please clarify where the payment for rock excavation and haul-off are to be paid for.

Response: Off haul and disposal of rock material is included in Bid Item 4 (as renumbered per Addendum No. 1) and will be compensated for as such. Bid Item 4 also includes all remaining stumps from tree removal which was already performed (see also Specification change 2.16 above).

Excavation of hard rock is included in Bid Item 14 (as renumbered per Addendum No. 1) and will be compensated for as such.

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Sausalito-Marín City Sanitary District

#1 East Rd
Sausalito, California 94965

TREATMENT AND WET WEATHER FLOW UPGRADE

NOTICE INVITING BIDS

1. The Sausalito-Marín City Sanitary District, California hereby invites bids for the project, in accordance with California Public Contract Code and other applicable law, and the following paragraphs. Bids will only be accepted from General Contractors that have been pre-qualified by the District for this project. Pre-qualified General Contractors are posted on the District's website. Bids from General Contractors that have not been pre-qualified to bid on the project will not be opened or accepted:
2. **All bids must be delivered to the Sausalito-Marín City Sanitary District, #1 East Road, Sausalito, California 94965 on or before 2:00 p.m., Pacific Standard Time, on Friday, February 3, 2017.** Bids will be opened and read publicly at that time. Bids must be made on the bid forms included in the bid package. Bids that are submitted late according to the official time kept by the District Clerk or a designee will be returned unopened. Bids submitted by facsimile or other electronic means will not be accepted. Bids that are incomplete or that otherwise do not conform to the requirements specified in the bid package may be deemed non-responsive.
3. **Notice is hereby given of a pre-bid meeting at 10 a.m., Pacific Standard Time, on Tuesday, December 13, 2016. The pre-bid meeting will begin at the District's Main Office located at 1 East Road, Sausalito, CA. Attendance at a pre-bid meeting is MANDATORY to ensure all bidders are familiar with the project sites.** Bidders shall complete the Bid Label as evidence that they visited the site. Please provide time for parking prior to the meeting as public parking is limited.
4. The project Contractor shall furnish all tools, equipment, apparatus, facilities, labor and material necessary to perform and complete in a good and workmanlike manner the construction of the TREATMENT AND WET WEATHER FLOW UPGRADE as shown in the project technical specifications and plans and in accordance with the contract documents. The work includes but is not limited to; 1) demolition of select existing facilities; 2) civil/earthwork, including soil nail retaining walls for a new access road and process structures; 3) yard and plant utility piping, including re-routing of the Main Street and Fort Baker influent sewers; 4) relocation of the existing 12kV electrical service and new switchgear 5) new equalization storage tank and headworks structure, including all

Sausalito-Marín City Sanitary District
Treatment and Wet Weather Flow Upgrade
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associated equipment; 6) new primary clarifier; 7) rehabilitation of the fixed film reactors, including new feed pumps and media replacement; 8) new secondary polishing disk filters including filter feed pumps; and appurtenant work as needed to construct a complete and operational project as specified in these Contract Documents. All work shall be completed within **730 calendar days** of the project commencement date specified in the notice to proceed for the project. **Liquidated Damages apply for this project as defined in paragraph 4 of the Agreement.**

5. All of the project work is to be done in accordance with the bid packages on file in the District's office at Sausalito-Marín City Sanitary District, #1 East Rd, Sausalito, California 94965 and at the locations specified below. Bid packages are available for free download from the Sausalito-Marín City Sanitary District's website; SMCSd.net

6. Complete bid packages are located at the following sites:

Bay Area Builders Exchange

<http://bayareabx.com/>

Phone 925-685-8630

aprilh@ccbx.com

iSqFt Plan Room

800-364-2059 ext. 8273

california@isqft.com

McGraw Hill Construction Dodge

Phone 626-932-6137

Fax 800-360-6397

catherine_cardona@mcgraw-hill.com

Napa Solano Builders Exchange

Phone 707-255-2515

Fax 707-255-2749

planroom@snbe.com

North Coast Builders Exchange

Phone 707-542-9502

Fax 707-542-2027

planroom@ncbeonline.com

Peninsula Builders Exchange

Phone 650-591-4486

Fax 650-591-8108

support@constructionplans.org

CMD

770-209-3396

Jeannie.kwan@cmdgroup.com

San Francisco Builders Exchange

Phone 415-282-8220

Fax 415-821-0363

djohnsonsf@sbcglobal.net

7. Questions concerning the project or the bid package must be submitted by facsimile or email to Kevin Rahman, Associate Engineer at least ten (10) working days before the time specified for bid opening. Where appropriate, the District may respond to such questions by addenda transmitted to all bid package recipients.
8. In accordance with California Public Contract Code, all bids must be presented under sealed cover and include one of the following forms of bidder's security: cash, cashier's check made payable to the District, certified check made payable to the District, or a bidder's bond. The amount of bidder's security provided must

Sausalito-Marín City Sanitary District
Treatment and Wet Weather Flow Upgrade
Notice Inviting Bids

equal at least ten (10) percent of the total of the bid price for the base bid and the additive or deductive items listed in this notice. The successful bidder must submit to the District complete, executed copies of all documents specified in the contract checklist included in the bid package within ten (10) working days of receiving written notice of award of the project. Bidder's security of any successful bidder that fails to do so will be forfeited to the District. The documents required pursuant to the contract checklist include, but are not limited to, a payment or labor and materials bond in an amount of at least 100 percent of the amount payable by the terms of the project contract and that satisfies the requirements of California Civil Code Sections 9550-9554, and a performance bond in an amount of at least 100 percent of the amount payable by the terms of the contract. All project bonds must be executed by an admitted surety insurer in accordance with applicable law and acceptable to the District.

9. **Pursuant to California Public Contract Code Section 3300, a Class A California contractor's license is required to bid on the project.** In accordance with California Business and Professions Code Section 7028.15, all project work must be performed by properly licensed contractors and subcontractors with active licenses in good standing as of the date and time specified for bid opening. Bids that do not satisfy applicable licensing requirements will be considered non-responsive. Licenses must be issued by the Contractor's State License Board of California and must be maintained in good standing throughout the project term. In accordance with California Business and Professions Code Section 7030.5, bidders must verify their Contractor's License number and license expiration date on the bid forms under penalty of perjury.
10. Pursuant to Public Contract Code 1725.5, no contractor or subcontractor may be listed in a bid or awarded a contract for a public works project unless it is registered with California's Department of Industrial Relations. In accordance with California Public Contract Code Section 6109, contractors and subcontractors who are ineligible to perform work on public works projects pursuant to California Labor Code Sections 1777.1 or 1777.7 may neither bid on, be awarded or perform work as a subcontractor on the project.
11. In accordance with California Labor Code Section 1771, not less than the general prevailing rate of per diem wages for work of a similar character in the locality in which the project is to be performed, and not less than the general prevailing rate of per diem wages for holiday and overtime work fixed as provided in the California Labor Code shall be paid to all workers engaged in performing the project. In accordance with California Labor Code Section 1770 and following, the Director of Industrial Relations has determined the general prevailing wage per diem rates for work in the locality in which the project is to be performed. In accordance with California Labor Code Section 1773, the District has obtained the general prevailing rate of per diem wages and the general rate for holiday

and overtime work in the locality in which the project is to be performed for each craft, classification or type of worker needed to perform the project. In accordance with California Labor Code Section 1773.2, copies of the prevailing rate of per diem wages are on file at the District and will be made available on request. In accordance with California Labor Code Section 1777.1, contractors and subcontractors that are found guilty of willfully violating Chapter 1 of Part 7 of Division 2 of the Labor Code (except for Section 1777.5), or that are found guilty of such violations with intent to defraud, and entities in which such contractors or subcontractors have any interest, may be ineligible to bid on, be awarded, or perform project work as a subcontractor

12. In accordance with California Public Contract Code Section 3400, bidders may propose equals of products listed in the technical specifications or project plans by manufacturer name, brand or model number, unless the technical specifications or plans specify that the product is necessary to match others in use. Complete information for products proposed as equals must be submitted to the District's Office for review at least ten (10) working days before the time specified for bid opening in accordance with the bidders instructions contained in the bid package.
13. In accordance with California Public Contract Code Section 22300, except where prohibited by federal regulations or policies, the successful bidder may, on request and at its expense, substitute securities in lieu of amounts withheld by the District from progress payments to ensure performance under the contract in accordance with the contract documents. Such securities will be subject to the terms of the escrow for security deposit agreement contained in the contract documents
14. The District reserves the right to reject any and all bids and/or to waive any bid irregularities to the extent permitted by law. If the District elects to award a contract for performance of the project, the contract will be awarded in accordance with California Public Contract Code Section 20162 and other applicable law to the responsible bidder submitting a responsive bid with the lowest total bid price for the base bid. All bids will remain valid for 90 days after the bid opening. Except as permitted by law and subject to all applicable remedies, including forfeiture of bidder's security, bidders may not withdraw their bid during the 90 day period after the bid opening.

Sausalito-Marín City District Sanitary District

By: _____ Title: _____

Dated this _____ day of _____, _____.

PUBLISH:

Sausalito-Marín City Sanitary District
Treatment and Wet Weather Flow Upgrade
Notice Inviting Bids

DATES: _____ and _____

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Sausalito-Marín City Sanitary District
#1 East Rd
Sausalito, California 94965

INSTRUCTIONS TO BIDDERS

1. DEFINITIONS

- 1.1 Bid forms. The bid forms are the forms contained in Volume 1 of the bid package.
- 1.2 Bid package. A complete bid package consists of the following documents: Notice Inviting Bids, Instructions to Bidders, Bidder's Check List, Bid Label, Bid, Non-collusion Affidavit, Bid Bond, Contractor License Information, Designation of Subcontractors, Major Equipment and Material Suppliers, Products Identified by Name and Substitution, Workers Compensation Insurance Certification, Debarment Certification, Bidder's Signature Page, Contract Check List, Agreement, Performance Bond, Payment/Labor and Materials Bond, Maintenance Bond, Escrow for Security Deposit Agreement, General Conditions, General Requirements, and Project Plans and Technical Specifications.
- 1.3 Contract documents. The contract documents refer to all of the documents incorporated into the final Project contract as listed in the contract.
- 1.4 Project. The Project is the TREATMENT AND WET WEATHER FLOW UPGRADE as described in the Technical Specifications and Project Plans included in the project bid package.
- 1.5 Project Plans. The Project Plans are primarily graphic detailed requirements concerning the Project contained in the bid package.
- 1.6 Technical Specifications. The Technical Specifications provide detailed requirements concerning the Project and are contained within the Project Plans.
- 1.7 General Requirements. The General Requirements describe general procedures and constraints for completing the Project included in the bid package.
- 1.8 Deferred Submittal. Deferred submittal items have not been designed by the Engineer. The Contractor shall be responsible for designing deferred submittal items in accordance with the Contract Documents. Unless noted otherwise, deferred submittals shall be stamped and signed by a

Sausalito Marin City Sanitary District
Treatment and Wet Weather Flow Upgrade
Instructions to Bidders

professional civil or structural engineer registered in California. Deferred submittal items shall be submitted to the Construction Manager for review and for approval. Deferred submittal items shall not be fabricated or installed until the submittal documents have been reviewed and approved by the District.

2. BIDDER'S REPRESENTATIONS

Each bidder by submitting a bid represents that:

- 2.1 The bidder has read and understands the bid package and the bid is in accordance with all of the requirements of the bid package and applicable law.
- 2.2 Neither the bidder nor any subcontractor included on the list of proposed subcontractors submitted with the bid are ineligible to perform work on public works projects pursuant to California Labor Code Sections 1777.1 or 1777.7.
- 2.3 The bidder understands that quantities of unit price items may vary from the estimates provided in the technical specifications.
- 2.4 Representatives of the bidder have visited the Project site and have familiarized themselves with the conditions under which the Project work is to be performed so as to ensure that the Project work may be performed for the amount bid.
- 2.5 The bidder has informed the District in writing no later than ten (10) working days prior to the time specified for bid opening of any apparent conflicts, errors, or ambiguities contained in the bid package or between the contents of the bid package and the Project site.

3. PRE-BID COMMUNICATION AND INTERPRETATION OF THE BID PACKAGE

- 3.1 Any bidder that discovers any apparent conflicts, errors, or ambiguities contained in the bid package or between the contents of the bid package and the Project site, or that has questions or requires clarification concerning the bid package or its intent must inform the District in writing as soon as reasonably possible, but no later than ten (10) working days before the date specified for bid opening. Such notice to the District must be sent to the address specified in the Notice Inviting Bids for questions concerning the bid package. Questions received less than five (5) working days before the time specified for opening bids may not be answered.

- 3.2 Any interpretation, correction or change of the bid package prior to bid opening will be made by addendum signed by an authorized representative of the District and transmitted to all bid package recipients. No other interpretation or information concerning the bid package issued prior to the date specified for opening bids will be binding. All addenda signed by an authorized representative of the District and issued prior to the time and date specified for opening bids will form a part of the contract documents and must be acknowledged on the bid forms. Any changes, exceptions or conditions concerning the Project and/or the bid package submitted by any bidder as part of a bid may render that bid non-responsive.
- 3.3 Questions concerning the project or the bid package shall be in writing, and may be submitted by facsimile or email to Kevin Rahman, Associate Engineer at least ten (10) working days before the time specified for bid opening. The District's facsimile number is 415-332-0453. The email address is kevin@smcsd.net.

4. PRE-BID ACCESS TO THE PROJECT SITE

- 4.1 Prior to submitting a bid, it will be the sole responsibility of each bidder to conduct any additional examination, investigation, exploration, test, study or other inquiry and to obtain any additional information pertaining to the physical conditions (including surface, subsurface, and underground utilities) at or near the Project site that may affect the cost, progress, or performance of the Project, and that the bidder deems are necessary to prepare its bid for performance of the Project in accordance with the bid package and contract documents. Bidders seeking any such additional examination or other inquiries or information concerning the Project will do so at the bidder's sole expense.
- 4.2 Bidders seeking to conduct any additional examination or other inquiry at the Project site must request site access from the District at least two (2) working days in advance. The location of any excavation, boring or other invasive testing will be subject to approval on behalf of the District and any other agencies with jurisdiction over such testing. Bidders may not conduct tests at the Project site prior to obtaining District approval. The District may require bidders to execute an access agreement prior to approving testing at the Project site. Once approved testing is complete, Bidders must fill all trenches or holes, restore all pavement to match existing structural section, and otherwise clean up and restore the test site to its pre-test condition.
- 4.3 Bidder's must visit the Project site prior to making a bid, and shall complete the Bid Label as evidence of this visit. Attendance at a pre-bid

meeting is MANDATORY to ensure all bidders are familiar with the project site.

5. BIDDING PROCEDURE

- 5.1 Bids must be delivered to the Sausalito-Marín City Sanitary District, #1 East Rd, Sausalito, California 94965, no later than the time and date specified in the Notice Inviting Bids. Bids will be opened and read publicly at that time. Bids that are submitted late according to the official time kept by the District Clerk or a designee will be returned unopened. Telephones for use by bidders are not available at the District offices. Note that limited cell phone coverage may be experienced at the District's office.

Bids will only be accepted from General Contractors that have been pre-qualified by the District for this project. Pre-qualified General Contractors are posted on the District's website. Bids from General Contractors that have not been pre-qualified to bid on the project will not be opened or accepted.

- 5.2 In accordance with California Public Contract Code Section 20804.5, bids must be presented under sealed cover. A completed bid label form furnished with the bid forms must be affixed to and visible on the outside of the sealed bid cover at the time the bid is submitted. Bids must be submitted using the bid forms furnished with the bid package. Bids must include all documents listed in the Bidder's Checklist. Bids must bear the bidder's legal name and be signed by a representative authorized to bind the bidder. Bids must be typed or written in ink. Corrections may be made if initialed by the individual signing the bid. No oral or telegraphic modifications of bids, including facsimile modifications, will be considered. Bids that are incomplete or that are not presented on the bid forms furnished with the bid package may be deemed non-responsive.

- 5.3 Each bid must give the full business address of the bidder. Bids of partnerships must furnish the full name of all partners and must be signed in the partnership name by one of the members of the partnership, or by an authorized representative, followed by the printed name and title of the person signing. Bids of corporations must be signed with the legal name of the corporation, followed by the name of the state of incorporation and by the signature and designation of the president, secretary or other person authorized to bind the corporation. The name of each person signing shall also be typed or printed below the signature. Upon request of the District, bidders will furnish satisfactory evidence of the authority of the person signing the bid. Bids of joint ventures must include a certified copy of the legal agreement constituting the joint venture.

- 5.4 No person, firm, corporation, partnership or legal joint venture may submit more than one bid for the Project. However, a person, firm, corporation, partnership or legal joint venture that has submitted a subcontract proposal to a bidder, or that has quoted prices on materials to a bidder may submit a subcontract proposal, quote prices to other bidders and submit its own bid.
- 5.5 In accordance with California Public Contract Code Section 20170, all bids must include one of the forms of bidder's security specified in the Notice to Bidders in an amount of at least ten (10) per cent of the total of the bid prices for the base bid and those additive or deductive items specifically identified in the Notice to Bidders for the purpose of determining the lowest price bid. Bidders that elect to provide bidder's security in the form of a bid bond must execute a bid bond using the form provided in the bid forms. The bidder's security is tendered as a guarantee that the successful bidder, if awarded the Project contract, will execute and submit to the District all required bonds, certificates of insurance, completed contract forms and other documents listed in the Contract Check List and enter into a contract with the District within ten (10) working days of receipt of the Notice of Award. The bidder's security of any successful bidder that fails to do so will be forfeited to the District. All bidders' security not forfeited to the District will be returned once a successful bidder provides all required documents and enters a contract with the District in accordance with all applicable bid package requirements. Forfeiture of the bidder's security to the District will not waive or otherwise limit any other remedy available to the District under applicable law.
- 5.6 In accordance with California Business and Professions Code Section 7028.15, Public Contract Code Section 20103.5, and as specified in the Notice to Bidders, all Project work must be performed by properly licensed contractors and subcontractors with active licenses in good standing as of the date and time specified for bid opening, or, if the project involves federal funds, no later than the time the Project contract is awarded. Bidders must verify their Contractor's License number and license expiration date on the proposal cover page under penalty of perjury. Bids that do not satisfy applicable licensing requirements will be considered non-responsive and rejected and may subject the bidder to criminal and/or civil penalties.
- 5.7 If the bid forms include a bidder's questionnaire, all bids must include a completed bidder's questionnaire on the forms provided. By submitting a bid, bidders authorize District representatives to verify any and all information provided on the bidder's questionnaire and agree to indemnify, defend and hold harmless the District and its officials, officers, employees, agents and volunteers to full the extent permitted by law from and against

any claims, liability or causes of action, including, without limitation, legal fees and costs, arising out of verification of the information provided on the bidder's questionnaire, and/or arising out of use of information provided in the bidder's questionnaire to determine, in accordance with applicable law, the qualification of the bidder for performing the Project.

- 5.8 Bids may be withdrawn prior to the time set for bid opening by a written request signed by an authorized representative of the bidder filed with the District. The bid security submitted with bids so withdrawn will be returned to the bidder. Bidders that have withdrawn their bid in accordance with this provision may submit a new bid prior to the time set for bid opening in accordance with all applicable bid package requirements. Bids may not be withdrawn during the ninety day period after the time set for bid opening except as permitted by law pursuant to California Public Contract Code Section 5100 and following. Any other bid withdrawal will result in forfeiture of the bidder's bid security to the District.

6. BID PROTESTS

Any protest of the proposed award of Bid to the bidder deemed the lowest responsible bidder must be submitted in writing to the District, no later than 5:00 PM on the third (3rd) business day following the date of the Bid opening.

- 6.1 The initial protest must contain a complete statement of the basis for the protest.
- 6.2 The protest must state the facts and refer to the specific portion of the document or the specific statute that forms the basis for the protest. The protest must include the name, address, and telephone number of the person representing the protesting party.
- 6.3 The party filing the protest must concurrently transmit a copy of the initial protest to the bidder deemed the lowest responsible bidder.
- 6.4 The party filing the protest must have actually submitted a Bid on the Project. A subcontractor of a party filing a Bid on this Project may not submit a Bid Protest. A party may not rely on the Bid Protest submitted by another Bidder, but must timely pursue its own protest.
- 6.5 The procedure and time limits set forth in this Section are mandatory and are the Bidder's sole and exclusive remedy in the event of a Bid Protest. The Bidder's failure to fully comply with these procedures shall constitute a waiver of any right to further pursue the Bid Protest, including filing of a challenge of the award pursuant to the California Public Contracts Code,

filing of a claim pursuant to the California Government Code, or filing of any other legal proceedings.

- 6.6 The District shall review all timely protests prior to formal award of the Bid. The District shall not be required to hold an administrative hearing to consider timely protest, but may do so at its option. At the time of the District Board's consideration of the award of the bid, the District Board shall also consider the merits of any timely protests. The District Board may either accept the protest and award the bid to the next lowest responsible bidder or reject the protest and award to the lowest responsible bidder. Nothing in this section shall be construed as a waiver of the District Board's right to reject all bids.
- 6.7 The District reserves the right to waive any bid irregularities not affecting the amount of the bid, except where such waiver would give the low bidder an advantage or benefit not allowed other bidders.

7. AWARD

- 7.1 In accordance with applicable law, the District reserves the right to reject any or all bids and to waive any informality in any bid. The District reserves the right to accept any portion of any bid, unless the bid package expressly provides that the award will be made as a whole. If the District elects to award a contract for performance of the Project, the contract will be awarded in accordance with California Public Contract Code and other applicable law to the responsible bidder submitting a responsive bid with the lowest total bid price for the base bid and the additive or deductive alternate items or optional items listed in the Notice Inviting Bids. In accordance with the contract documents and other applicable law, the District may add or deduct items of work from the Project after the lowest responsible bidder is determined.
- 7.2 The successful bidder must submit to the District complete, executed copies of all documents specified in the contract checklist included in the bid package within ten (10) working days of receiving written notice of award of the Project. Bidder's security of any successful bidder that fails to do so will be forfeited to the District.
- 7.3 The successful bidder and any subcontractors and others engaged in performance of the Project must have valid local business license(s), as applicable, before commencing work on the Project.
- 7.4 Upon verifying that the successful bidder has provided complete, executed copies of all documents specified in the contract checklist included in the bid package, an authorized District representative will execute the Project

contract, and the District will issue to the successful bidder a notice to proceed specifying the Project commencement date. The number of days within which the Project must be complete begins to run on the Project commencement date.

8. PRICING

- 8.1 If an inconsistency exists between the amount listed for a unit price in a bid and the total listed for that bid item (e.g., if the total listed for a bid item does not equal the unit price listed in the bid multiplied by the quantity listed), subject to applicable law, the unit price will be deemed to accurately reflect the bidder's intent concerning the bid item and the intended total for the bid item will be deemed to be the unit price as listed in the bid multiplied by the quantity listed.
- 8.2 If the Project bid price is a lump sum total made up of smaller individual bid item prices and an inconsistency exists between the lump sum total bid price and any individual bid item price, subject to applicable law, the individual bid item prices as listed in the bid will be deemed to accurately reflect the bidder's intended bid for the Project and the intended lump sum total bid for the Project will be deemed to be the sum of the individual bid item prices as listed in the bid, even if that sum is different from the amount actually listed as the lump sum total bid for the Project.
- 8.3 Any federal, state, or local tax payable on articles to be furnished for the Project shall be included in the lump sum total bid price and paid by the Contractor under the contract.

9. QUANTITIES

- 9.1 Quantities, including but not limited to, material or labor quantities, that are provided in the bid package concerning the Project are estimates only and are provided solely as a general indication of the Project scope. The District does not warrant that such quantity estimates provided in the bid package represent the actual quantities required to perform the Project in accordance with the contract documents. Such quantity estimates do not bind the District, and bidders should not rely on them in preparing their bids. Each bidder is solely responsible for determining the quantities on which to base their bids in light of information contained in the bid package, bidder investigation and analysis of the Project and the Project site, and any other analysis or expertise of the bidder concerning the Project.
- 9.2 The District may amend, decrease or increase the Project work in accordance with the bidding package and the contract documents. If the

District amends, decreases or increases the Project work prior to award of the Project each bidder will be solely responsible for determining the revised quantities, if any, on which to base their bid in light of information contained in the bid package and any amendments or addenda to the bid package, bidder investigation and analysis of the Project as amended, decreased or increased, the Project site, and any other analysis or expertise of the bidder concerning the Project.

10. MANUFACTURERS AND SUBSTITUTION OF "OR EQUAL" ITEMS

- 10.1 In accordance with California Public Contract Code Section 3400, where the technical specifications or Project plans list products by manufacturer's name, brand or model number such information indicates the quality and utility of the items desired and does not restrict bidders to that manufacturer's name, brand or model number, unless the technical specifications or Project plans specify that the listed product is necessary to match others in use on a particular public improvement either completed or in the course of completion. Except where the Technical Specifications or Project plans indicate that a particular brand product is necessary to match others in use, when a manufacturer's name, brand or model number is listed, it shall be construed to be followed by the words "or equal" whether or not those words in fact follow the manufacturer's name, brand name or model number listed in the technical specifications or Project plans. Unless the technical specifications or Project plans indicate that a particular brand product is necessary to match others in use, bidders may propose equals of products listed by manufacturer name, brand name or model number. Layouts and configurations shown on the Project plans are based on the first listed Manufacturer. The arrangement of piping and equipment and foundations indicated on the Project plans may be modified as necessary for the specific equipment provided. The cost of all modifications, including design services and District, Construction Manager, Engineer, and other District Representative time for review and approval, shall be the responsibility of the Contractor at no increase in cost to the DISTRICT. The District shall review the proposed modification to the original design and shall be the sole judge as to type, function, and quality of the modification.
- 10.2 Complete information for products proposed as equals must be submitted to the District for review at least ten (10) working days before the time specified for opening bids. To be considered, proposals concerning products proposed as equals must include sufficient information to permit the District to determine whether the products proposed as equals will satisfy the same performance requirements as products listed by manufacturer's name, brand or model number. Such performance requirements may include, but are not limited to, size, strength, function,

appearance, ease of maintenance and repair, and useful life requirements. Proposals concerning products proposed as equals that are submitted less than ten (10) days before the time specified for opening bids will not be considered. Failure to bid products specified by manufacturer name, brand name or model number where the technical specifications or Project plans specify that a particular product is necessary to match others in use, or where no proposal concerning products proposed as equals has been submitted in accordance with this provision may render a bid non-responsive. Full submittal information as specified under Specification Section 01300, Submittals, shall be submitted following award. The Bidder shall be responsible for any additional costs necessary for the incorporation of such substitutions.

- 10.3 Bidders must designate the manufacturer/supplier of each item of equipment, materials or system included on the Schedule of Major Equipment and Material Suppliers. The Bidder shall name a manufacturer for each item and the supplier of the item if the supplier is not the manufacturer.

11. SUBCONTRACTING

- 11.1 Bids must be in accordance with the requirements of the Subletting and Subcontracting Fair Practices, Act, California Public Contract Code Section 4100 and following. Bids must include a completed list of proposed subcontractors on the form included in the bid package. In accordance with California Public Contract Code Section 4104, completed lists of proposed subcontractors must include the name, business location, the portion (type or trade), and dollar amount of the Project work to be subcontracted for each subcontractor that will perform a portion of the Project work (including special fabrication and installation of a portion of the work) valued in excess of one half ($\frac{1}{2}$) of one (1) percent of the total Project bid price. If the Project work includes construction of streets or highways, the completed list of proposed subcontractors must include the subcontractor name, business location, type of work and dollar amount to be subcontracted for each subcontractor that will perform a portion of the Project work (including special fabrication and installation of a portion of the work) valued in excess of one half ($\frac{1}{2}$) of one (1) percent of the total Project bid price, or ten thousand dollars (\$10,000), whichever is greater. Bids that fail to include complete lists of proposed subcontractors in accordance with Public Contract Code Section 4100 and following and this provision may be deemed non-responsive.
- 11.2 In accordance with California Public Contract Code Section 4106, for any portion of the Project work with a value of more than one half ($\frac{1}{2}$) of one (1) percent of the total Project bid price for which no subcontractor is

listed, or for which more than one subcontractor is listed, bidders certify by submitting their bids that they are qualified to perform that portion of the Project work and that they will perform that portion of the Project work with their own forces. Bidders may not substitute another subcontractor for a subcontractor listed in their bid except as permitted by the District in accordance with Section 4107 and following of the California Public Contract Code. The bidder must self-perform a minimum of 30% of the total Project bid price.

12. ASSIGNMENT

Bidders may not assign, sublet, sell, transfer, or otherwise dispose of their bid or any right, title or interest in their bid, or their obligations under their bid, without the written consent of an authorized representative of the District. Any purported assignment, subletting, sale, transfer or other disposition of a bid or any interest in a bid, or of any obligations under a bid without such written consent will be void and of no effect.

13. BONDS

The successful bidder must submit to the District a performance bond within ten (10) working days of receiving written notice of award. If the Project involves expenditures in excess of twenty five thousand dollars (\$25,000), the successful bidder must submit to the District a payment or labor and materials bond within ten (10) working days of receiving written notice of award. Prior to issuance of the final Project payment, the successful bidder must submit a warranty or maintenance bond. All bonds must be executed by corporate sureties who are admitted surety insurers in the State of California in accordance with applicable law and acceptable to the District. Individual sureties will not be accepted. All project bonds must be executed using the forms provided in the bid package.

- 13.1 In accordance with California Civil Code Section 3247, the payment or labor and materials bond must be in the amount of one hundred percent (100%) of the total amount payable by the terms of the Project contract and guarantee payment to persons listed in California Civil Code Section 3181 for work performed and for charges for materials, supplies, and equipment provided under the Project contract (including amounts due under or subject to the Unemployment Insurance Code) in accordance with the requirements of California Civil Code Section 3248.
- 13.2 The performance bond must be in the amount of one hundred (100) percent of the amount payable (total base bid) by the terms of the Project contract to guarantee the faithful performance of the Project work.
- 13.3 The warranty or maintenance bond must be in the amount of ten (10) percent of the final Project contract amount and guaranty the Project work

against defects in materials, equipment, workmanship, or needed repair for one (1) year from the District's acceptance of the Project work.

14. LABOR LAWS

- 14.1 Bidders shall comply with applicable provisions of Chapter 1 of Part 7 of the California Labor Code, beginning with Section 1720.
- 14.2 In accordance with California Labor Code Section 1861, bids must include a workers compensation insurance certification on the form included in the bid package.
- 14.3 In accordance with California Labor Code Section 1771, not less than the general prevailing rate of per diem wages for work of a similar character in the locality in which the project is to be performed, and not less than the general prevailing rate of per diem wages for holiday and overtime work fixed as provided in the California Labor Code shall be paid to all workers engaged in performing the project.
- 14.4 In accordance with California Labor Code Section 1770 and following, the Director of Industrial Relations has determined the general prevailing wage per diem rates for work in the locality in which the project is to be performed. In accordance with California Labor Code Section 1773, the District has obtained the general prevailing rate of per diem wages and the general rate for holiday and overtime work in the locality in which the project is to be performed for each craft, classification or type of worker needed to perform the project. In accordance with California Labor Code Section 1773.2, copies of the prevailing rate of per diem wages are on file at the District and will be made available on request.
- 14.5 In accordance with California Labor Code Section 1777.1, contractors and subcontractors that are found guilty of willfully violating Chapter 1 of Part 7 of Division 2 of the Labor Code (except for Section 1777.5), or that are found guilty of such violations with intent to defraud, and entities in which such contractors or subcontractors have any interest, may be ineligible to bid on, be awarded, or perform project work as a subcontractor.

SAUSALITO-MARIN CITY SANITARY DISTRICT
#1 EAST ROAD
SAUSALITO, CALIFORNIA 94965

BIDDER'S CHECK LIST

Did You:

- _____ Attend the pre-bid conference on _____, _____ at _____ at the District's Main Office located at 1 East Road, Sausalito, CA. The Contractor's proposed foreman shall be present.
- _____ Submit equal product proposals, if any, in accordance with the instructions to bidders included in the bid package at least 7 working days before the time specified for bid opening?
- _____ Include with your bid properly completed, accurate copies of the following documents in the following order using the forms included in the bid package:
 - _____ Bidder's check list?
 - _____ Bid
 - _____ Acknowledgement of each addendum issued by the District, if any, with complete, signed and dated copies of each addendum attached?
 - _____ Executed bid bond?
 - _____ Contractor licensing information?
 - _____ Major equipment and material suppliers page?
 - _____ Designation of subcontractors and electrical subcontractor bonding profile?
 - _____ Workers compensation insurance certification?
 - _____ Signed and notarized non-collusion affidavit?
 - _____ Debarment certification?
 - _____ Bidder's questionnaire, if any?
 - _____ Executed bidder's signature page?
- _____ Affix a properly completed, signed and accurate bid label using the form included in the bid package to the sealed cover of your bid?
- _____ Arrange to have the sealed bid delivered to Kevin Rahman in the Sausalito Marin City Sanitary District offices at #1 East Road, Sausalito, California 94965 before 2:00 PM, on February 3, 2017.

Sausalito Marin City Sanitary District
Treatment and Wet Weather Flow Upgrade
Bidder's Check List

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SAUSALITO-MARIN CITY SANITARY DISTRICT
#1 EAST ROAD
SAUSALITO, CALIFORNIA 94965

BID LABEL

Sealed bid for the _____ Project.

Bidder: _____

By my signature below I certify under penalty of perjury under the laws of the State of California that a representative of the above bidder visited the Project sites on

_____, _____ at _____.

By: _____
(Official authorized to bind bidder)

Title: _____

Sausalito-Marín City Sanitary District
Treatment and Wet Weather Flow Upgrade
Bid Label

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Sausalito-Marin City Sanitary District
Marin County, California

BID

For the Construction of the

TREATMENT AND WET WEATHER FLOW UPGRADE PROJECT

To the Honorable Board of Directors
Sausalito-Marin City Sanitary District
#1 East Road
Sausalito, CA 94965

Directors:

The undersigned, as bidder, declares that he/she has carefully examined the Notice Inviting Sealed Bids, Instructions to Bidders, Specifications and Plans, as well as the site and conditions affecting the work, and the bidder proposes and agrees that if this bid is accepted, he/she will contract with the Sausalito-Marin City Sanitary District to provide all necessary machinery, tools, labor and apparatus for construction and do all the work and furnish all the materials called for by the Contract Documents in the manner and time therein set forth required for the construction of the District project, complete and in operating condition.

Construction shall be in strict accordance with the Contract Documents, prepared therefore and adopted by the District Board, which Contract Documents are hereby made a part hereof.

The bidder proposes and agrees to contract with said District to furnish and perform all of the described work, including subsidiary obligations as defined in said Contract Documents, for the following prices, which include all applicable sales taxes, to-wit:

Item Number	Quantity	Unit	Description	Bid
1.	1	Lump Sum	Mobilization (maximum of 10% of total bid amount)	
2.	1	Lump Sum	Sheeting, Shoring, and Bracing for the Project including but not limited to that as required by Sections 6700-6708 of the Labor Code:	
3.	1	Lump Sum	12kV Service Relocation	
4.*	7,236	CY	Off-Haul of Unsuitable Material	

Sausalito-Marin City Sanitary District
Treatment and Wet Weather Flow Upgrade
Bid

5.*	804	CY	Off-Haul of Material for Reuse within the GGNRA	
6.	1	Lump Sum	Soil Nail Retaining Walls (Upper, Lower, and Admin)	
7.	1	Lump Sum	Lining of Headworks, Equalization, and Primary Structures	
8.	1	Lump Sum	Eutek HeadCell Grit Removal Unit (Equipment Only)	\$162,000
9.	1	Lump Sum	Complete the Work in accordance with the Contract Documents to install the Eutek HeadCell Grit Removal Unit	
10.	1	Lump Sum	Primary Clarifier	
11.	1	Lump Sum	Secondary Polishing Disk Filters	
12.	1	Lump Sum	Relocation of the 8-inch diameter Fort Baker Sewer	
13.*	1,000	Linear Feet	Allowance for demolition of unknown pipelines, 6-inch nominal diameter and smaller.	
14.*	3,705	CY	Excavation of hard rock	
15.*	3,705	CY	All other excavation not covered or included in Bid Item 14	
16.	1	Lump Sum	Complete the Work in accordance with The Contract Documents, except for the individual bid items listed above	
Optional Bid Items				
17.	1	Lump Sum	Temporary secondary effluent filtration	
18.	250	Linear Feet	Concrete crack repair on the interior of surface of both fixed film reactor structures.	
19.	1,200	Square Feet	Concrete surface repair on the interior of surface of both fixed film reactor structures.	
20.	1	Lump Sum	Coat the interior concrete surface of both fixed film reactors.	
TOTAL BASE BID		All work incidental thereto and connected therewith for Bid Items 1 through 20: \$ _____		

*** Because of insufficient information available at the time of final design, these bid items are not subject to any quantity guarantee as outlined in Section 9 of Instructions to Bidders.**

Contractor shall place his initials next to this statement to ensure bidder's understanding of this statement. (Initials Here)

Sausalito-Marín City Sanitary District
Treatment and Wet Weather Flow Upgrade
Bid

In submitting this bid, it is understood by the bidder that the right is reserved by the District to reject any and all bids and to waive any irregularities or informalities in any bid or in the bidding.

The undersigned acknowledges that bidder is skilled and experienced in the use and interpretation of plans and specifications and has carefully reviewed the plans and specifications for this project and has found them free of ambiguities and sufficient for bid purposes. Further, bidder has carefully examined the site of the work and, from his/her own observations, is satisfied as to the nature and location of the work, the character, quality and quantity of materials, and the difficulties likely to be encountered, and other items which may affect the performance of the work. The bid is based solely on these documents and observations and has not relied in any way on any explanation or interpretation, oral or written, from any other source.

The undersigned has checked carefully all the above figures and understands that the District will not be responsible for any errors or omissions on the part of the undersigned in making up this bid.

It is understood and agreed that the undersigned will complete the work of the contract within the time provided for in the Contract Documents and Specifications governing said work, and that liquidated damages shall apply as specified.

The undersigned bidder agrees that if notified of the acceptance of this bid within ninety (90) days of the time set for opening of bids, bidder will execute the contract for the above work and for the above-stated compensation, will furnish satisfactory bonds in the sum specified guaranteeing faithful performance and payment of bills, and will complete the work within the time provided for in the Contract Documents and Specifications covering the work.

The undersigned hereby certifies that this bid is genuine and not sham or collusive or made in the interest or in behalf of any persons not herein named and that the undersigned has not directly or indirectly induced or solicited any other bidder to put in a sham bid or any other person, firm, or corporation to refrain from bidding and that the undersigned has not in any manner sought by collusion to secure for himself/herself an advantage over any other bidder.

Accompanying this bid is cash, a bid bond, certified check or cashier's check, payable to or in favor of the Sausalito-Marín City Sanitary District, which it is agreed (pursuant to the Instructions to Bidders) shall be forfeited to the District if the undersigned fails to execute a contract for the performance of this work embraced by this bid and to furnish the necessary bonds specified within ten (10) days after notification of the award to the undersigned.

In accordance with Section 7028.15 of the Business and Professions Code, it is a misdemeanor for any person to submit a bid to a public agency without having a

Sausalito-Marín City Sanitary District
Treatment and Wet Weather Flow Upgrade
Bid

Contractor's License. The Sausalito-Marin City Sanitary District will verify that the Contractor is properly licensed before awarding the contract.

The undersigned Contractor is aware of the provisions of Section 3700 of the Labor Code, which require every employer to be insured against liability for worker's compensation or to undertake self-insurance in accordance with the provisions of that Code, and will comply with such provisions before commencing performance of the work of this contract.

Sausalito-Marin City Sanitary District
Treatment and Wet Weather Flow Upgrade
Bid

Addenda Acknowledged

I hereby acknowledge receipt of the following addenda:

Addendum No. 1 _____ Addendum No. 2 _____ Addendum No. 3 _____

SIGNATURES

PRIME CONTRACTING FIRM ORGANIZATION

Type of Organization:

Corporation

Partnership

Individual

Names of individual members of the firm:

Name of Corporation President:

Name of Corporation Secretary:

Corporation is organized under the laws of the State of

FIRM:

BY:

Signature

()

(Corporate Seal)

()

ADDRESS:

CITY:

TELEPHONE:

FAX:

CONTRACTOR'S LICENSE NO:

EXPIRATION DATE:

Sausalito-Marín City Sanitary District
Treatment and Wet Weather Flow Upgrade
Bid

Note: If Bidder is a corporation, the legal name of the corporation shall be set forth above together with the signature of the officer or officers authorized to sign contracts on behalf of the corporation. If bidder is a co-partnership, the true name of the firm shall be set forth above together with the signature of the partner or partners authorized to sign contracts on behalf of the co-partnership; and if Bidder is an individual, his/her signature shall be placed above. If signature is an agent, other than an officer of a corporation or a member of a partnership, a Power of Attorney must be on file with the District prior to opening of Bids or submitted with the Bid; otherwise, the Bid will be disregarded as irregular and unauthorized.

NON-COLLUSION AFFIDAVIT

The following Non-Collusion Affidavit is submitted by the Bidder in accordance with Section 7106 of the Public Contract Code of the State of California.

State of California)
)
County of) SS.

_____, being first duly sworn, deposes and says that
he or she

is _____ of

_____, the party making the foregoing bid, that the bid is not made in the interest of, or on behalf of, any undisclosed person, partnership, company, association, organization, or corporation; that the bid is genuine and not collusive or sham; that the bidder has not directly or indirectly induced or solicited any other bidder to put in a sham bid, and has not directly or indirectly colluded, conspired, connived, or agreed with any bidder or anyone else to put in a sham bid, or that anyone shall refrain from bidding; that 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, or to secure any advantage against the public body awarding the contract of anyone interested in the proposed contract; that all statements contained in the bid are true; and, further, that 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, or paid, and will not pay, any fee to any corporation, partnership, company association, organization, bid depository, or to any member or agent thereof to effectuate a collusive or sham bid.

Subscribed and sworn to before me this

day of _____, 20_____

Notary Public in and for the State of California

Sausalito-Marin City Sanitary District
Treatment and Wet Weather Flow Upgrade
Non Collusion Affidavit

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BID BOND

KNOW ALL MEN BY THESE PRESENTS, that we, the undersigned, _____ as
Principal, and _____ as
Surety, are hereby held and firmly bound unto the Sausalito-Marin City Sanitary District
as OWNER in the penal sum of _____
for the payment of which, well and truly to be made, we hereby jointly and severally bind
ourselves, successors and assigns.

Signed, this day of , 20____.

The Condition of the above obligation is such that, where the Principal has submitted to
the Sausalito-Marin City Sanitary District a certain BID, attached hereto and hereby
made a part hereof, to enter into a contract in writing for the construction of the
TREATMENT AND WET WEATHER FLOW UPGRADE

NOW, THEREFORE;

- (a) If said BID shall be rejected, or
- (b) If said BID shall be accepted and the Principal shall execute and deliver a contract
in the CONTRACT attachment hereto (properly completed in accordance with said
BID) and shall furnish BONDS for faithful performance of said contract, and for the
payment of all persons performing labor or furnishing materials in connection
therewith, and shall in all other respects perform the agreement created by the
acceptance of said BID, then this obligation shall be void; otherwise the same shall
remain in force and effect, it being expressly understood and agreed that the liability
of the Surety for any and all claims hereunder shall, in no event, exceed the penal
amount of this obligation as herein stated.

The Surety, for value received, hereby stipulates and agrees that the obligations of said
Surety and its BOND shall be in no way impaired or affected by any extension of the
time which the OWNER may accept such BID; and said Surety does hereby waive
notice of any such extension.

Sausalito-Marin City Sanitary District
Treatment and Wet Weather Flow Upgrade
Bid Bond

IN WITNESS WHEREOF, the Principal and Surety have hereunto set their hands and seals, and such of them as are corporations have caused their corporate seals to be hereto affixed and these presents to be signed by their proper officers, the day and year first set forth above.

Principal

By:

Surety

Business Address of Surety

Telephone Number of Surety

By:

Attorney-in-Fact

Note: Signature of person executing for Surety must be notarized and evidence of corporate authority attached.

The Contractor shall use this form of Bid Bond.

SAUSALITO-MARIN CITY SANITARY DISTRICT
#1 EAST ROAD
SAUSALITO, CALIFORNIA 94965

CONTRACTOR LICENSE INFORMATION

The bidder acknowledges that the license required for performance of the TREATMENT AND WET WEATHER FLOW UPGRADE is an A license.

The bidder holds the following California Contractors License(s):

1. License No. _____, Class _____, Expiration Date _____
2. License No. _____, Class _____, Expiration Date _____
3. License No. _____, Class _____, Expiration Date _____
4. License No. _____, Class _____, Expiration Date _____
5. License No. _____, Class _____, Expiration Date _____
6. License No. _____, Class _____, Expiration Date _____
7. License No. _____, Class _____, Expiration Date _____
8. License No. _____, Class _____, Expiration Date _____
9. License No. _____, Class _____, Expiration Date _____
10. License No. _____, Class _____, Expiration Date _____

Bidder's Taxpayer Identification No. _____

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DESIGNATION OF SUBCONTRACTORS AND ELECTRICAL SUBCONTRACTOR BONDING PROFILE

In compliance with the provisions of Sections 4100-4113 of the Public Contract Code of the State of California, and any amendments thereof, each Bidder shall set forth below: (1) the name and the location of the place of business of each subcontractor who will perform work or labor or render service to the Contractor in or about the construction of the work in an amount in excess of one-half of one percent ($\frac{1}{2}\%$) of the Contractor's total bid or \$10,000, whichever is greater, and (2) the portion of the work which will be done by each Subcontractor.

If the Contractor fails to specify a Subcontractor for any portion of the work to be performed under the contract, the Contractor shall be deemed to have agreed to perform such portion himself/herself, and he/she shall not be permitted to subcontract that portion of the work except under the conditions hereinafter set forth.

Subletting or subcontracting of any portion of the work as to which no Subcontractor was designated in the original bid shall be permitted in cases of public emergency or necessity, and then only after a finding reduced to writing as a public record of the Board of Directors of the District.

List below the name, location of the place of business and contractor's license number of each subcontractor and the portion of the work to be done by each subcontractor.

1.		
	Name of Subcontractor	Contractor's License No.
	Location of Business	Portion of Work
2.		
	Name of Subcontractor	Contractor's License No.
	Location of Business	Portion of Work
3.		
	Name of Subcontractor	Contractor's License No.
	Location of Business	Portion of Work
4.		
	Name of Subcontractor	Contractor's License No.
	Location of Business	Portion of Work

Sausalito Marin City Sanitary District
Treatment and Wet Weather Flow Upgrade
Designation of Subcontractors

5.	_____	_____
	Name of Subcontractor	Contractor's License No.
	_____	_____
	Location of Business	Portion of Work
6.	_____	_____
	Name of Subcontractor	Contractor's License No.
	_____	_____
	Location of Business	Portion of Work
7.	_____	_____
	Name of Subcontractor	Contractor's License No.
	_____	_____
	Location of Business	Portion of Work
8.	_____	_____
	Name of Subcontractor	Contractor's License No.
	_____	_____
	Location of Business	Portion of Work

ELECTRICAL SUBCONTRACTOR BONDING PROFILE

The electrical subcontractor shall verify its financial capacity by the following:

At the time of submission of the bid the electrical subcontractor shall have an unencumbered bonding capacity equal to at least 100 percent of the electrical subcontract cost for this project.

Current Total Bonding Capacity: _____

Current Unencumbered Bonding Capacity: _____

Electrical Subcontract Value: _____

To verify the above information, the Owner will contact the electrical subcontractor's surety. The electrical subcontractor shall authorize its surety to release this information. Failure to release this information will result in the bid being deemed non-responsive and/or result in a determination that the electrical subcontractor is not eligible/responsible for purposes of the Project.

Surety: _____

Contact Person for Insurance Company: _____

Telephone Number: _____

Signed this _____ day of _____, 20 ____.

Sausalito Marin City Sanitary District
Treatment and Wet Weather Flow Upgrade
Designation of Subcontractors

**SCHEDULE OF
MAJOR EQUIPMENT AND MATERIAL SUPPLIERS, PRODUCTS IDENTIFIED BY
NAME AND SUBSTITUTION**

Bidders must designate the manufacturer/supplier of each item of equipment, materials or system included on the attached list. The Bidder shall name a manufacturer for each item and the supplier of the item if the supplier is not the manufacturer.

Failure to bid products specified by manufacturer name, brand name or model number where the plans or specifications specify that a particular product is only available from one source or is necessary to match others in use, or to timely submit a proposal concerning products proposed as equals may render a bid non-responsive.

The following named items of major equipment and materials will be supplied by the manufacturers or suppliers as indicated by the Bidder, where no manufacturer or brand name is specified or as specified by the Owner. In accordance with Public Contract Code Section 3400, where a manufacturer's name is designated in the table below by the Owner, the Owner has made a finding that the that the listed product is only available from one source or is necessary to match others in use on a particular public improvement either completed or in the course of completion. By so indicating, the Bidder warrants that the equipment and material manufactured and/or supplied by the named manufacturer or supplier will be provided on the project unless review of submittal information or performance under tests reveals that the equipment or material does not meet the Contract requirements. Where a manufacturers name has been designated by the Owner, as part of the equipment submittal process the Contractor shall submit copies of the five (5) most recent invoices for the same equipment supplied on other projects. Invoices shall clearly indicate the equipment cost paid by the purchaser.

If the Bidder fails to identify a manufacturer/supplier for any item shown on this list, the Owner has the right to waive such omission. In such case it will be assumed that the manufacturer/ supplier to be used by the Bidder will be the first listed manufacturer/ supplier identified for the given item under these Specifications without change in the contract price.

Equipment (Specification Section)	Manufacturer
11052 Automated Refrigerated Samplers	
11136 Vertical Non-Clog Pumps	
11141 Recessed Impeller Pumps	
11147 Double Disc Pumps	Penn Valley Pump Company, Inc.

Sausalito-Marin City Sanitary District
Treatment and Wet Weather Flow Upgrade
Schedule Of Material and Equipment

Equipment (Specification Section)	Manufacturer
11148 Submersible Non-Clog Pumps	Flygt
11231 Circular Center-Feed Clarifier	
11305 Horizontal Self-Priming Centrifugal Pumps	
11320 Hydraulic Grit System	Hydro Intl. (Headcell)
11325 Grit Washer	
11330 Filter Screens	
11403 Fixed Film Media	
11606 Digester Gas Handling Equipment	
11800 Disk Filter System	
11900 Flushing Trough	
13130 Flat Circular Clarifier Covers	
13470 SCADA PLC System	AutomationDirect DL4 Series
14510 Shaftless Screw Conveyors	
14700 Turntable	
15200 Valves General (Plug Valves)	
15200 Valves General (Knife Gate Valves)	
15200 Valves General (Butterfly Valves)	
15201 Valve and Gate Actuators (Motorized)	
15250 Hydraulic Gates and Valves, General	

By: _____
(Official authorized to bind bidder)

Title: _____

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SAUSALITO-MARIN CITY SANITARY DISTRICT
#1 EAST ROAD
SAUSALITO, CALIFORNIA 94965

WORKERS COMPENSATION INSURANCE CERTIFICATION

By submitting its bid the bidder certifies as follows:

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

By: _____
(Official authorized to bind bidder)

Title: _____

Sausalito-Marin City Sanitary District
Treatment and Wet Weather Flow Upgrade
Workers Compensation Insurance

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SAUSALITO-MARIN CITY SANITARY DISTRICT
#1 EAST ROAD
SAUSALITO, CALIFORNIA 94965

DEBARMENT CERTIFICATION

By submitting its bid the bidder certifies in accordance with California Public Contract Code Section 6109 that neither the bidder nor any subcontractor included on the list of proposed subcontractors submitted with the bid is ineligible to perform work on public works projects pursuant to California Labor Code Sections 1777.1 or 1777.7. In accordance with California Public Contract Code Section 6109, contractors and subcontractors who are ineligible to perform work on public works projects pursuant to California Labor Code Sections 1777.1 or 1777.7 may neither bid on, be awarded or perform as a subcontractor on public works projects.

By: _____
(Official authorized to bind bidder)

Title: _____

Sausalito-Marín City Sanitary District
Treatment and Wet Weather Flow Upgrade
Debarment Certification

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SAUSALITO-MARIN CITY SANITARY DISTRICT
#1 EAST ROAD
SAUSALITO, CALIFORNIA 94965

BIDDER'S SIGNATURE PAGE

By my signature on this proposal I certify, under penalty of perjury under the laws of the State of California, that the information submitted with this proposal for the TREATMENT AND WET WEATHER FLOW UPGRADE which information includes, but is not limited to, the bidder's check list, bid label, proposal cover page and bid schedule, bid bond, contractor license information, list of proposed subcontractors, workers compensation insurance certification, non-collusion affidavit, and debarment certification are accurate, true and correct, and are submitted in accordance with the requirements of the bid package issued by the Sausalito-Marine City Sanitary District concerning the TREATMENT AND WET WEATHER FLOW UPGRADE and applicable law. By my signature on this proposal I further certify that I am legally authorized to bind the bidder in accordance with the requirements of the bid package.

Date: _____

(Typed or printed name)

(Signature)

(Bidder)

Bidder business address (street, city, state and zip code)

Bidder Business phone: () _____

Bidder Business fax: () _____

Sausalito-Marine City Sanitary District
Treatment and Wet Weather Flow Upgrade
Bidder's Signature Page

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Sausalito-Marín City Sanitary District
#1 East Road
Sausalito, California 94965

CONTRACT CHECK LIST

Complete, accurate, executed copies of the following documents must be submitted to the Sausalito-Marín City Sanitary District in accordance with the bid package issued by the District for the TREATMENT AND WET WEATHER FLOW UPGRADE within ten (10) working days of receiving written notice of award of the project. The bidder's security of any successful bidder that fails to do so will be forfeited to the District.

_____ Contract Check List

_____ Agreement

_____ General Conditions

_____ Performance Bond

_____ Payment Bond

_____ Certificates of Insurance and Endorsements

_____ Escrow for Deposit Agreement, if applicable

_____ Contractor Safety Manual Acknowledgement Form

Sausalito-Marín City Sanitary District
Treatment and Wet Weather Flow Upgrade
Contract Check List

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Sausalito-Marín City Sanitary District
#1 East Road
Sausalito, California 94965

AGREEMENT

The Sausalito-Marín City Sanitary District, ("District") enters into this agreement, dated for reference purposes only, with _____ ("Contractor").

RECITALS

- A. NOTICE INVITING BIDS. The District gave notice inviting bids to be submitted by _____, 20____, for the project, TREATMENT AND WET WEATHER FLOW UPGRADE, by published notice and/or posting in accordance with California Public Contract Code Section 20804 and other applicable law.
- B. BID OPENING. On _____, 20____, District representatives opened the bids for the TREATMENT AND WET WEATHER FLOW UPGRADE and read the bids aloud.
- C. PROJECT AWARD. On _____, 20____, the District Board awarded the TREATMENT AND WET WEATHER FLOW UPGRADE to the Contractor and directed District staff to send the Contractor written notice of award of the project. The District Board conditioned award of the project on the Contractor's providing executed copies of all documents specified in the contract check list included in the bid package within ten (10) working days of receiving written notice of award of the project.
- D. REQUIRED DOCUMENTS. The Contractor has provided the District executed copies of all documents specified in the contract checklist included in the bid package within ten (10) working days of receiving written notice of award.

AGREEMENT TERMS

The District and the Contractor agree as follows:

1. THE WORK. The Contractor shall furnish all equipment, tools, apparatus, facilities, material labor, and skill necessary to perform and complete in a good and workmanlike manner the project, TREATMENT AND WET WEATHER FLOW UPGRADE, ("Work") as shown in the Technical Specifications and Project Plans in accordance with the Contract Documents and applicable law.
2. LOCATION OF WORK. The Work will be performed at the locations shown on project drawing G-1 in Marin City, Sausalito, and Fort Baker National Park.

Sausalito-Marín City Sanitary District
Treatment and Wet Weather Flow Upgrade
Agreement

3. TIME FOR COMPLETION. The Contractor must complete the Work in accordance with the Contract Documents. All work shall be completed within **730 calendar days** of the project commencement date specified in the notice to proceed for the project.
4. REMEDIES FOR TIMELY COMPLETION THE WORK.
 - 4.1 **LIQUIDATED DAMAGES:** If the Contractor fails to fully perform the Work in accordance with the Contract Documents by the Time for Completion, as such time may be amended by change order or other modification to this agreement in accordance with its terms, and/or if the Contractor fails, by the Time for Completion, to fully perform all of the Contractor's obligations under this agreement that have accrued by the Time for Completion, the Contractor will become liable to the District for all resulting loss and damage in accordance with the Contract Documents and applicable law. The District's remedies for the Contractor's failure to perform include, but are not limited to, assessment of liquidated damages of **ONE THOUSAND Dollars (\$1000) per calendar day** in accordance with California Government Code Section 53069.85 and the Contract Documents, and/or obtaining or providing for substitute performance in accordance with the Contract Documents. Liquidated damages shall not cover the cost of completion of the Work, damages resulting from defective work, or damages suffered by others who then seek to recover their damages from District (for example, delay claims of other contractors, subcontractors, tenants, or other third-parties), and defense costs thereof.
5. CONTRACT PRICE AND PAYMENT. As full compensation in consideration of completion of the Work in accordance with the Contract Documents and in consideration of the fulfillment of all of the Contractor's obligations under the Contract Documents, the District will pay the Contractor in lawful money of the United States the total price of \$_____ (the "Contract Price") as specified in the Contractor's completed Bid Schedule dated _____, _____, and attached to and incorporated in this agreement. Payment to the Contractor under this agreement will be for Work actually performed in accordance with the Contract Documents and will be made in accordance with the requirements of the Contract Documents and applicable law. The District will have no obligation to pay the Contractor any amount in excess of the Contract Price unless this agreement is first modified in accordance with its terms. The District's obligation to pay the Contractor under this agreement is subject to and may be offset by charges that may apply to the Contractor under this agreement. Such charges include but are not limited to, charges for liquidated damages and/or substitute performance in accordance with the Contract Documents.

Sausalito-Marín City Sanitary District
Treatment and Wet Weather Flow Upgrade
Agreement

6. PREVAILING WAGES. In accordance with California Labor Code Section 1771, not less than the general prevailing rate of per diem wages for work of a similar character in the locality in which the Work is to be performed, and not less than the general prevailing rate of per diem wages for holiday and overtime work fixed as provided in the California Labor Code must be paid to all workers engaged in performing the Work. In accordance with California Labor Code Section 1770 and following, the Director of Industrial Relations has determined the general prevailing wage per diem rates for the locality in which the Work is to be performed. In accordance with California Labor Code Section 1773, the District has obtained the general prevailing rate of per diem wages and the general rate for holiday and overtime work in the locality in which the Work is to be performed for each craft, classification or type of worker needed to perform the project. In accordance with California Labor Code Section 1773.2, copies of the prevailing rate of per diem wages are on file at the District Public Works Department and will be made available on request. Throughout the performance of the Work the Contractor must comply with all provisions of the Contract Documents and all applicable laws and regulations that apply to wages earned in performance of the Work.
7. THE CONTRACT DOCUMENTS. This agreement consists of the following documents ("Contract Documents"), all of which are incorporated into and made a part of this agreement as if set forth in full. In the event of a conflict between or among the Contract Documents, precedence will be in the following order:
 - 7.1 This agreement and change orders and other amendments to this agreement signed by authorized representatives of the District and the Contractor.
 - 7.2 The General Conditions and change orders and other amendments to the General Conditions signed by authorized representatives of the District and the Contractor.
 - 7.3 The General Requirements, addenda to the General Requirements signed by authorized representatives of the District and issued prior to bid opening, Equal Product Proposals accepted by the District and signed by authorized District representatives prior to bid opening, and change orders and other amendments to the General Requirements signed by authorized representatives of the District and the Contractor.
 - 7.4 The Project Plans and Technical Specifications, addenda to the Project Plans and Technical Specifications signed by authorized representatives of the District and issued prior to bid opening, Equal Product Proposals accepted by the District and signed by authorized District representatives

Sausalito-Marín City Sanitary District
Treatment and Wet Weather Flow Upgrade
Agreement

prior to bid opening, and change orders and other amendments to the Project Plans and Technical Specifications signed by authorized representatives of the District and the Contractor.

- 7.5 Notice Inviting Bids.
 - 7.6 Instructions to Bidders.
 - 7.7 The successful bidder's completed Bid.
 - 7.8 The successful bidder's completed Contractor License Information.
 - 7.9 The successful bidder's completed List of Proposed Subcontractors.
 - 7.10 The successful bidder's Workers Compensation Insurance Certification.
 - 7.11 The successful bidder's completed Non-collusion Affidavit.
 - 7.12 The successful bidder's Debarment Certification.
 - 7.13 The successful bidder's completed Certificates of Insurance and Endorsements.
 - 7.14 The successful bidder's executed Performance Bond.
 - 7.15 The successful bidder's executed Payment Bond.
 - 7.16 The Maintenance Bond form included in the bid package that the Contractor must execute prior to release of final payment under the Contract.
 - 7.17 The successful bidder's Qualification Statement, if any.
 - 7.18 The successful bidder's signed Signature Form.
8. INTERPRETATION OF CONTRACT DOCUMENTS. Any question concerning the intent or meaning of any provision of the Contract Documents, including, but not limited to, the Project Plans and Technical Specifications, must be submitted to the District, or his/her designee, for issuance of an interpretation and/or decision by the District in accordance with the requirements of the Contract Documents. Interpretations or decisions by any other person concerning the Contract Documents will not be binding on the District. The decision of the District, or his/her designee, shall be final.

Sausalito-Marín City Sanitary District
Treatment and Wet Weather Flow Upgrade
Agreement

9. ASSIGNMENT PROHIBITED. The Contractor may not assign part or all of this agreement, or any moneys due or to become under this agreement, or any other right or interest of the Contractor under this agreement, or delegate any obligation or duty of the Contractor under this agreement without the prior written approval of an official authorized to bind the District and an authorized representative of Contractor's surety or sureties. Any such purported assignment or delegation without such written approval on behalf of the District and the Contractor's sureties will be void and a material breach of this agreement subject to all available remedies under this agreement and at law and equity.

10. CERTIFICATION RE CONTRACTOR'S LICENSE. By signing this Agreement the Contractor certifies that the Contractor holds a valid Class A license issued by the California State Contractors Licensing Board, and that the Contractor understands that failure to maintain its license in good standing throughout the performance of the Work may result in discipline and/or other penalties pursuant to the California Business and Professions Code, and may constitute a material breach of this agreement subject to all available remedies under this agreement and at law and equity.

11. SEVERABILITY. If any term or provision or portion of a term or provision of this Agreement is declared invalid or unenforceable by any court of lawful jurisdiction, then the remaining terms and provisions or portions of terms or provisions will not be affected thereby and will remain in full force and effect.

Executed on _____, _____, by

CONTRACTOR

DISTRICT

By: _____

By: _____

Title: _____

Title: _____

[Attach Notary Page]

Attest:

By: _____

Sausalito-Marin City Sanitary District
Treatment and Wet Weather Flow Upgrade
Agreement

Sausalito-Marin City Sanitary District
Treatment and Wet Weather Flow Upgrade
Agreement

Sausalito-Marín City Sanitary District
#1 East Road
Sausalito, California 94965

PERFORMANCE BOND

KNOW ALL MEN BY THESE PRESENTS:

WHEREAS the Board of Sausalito-Marín City Sanitary District has awarded to _____ (designated as the "PRINCIPAL") a contract for the Project, TREATMENT AND WET WEATHER FLOW UPGRADE, which contract and all of the contract documents as defined therein (designated as the "Contract") are hereby made a part hereof; and

WHEREAS, said PRINCIPAL is required under the terms of the Contract to furnish a bond for the faithful performance of the Contract;

NOW, THEREFORE, WE, the PRINCIPAL and _____ as surety (designated as "SURETY"), an admitted surety insurer authorized to do business in the State of California, are held and firmly bound unto the District (designated as "OBLIGEE"), in the penal sum of

_____ dollars
(\$ _____), lawful money of the United States for the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, and administrators, and successors, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH that, if the above bound PRINCIPAL, his or its heirs, executors, administrators, successors, or assigns, shall in all things stand to and abide by, and well and truly keep and perform the covenants, conditions and agreements in the Contract and any alteration thereof made as therein provided, on his or their part to be kept and performed at the time and in the manner therein specified and in all respects according to their true intent and meaning, and shall defend, indemnify and save harmless the OBLIGEE, its officials, officers, employees, volunteers and agents, as therein stipulated, then this obligation shall become null and void, otherwise it shall be and remain in full force and virtue.

And the said SURETY, for value received, hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the Contract or to the work to be performed thereunder or to the specifications or the plans accompanying the same or to any other part of the contract documents, as defined therein, shall in any way affect said SURETY's obligation on this bond, and the SURETY does hereby waive notice of any such change, extension of time, alteration or addition.

Sausalito-Marín City Sanitary District
Treatment and Wet Weather Flow Upgrade
Performance Bond

And the said SURETY, for value received, hereby stipulates and agrees that upon termination of the Principal's control of Work for any of the reasons specified in Sections 11.1.1.1 through 11.1.1.5 of the General Conditions of the Contract, the OBLIGEE reserves the right to refuse tender of the PRINCIPAL by the SURETY to complete the Contract work.

If any action shall be brought by the OBLIGEE upon this bond, a reasonable attorney's fee, to be fixed by the court, shall be and become a part of the OBLIGEE's judgment in any such action.

IN WITNESS WHEREOF, the above-bound parties have executed this instrument under their several seals this _____ day of _____, _____, the name and corporate seals of each corporate party being hereto affixed and these presents duly signed by their undersigned representatives, pursuant to authority of their governing bodies.

(Corporate Seal)

PRINCIPAL

(Acknowledgement)

By: _____
Title: _____

(Corporate Seal)

SURETY

(Acknowledgement)

By: _____
(Attorney-in-fact)
Title: _____

(NOTE TO SURETY COMPANY: A certified copy of unrevoked resolution of authority for the attorney-in-fact must be submitted with and attached to the executed bid bond.)

Sausalito-Marín City Sanitary District
Treatment and Wet Weather Flow Upgrade
Performance Bond

Sausalito-Marín City Sanitary District
#1 East Road
Sausalito, California 94965

PAYMENT/LABOR AND MATERIALS BOND

KNOW ALL MEN BY THESE PRESENTS:

WHEREAS the Board of the Sausalito-Marín City Sanitary District has awarded to _____, (designated as the "PRINCIPAL") a contract for the TREATMENT AND WET WEATHER FLOW UPGRADE, which contract and all of the contract documents as defined therein (designated as the "Contract") are hereby made a part hereof; and

WHEREAS, pursuant to California Civil Code Section 3247, the PRINCIPAL is required, before entering upon the performance of the Contract, to file a payment bond with and have such bond approved by the officer or public entity by whom the Contract is awarded; and

WHEREAS, pursuant to California Civil Code Section 3248, such payment bond must be in a sum not less than one hundred percent (100%) of the total amount payable by the terms of the Contract, and must satisfy the other requirements specified in that section; and

WHEREAS, the PRINCIPAL is required in accordance with the Contract to furnish a payment bond in connection with the Contract to secure payment of claims of laborers, mechanics and materialmen employed on work under the Contract in accordance with applicable law;

NOW, THEREFORE, THESE PRESENTS WITNESSETH:

That the PRINCIPAL and the undersigned _____, as surety (designated as "SURETY"), an admitted surety insurer authorized to do business in the State of California are held and firmly bound unto all laborers, material men, and all other persons named in California Civil Code Section 3181 in the sum of _____ Dollars (\$ _____), lawful money of the United States, being a sum not less than one hundred percent of the total amount payable by the terms of the Contract, for the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators, successors, or assigns, jointly and severally, by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH that if the PRINCIPAL or any of the PRINCIPAL's subcontractors, or the heirs, executors, administrators, successors, or assigns of any, all, or either of them, shall fail to pay any persons named in California Civil Code Section 3181, or fail to pay for any labor, materials, provisions, provender, or

Sausalito-Marín City Sanitary District
Treatment and Wet Weather Flow Upgrade
Payment Bond

other supplies used in, upon, for or about the performance of the work contracted to be done, or for any work or labor thereon of any kind, or fail to pay amounts due under the Unemployment Insurance Code with respect to such work or labor, or fail to pay for any amounts required to be deducted, withheld, and paid over to the Employment Development Department from the wages of employees of the PRINCIPAL or any subcontractors of the PRINCIPAL pursuant to Section 13020 of the Unemployment Insurance Code with respect to such work or labor, that the SURETY will pay for the same in an amount not exceeding the amount herein above set forth, and also, in case suit is brought upon this bond, will pay a reasonable attorney's fee to be awarded and fixed by the Court; otherwise this obligation shall be void.

It is hereby expressly stipulated and agreed by the said Surety, for value received, that this bond shall inure to the benefit of any and all of the persons named in Section 3181 of the California Civil Code so as to give a right of action to them or their assigns in any suit brought upon this bond.

It is hereby further expressly stipulated and agreed by the said Surety, for value received, that no change, extension of time, alteration or addition to the terms of the Contract or the specifications or drawings accompanying the same or to any other part of the contract documents, as defined therein, shall in any manner affect the obligations of the SURETY on this bond, and SURETY does hereby waive notice of any such change, extension, alteration, or addition.

IN WITNESS WHEREOF, the above-bound parties have executed this instrument under their several seals this _____ day of _____, _____, the name and corporate seals of each corporate party being hereto affixed and these presents duly signed by their undersigned representatives, pursuant to authority of their governing bodies.

(Corporate Seal)

PRINCIPAL

(Acknowledgement)

By: _____
Title: _____

(Corporate Seal)

SURETY

(Acknowledgement)

By: _____
(Attorney-in-fact)
Title: _____

(NOTE TO SURETY COMPANY: A certified copy of unrevoked resolution of authority for the attorney-in-fact must be submitted with and attached to the executed bid bond.)

Sausalito-Marín City Sanitary District
Treatment and Wet Weather Flow Upgrade
Payment Bond

Sausalito-Marín City Sanitary District
#1 East Road
Sausalito, California 94965

MAINTENANCE BOND

KNOW ALL MEN BY THESE PRESENTS:

WHEREAS the Board of the Sausalito-Marín City Sanitary District has awarded to _____, (designated as the "PRINCIPAL") a contract for TREATMENT AND WET WEATHER FLOW UPGRADE, which contract and all of the contract documents as defined therein (designated as the "Contract") are hereby made a part hereof; and

WHEREAS, the PRINCIPAL is required under the terms of the Contract to furnish a bond for the correction of any defects due to defective materials or workmanship in the work performed under the Contract.

NOW, THEREFORE, we the PRINCIPAL and the undersigned _____, as surety (designated as "SURETY"), an admitted surety insurer authorized to do business in the State of California, are held and firmly bound unto the Sausalito-Marín City Sanitary District, (designated as the "OBLIGEE"), in the penal sum of _____ Dollars (\$_____), lawful money of the United States, being a sum not less than ten percent (10%) of the final Contract price, for the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators, successors, and assigns jointly and severally, firmly by these presents.

THE CONDITIONS OF THIS OBLIGATION ARE SUCH that if, during a maintenance period of one (1) year from the date of acceptance by the OBLIGEE of the contracted work, the PRINCIPAL upon receiving written notice of a need for repairs which are directly attributable to defective materials or workmanship, shall diligently take the necessary steps to correct said defects within seven (7) days from the date of said notice, then this obligation shall be null and void; otherwise it shall remain in full force and effect.

If any action shall be brought by the OBLIGEE upon this bond, a reasonable attorney's fee, to be fixed by the Court, shall be and become a part of OBLIGEE's judgment in any such action.

No right of action shall accrue on this bond to, or for the use of, any person or corporation other than the OBLIGEE named herein or the heirs, executors, administrator or successor of the OBLIGEE.

Sausalito-Marín City Sanitary District
Treatment and Wet Weather Flow Upgrade
Maintenance Bond

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

(Corporate Seal)

PRINCIPAL

(Acknowledgement)

By: _____
Title: _____

(Corporate Seal)

SURETY

(Acknowledgement)

By: _____
(Attorney-in-fact)
Title: _____

(NOTE TO SURETY COMPANY: A certified copy of unrevoked resolution of authority for the attorney-in-fact must be submitted with and attached to the executed bid bond.)

Sausalito-Marín City Sanitary District
Treatment and Wet Weather Flow Upgrade
Maintenance Bond

Sausalito-Marín City Sanitary District
#1 East Road
Sausalito, California 94965

ESCROW AGREEMENT FOR SECURITY DEPOSITS IN LIEU OF RETENTION

This Escrow Agreement is made and entered into by and between Sausalito-Marín City Sanitary District, whose address is #1 East Road, Sausalito, California

94965, hereinafter called "District", _____, whose address is

_____, hereinafter called "Contractor", and

_____, whose address is

_____, hereinafter called "Escrow Agent"

For consideration hereinafter set forth, the District, Contractor, and Escrow Agent agree as follows:

1. Pursuant to Section 22300 of the Public Contract Code of the State of California, Contractor has the option to deposit securities with Escrow Agent as a substitute for retention earnings required to be withheld by District pursuant to the Construction Contract entered into between the District and Contractor for the project entitled TREATMENT AND WET WEATHER FLOW UPGRADE in the amount of \$_____ dated _____ (hereinafter referred to as the "Contract"). Alternatively, on written request of the Contractor, the District shall make payments of the retention earnings directly to the Escrow Agent. When Contractor deposits the securities as substitute for Contract earnings, the Escrow Agent shall notify the District within 10 days of the deposit. The market value of the securities at the time of the substitution shall be at least equal to the cash amount then required to be withheld as retention under the terms of the Contract between the District and Contractor. Securities shall be held in the name of _____ and shall designate the Contractor as the beneficial owner.
2. The District shall make progress payments to the Contractor for such funds which otherwise would be withheld from progress payments pursuant to the Contract provisions, provided that the Escrow Agent holds securities in the form and amount specified above.
3. When the District makes payment of retentions earned directly to the Escrow Agent, the Escrow Agent shall hold them for the benefit of the Contractor until such time as the escrow created under this contract is terminated. The Contractor may direct the investments of the payments into securities. All terms and conditions of this agreement and the rights and responsibilities of the parties shall be equally applicable and binding when the District pays the escrow agent directly.
4. Contractor shall be responsible for paying all fees for the expenses incurred by Escrow Agent in administering the Escrow Account and all expenses of the District. These

Sausalito-Marín City Sanitary District
Treatment and Wet Weather Flow Upgrade
Escrow Agreement

expenses and payment terms shall be determined by the District, Contractor and Escrow Agent.

5. The interest earned on the securities or the money market accounts held in escrow and all interest earned on that interest shall be for the sole account of the Contractor and shall be subject to withdrawal by contractor at any time and from time to time without notice to the District.
6. Contractor shall have the right to withdraw all or any part of the principal in the Escrow Account only by written notice to Escrow Agent accompanied by written authorization from District to the Escrow Agent that District consents to the withdrawal of the amount sought to be withdrawn by Contractor.
7. The District shall have a right to draw upon the securities in the event of default by the Contractor. Upon seven day's written notice to the Escrow Agent from the District of the default, the Escrow Agent shall immediately convert the securities to cash and shall distribute the cash as instructed by the District.
8. Upon receipt of written notification from the District certifying that the Contract is final and complete, and that the Contractor has complied with all requirements and procedures applicable to the Contract, Escrow Agent shall release to Contractor all securities and interest on deposit less escrow fees and charges of the Escrow Account. The escrow shall be closed immediately upon disbursement of all monies and securities on deposit and payments of fees and charges.
9. Escrow Agent shall rely on the written notifications from the District and the Contractor pursuant to Sections (4) to (6) inclusive, of this agreement and the District and Contractor shall hold Escrow Agent harmless from Escrow Agent's release and disbursement of the securities and interest as set forth above.
10. The names of the persons who are authorized to give written notice or to receive written notice on behalf of the District and on behalf of Contractor in connection with the foregoing, and exemplars of their respective signatures, are as follows:

On behalf of District:

On Behalf of Contractor

Title

Title

Name

Name

On behalf of Escrow Agent:

Sausalito-Marín City Sanitary District
Treatment and Wet Weather Flow Upgrade
Escrow Agreement

Title

Name

Signature

Address

At the time the Escrow Account is opened, the District and Contractor shall deliver to the Escrow Agent a fully executed counterpart of this Agreement.

IN WITNESS WHEREOF, the parties have executed this Agreement by their proper officers on the date first set forth above.

District:

Contractor:

Title

Title

Name

Name

Signature

Signature

Address

Address

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Sausalito-Marín City Sanitary District
#1 East Road
Sausalito, California 94965

GENERAL CONDITIONS

1. DEFINITIONS:

The following terms as used in any agreement of which these General Conditions are a part are defined as follows:

- 1.1 Agreement: The agreement between the District and Contractor concerning the Project, as evidenced by and comprised of the Contract Documents. The agreement is also referred to as the “contract” within the Contract Documents.
- 1.2 Architect or Engineer: The person or persons so specified on the title sheet of the Technical Specifications and/or Project Plans. The Construction Manager shall be to official point of contact for all communication with the Architect or Engineer.
- 1.3 Bid Package: All of the documents listed as comprising the entire Bid Package as specified in the Instructions to Bidders and representing the full set of documents made available to bidders on the Project.
- 1.4 District: Sausalito-Marín City Sanitary District. The term, District, and Owner, are interchangeable.
- 1.5 Contract Documents: All those documents listed in the Project agreement as comprising the entire agreement between the District and the Contractor.
- 1.6 Contractor: The successful bidder for the Project and party to the Project agreement with the District as specified in the Project agreement.
- 1.7 Days: Unless otherwise specified in the Contract Documents, days mean calendar days.
- 1.8 Project: The TREATMENT AND WET WEATHER FLOW UPGRADE as described in the contract documents.
- 1.9 Construction Manager: The District, or the District’s authorized representative for administration and overall management of the Project agreement and Work. The Construction Manager is the official point of

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contact between the District, the Architect and/or Engineer, and the Contractor.

- 1.10 Project Plans: The primarily graphic detailed requirements concerning the Project contained in the Bid Package and any addenda to the Project Plans signed by authorized District representatives and issued prior to bid opening, Equal Product Proposals accepted by the District and signed by authorized District representatives prior to bid opening, and change orders and other amendments to the Project Plans signed by authorized representatives of the District and the Contractor in accordance with the requirements of the Contract Documents.
- 1.11 Not used.
- 1.12 Subcontractor: A person, firm or corporation that is obligated as a party to a contract with the Contractor to perform part of the Project work. For purposes of these General Conditions Subcontractors include, but are not limited to, those that are obligated as parties to a contract with the Contractor to specially fabricate and install a portion of the Project Work according to the Project Plans.
- 1.13 Technical Specifications: The detailed Project requirements contained within the Project Plans and any addenda to the Technical Specifications signed by authorized District representatives and issued prior to bid opening, Equal Product Proposals accepted by the District and signed by authorized District representatives prior to bid opening, and change orders and other amendments to the Technical Specifications signed by authorized representatives of the District and the Contractor in accordance with the requirements of the Contract Documents..
- 1.14 Work: The furnishing of all equipment, tools, apparatus, facilities, material, labor and skill necessary to perform and complete in a good and workmanlike manner the Project as shown in the Project Plans and Technical Specifications in accordance with the Contract Documents and applicable law.
- 1.15 Written Notice: Will be deemed to have been duly served for purposes of these General Conditions and any agreement of which they are a part if delivered in person to the individual or to a member of the firm or to any office of the corporation for whom the notice is intended, or if sent by registered or certified mail to the last known business address known to the party giving notice. Unless otherwise specified in the Contract Documents, the last known address of the Contractor shall be that listed in the Contractor's completed Bid.

- 1.16 Field Directive: A Field Directive (FD) is used for providing written direction to the Contractor to perform work which: a) directs the Contractor to proceed with work that the Construction Manager has not recognized as extra work, b) directs the Contractor to proceed with work that the Construction Manager has determined is extra work but costs have not been determined or are difficult to determine by the Construction Manager.
- 1.17 Non-Compliance Notice: A Non-Compliance Notice (NCN) is issued by the Construction Manager when work performed does not comply with the contract plans and specifications. An NCN must be corrected by the Contractor prior to sequential work proceeding.
- 1.18 Request for Information (RFI): A document prepared by the Contractor requesting information regarding the project or Contract Documents that is not clear or ambiguous. The RFI system is also a means for the District to provide minor Contract Document clarifications or supplements to Contractor.
- 1.19 Contract Change Order (CCO): A written instrument prepared by the District (post-execution of the Contract) and signed by the District and Contractor, stating their agreement upon all of the following:
1. A change in the work;
 2. The amount of the adjustment in the Contract sum, if any; and,
 3. The amount of the adjustment in the Contract time, if any.
- 1.20 Potential Contract Change Order (PCO): A written instrument prepared by the contractor to request a scope, cost and/or schedule change to the contract.
- 1.21 System Outage Request: A written communication instrument prepared by the contractor to request a specific system, road, or other District asset be taken out of service or to connect to an existing system to allow contract work to proceed. The main purpose is to notify the district in advance and allow district approval for the system to be taken out of service and/or connected to.

2. SCOPE OF WORK

- 2.1 Documents Furnished by District. The District will furnish to the Contractor, free of charge, one (1) set of reproducible Conformed Project Plans and Technical Specifications and five (5) sets of prints of the Conformed Project Plans and Technical Specifications for execution of the

Work. Throughout the performance of the Work the Contractor must keep one copy of the Project Plans and Technical Specifications in good order and available for review by the Construction Manager and any other District contractors or representatives. Electronic files in AutoCAD format may be provide to contractor, subject to the contractor signing the District's standard CAD release agreement.

2.2 Ownership of Documents Furnished by District. All documents furnished by the District, including, but not limited to, the, Project Plans and Technical Specifications, and any copies, are the property of the District. Documents furnished by the District may not to be used on any other work. All documents furnished by the District must be returned to District upon completion of the Work.

2.3 Project Plans and Technical Specifications.

2.3.1 The Project Plans and Technical Specifications are complementary and intended to mutually describe the Work necessary to complete the Project in accordance with the Contract Documents.

2.3.2 In general, the Project Plans indicate dimensions, position and kind of construction, and the Technical Specifications indicate qualities and methods. Any Work indicated on the Project Plans and not mentioned in the Technical Specifications or vice versa must be furnished as though fully set forth in both. Work that is not particularly detailed, marked or specified shall be the same as similar Work that is detailed, marked or specified. The Contractor must furnish items necessary for the operation of equipment depicted in the Project Plans or specified in the Technical Specifications that are suitable to allow such equipment to function properly at no extra charge.

2.3.3 The Contractor must notify the Construction Manager as soon as possible of any apparent errors or inconsistencies, including, but not limited to, typographical or notational errors in the Project Plans, Technical Specifications, and/or in work done by others affecting the Work. The Construction Manager will issue instructions concerning any such apparent errors or inconsistencies. If the Contractor proceeds with Work impacted by apparent errors or inconsistencies without instructions from the Construction Manager, the Contractor shall do so at its sole risk and shall have all of the obligations and the District shall have all of the rights and remedies specified in Section 11 concerning any resulting damage or defect.

2.3.4 The General Conditions apply with equal force to all of the Work, including extra work authorized by the Construction Manager in accordance with the Contract Documents. The Contractor must submit any required shop diagrams and/or drawings by the times and in the quantities indicated in the Technical Specifications. Any such shop diagrams and/or drawings must show completely the Work to be done, expanding on the Project Plans concerning details not previously shown, field conditions and the condition of the Work. Architect or Engineer review of such shop diagrams and/or drawings will concern conformance with the requirements of the Contract Documents only. The Architect or Engineer assumes no responsibility for the correctness or accuracy of the dimensions or any other contents of any shop diagrams and/or drawings submitted by the Contractor. The Contractor must check all dimensions at the Work site. Shop diagrams and/or drawings must be clearly marked with the name of the Project and the name of the Contractor, subcontractor or supplier making the submittal, and must be stamped and signed by the Contractor and submitted under a signed transmittal letter from the Contractor certifying that all dimensions have been checked at the Work site. These requirements are mandatory. The Architect or Engineer will not review shop diagrams and/or drawings that do not satisfy these requirements. The Contractor will be responsible for any and all discrepancies between dimensions of the actual Project site and/or Work and those shown on shop diagram and/or drawings submitted by the Contractor, and for any other errors contained in or resulting from such shop diagrams and/or drawings, including, but not limited to, errors in material and/or equipment quantities and any resulting errors, delays or additional cost in the performance of the Work. The Contractor will have all of the obligations and the District will have all of the rights and remedies that are specified in Section 11 concerning any discrepancies or errors in shop diagrams and/or drawings submitted by the Contractor, and concerning any resulting errors, delays or additional costs in the performance of the Work.

2.3 Coordination and Interpretation of Contract Documents

2.3.1 These General Conditions, the Notice to Bidders, the Instructions to Bidders, the Proposal, the Plans, the Technical Specifications, all addenda, contract change orders, and any supplementary documents are essential parts of the Contract, and a requirement occurring in one is as binding as though occurring in all. They are

intended to be complementary, and to describe and provide for a complete work.

2.3.2 In case of a conflict or ambiguity in the Contract Documents, the following order of precedence shall prevail:

1. Contract Change Orders
2. Contract
3. Addenda
4. Bid Proposal
5. Technical Specifications
6. Plans
7. General Conditions
8. Instructions to Bidders
9. Notice to Bidders

2.3.3 Should it appear that the work to be done or any of the matters relative thereto are not sufficiently detailed or explained in the Contract Documents, the Contractor shall apply to the Construction Manager for further explanations as may be necessary and shall conform to them as part of the contract. In the event of any doubt or question arising respecting the true meaning of the Contract Documents, reference shall be made to the Construction Manager, whose decision thereon shall be final.

2.3.4 In the event of any discrepancy, between any drawing and the figures written thereon, the figures shall be taken as correct. Detail drawings shall prevail over general drawings and general notes shall prevail over drawings.

3. CONTROL OF WORK AND MATERIAL

3.1 Construction Manager's Status. The Construction Manager will administer the Project in accordance with the Contract Documents. After execution of the agreement and issuance of the Notice to Proceed, all correspondence and/or instructions concerning the Project between the Contractor and/or District shall be forwarded through the Construction Manager. Except as otherwise provided in the Contract Documents, the Construction Manager will not be responsible for and will not have control or charge of construction means, methods, techniques, or procedures or for safety precautions in connection with the Work. The Construction Manager, however, will have authority to reject materials and/or workmanship that do not conform to the requirements of the Contract Documents. The

Construction Manager will also have the authority to require inspection or testing of the Work.

3.2 Architect or Engineer's Status. The Architect or Engineer will advise the Construction Manager concerning decisions on all claims of the Contractor and all other matters relating to the execution and progress of the Work or the interpretation of the Contract Documents. The Architect or Engineer will also advise the Construction Manger concerning Work that does not conform to the Contract Documents. Whenever, in the Architect's or Engineer's opinion, it is necessary or advisable in accordance with the Contract Documents, the Architect or Engineer may recommend to the Construction Manager inspection or testing of the Work, whether or not such Work is then fabricated, installed or completed.

3.3 Inspection and Testing of Work and Material.

3.3.1 The District, the Construction Manager, the Architect or Engineer and their representatives will have access to the Work at all times wherever it is in preparation or progress. The Contractor must provide proper facilities for such access and for inspection.

3.3.2 The Contractor must inspect all materials as delivered and promptly return all defective materials without waiting for their rejection by the Construction Manager or Architect or Engineer.

3.3.3 If the Construction Manager, the Contract Documents, or any laws, ordinances, or any public authority require any Work to be tested or approved, the Contractor must give the Construction Manager forty-eight (48) hour notice of the Contractor's readiness for inspection. Inspections will be promptly made, and where practicable, at the source of supply. Any work subject to such testing that is covered up without 48 hour notice to the Construction Manager or without the approval or consent of the Construction Manager must, if required by the Construction Manager, be uncovered for examination at the Contractor's expense. The Contractor will have all of the obligations and the District will have all of the rights and remedies that are specified in Section 11 concerning any work subject to testing that is covered up without 48 hour notice to the Construction Manager and that is not uncovered for examination at the Contractor's Expense if required by the Construction Manager.

3.3.4 Tests of materials or qualification tests required by the Contract Documents must be made in accordance with the Contract Documents and the requirements of the California Building

Standards Code as adopted by the District and other applicable law. Copies of all testing reports shall be distributed as required in the Contract Documents.

- 3.3.5 The District or its representatives may order re-examination of questioned Work. If ordered to do so, the Contractor must uncover such Work. If such Work is found to be according to the Contract Documents, the District shall pay the cost of uncovering and restoring the Work, unless such Work was subject to testing and covered up without timely notice to or approval of the Construction Manager. If re-examined Work is found not in accordance with the Contract Documents, the Contractor must pay the cost of uncovering and restoring the Work. The Contractor will have all of the obligations and the District will have all of the rights and remedies that are specified in Section 11 concerning any re-examined Work not in accordance with the Contract Documents that the Contractor fails to uncover and restore at the Contractor's expense.
- 3.3.6 The Contractor must replace or correct without charge any material or workmanship found not to conform to the requirements of the Contract Documents, unless the District consents to accept such material or workmanship with an appropriate adjustment in the Contract Price. The Contractor must promptly segregate and remove non-conforming material from the Work site. The Contractor will have all of the obligations and the District will have all of the rights and remedies that are specified in Section 11 concerning any failure by the Contractor to replace or correct without charge any material or workmanship that does not conform to the requirements of the Contract Documents and that the District has not consented to accept.
- 3.4 Samples Furnished by the Contractor. The Contractor must furnish all samples for approval as directed in sufficient time to permit the Architect or Engineer to examine, approve and select samples before they are required by the progress of the Work. Portions of the Work for which samples are required and for which the Architect or Engineer has selected samples must be in accordance with such approved samples. Samples must be sent prepaid to the office of the Construction Manager or to such place as the Construction Manager may direct.
- 3.5 Materials and Substitutions.

- 3.5.1 Materials used for the Work must be new and of the quality specified. When not particularly specified, materials must be the best of their class or kind. The Contractor must, if required, submit satisfactory evidence as to the kind and quality of materials.
- 3.5.2 If the Contractor submitted complete information to the District for products proposed as equals in accordance with the Bid Package, and the District approved such products proposed as equals in writing, the Contractor may either furnish such products approved as equals, or furnish the products listed by manufacturer name, brand or model number in the Technical Specifications or Project Plans. The District retains the right, in its sole discretion, to accept or reject any other proposed substitution. To be considered, proposals concerning products proposed as equals must include sufficient information to permit the District to determine whether the products proposed as equals will satisfy the same performance requirements as products listed by manufacturer's name, brand or model number. Such performance requirements may include, but are not limited to, size, strength, function, appearance, ease of maintenance and repair, and useful life requirements. If the District does not accept a proposed substitution, the Contractor must furnish the product specified in the Technical Specifications or Project Plans for the Contract Price, regardless of whether the product is specified by manufacturer's name, brand or model number, or otherwise.
- 3.5.3 During the performance of the Work, including off-hours and weekends, all materials must be neatly stacked, properly protected from the weather and other adverse impacts, and placed so as to avoid interference with efficient progress of the Work, with other activities of the District, or with the use of existing District facilities by the public. All materials must be delivered so as to ensure efficient and uninterrupted progress of the Work. Materials must be stored so as to cause no obstruction and so as to prevent overloading of any portion of the Work. The Contractor will be responsible for damage or loss of materials delivered to and/or stored at the Work site due to weather or other causes. The Contractor must promptly remove from the Work site all materials rejected by the District or its representatives as failing to conform to the requirements of the Contract Documents, whether such non-conforming materials have been incorporated in the Work or not. If the District or its representatives so direct, the Contractor must promptly replace and re-execute Work performed by the Contractor and order the replacement and re-execution of Work performed by

subcontractors using non-conforming materials with materials that satisfy the requirements of the Contract Documents without expense to the District. The Contractor will bear the expense of making good all Work destroyed or damaged by such removal. The Contractor will have all of the obligations and the District will have all of the rights and remedies that are specified in Section 11 concerning any failure by the Contractor to replace or re-execute Work using non-conforming materials, and/or to make good all work destroyed or damaged by such removal and/or execution.

3.6 Audit and Examination of Records. The District may examine and audit at no additional cost to the District all books, estimates, records, contracts, documents, bid documents, bid cost data, subcontract job cost reports and other Project related data of the Contractor, subcontractors engaged in performance of the Work, and suppliers providing supplies, equipment and other materials required for the Work, including computations and projections related to bidding, negotiating, pricing or performing the Work or contract modifications and other materials concerning the Work, including, but not limited to, Contractor daily logs, in order to evaluate the accuracy, completeness, and currency of cost, pricing, scheduling and any other project related data. Contractor shall maintain daily job reports recording all significant activity on the job, including the number of workers on site, work activities, problems encountered and delays. Contractor shall provide District with electronic copies each day. Contractor shall take monthly progress photographs of all areas of the Work. Contractor shall maintain copies of all correspondence with subcontractors and records of meetings with subcontractors and provide these to the District on request. The Contractor will make available all such Project related data at all reasonable times for examination, audit, or reproduction at the Contractor's business office at or near the Work site, and at any other location where such Project related data may be kept until three years after final payment under the Agreement. Pursuant to California Government Code Section 8546.7, if the amount of public funds to be expended is in excess of \$10,000, this Agreement shall be subject to the examination and audit of the State Auditor, at the request of the District, or as part of any audit of the District, for a period of three (3) years after final payment under the Agreement.

3.7 Advertising. No advertising signs of any kind may be displayed on the Work site, or on fences, offices or elsewhere adjacent to the Work site.

4. CHANGES IN WORK

- 4.1 District Directed Change Orders. The District may at any time during the progress of the Work direct any amendments to the Work or any of the Contract Documents, including, but not limited to the Technical Specifications, or Project Plans. Such amendments will in no way void the agreement, but will be applied to amend the Contract Price, if such amendments affect the Contract Price, the Project schedule, if such amendments affect the Project schedule, or any other provision of the Contract Documents based on a fair and reasonable valuation of the amendment in accordance with this Section 4.
- 4.2 Writing Requirement. Change orders and other amendments to the Technical Specifications, the Project Plans, or other Contract Documents may be made only by in writing executed by authorized representatives of the District and the Contractor.
- 4.3 Contractor Proposed Change Orders. Unless the Construction Manager otherwise authorizes or the District and the Contractor otherwise agree, change order proposals submitted by the Contractor must be submitted to the Construction Manager no later than the time of the proposed change.
- 4.4 All Change Orders. All change order proposals must be submitted on completed Change Order forms provided in the Contract Documents. All such change order proposals must itemize all cost impacts of the proposed change order and include a total price for that change order and the amended Contract Price that would become effective upon execution of the change order. All change order proposals must specify any change in the Project schedule, or in any project milestone including, but not limited to, the Time for Completion, under the change order. It is understood that change orders that do not specify a change in any milestone, including, but not limited to, the Time for Completion, may be accomplished by the Time for Completion then in effect.
- 4.5 Change Order Pricing. Change order pricing will be governed by the following:
 - 4.5.1 Unit prices specified in the Contract Documents will apply to cost impacts involving items for which the Contract Documents specify unit prices.
 - 4.5.2 Cost impacts involving items for which no unit prices are specified will be calculated by adding the itemized actual direct cost that would be added or reduced under the change order and an allowance for indirect costs in accordance with this Section. Itemization for direct costs for required labor must include the classifications of labor required, the total hours required for each

classification, the hourly rate for each classification and other labor related costs such as liability and workers compensation insurance, social security, retirement and unemployment insurance. All other cost impacts for which no unit prices are specified must be itemized as appropriate, including the cost of tools, vehicles, phones and other equipment, and the cost of all required materials or supplies. Indirect costs added under a change order may not exceed an allowance of fifteen (15) percent of the total Contractor and/or subcontractor direct costs added under the change order. The performing contractor/subcontractor will add (15) percent indirect costs with the next up tier adding (5) percent. Such allowance covers Contractor overhead and profit under the change order and includes the cost of insurance in addition to that required pursuant to Section 8.8, bond premiums, superintendent labor, clerical labor, home office expenses, worksite office expenses, and utility costs under the change order. Such costs may not be itemized as direct costs under a change order. Indirect costs deducted under a change order will be calculated in exactly the same way as indirect costs added under a change order, except indirect costs deducted under a change order may not exceed an allowance of seven and a half (7.5) percent of the total of combined Contractor and subcontractor direct costs deducted under the change order.

- 4.6 Liability Under Unapproved Change Orders. The Contractor shall be solely responsible for any and all losses, costs, or liabilities of any kind incurred by the Contractor, any subcontractor engaged in the performance of the Work, any party supplying material or equipment for the Work or any third party that are incurred pursuant to Contractor-proposed change orders prior to issuance of an approved change order executed in accordance with this Section 4. The Contractor will have all of the obligations and the District will have all of the rights and remedies that are specified in Section 11 concerning any work or resulting losses, costs, or liabilities pursuant to a Contractor proposed change order before issuance of an approved change order executed in accordance with this Section 4.
- 4.7 Changes Subject to Contract Documents. Any changes in the Work and/or the Contract Documents pursuant to change orders and any other amendments issued in accordance with the Contract Documents, including this Section 4, will in all respects be subject to all provisions of the Contract Documents, including, but not limited to, the Technical Specifications and the Project Plans, except as modified by such change orders or amendments.
- 4.8 Change Order Disputes.

4.8.1 Disputed District Directed Change Orders. If the Contractor disputes a District directed change order following a reasonable effort by the District and the Contractor to resolve the dispute including, at a minimum, a meeting between appropriate representatives of the Contractor and the District, the Contractor must commence performing the Work consistent with the disputed change order within five (5) working days of the last meeting between representatives of the Contractor and the District to resolve the dispute, or within the time specified in the disputed District directed change order, whichever is later. In performing Work consistent with a disputed District-directed change order pursuant to this provision the Contractor will have all of the Contractor's rights concerning claims pursuant to the Contract Documents and applicable law.

4.8.2 Disputed Contractor Proposed Change Orders. If the District disputes a Contractor proposed change order, the District and the Contractor will use reasonable efforts to resolve the dispute including, at a minimum, holding a meeting between appropriate representatives of the Contractor and the District. Regardless of and throughout any such efforts to resolve the dispute the Contractor must continue performing the Work irrespective of and unmodified by the disputed change order. In continuing to perform the Work, the Contractor will retain all of the Contractor's rights under contract or law pertaining to resolution of disputes and protests between contracting parties. Disputes between the District and the Contractor concerning any Contractor-proposed change order or other amendment do not excuse the Contractor's obligation to perform the Work in accordance with the Contract Documents excluding such Contractor-proposed change order or other amendment by the Time for Completion or waive any other Project milestone or other requirement of the Contract Documents.

4.9 Escrow Bid Documents

4.9.1 Requirements for Escrow Bid Documents.

4.9.1.1 The Contractor shall submit to the District a set of Escrow Bid Documents as defined in this section of the General Conditions. Escrow Bid Documents will be used only in the manner and for the purposes described herein.

4.9.1.2 The submission of the Escrow Bid Documents, as with the bonds and insurance documents required in the Instructions to

Bidders, is considered an essential part of the award of Contract. Should the Contractor fail to make the submission within the allowed time specified, the Contractor may be deemed to have failed to enter into the Contract, the Contractor shall forfeit the amount of its Bid security accompanying Contractor's Bid, and the District may award the Contract to the next lowest, responsive, responsible Bidder.

- 4.9.1.3 The Contractor shall submit the Escrow Bid Documents, in person by an authorized representative of the Contractor, to:

Sausalito Marin City Sanitary District
#1 East Road
Sausalito, CA 94965

4.9.2 Scope of Escrow Bid Documents.

- 4.9.2.1 The Contractor shall submit one copy of all documentary information received or generated by the Contractor in preparation of Bid prices for the Contract Documents, as specified in paragraphs 4.9.5 and 4.9.6 below. This material is referred to as the "Escrow Bid Documents." The Contractor's Escrow Bid Documents will be held in escrow as provided herein.

- 4.9.2.2 The Contractor represents and agrees, as a condition of award of the Contract, that the Escrow Bid Documents in conjunction with the actual bid submittal constitute all written information used in the preparation of its Bid, and that no other written Bid preparation information shall be considered in resolving disputes or claims or may be considered in legal proceedings. The Contractor also agrees that nothing in the Escrow Bid Documents shall change or modify the terms or conditions of the Contract Documents. The Contractor is advised that the Escrow Bid Documents will only be used in the determination of price adjustments and change orders and resolution of disputes and claims.

4.9.3. Ownership of Escrow Bid Documents.

- 4.9.3.1 The Escrow Bid Documents are, and shall always remain, the property of the Contractor, subject to joint review by the District and the Contractor, as provided herein.

- 4.9.3.2 The District stipulates and expressly acknowledges that the Escrow Bid Documents constitute trade secrets. This acknowledgement is based on the District's express understanding that the information contained in the Escrow Bid Documents is not known outside Contractor's business, is known only to a limited

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extent and only by a limited number of the Contractor's employees, is safeguarded while in the Contractor's possession, is extremely valuable to the Contractor and could be extremely valuable to the Contractor's competitors by virtue of it reflecting the Contractor's contemplated construction techniques. The District further acknowledges that the Escrow Bid Documents and the information contained in them are made available to the District only because such action is an express pre-requisite to award of the Contract. The District agrees to safeguard the Escrow Bid Documents, and all information contained in them, against disclosure to the fullest extent permitted by law, consistent with paragraph 4.9.4 below.

4.9.4. Escrow Bid Documents may be used in the determination of price adjustments and change orders and in the resolution of disputes and claims. If used in legal proceedings, Escrow Bid Documents shall be subject to an appropriate protective order limiting their disclosure.

4.9.5. Format and Contents of Escrow Bid Documents.

4.9.5.1 The Contractor may submit Escrow Bid Documents in their usual cost-estimating format; a standard format is not required. The Contractor shall prepare and submit the Escrow Bid Documents in English.

4.9.5.2 The Contractor shall itemize clearly in the Escrow Bid Documents the estimated costs of performing the work of each Bid item contained in the Contractor's Bid. The Contractor shall separate Bid items into sub-items as required to present a detailed cost estimate and allow a detailed cost review. The Escrow Bid Documents shall include all Subcontractor bids or quotes, supplier bids or quotes, quantity take-offs, crews, equipment, calculations of rates of production and progress, copies of quotes from Subcontractors and suppliers, and memoranda, narratives, add/deduct sheets, and all other information used by the Contractor to arrive at the prices contained in the Bid. Escrow Bid Documents shall include costs of scheduled maintenance, depreciation, fleet rental expense discounts and incentives, and similar cost adjustments if used by the Contractor to calculate its Bid prices. Estimated costs shall be broken down into the Contractor's usual estimate categories such as direct labor, repair labor, equipment ownership and operation, expendable materials, permanent materials and subcontract costs as appropriate. Plant and equipment and indirect costs shall be detailed in the Contractor's

usual format. The Contractor shall identify its allocation of indirect costs, contingencies, markup and other items to each Bid item.

4.9.5.3 The Contractor shall identify all costs. For Bid items amounting to less than \$10,000, the Contractor may estimate costs without a detailed cost estimate, provided that the Contractor includes applicable labor, equipment, materials and subcontracts, and allocates applicable indirect costs, contingencies and markup.

4.9.5.4 Bid documents provided by the District should not be included in the Escrow Bid Documents unless needed to comply with these requirements.

4.9.6. Submittal of Escrow Bid Documents.

4.9.6.1 The Contractor shall submit the Escrow Bid Documents within fourteen (14) days after the postmarked date of the Notice of Award. The container in which the Escrow Bid Documents are submitted shall be clearly marked on the outside with the Contractor's name, date of submittal, project name and the words "Escrow Bid Documents - Open only in the presence of Authorized Representatives of both District and Contractor." The District will review the Escrow Bid Documents for initial compliance. The District has five (5) business days after review of Bidder's Escrow Bid Documents to demand additional information.

4.9.6.2 By submitting Escrow Bid Documents, the Contractor represents that the material in the Escrow Bid Documents constitutes all the documentary information used in preparation of the Bid and that the Contractor has personally examined the contents of the Escrow Bid Documents container and has found that the documents in the container are complete. The Contractor agrees that it will not introduce or rely on any other documents to prove how it prepared its Bid.

4.9.6.3 If the Contractor's proposal is based upon subcontracting any part of the Work, each Subcontractor whose total subcontract price exceeds \$10,000, shall provide separate Escrow Documents to be included with those of the Contractor. Such documents shall be opened and examined in the same manner and at the same time as the examination described above for the Contractor.

4.9.7. Storage, Examination, and Final Disposition of Escrow Bid Documents.

4.9.7.1 The Escrow Bid Documents will be placed in escrow until Acceptance of the Work on the Project, in a mutually agreeable

institution. The Contractor shall pay the costs of storage for the Escrow Bid Documents until that time. The storage facilities shall be the appropriate size for all the Escrow Bid Documents and located conveniently to both the District's and, to the extent reasonably possible, the Contractor's offices, but in no event outside the County of Marin.

4.9.7.2 Both the District and the Contractor shall examine the Escrow Bid Documents, at any time deemed necessary by either the District or the Contractor, to assist in the negotiation of price adjustments and change orders or the resolution of disputes and claims. Examination of the Escrow Bid Documents is subject to the following conditions:

1. As trade secrets, the Escrow Bid Documents are proprietary and confidential under paragraph 4.9.3.2. of this Section.
2. The District and the Contractor (and any Subcontractor, to the extent Escrow Bid Documents are required by a Subcontractor) shall each designate in writing to the other party(s) at least seven (7) days prior to any examination, representatives who are authorized to examine the Escrow Bid Documents. Except as otherwise provided in a court order, no other persons shall have access to the Escrow Documents.
3. Except as otherwise provided in a court order, access to the documents may take place only in the presence of duly designated representatives of both the District and the Contractor. If the Contractor fails to designate a representative or appear for joint examination on seven (7) days' notice, then the District's representative may examine the Escrow Bid Documents upon an additional three (3) days' notice.
4. Following Acceptance of the Work on the Project and final settlement of any outstanding disputes, claims, price adjustments, and/or change orders, the District shall direct the escrow agent holding the Escrow Bid Documents in writing to return those documents to the Contractor.

5. TRENCHING AND UTILITIES

5.1 Excavation More Than Four Feet Deep. In accordance with California Public Contract Code Section 7104, if the Work involves excavation more than four feet deep the Contractor must promptly notify the District in writing before disturbing: any material that the Contractor believes may be hazardous waste, as defined in Section 25117 of the Health and Safety

Code, that is required to be removed to a Class I, Class II or Class III disposal site in accordance with provisions of existing law; any subsurface or latent physical conditions at the Work site differing from those indicated; or any unknown physical conditions at the Work site of any unusual nature, different materially from those ordinarily encountered and generally recognized as inherent in work of the character provided for in the Contract Documents. The District will promptly investigate any such conditions for which notice is given. If the District finds that the conditions do materially differ, or involve hazardous waste, and would cause a decrease or increase in the cost or time of performance of the Work, the District will issue a change order pursuant to Section 4 of these General Conditions. If a dispute arises between the District and the Contractor concerning whether the conditions materially differ, or involve hazardous waste, or cause a decrease or increase in the cost or time of performance, the Contractor will not be excused from any completion date provided in the Contract Documents, but shall proceed with all Work to be performed. The Contractor will retain all rights under contract or law pertaining to resolution of disputes and protests between contracting parties.

- 5.2 Excavation of Five Feet or More. In accordance with California Labor Code Section 6705, contractors performing contracts exceeding \$25,000 in cost and involving excavation five or more feet deep must submit for the District's acceptance, prior to 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 excavation. If the plan varies from the shoring system standards, it must be prepared by a registered civil or structural engineer.

5.3 Utility Relocation Costs.

- 5.3.1 In accordance with California Government Code Section 4215, the District assumes the responsibility for the timely removal, relocation or protection of existing main or trunkline utility facilities located on the Work site if such utilities are not identified by the District in the Technical Specifications and/or Project Plans. The District will compensate the Contractor for the costs of locating, repairing damage not due to the Contractor's failure to exercise reasonable care, and removing or relocating existing main or trunkline utility facilities located at the Work site and not identified with reasonable accuracy in the Technical Specifications and/or Project Plans. The District will also compensate the Contractor for the cost of equipment on the Project necessarily idled during such work. The Contractor will not be assessed liquidated damages for Work

completion delays caused by the District's failure to provide for removal or relocation of such main or trunkline utility facilities.

- 5.3.2 Nothing in this provision or the Contract Documents will be deemed to require the District to indicate the presence of existing service laterals or appurtenances whenever the presence of such utilities on the Work site can be inferred from the presence of other visible facilities, such as buildings, meter and junction boxes, on or adjacent to the Work site; provided, however, that nothing in this provision or the Contract Documents shall relieve the District from identifying main or trunklines in the Technical Specifications and/or Project Plans.
- 5.3.4 Nothing in this provision or the Contract Documents will preclude the District from pursuing any appropriate remedy against the utility for delays, which are the responsibility of the utility.
- 5.3.5 Nothing in this provision or the Contract Documents will be construed to relieve the utility from any obligation as required either by law or by contract to pay the cost of removal or relocation of existing utility facilities.
- 5.3.6 If the Contractor while performing the Work discovers utility facilities not identified by the District in the Technical Specifications and/or Project Plans, the Contractor must immediately notify the District and utility in writing.
- 5.3.7 Either the District or the utility, whichever owns existing main or trunkline utility facilities located on the Work site, shall have sole discretion to effect repairs or relocation work or to permit the Contractor to perform such repairs or relocation work at a reasonable price.

6. PROJECT FACILITIES

- 6.1 Work Site Offices. Any Work site office facilities used by the Contractor and/or its privities must conform to all applicable codes, ordinances and regulations. The cost of such Work site office facilities shall be included in the Contract Price.
- 6.2 District Rights of Access and Ownership. The District and its authorized representatives will at all reasonable times while such office facilities are located at the Work site (including, at a minimum, all times during which the Work is performed), have access to any such Work site office facilities

used by the Contractor and/or its privities. With respect to the right of access of the District and its authorized representatives, neither the Contractor nor its privities shall have a reasonable expectation of privacy pursuant to the Fourth Amendment to the United States Constitution or other applicable law concerning such Work site office facilities used by the Contractor and/or its privities. Without exception, any and all Project related materials located at such Work site facilities will be deemed at all times to be District property subject to inspection and copying by the District and its authorized representatives at all reasonable times while such facilities are located at the Work site (including, at a minimum, all times during which the Work is performed). Any interference by the Contractor or its privities with the District's rights of access and/or ownership pursuant to this Section 6 will constitute a material breach of the Agreement subject to any and all remedies available pursuant to the Contract Documents and at law and equity.

7. PROSECUTION AND PROGRESS OF THE WORK

- 7.1 Liquidated Damages. Time is of the essence in the Agreement. The District and the Contractor agree that it will be difficult and/or impossible to determine the actual damage which the District will sustain in the event of the Contractor's failure to fully perform the Work or to fully perform all of the Contractor's obligations that have accrued pursuant to the Agreement by the Time for Completion. Accordingly, the District and the Contractor agree in accordance with California Government Code Section 53069.85 that the Contractor will forfeit and pay to the District liquidated damages in the sum of **\$1000 per day** for each and every calendar day completion of the Work and/or performance of all of the Contractor's obligations that have accrued pursuant to the Agreement is delayed beyond the Time for Completion. The District and the Contractor further agree in accordance with California Government Code Section 53069.85 that the liquidated damages sum specified in this provision is not manifestly unreasonable under the circumstances existing at the time the Agreement was made, and that the District may deduct liquidated damages sums in accordance with this provision from any payments due or that may become due the Contractor under the Agreement.
- 7.2 No Damage for Delay Beyond District and Contractor Control. The Contractor will not be held responsible for delays in performance of the Work caused by delay beyond the control of both District and Contractor, such as by strikes, lockouts, or labor disturbances that are not within the control of the contractor to resolve, lack or failure of transportation, or acts of other government entities. This provision will not apply where the delay would not have occurred but for a previous contractor caused delay in the

prosecution of the Work. The District will not be liable to the Contractor, any subcontractor or other entity engaged in the performance of the Work, any supplier, or any other person or organization, or to any surety or employee or agent of any of them, for damages arising out of or resulting from (i) delays beyond the control of the District and the Contractor including but not limited to fires, floods, epidemics, abnormal weather conditions, earthquakes and acts of God or acts or neglect by utility owners or other contractors performing other work, or (ii) delays caused by the District, its officials, officers, employees, agents, or volunteers, or delays caused by the Construction Manager or the Architect or Engineer, which delays are reasonable under the circumstances involved and/or are within the contemplation of the District and the Contractor. An extension of the Time for Performance in an amount equal to the time loss due to such delay(s) will be the Contractor's sole and exclusive remedy for such delay(s).

- 7.3 No Damage for Contractor Caused Delay. Contractor shall not be entitled to additional compensation for extended field or home office overhead, field supervision, costs of capital, interest, escalation charges, acceleration costs or other impacts for any delays to the extent such delays are caused by the failure of the Contractor or any subcontractor or other entity engaged in performance of the Work to perform the Work in accordance with the Contract Documents. Contractor may be eligible for additional compensation in excess of the Contract Price for delays caused by the District and/or its privities.
- 7.4 No Damage for Other Delay. Contractor will not be entitled to damages for delay to the Work caused by the following, which the District and Contractor agree will be deemed for purposes of California Public Contract Code Section 7102 either not caused by the District, and/or within the contemplation of the District and the Contractor, and/or reasonable under the circumstances:
 - 7.4.1 Exercise of the District's right to sequence the Work in a manner that would avoid disruption to the District and other contractors based on: the failure of the Contractor or any subcontractor or other entity engaged in the performance of the Work to perform the Work in accordance with the Contract Documents, enforcement by the District or any other governmental agency of competent jurisdiction of any government act or regulation, or enforcement by the District of any provisions of the Agreement.
 - 7.4.2 Requests for clarification or information concerning the Contract Documents or proposed change orders or modifications to the

Contract Documents, including extensive and/or numerous such requests for clarification or information or proposed change orders or modifications, provided such clarifications or information or proposed change orders or modifications are processed by the District or its representatives in a reasonable time in accordance with the Contract Documents.

- 7.5 Delays Caused by the District and/or Its Privities. Either the District or the Contractor may propose a change in the Time for Completion for delays that are purported to be caused by the District and/or its privities and that are not reasonable under the circumstances involved and/or that are not within the contemplation of the District and the Contractor. Such proposed changes in the Time for Completion will constitute change order proposals subject to Section 4. In accordance with Section 4, the District and the Contractor may agree upon pricing for the cost impacts, if any, resulting from such delays. If such pricing is in anticipation of cost impacts that may, but have not yet occurred, the District will be obligated to pay the Contractor for such anticipated impacts in accordance with the Agreement and any applicable, approved change orders only to the extent the Contractor actually incurs the anticipated cost impacts. Notwithstanding anything to the contrary in Section 4.5.2, the District and the Contractor may agree to a daily rate or cap or lump sum that will apply to the cost impacts, if any, resulting from delay purportedly caused by the District and/or its privities subject to this provision. However, if such daily rate or cap or lump sum is in anticipation of cost impacts that have not yet occurred, the District will be obligated to pay such daily rate or cap or lump sum only to the extent the Contractor actually incurs such cost impacts.
- 7.6 Weather Delays. The Contractor shall diligently prosecute the work to completion, including all corrective punch list items and including necessary startup and training, before the expiration of the WORKING DAYS indicated below from the date the Contract is approved by the District. A working day is defined as any day, except as follows:
- (a) Saturdays, Sundays and legal holidays;
 - (b) Days on which the Contractor is prevented by inclement weather or conditions resulting immediately there from adverse to the current controlling operation or operations, as determined by the Construction Manager, from proceeding with at least 75 percent of the normal labor and equipment force engaged on that operation or operations for at least 60 percent of the total daily time being currently spent on the controlling operation or operations.

- 7.6.1 Should the Contractor prepare to begin work at the regular starting time of any day on which inclement weather, or the conditions resulting from the weather, or the condition of the work, prevents the work from beginning at the usual starting time and the crew is dismissed as a result thereof and the contractor does not proceed with at least 75 percent of the normal labor and equipment force engaged in the current controlling operation or operations for at least 60 percent of the total daily time being currently spent on the controlling operation or operations, the Contractor will not be charged for a working day whether or not conditions should change thereafter during that day and the major portion of the day could be considered to be suitable for those construction operations.
- 7.6.2 The current controlling operation or operations is to be construed to include any feature of the work (e.g., an operation or activity, or a settlement or curing period) considered at the time by the Construction Manager and the Contractor, which, if delayed or prolonged, will delay the time of completion of the contract. Such consideration will be based on an evaluation of the CPM Schedule. Determination that a day is a non-working day by reason of inclement weather or conditions resulting immediately there from, shall be made by the Construction Manager and are non-compensable. The Contractor will be allowed 15 days from the issuance of the weekly statement of working days in which to file a written protest setting forth in what respects the Contractor differs from the Construction Manager; otherwise, the decision of the Construction Manager shall be deemed to have been accepted by the Contractor as correct. The Construction Manager will furnish the Contractor a weekly statement showing the number of working days charged to the contract for the preceding week, the number of working days of time extensions being considered or approved, the number of working days originally specified for the completion of the contract and the number of working days remaining to complete the contract and the extended date for completion.
- 7.7 Delay Claims. Whenever the Contractor claims a delay for which the Time for Completion may be extended, the Contractor must request an extension of time within five (5) days of the start of the delay. The request must be in writing and describe in detail the cause for the delay, and, if possible, the foreseeable extent of the delay.

7.7.1 Time Impact Evaluation (TIE) for Change Orders and Other Delays

- 7.7.1.1 When Contractor is directed to proceed with changed work, Contractor shall prepare and submit, within 14 days from the direction to proceed, a TIE that includes both a written narrative and a schedule diagram depicting how the

changed work affects other schedule activities. The schedule diagram shall show how Contractor proposes to incorporate the changed work in the Progress Schedule, and how it impacts the current Progress Schedule Update; critical path or otherwise. Contractor is also responsible for requesting time extensions based on the TIEs impact on the critical path. The diagram shall be tied to the main sequence of scheduled activities to enable District to evaluate the impact of changed work to the scheduled critical path.

7.7.1.2 Comply with the requirements of paragraph 7.7.1.1 of this Section for all types of delays such as, but not limited to, Contractor/Subcontractor delays, adverse weather delays, strikes, procurement delays, fabrication delays, etc.

7.7.1.3 All costs associated with the preparation of TIEs, and the process of incorporating TIEs into the current Progress Schedule update, shall be considered as included in the overhead percentages identified in Section 4, "Changes in the Work," of the general Conditions. Contractor shall provide District with four copies of each TIE.

7.7.1.4 Once agreement has been reached on a TIE, the Contract Time will be adjusted accordingly. If agreement is not reached on a TIE, the Contract Time may be extended in an amount District allows, and Contractor may submit a Claim for additional time as provided in Section 11.3, "Disputes," of the General Conditions.

7.8 Contractor Coordination of the Work.

7.8.1 The District reserves the right to do other work in connection with or in the vicinity of the Project by contract or otherwise, and Contractor shall at all times conduct the Work so as to impose no hardship on the District, others engaged in the Work or other contractors working at the Work site. The Contractor will adjust, correct and coordinate the Work with the work of others so that no delays result in the Work or other work at or near the Work site.

7.8.2 If any part of the Work depends for proper execution or results upon the work of the District or any other contractor, the Contractor will, before proceeding with such Work, promptly report to the District any apparent discrepancies or defects in such other Work. Failure of the Contractor to promptly report any apparent discrepancy or defect will be deemed an acceptance of the District's or other contractor's Work as fit and proper.

7.8.3 The Contractor will provide proper facilities at all times for access of the District, the Construction Manager, Architect or Engineer, and

other authorized District representatives to conveniently examine and inspect the Work.

8. CONTRACTOR RESPONSIBILITIES

- 8.1 Eligibility. By executing the Agreement, the Contractor certifies that the Contractor is not ineligible to perform work on public works projects pursuant to California Labor Code Sections 1777.1 or 1777.7. In accordance with California Public Contract Code Section 6109(a), contractors who are ineligible to perform work on public works projects pursuant to California Labor Code Sections 1777.1 or 1777.7 may neither bid on, be awarded or perform the Work. The Contractor shall hold harmless and indemnify the District from and against any and all damages, costs, and liability arising from or as a consequence of any violation of Public Contract Code Section 6109.
- 8.2 Supervision of the Work. The Contractor will be solely responsible for the performance of the Work, including portions of the Work to be performed by subcontractors. The Contractor is charged with ensuring that all orders or instructions from the District, Construction Manager or Architect/Engineer are disseminated to and followed by all subcontractors engaged in performance of the Work. The Contractor will supervise the Work using the Contractor's best skill and attention. At any time during the progress of the Work, the District, the Construction Manager, or the Architect/Engineer may require the Contractor and/or subcontractors engaged in performance of the Work to attend a project meeting and the Contractor will attend, and ensure the attendance of any subcontractors whose attendance is required by the District and/or advisable in light of the matters to be addressed at the meeting.
- 8.3 Contractor's Superintendent. The Contractor will keep on the Work, throughout its progress, a competent, English speaking superintendent and any necessary assistants, all satisfactory to the District. The superintendent shall have a minimum of five years of experience on similar size construction projects and may not be changed without the consent of the District. The superintendent will represent the Contractor and all directions given by the District to the superintendent will bind the Contractor in accordance with the Agreement. Superintendent time included in Contractor's completed bid schedule and/or in approved change orders, if any, must be included in Contractor's approved overhead rate and may not be charged as a direct cost. At any time the District may require the removal of the superintendent and/or any foreman without cause.

- 8.4 Competent Employees. The Contractor must at all times enforce strict discipline and good order among the Contractor's employees and may not employ on the Work any unfit person or anyone not skilled in the Work assigned, or anyone incompetent or unfit for the duties of that person. When the District determines that a Contractor employee does not satisfy the requirements of this provision, upon notice from the District, the Contractor must ensure that employee performs no further Work and is no longer present at the Work site. Any such Contractor employee may not again be employed on the Work without District approval.
- 8.5 Items Necessary for Proper Completion of the Work. Except as otherwise noted in the Contract Documents, the Contractor will provide and pay for all labor, materials, equipment, permits, fees, licenses, facilities and services necessary for the proper execution and timely completion of the Work in accordance with the Contract Documents.
- 8.6 Daily Job Reports. The Contractor shall provide the District daily with electronic copies of its daily job reports detailing and recording all significant activity on the job, including but not limited to, the number of the Contractor's and all of its subcontractors' workers on the site, major equipment, critical material deliveries, problems encountered and delays or cost impacts if not mitigated timely.
- 8.7 Subcontracting.
- 8.7.1 By executing the Agreement, the Contractor certifies that no subcontractor included on the list of proposed subcontractors submitted with the Contractor's bid is ineligible to perform work on public works projects pursuant to California Labor Code Sections 1777.1 or 1777.7. In accordance with California Public Contract Code Section 6109(a), subcontractors who are ineligible to perform work on public works projects pursuant to California Labor Code Sections 1777.1 or 1777.7 may neither bid on, be awarded or perform as a subcontractor on the Work. In accordance with California Public Contract Code Section 6109(b), any contract on a public works project entered into between a contractor and a debarred subcontractor is void as a matter of law. The Contractor will ensure that no debarred subcontractor receives any public money for performing the Work, and any public money that may have been paid to a debarred subcontractor for the Work is returned to the District. The Contractor will be responsible for payment of wages to workers of a debarred subcontractor who has been allowed to perform the Work.

8.7.2 The Agreement and the performance of the Work are subject to the requirements of the Subletting and Subcontracting Fair Practices Act codified at California Public Contract Code Section 4100 and following. If the Contractor fails to specify a subcontractor or specifies more than one subcontractor for the same portion of the Work in excess of one-half of 1 percent of the Contractor's total bid, the Contractor agrees that the Contractor is fully qualified to perform that portion of the Work with the Contractor's own forces, and that the Contractor will perform that portion of the Work with the Contractor's own forces. If after award of the Agreement the Contractor subcontracts, except as provided for in California Public Contract Code Sections 4107 or 4109, any such portion of the Work, the Contractor will be subject to the penalties set forth in California Public Contract Code Sections 4110 and 4111, including cancellation of the Agreement, assessment of a penalty of up to 10 percent of the amount of the subcontract, and disciplinary action by the Contractors State License Board.

8.7.3 No contractual relationship exists between the District and any subcontractor engaged in performance of the Work.

8.7.4 Incorporation of Contract Documents. The Contractor must incorporate the Contract Documents in each contract with a subcontractor engaged in the performance of the Work. The Contractor shall be solely responsible for any delay or additional costs incurred as a result of its failure to provide adequate or accurate project information to a subcontractor that results in improper submittals and/or work, or time or other impacts is the sole responsibility of the Contractor. The Contractor will have all of the obligations and the District will have all of the remedies that are specified in Section 11.

8.7.5 Coordination of Subcontract Work: The Contractor is responsible for scheduling the Work of subcontractors so as to avoid delay or injury to either Work or materials.

8.8 Insurance.

8.8.1 All required insurance shall be provided in the form of "occurrence"-type policies underwritten by admitted insurers in the State of California with a rating of A or better from the current year Best Rating Guide. All policies must be issued at the expense of the Contractor and must be maintained at the Contractor's expense throughout the performance of the Work.

8.8.2 The Contractor and any subcontractors engaged in performance of the Work must secure payment of workers compensation in accordance with California Labor Code Section 3700 and other applicable law. The Contractor must verify that all Subcontractors comply with this requirement.

8.8.3 Within ten (10) working days following notice of award the Contractor must submit to the District along with executed copies of all other documents specified in the Contract Check List certificates of insurance and endorsements evidencing that the Contractor has in effect and will maintain throughout the performance of the Work the following kinds and amounts of insurance:

8.8.3.1 Worker's Compensation Insurance. Workers Compensation and Employers Liability insurance as required by any applicable law, regulation or statute, including the provisions of Division IV of the Labor Code of the State of California, and any act or acts amending it. Such insurance must cover the full liability of the Contractor. The Contractor's Employer's Liability Insurance must be in an amount no less than \$1,000,000.00 per claim.

8.8.3.2 Commercial General Liability and Automobile Liability Insurance. Coverage for liability because of Bodily Injury and property Damage including, but not limited to the following coverage:

Completed Operations and Products Liability
Bodily Injury
Personal Injury
Broad Form Property Damage Liability
Contractual Liability insuring the obligations assumed by the Contractor under the Contract Documents
Automobile Liability, including owned, non-owned and hired automobiles
Coverage for the XCU hazards of Explosion, Collapse and Underground

8.8.3.3 Commercial Umbrella Policy. The Commercial policy is to insure losses above General liability, Employers liability, and auto liability limits.

- 8.8.3.4 Builders Risk. The Contractor must, at the Contractor's own expense, maintain a builder's risk fire insurance policy, special form including extended coverage and vandalism, and malicious mischief endorsements. The policy must name the District and the Contractor as insureds. Such insurance must be carried in the amount of 100% of the Contract Price. In the event of a partial or total destruction by fire of any or all of the Work at any time prior to the completion and acceptance thereof, the Contractor shall promptly reconstruct all Work so destroyed or injured at the Contractor's own cost and expense and at no cost to the District.
- 8.8.3.5 Contractor Pollution Legal Liability Insurance. The Contractor shall obtain Contractors's Pollution Legal Liability Insurance, which shall include but not be limited to, administrative actions and fines.
- 8.8.3.6 U.S. Longshoreman and Harbor Workers (USL&H). The Contractor shall obtain USL&H Insurance if the Work will be performed on or adjacent to a navigable water, as defined by the U.S. Department of Labor. If USL&H insurance applies, the Contractor shall be required to provide proof of insurance coverage in compliance with statutory requirements of the Longshoreman and Harbor Workers' Compensation Act (administered by the US Department of Labor)."

8.8.4 The insurance furnished by the Contractor must be primary in the amount of any loss.

8.8.5 The limits of the insurance required above will be at least:

Comprehensive General Liability

Bodily Injury Liability	\$5,000,000	each occurrence
	\$10,000,000	in aggregate

Property Damage Liability	\$5,000,000	each occurrence
	\$10,000,000	in aggregate

Comprehensive Automobile Liability

Bodily Injury Liability	\$1,000,000	each person
	\$5,000,000	each occurrence

Sausalito-Marín City Sanitary District
Treatment and Wet Weather Flow Upgrade
General Conditions

Property Damage Liability \$5,000,000 each occurrence

Commercial Umbrella Policy \$5,000,000

Builders Risk issued for the value of the Contract Price:

USL&H and Contractor Pollution Legal Liability Coverage
\$5,000,000

- 8.8.6 For each insurance policy required under the Agreement except for the required workers compensation insurance policy, the Contractor must provide endorsements that add the Sausalito-Marin City Sanitary District (SMCSD), its Board of Directors, officers, employees, Architect/Engineer, and Construction Manager and the National Park Service (NPS) as additional insured. Such endorsements must: provide that the insurance required to be furnished by the Contractor will be primary as regards the District, and that the District's insurance will be excess of and not contribute to the insurance required to be furnished by the Contractor; that the District will receive 30 day written notice of any reduction or cancellation of such insurance required to be furnished by the Contractor; and include a severability of interest clause acceptable to the District. Said endorsement shall be at least as broad as Insurance Services Office form number CG2010 (Ed. 11/85).

8.9 Indemnities.

- 8.9.1 The Contractor will take all responsibility for the Work, and will bear all losses and damages directly or indirectly resulting to the Contractor, any subcontractors engaged in performance of the Work, the District, its officials, officers, employees, agents, volunteers and consultants, and to third parties on account of the performance or character of the Work, unforeseen difficulties, accidents, or occurrences of other causes predicated on active or passive negligence of the Contractor or of any subcontractor engaged in performance of the Work. To the fullest extent permitted by law the Contractor will indemnify, defend and hold harmless the District, its officials, officers, employees, agents, volunteers and consultants from and against any or all loss, liability, expense, claims, costs (including costs of defense), suits, and damages of every kind, nature and description (including, but not limited to, penalties resulting from exposure to hazards in violation

of the California Labor Code) directly or indirectly arising from the performance of the Work ("Claims").

- 8.9.2 The Contractor will indemnify, defend and hold harmless the District, the District's officials, officers, employees, volunteers, agents and the Construction Manager and Engineer for all liability on account of any patent rights, copyrights, trade names or other intellectual property rights that may apply to the Contractor's performance of the Work. The Contractor will pay all royalties or other charges as a result of intellectual property rights that may apply to methods, types of construction, processes, materials, or equipment used in the performance of the Work, and will furnish written assurance satisfactory to the District that any such charges have been paid.
- 8.9.3 The Contractor assumes all liability for any accident or accidents resulting to any person or property as a result of inadequate protective devices for the prevention of accidents in connection with the performance of the Work. The Contractor will indemnify, defend, and hold harmless the District and its officials, officers, employees, agents, volunteers and consultants from such liability.
- 8.9.4 Approval of the Contractor's certificates of insurance and/or endorsements does not relieve the Contractor of liability under this Section 8.9. The Contractor will defend, with legal counsel reasonably acceptable to the District, any action or actions filed in connection with any Claims and will pay all related costs and expenses, including attorney's fees incurred. The Contractor will promptly pay any judgment rendered against the District, its officials, officers, employees, agents, volunteers or consultants for any Claims. In the event the District, its officials, officers, employees, agents, volunteers or consultants is made a party to any action or proceeding filed or prosecuted against Contractor for any Claims, Contractor agrees to pay the District, its officials, officers, employees, agents, volunteers and consultants any and all costs and expenses incurred in such action or proceeding, including but not limited to, reasonable attorneys' fees.
- 8.9.5 In accordance with California Civil Code Section 2782(a), nothing in the Agreement will be construed to indemnify the District for its sole negligence, willful misconduct, or for defects in design furnished by District. In accordance with California Civil Code Section 2782(b), nothing in the Agreement will be construed to impose on the Contractor or to relieve the District from liability for the District's

active negligence. By execution of the Contract Documents the Contractor acknowledges and agrees that the Contractor has read and understands the insurance and other requirements of Agreement, and this Section 8.9, which is a material element of consideration.

8.10 Licenses/Permits. The Contractor must, without additional expense to the District, obtain all licenses, permits and other approvals required for the performance of the Work.

8.11 California Labor Code Requirements.

8.11.1 In accordance with California Labor Code Section 1810, eight (8) hours of labor in performance of the Work shall constitute a legal day's work under the Agreement.

8.11.2 In accordance with California Labor Code Section 1811, the time of service of any worker employed in performance of the Work is limited to eight hours during any one calendar day, and forty hours during any one calendar week, except in accordance with California Labor Code Section 1815, which provides that work in excess of eight hours during any one calendar day and forty hours during any one calendar week is permitted upon compensation for all hours worked in excess of eight hours during any one calendar day and forty hours during any one calendar week at not less than one-and-one-half times the basic rate of pay.

8.11.3 The Contractor and its subcontractors will forfeit as a penalty to the District \$25 for each worker employed in the performance of the Work for each calendar day during which the worker is required or permitted to work more than eight (8) hours in any one calendar day, or more than forty (40) hours in any one calendar week, in violation of the provisions of California Labor Code Section 1810 et seq.

8.11.4 In accordance with California Labor Code Section 1773.2, the District has determined the general prevailing wages in the locality in which the Work is to be performed for each craft or type of work needed to be as published by the State of California Department of Industrial Relations, Division of Labor Statistics and Research, a copy of which is on file in the District and shall be made available on request. The Contractor and subcontractors engaged in the performance of the Work shall pay no less than these rates to all persons engaged in performance of the Work.

8.11.5 In accordance with California Labor Code Section 1775, the Contractor and any subcontractors engaged in performance of the Work must comply Labor Code Section 1775 which establishes a penalty of up to not more than Two Hundred Dollars (\$200.00) for each day for each worker for each worker engaged in the performance of the Work that the Contractor or any subcontractor pays less than the specified prevailing wage. The amount of such penalty shall be determined by the Labor Commissioner. The Contractor or subcontractor shall pay the difference between the prevailing wage rates and the amount paid to each worker for each calendar day or portion thereof for which each worker was paid less than the prevailing wage rate. If a subcontractor worker engaged in performance of the Work is not paid the general prevailing per diem wages by the subcontractor, the Contractor is not liable for any penalties therefore unless the Contractor had knowledge of that failure or unless the Contractor fails to comply with all of the following requirements:

8.11.5.1 The contract executed between the Contractor and the subcontractor for the performance of part of the Work must include a copy of the provisions of California Labor Code Sections 1771, 1775, 1776, 1777.5, 1813, and 1815.

8.11.5.2 The Contractor must monitor payment of the specified general prevailing rate of per diem wages by the subcontractor by periodic review of the subcontractor's certified payroll records.

8.11.5.3 Upon becoming aware of a subcontractor's failure to pay the specified prevailing rate of wages, the Contractor must diligently take corrective action to halt or rectify the failure, including, but not limited to, retaining sufficient funds due the subcontractor for performance of the Work.

8.11.5.4 Prior to making final payment to the subcontractor, the Contractor must obtain an affidavit signed under penalty of perjury from the subcontractor that the subcontractor has paid the specified general prevailing rate of per diem wages employees engaged in the performance of the Work and any amounts due pursuant to California Labor Code Section 1813.

8.11.6 In accordance with California Labor Code Section 1776, the Contractor and each subcontractor engaged in performance of the Work, must keep accurate payroll records showing the name, address, social security number, work classification, straight time and overtime hours worked each day and week, and the actual per diem wages paid to each journeyman, apprentice, worker, or other employee employed in performance of the Work. Each payroll record must contain or be verified by a written declaration that it is made under penalty of perjury, stating that the information contained in the payroll record is true and correct and that the employer has complied with the requirements of Sections 1771, 1811, and 1815 for any work performed by the employer's employees on the public works project. The payroll records required pursuant to California Labor Code Section 1776 must be certified and must be available for inspection by the District and its authorized representatives, the Division of Labor Standards Enforcement, and the Division of Apprenticeship Standards of the Department of Industrial Relations and must otherwise be available for inspection in accordance with California Labor Code Section 1776.

8.11.7 In accordance with California Labor Code Section 1777.5, the Contractor, on behalf of the Contractor and any subcontractors engaged in performance of the Work, will be responsible for ensuring compliance with California Labor Code Section 1777.5 governing employment and payment of apprentices on public works contracts.

8.11.8 In case it becomes necessary for the Contractor or any subcontractor engaged in performance of the Work to employ on the Work any person in a trade or occupation (except executive, supervisory, administrative, clerical, or other non manual workers as such) for which no minimum wage rate has been determined by the Director of the Department of Industrial Relations, the Contractor must pay the minimum rate of wages specified therein for the classification which most nearly corresponds to Work to be performed by that person. The minimum rate thus furnished will be applicable as a minimum for such trade or occupation from the time of the initial employment of the person affected and during the continuance of such employment.

8.12 Laws and Ordinances. The Contractor and all subcontractors engaged in the performance of the Work must conform to the following specific rules and regulations as well as all other laws, ordinances, rules and regulations

that apply to the Work. Nothing in the Technical Specifications or Project Plans is to be construed to permit Work not conforming to these codes:

National Electrical Safety Code, U. S. Department of Commerce
National Board of Fire Underwriters' Regulations
California Building Standards Code as adopted by the District
Manual of Accident Prevention in Construction, latest edition, published by A.G.C. of America
Industrial Accident Commission's Safety Orders, State of California
Regulations of the State Fire Marshall (Title 19, California Code of Regulation) and Applicable Local Fire Safety Codes
Labor Code of the State of California - Division 2, Part 7, Public Works and Public Agencies.

- 8.13 Guaranty. The Contractor guarantees all of the Work for one year from the date the District accepts the Work. Upon receiving written notice of a need for repairs which are directly attributable to defective materials or workmanship the Contractor must make good any defects arising or discovered in any part of the Work by diligently commencing the necessary repairs within seven (7) days from the date of notice from the District. If the Contractor fails to make good any defects in the Work in accordance with this provision, in addition to any other available remedy under the contract or at law or equity, the District may make good or have made good such defects in the Work and deduct the cost from amounts that may be due or become due the Contractor, and/or call on the Contractor's maintenance bond for the cost of making good such defects and for the District's reasonable legal costs, if any, of recovering against the bond. The Contractor shall remain responsible for repairing any Work found to be defective regardless of when such defect is discovered by the District.

8.14 Safety.

8.14.1 In accordance with generally accepted construction practices and applicable law, the Contractor will be solely and completely responsible for conditions of the Work site, including safety of all persons and property during performance of the Work. This requirement will apply continuously and not be limited to normal working hours. For purposes of California Labor Code Section 6400 and related provisions of law the Contractor and the Contractor's privities and any other entities engaged in the performance of the Work will be "employers" responsible for furnishing employment and a place of employment that is safe and healthful for the employees, if any, of such entities engaged in the

performance of the Work. Neither the District nor its officials, officers, employees, agents, volunteers or consultants will be “employers” pursuant to California Labor Code Section 6400 and related provisions of law with respect to the Contractor, the Contractor’s privities or other entities engaged in the performance of the Work.

8.14.2 Review and observation by the District, the Construction Manager, the Architect or Engineer, and/or other representatives of the District of the Contractor’s performance of the Work will not constitute review of the adequacy of the Contractor’s safety measures in, on, or near the Work site. Such reviews and observations do not relieve the Contractor of any of the Contractor’s obligations under the Contract Documents and applicable law to ensure that the Work site is maintained and the Work is performed in a safe manner.

8.14.3 The Contractor will be solely responsible for the implementation and maintenance of safety programs to ensure that the Work site is maintained and the Work is performed in a safe manner in accordance with the Contract Documents and applicable law. The Contractor shall perform daily site clean up/housekeeping and road sweeping. District may acquire at its discretion third party housekeeping services. Contractor will be responsible for third party fees and administrative costs.

8.14.4 Within ten (10) working days following notice of award the Contractor must submit to the District a copy of the Contractor’s IIPP and Site Safety Plan. The plan must include a confined space and lockout/tagout (LOTO) plans for review.

8.14.5 The Contractor must furnish and place proper guards and systems for the prevention of accidents, including, but not limited to, those systems required pursuant to Title 8, Section 1670 and following of the California Code of Regulations concerning safety belts and nets. The Contractor must provide and maintain any other necessary systems or devices required to secure safety of life or property at the Work site in accordance with accepted standards of the industry and applicable law. The Contractor must maintain during all night hours sufficient lights to prevent accident or damage to life or property.

8.14.6 The Contractor is responsible for the prevention of accidents on work under its direction and for complying with Federal, State, and

local safety requirements, including District's "Contractor Safety Handbook" guidelines. The District's "Contractor Safety Handbook" is available for Contractor review at the office of the Owner. The Contractor shall execute the acknowledgement form within the District's Contractor Safety Handbook prior to receiving the Notice to Proceed.

8.14.7 CONFINED SPACE PROCEDURES

The District has adopted its own safety program for confined space entry, which is consistent with General Industrial Safety Order (GISO) Section 5157. While working on this project, the Contractor and all subcontractors shall comply with the District's Safety Manual confined space entry procedures for all permit space entries.

8.14.8 HAZARDOUS MATERIALS EXPOSURE

The Contractor shall so perform its work as not to expose personnel to, or to discharge into the atmosphere from any source whatever, smoke, dust, asbestos, toxic chemicals, or other air contaminants in violation of the laws, rules, and regulations of the governmental entities having jurisdiction. Contractor or subcontractors removing 100 or more square feet of asbestos must be "Certified" in accordance with state law. All work involving exposure to asbestos and all other hazardous materials shall be performed with protection of personnel in compliance with all applicable regulations and safety requirements.

8.14.9 SPECIFIC SAFETY REQUIREMENTS

The Contractor shall:

1. Notify its employees, vendors and subcontractors of the job safety requirements.
2. Ensure that its employees, vendors, and subcontractors have the safety training and equipment appropriate for the job.
3. Provide its employees, vendors, and subcontractors with the appropriate MSDS sheets and instructions required for the job.
4. All of the above shall be in accordance with the Contractor's Safety program.

8.14.10 SUBMITTALS

Sausalito-Marín City Sanitary District
Treatment and Wet Weather Flow Upgrade
General Conditions

Before work is started, the Contractor shall submit his/her safety program and those of all listed subcontractors. Each element shall include requirements for personal protective equipment and training.

8.14.11 SCAFFOLDING, SHORING AND BRACING

The Contractor shall furnish and maintain all scaffolding, shoring and bracing required in the prosecution of the work of building construction and trenching. All such auxiliary construction shall be made and maintained in accordance with any and all statutes, laws, ordinances, rules or regulations of the State of California or other authorities or insurance companies having jurisdiction there over. The Contractor's attention is called to Section 6700 and following of the Labor Code, which is the section covering trench safety, which is included as a part of this Contract.

The Contractor shall submit to the District specific plans to show details of provision for scaffolding, rigging and fall protection. This in no way relieves the Contractor from the requirement of maintaining safety in all operations performed by him or his subcontractors. The detailed plan showing design of bracing, sloping or other provisions shall be prepared by a registered Civil or Structural Engineer as required. Acceptance by the District or its designated agent only constitutes acknowledgment of the submission and does not constitute review or approval of the design, design assumptions, or criteria, completeness of submissions, applicability to areas of intended use, nor implementation of the plans, which are solely the responsibility of the Contractor and his registered engineer.

In accordance with Section 6705 of the Labor Code, the Contractor shall submit to the District specific plans to show details of provision for worker protection from caving ground. This in no way relieves the Contractor from the requirement of maintaining safety in all operations performed by him or his subcontractors. The detailed plan showing design of shoring, bracing, sloping or other provisions shall be prepared by a registered Civil or Structural Engineer as required. Acceptance by the District or its designated agent only constitutes acknowledgment of the submission and does not constitute review or approval of the design, design assumptions, or criteria, completeness of submissions, applicability to areas of intended use, nor implementation of the plans, which are solely the responsibility of the Contractor and his registered engineer.

- 8.15 Assignment of Unfair Business Practice Claims. In accordance with California Public Contract Code Section 7103.5, the Contractor and any subcontractors offer and agree to assign to the District all rights, title, and interest in and to all causes of action the Contractor or any subcontractors may have under Section 4 of the Clayton Act (15 U.S.C. § 15) or under the Cartwright Act (Chapter 2 (commencing with § 16700) of Part 2 of Division 7 of the Business and Professions Code), arising from purchases of goods, services or materials pursuant to this contract. This assignment shall be made and become effective at the time the District tenders final payment to the Contractor, without further acknowledgement by the parties.

9. MEASUREMENT AND PAYMENT

- 9.1 F.O.B. All shipments must be F.O.B. destination to the Work site and/or other sites indicated in the Contract Documents. The Contract Price is all-inclusive (including sales tax). There shall be no additional compensation paid for containers, packing, unpacking, drayage or insurance.

9.2 Payment

- 9.2.1 On or about the first day of each calendar month the Contractor will submit to the Construction Manager a verified application for payment and schedule of values supported by a statement showing all materials actually installed during the preceding month and the cost of labor actually expended in the performance of the Work. Unless otherwise provided in the Contract Documents, no allowances or payments will be made for material or equipment not placed at the Work site.
- 9.2.2 To be eligible for payment the Contractor's applications for payment must include certified payroll reports prepared in accordance with California Labor Code Section 1776 and the Agreement for each employee of the Contractor and any subcontractors engaged in the performance of the Work during the preceding months, applications for payment will not be processed without certified payroll reports.
- 9.2.3 In accordance with California Public Contract Code Section 20104.50, the District will review applications for payment as soon as practicable after receipt. Any application or part of an application that is determined to be improper will be returned to the Contractor as soon as practicable, but no later than seven (7) days after receipt by the District, along with a written description of the reasons why the application is improper. The Contractor's failure to

submit a schedule in the time specified in Section 3.8, or its submission of a schedule to which the District has taken any uncorrected exception, shall serve as a basis for returning an application for payment in its entirety.

- 9.2.4 Unless the Contractor has elected to post securities in lieu of retention in accordance with California Public Contract Code Section 22300 and the Agreement, and the Contractor and the District have executed an escrow agreement in accordance with the Public Contract Code and the Agreement, the District will make progress payments to the Contractor in accordance with applicable law in the amount of ninety-five (95) percent of the value of the labor actually performed and the material incorporated in the Work as specified in Contractor's verified application for payment upon approval by the District's authorized representative(s). Payment of progress payments will not be construed as acceptance of the Work performed. If the Contractor has elected to post securities in lieu of retention in accordance with Public Contract Code Section 22300 and the Agreement and the Contractor and the District have executed an escrow agreement in accordance with the Public Contract Code and the Agreement, the District will make payments to the Contractor or the Contractor's escrow agent in accordance with such escrow agreement.
- 9.2.5 The District will pay the Contractor's final invoice in accordance with applicable law and this Section 9 following acceptance of the Work provided that:
 - 9.2.5.1 The Contractor has furnished evidence satisfactory to the District that all claims for labor and material have been paid, or the time for filing valid stop notices has passed and no stop notices have been filed, or all stop notices filed have been released by valid release or release bond acceptable to the District.
 - 9.2.5.2 No claim has been presented to the District by any person based upon any acts or omissions of the Contractor or any subcontractor engaged in the performance of the Work.
 - 9.2.5.3 No other claim or dispute exists under the Agreement or applicable law concerning payment of the Contractor's final invoice and/or release of the Agreement retention.

9.2.5.4 The Contractor has filed with the District the Maintenance Bond provided in the Contract Documents with duly notarized signatures of an authorized representative of the Contractor and an attorney-in-fact of an admitted surety insurer acceptable to the District and such Maintenance Bond binds the Contractor as Principal and the Surety in accordance with its terms in the amount of 10% of the final Contract Price.

9.2.5.5 The Contractor's application for final payment contains a written waiver of all claims against the District of which the Contractor may not yet asserted at the time of the submission of the application for final payment.

9.2.6 In accordance with California Public Contract Code Section 20104.50, if the District fails to make a progress payment within thirty (30) days of receipt of an undisputed, properly submitted application for payment, the District will pay the Contractor interest equivalent to the legal rate set forth in subdivision (a) of California Code of Civil Procedure Section 685.010. The number of days available to the District to make a payment without incurring an interest obligation pursuant to this provision and California Public Contract Code Section 20104.50 will be reduced by the number of days, if any, by which the District has delayed return of an application for payment beyond the seven day return requirement set forth in Section 9.2.5.

9.3 Non-Allowable Direct Charges. The following costs are not allowable direct charges under the Agreement. The following costs may only be paid under the Agreement, if at all, as part of any allowance for contractor overhead and/or profit established under the Agreement.

9.3.1 Labor costs in excess of applicable prevailing wages pursuant to the Agreement and applicable law, liability and workers compensation insurance, social security, retirement and unemployment insurance and other employee compensation and benefits pursuant to bona fide compensation plans in effect at the time specified for the opening of Project bids for contractor and subcontractor employees engaged in the performance of the Work. However, in no event will allowable direct labor charges under the agreement include employee bonuses, employee vehicles or vehicle allowances, employee telephones or telephone allowances, or employee housing or housing allowances, whether or not such

benefits are part of a bona fide compensation plan in effect at the time specified for the opening of Project bids.

9.3.2 Superintendent labor and clerical labor.

9.3.3 Bond premiums

9.3.4 Insurance in excess of that required under Section 8.8

9.3.5 Utility costs

9.3.6 Work Site office expenses

9.3.7 Home office expenses.

9.4 Retention. The Owner will withhold from each of the partial payments and retain as part security, five (5) percent of the amount earned until the final payment. However, at any time after completion of fifty (50) percent of the work has been completed, the Owner at its sole discretion, may reduce this amount in accordance with the Public Contract Code Section 9203. In addition to the amount which the Owner may otherwise retain under the Contract, the District or its agent may, in accordance with the Contract Documents and applicable law, withhold any payment of monies due or that may become due the Contractor because of:

9.4.1 Defective work not remedied or uncompleted work.

9.4.2 Claims filed or reasonable evidence indicating probable filing of claims.

9.4.3 Failure to properly pay subcontractors or to pay for material or labor.

9.4.4 Reasonable doubt that the Work can be completed for the balance then unpaid.

9.4.5 Damage to another contractor.

9.4.6 Damage to the District.

9.4.7 Damage to a third party.

9.4.8 Delay in the progress of the Work, which, in the District's judgment, is due to the failure of the Contractor to properly expedite the Work.

9.4.9 Liquidated damages or other charges that apply to the Contractor under the Agreement.

9.4.10 Any other lawful basis for withholding payment under the contract.

9.5 Securities in Lieu of Retention.

9.5.1 In accordance with Public Contract Code Section 22300, except where federal regulations or policies do not permit substitution of securities, the Contractor may substitute securities for any moneys withheld by the District to ensure performance of the Work. At the Contractor's request and expense, securities equivalent to the amount withheld will be deposited with the District, or with a state or federally chartered bank in California as the escrow agent, who will then pay those moneys to the Contractor under the terms of an Escrow for Security Deposit agreement. The Escrow for Security Deposit agreement is provided in the Contract Documents. Upon satisfactory completion of the Work, the securities will be returned to the Contractor.

9.5.2 Alternatively, at the Contractor's request and expense, the District will pay retentions earned directly to the escrow agent. At the Contractor's expense, the Contractor may direct investment of the payments into securities. Upon satisfactory completion of the Work, the Contractor will receive from the escrow agent all securities, interest, and payments received by the escrow agent from the District pursuant to this provision and the terms of the Escrow for Security Deposit agreement. The Contractor will, within 20 days of receipt of payment, pay to each subcontractor the respective amount of interest earned, less costs of retention withheld from each Subcontractor, on monies withheld to ensure the Contractor's performance of the Work.

9.5.3 Securities eligible for investment in accordance with this provision 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 the Contractor and the District.

9.5.4 The Contractor will be the beneficial owner of any securities substituted for moneys withheld and will receive any interest thereon.

10. PROJECT ACCEPTANCE AND CLOSEOUT

- 10.1 Occupancy. The District reserves the right to occupy or use any part or parts or the entire of the Work before the Work is fully performed. Subject to applicable law, exercising this right will in no way constitute acceptance of any part of the Work so occupied or used or acceptance of the entire Work, nor will such occupancy or use in any way affect the times when payments will become due the Contractor, nor will such occupancy or use in any way prejudice the District's rights under the Agreement, any Agreement bonds, or at law or equity. Occupancy or use shall not waive the District's rights to assess liquidated damages in accordance with Section 7 after the date of such occupancy or use.
- 10.2 Work Completion and Final Inspection. When the Contractor considers the Work is completed, the Contractor will submit written certification to the Construction Manager specifying that: the Contract Documents have been reviewed; the Work has been inspected for compliance with the Contract Documents; the Work has been completed in accordance with the Contract Documents; and that equipment and systems have been tested in the presence of the District's representative and are operational. The District and/or the District's authorized representatives will make an inspection to verify that the Work is complete and will notify the Contractor in writing of any incomplete or deficient Work. The Contractor will take immediate steps to remedy the stated deficiencies and give notice of correction to the Construction Manager. Upon receiving a notice of correction, the District or the District's authorized representatives will re-inspect the Work. The Contractor must correct all punch list items within 15 working days after the issuance of the punch list. Before acceptance of the Work the Contractor must submit: one set of reproducible mylars of the Project Record Drawings (As-Built), and any equipment operating and maintenance instructions and data, warranties.
- 10.3 Work Acceptance.
- 10.3.1 All finished Work will be subject to inspection and acceptance or rejection by the District, the Construction Manager, and the Architect or Engineer and other government agencies having jurisdiction over the Work. Final acceptance of the Work will be at the discretion of the District.
- 10.3.2 The District will accept the Work in writing only when the Work has been completed to the District's reasonable satisfaction. Progress payments will in no way be construed as acceptance of any part of the Work.

10.3.3 In evaluating the Work, no allowance will be made for deviations from the Technical Specifications, Project Plans or other Contract Documents unless already approved in writing in accordance with the requirements of Section 4, above.

10.3.4 The fact that the Work and materials have been observed from time to time and that progress payments have been made does not relieve the Contractor of the responsibility of replacing and making good any defective or omitted work or materials in accordance with the requirements of the Contract Documents.

11. REMEDIES AND DISPUTES

11.1 Failure to Correct Work. Within ten (10) working days of receiving written notice from the District describing Work that is defective or that is otherwise not in accordance with the requirements of the Agreement and/or applicable law and directing that such Work be corrected, the Contractor and/or the Contractor's sureties must give the District written notice of the intent of the Contractor and/or the Contractor's sureties to correct such Work and commence correction of such Work in accordance with the District's notice and the Agreement. If the Contractor and/or the Contractor's sureties do not give the District written notice of intent to correct such Work and commence correction of such Work within ten (10) working days of receipt of the District's notice, then the District may correct such work and/or have such work corrected for the account and at the expense of the Contractor and/or its sureties, and the Contractor and/or its sureties will be liable to the District for any resulting excess cost. The District may, in addition to all other remedies that the District may have under the Agreement and at law or equity, deduct any such excess cost of completing the Work from amounts that are due or that may become due the contractor.

11.2 Termination.

11.2.1 In accordance with California Public Contract Code Section 7105, in addition to all other available remedies that the District may have under the Agreement, and at law or equity, the District may terminate the Contractor's control of the Work:

11.2.1.1 If the Contractor or any of its subcontractors engaged in the performance of the Work fails to timely perform the Work and/or any of the Contractor's material obligations under the Contract Documents, including but not limited

to submission of an acceptable schedule, that have accrued except for due to reasons beyond the control of the Contractor pursuant to the Contract Documents.

- 11.2.1.2 If the Contractor is adjudged bankrupt, or if it should make a general assignment for the benefit of creditors, or if a receiver should be appointed on account of its creditors.
 - 11.2.1.3 If the Contractor or any of the subcontractors engaged in the performance of the Work persistently or repeatedly refuses or fails to supply enough properly skilled workmen or proper materials for the timely completion of the Work.
 - 11.2.1.4 If the Contractor fails to make prompt payment to subcontractors engaged in the performance of the Work or for material or labor used in the performance of the Work in accordance with the Contract Documents and applicable law.
 - 11.2.1.5 If the Contractor or any subcontractors engaged in the performance of the Work persistently disregards laws or ordinances applicable to the performance of the Work, or the instructions of the District, the Construction Manager, the Architect, or other authorized representatives of the District.
 - 11.2.1.6 For any reason or for no reason, at the District's sole discretion.
- 11.2.2 If the District intends to terminate the Contractor's control of the Work for any of the reasons specified in Sections 11.2.1.1 through 11.2.1.5, above, the District will immediately serve written notice to the Contractor and its sureties in accordance with the Contract Documents. Notice of the District's intent to terminate the Contractor's control of the Work will be given by registered or certified mail and specify the grounds for termination, the required cure and the time by which the cure must be effected. Upon receipt of notice of the District's intent to terminate the Contractor's control of the Work for any of the reasons specified in provisions 11.2.1.1 through 11.2.1.5, above, the Contractor will have ten (10) days from receipt of the notice or a longer time specified in the notice to cure its default. If the Contractor does

not effect the required cure by the time specified in the notice, the District will issue a written notice of termination to the Contractor and its sureties by registered or certified mail. The notice of termination will specify: that upon receipt of the notice the Contractor's right to perform or complete the Work, including on behalf of the Contractor's sureties, is terminated; that the Contractor's sureties will have the right to take over and complete the Work and perform all of the Contractor's remaining obligations that have accrued under the Agreement; and that if the Contractor's sureties do not both give the District written notice of their intention to take over and perform the Agreement and commence completion of the Work and performance of all of the Contractor's remaining obligations that have accrued under the Agreement within ten (10) days after receipt of notice of termination that the District may declare the Contractor's sureties in default and take over the completion of the Work or have the Work completed for the account and at the expense of the Contractor and its sureties, and the Contractor and its sureties will be liable to the District for any resulting excess cost. The District may, in addition to all other available remedies that the District may have under the Contract Documents and at law or equity, deduct any such excess cost of completing the Work from amounts that are due or that may become due the Contractor.

- 11.2.3 Upon termination of the Contractor's control of the Work for any of the reasons specified in Sections 11.2.1.1 - 11.2.1.5, the Contractor will, if so directed by the District, immediately remove from the Work site any and all materials and personal property belonging to the Contractor which have not been incorporated in the Work and the Contractor and its sureties will be liable upon their bond for all damages caused the District by reason of the Contractor's failure to complete the Work.
- 11.2.4 Upon termination of the Contractor's control of the Work for any of the reasons specified in provisions 11.2.1.1 through 11.2.1.5, above, the District reserves the right to refuse tender of the Contractor by any surety to complete the Work.
- 11.2.5 If the District completes or has completed any portion of, or the whole of the Work, following termination of the Contractor's control of the Work for any of the reasons specified in Sections 11.2.1.1 through 11.2.1.5, above, the District will neither be liable for nor account to the Contractor or the Contractor's sureties in any way for the time within which, or the manner in which such

Work is performed, or for any changes made in such Work or for the money expended in satisfying claims and/or suits and/or other obligations in connection with completing the Work. If, following termination of the Contractor's control of the Work for any of the reasons specified in Sections 11.2.1.1 through 11.2.1.5, above, the unpaid balance of the Contract Price exceeds the expense of completing the Work, including compensation for additional legal, managerial and administrative services and all other amounts due for the completion of the Work and/or satisfaction of claims of the District and/or others arising out of the Agreement and any other charges that apply to the Contractor under the Agreement, the difference will be paid to the Contractor. If such expenses of completing the Work exceed the unpaid balance of the Contract Price, the Contractor or its sureties will pay the difference to the District.

- 11.2.6 If the Agreement or Contractor's control of the Work is terminated for any reason, no allowances or compensation will be granted for the loss of any anticipated profit by the Contractor.
- 11.2.7 In accordance with California Government Code Section 4410, in the event a national emergency occurs, and public work being performed by contract is stopped, directly or indirectly, because of the freezing or diversion of materials, equipment or labor, as the result of an order or a proclamation of the President of the United States, or of an order of any federal authority, and the circumstances or conditions are such that it is impracticable within a reasonable time to proceed with a substantial portion of the work, then the District and the Contractor may, by written agreement, terminate the Agreement. In accordance with California Government Code Section 4411, such an agreement will include the terms and conditions of the termination of the contract and provision for the payment of compensation or money, if any, which either party will pay to the other or any other person, under the facts and circumstances in the case. Compensation to the Contractor will be determined on the basis of the reasonable value of the work done, including preparatory work. As an exception to the foregoing, in the case of any fully completed separate item or portion of the Work for which there is a separate contract price, the contract price shall control. The parties may in any other case adopt the contract price as the reasonable value of the work or any portion of the work done.

11.3 Disputes.

11.3.1 In accordance with California Public Contract Code Section 20104.2, the following procedures apply to claims of \$375,000 or less between the Contractor and the District:

11.3.1.1 The claim shall be in writing and include the documents necessary to substantiate the claim. Claims must be filed on or before the date of final payment. Nothing in this subdivision is intended to extend the time limit or supersede notice requirements otherwise provided by contract for the filing of claims.

11.3.1.2 For claims of less than fifty thousand dollars (\$50,000), the District shall respond in writing to any written claim within 45 days of receipt of the claim, or may request, in writing, within 30 days of receipt of the claim, any additional documentation supporting the claim or relating to defenses to the claim the District may have against the Contractor.

11.3.1.2.1 If additional information is thereafter required, it shall be requested and provided pursuant to this subdivision, upon mutual agreement of the District and the Contractor.

11.3.1.2.2 The District's written response to the claim, as further documented, shall be submitted to the Contractor within 15 days after receipt of the further documentation or within a period of time no greater than that taken by the Contractor in producing the additional information, whichever is greater.

11.3.1.3 For claims of over fifty thousand dollars (\$50,000) and less than or equal to three hundred seventy-five thousand dollars (\$375,000), the District shall respond in writing to all written claims within 60 days of receipt of the claim, or may request, in writing, within 30 days of receipt of the claim, any additional documentation supporting the claim or relating to defenses to the claim the District may have against the Contractor.

11.3.1.3.1 If additional information is thereafter required, it shall be requested and provided pursuant to

this subdivision, upon mutual agreement of the District and the Contractor.

- 11.3.1.3.2 The District's written response to the claim, as further documented, shall be submitted to the Contractor within 30 days after receipt of the further documentation, or within a period of time no greater than that taken by the Contractor in producing the additional information or requested documentation, whichever is greater.
- 11.3.1.4 If the Contractor disputes the District's written response, or the District fails to respond within the time prescribed, the Contractor may so notify the District, in writing, either within 15 days of receipt of the District's response or within 15 days of the District's failure to respond within the time prescribed, respectively, and demand an informal conference to meet and confer for settlement of the issues in dispute. Upon a demand, the District shall schedule a meet and confer conference within 30 days for settlement of the dispute.
- 11.3.1.5 Following the meet and confer conference, if the claim or any portion remains in dispute, the Contractor may file a claim as provided in Chapter 1 (commencing with Section 900) and Chapter 2 (commencing with Section 910) of Part 3 of Division 3.6 of Title 1 of the Government Code. For purposes of those provisions, the running of the period of time within which a claim must be filed shall be tolled from the time the Contractor submits his or her written claim pursuant to subdivision (a) until the time that claim is denied as a result of the meet and confer process, including any period of time utilized by the meet and confer process.
- 11.3.1.6 This article does not apply to tort claims and nothing in this article is intended nor shall be construed to change the time periods for filing tort claims or actions specified by Chapter 1 (commencing with Section 900) and Chapter 2 (commencing with Section 910) of Part 3 of Division 3.6 of Title 1 of the Government Code.

11.3.2 In accordance with California Public Contract Code Section 20104.4, the following procedures apply to civil actions to resolve claims of \$375,000 or less between the District and the Contractor:

11.3.2.1 Within 60 days, but no earlier than 30 days, following the filing or responsive pleadings, the court shall submit the matter to non-binding mediation unless waived by mutual stipulation of both parties. The mediation process shall provide for the selection within 15 days by both parties of a disinterested third person as mediator, shall be commenced within 30 days of the submittal, and shall be concluded within 15 days from the commencement of the mediation unless a time requirement is extended upon a good cause showing to the court or by stipulation of both parties. If the parties fail to select a mediator within the 15-day period, any party may petition the court to appoint the mediator.

11.3.2.2 If the matter remains in dispute, the case shall be submitted to judicial arbitration pursuant to Chapter 2.5 (commencing with Section 1141.10) of Title 3 of Part 3 of the Code of Civil Procedure, notwithstanding Section 1141.11 of that code. The Civil Discovery Act of 1986 (Article 3 (commencing with Section 2016) of Chapter 3 of Title 3 of Part 4 of the Code of Civil Procedure) shall apply to any proceeding brought under this subdivision consistent with the rules pertaining to judicial arbitration.

11.3.2.2.1 Notwithstanding any other provision of law, upon stipulation of the parties, arbitrators appointed for purposes of this article shall be experienced in construction law, and, upon stipulation of the parties, mediators and arbitrators shall be paid necessary and reasonable hourly rates of pay not to exceed their customary rate, and such fees and expenses shall be paid equally by the parties, except in the case of arbitration where the arbitrator, for good cause, determines a different division. In no event shall these fees or expenses be paid by state or county funds.

11.3.2.2.2 In addition to Chapter 2.5 (commencing with Section 1141.10) of Title 3 of Part 3 of the

Code of Civil Procedure, any party who after receiving an arbitration award requests a trial de novo but does not obtain a more favorable judgment shall, in addition to payment of costs and fees under that chapter, pay the attorney's fees of the other party arising out of the trial de novo.

11.3.2.3 The court may, upon request by any party, order any witnesses to participate in the mediation or arbitration process.

11.3.3 In accordance with California Public Contract Code Section 20104.6:

11.3.3.1 The District shall not fail to pay money as to any portion of a claim, which is undisputed except as otherwise provided in the contract.

11.3.3.2 In any suit filed under Public Contract Code Section 20104.4 concerning this contract, the District shall pay interest at the legal rate on any arbitration award or judgment. Such interest shall accrue from date the suit was filed.

SECTION 01010

SUMMARY OF WORK

PART 1 GENERAL

1.01 DESCRIPTION: This Section covers a summary of the Work and requirements supplementary to those of the Conditions of the Contract and other Sections of the specifications.

A. WORK UNDER THIS CONTRACT. The work includes furnishing all labor, materials and equipment for the TREATMENT AND WET WEATHER FLOW UPGRADE including but not limited to; 1) demolition of select existing facilities; 2) civil/earthwork, including soil nail retaining walls, for a new access road and process structures; 3) yard and plant utility piping, including re-routing of the Main Street and Fort Baker influent sewers; 4) relocation of the existing 12kV electrical service and new switchgear 5) new equalization storage tank and headworks structure, including all associated equipment; 6) new primary clarifier; 7) rehabilitation of the fixed film reactors, including new feed pumps and media replacement; 8) new secondary polishing disk filters including filter feed pumps; and appurtenant work as needed to construct a complete and operational project as specified in these Contract Documents. The Work shall be performed in accordance with the intent of the Contract Documents, excluding any work under separate contract or other arrangement. The Contractor is required to perform all civil, structural, mechanical, electrical and instrumentation work as applicable and as shown on the Drawings and required in the Specifications, to interconnect new equipment with existing equipment so as to provide completely functioning systems.

1.03 DISTRICT SUPPLIED ITEMS

B. Calcon will provide programming services for the project

1.04 CONTRACTOR USE OF SITE AND PREMISES

A. Limit use of site and premises to allow District occupancy and Work by other Contractors. The Contractor shall cooperate fully with the District and other Contractors to provide continued access to their respective work sites. The Contractor's failure to do so shall not constitute the basis for delay claims by the Contractor.

B. Liquidated Damages apply for this project as defined in paragraph 4 of the Agreement.

1.05 ANTICIPATED CONCURRENT WORK

A. District operations shall be accommodated at all times.

1.06 PRECONSTRUCTION CONFERENCE

A. Refer to Section 01040 for required attendees. Scheduling and location of the Pre-Construction Conference shall be confirmed with the Construction Manager no more

than five (5) days after the Notice to Proceed.

1.07 TRAFFIC CONTROL AND STORM WATER POLLUTION PREVENTION PROGRAM (SWPPP)

- A. Traffic control plans shall be prepared by the Contractor for all vehicle traffic anticipated at the treatment plant entrance on East Road.
- B. The disturbed area for the project is estimated to be less than one acre, therefore a SWRCB Construction Stormwater Permit is not required. However, the Contractor shall prepare and implement a level 1 SWPPP that complies with SWRCB requirements. It is the responsibility of the Contractor to provide a SWPPP to the District for approval in advance of Work.

END OF SECTION 01010

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SECTION 01014

PROTECTION OF THE ENVIRONMENT

PART 1 GENERAL

1.01 GENERAL

- A. The Contractor shall maintain all work areas within and outside the project boundaries free from environmental pollution that would be in violation to any federal, state, or local regulations.

PART 2 PROTECTION OF THE ENVIRONMENT

2.01 WATERWAYS

- A. The Contractor shall observe the rules and regulations of the State of California and agencies of the United States government prohibiting the pollution of stream or river waters by the dumping of any refuse, rubbish, or debris therein.

2.02 AIR QUALITY

- A. Air pollution due to construction operations shall be minimized by wetting down bare soils during windy periods, use of properly operating combustion emission control devices on construction vehicles and equipment used by contractors, and by shutting down motorized equipment not actually in use.
- B. Trash burning will not be permitted on the construction site.
- C. If temporary heating devices are necessary for protection of the work, such devices shall be of an approved type that will not cause pollution of the air.
- D. The control measures from the Bay Area Air Quality Management District (BAAQMD) 1999 CEQA Guidelines shall be implemented by the Contractor to reduce air quality impacts from construction. The Contractor shall:
- a. Water all active construction areas at least twice daily.
 - b. Cover all trucks hauling soil, sand, and other loose materials or require all trucks to maintain at least two feet of freeboard.
 - c. Apply water three times daily, or apply (non-toxic) soil stabilizers on all unpaved access roads, parking areas and staging areas at construction sites.
 - d. Sweep daily (with water sweepers) all paved access roads, parking areas and staging areas at construction sites.
 - e. Sweep streets daily (with water sweepers) if visible soil material is carried onto adjacent public streets.

- f. Minimize idling times either by shutting equipment off when not in use or reducing the maximum idling time to 30 seconds (as required GGNRA Vehicle Idling Standard Operating Procedures adopted by GGNRA in compliance with State of California)

2.03 CONSTRUCTION NOISE

- A. The Contractor shall conduct all work, using appropriate construction methods and equipment, and furnish and install acoustical barriers, all as necessary so that no noise emanating from the process or any related tool or equipment will exceed legal noise levels. Contractor shall have machinery equipped with mufflers that meet the provisions of the State Resources Code and the Vehicle Code.

2.04 NIGHTTIME WORK

- A. If the Contractor desires to perform any work between the hours of 4:30 p.m. and 7 a.m., Contractor shall obtain all necessary permits from the appropriate agencies and make all necessary arrangements prior to commencing. The Contractor shall be responsible for all overtime costs for District and District's representative staff during these work hours.

2.05 BIOLOGICAL

- A. To avoid impacts on birds protected by the Migratory Bird Treaty Act, the District will perform a pre-construction breeding season survey of the proposed project area and immediate vicinity, by a National Park Service (NPS)-approved biologist, during the week prior to beginning of planned construction. The GGNRA wildlife biologist must receive qualifications of the surveying biologist no later than 2 weeks before the pre-construction survey. If migratory nesting birds covered by the statute are identified on or adjacent to the proposed project area, construction would be delayed, if necessary within 500 feet of active bird nests until any eggs have hatched and young have fledged. Contract shall accommodate delays or modifications to working areas, resulting from nesting birds, at no additional cost to the District.
- B. NOT USED
- C. The Contractor shall coordinate and comply with a NPS construction monitor shall be on site, at a minimum during initial work, to make suggestions for subsurface digging relating to root damage or work areas with oak saplings that may be salvaged.
- D. To avoid the potential spread of Sudden Oak Death (SOD), other newly discovered fungal pathogens, and invasive plant seeds into clean areas of the Park, all excavated earth materials in woodland areas shall be left on site, as directed by guidelines in GGNRA's Standard Operating Procedures for Earth Materials Management and consultation with the Vegetation Ecologist and/or Integrated Pest Management Specialist. All removed vegetation shall be left onsite or hauled to a permitted recycling center in Marin County.
- E. To further minimize the spread of soil borne diseases (SOD and Phytophthora) and noxious weeds, prior to arrival and departure from the project area, all vehicles, equipment and tools shall be brushed clean of dirt or other debris and treated with ethyl or isopropyl alcohol (at least 70% by volume) to wet, OR sprayed down with a power washer and let dry, OR washed at a commercial vehicle wash and let dry. This pertains to all surfaces including tire treads, wheel wells, and undercarriage. Each day, prior to entering worksites involving earthwork, all

handtools, gloves, work shoes, and personal protective equipment shall be free of dirt of other debris, and treated with isopropyl alcohol (at least 70% by volume) to wet, OR laundered with hot water and soap and dried."

2.06 CULTURAL

- A. The Contractor shall comply with the following measures and protocols related to unanticipated archeological discoveries and human remains during construction:
- a. Prior to construction, the Contractor, including workers and supervisors shall participate in a training session, led by the District, on the potential for encountering buried archaeological resources and human remains that could be found in the project area and the response procedures to be followed if there is an unanticipated discovery;
 - b. In the event of the discovery of unanticipated archeological resources, work within 100 feet of the discovery will halt and the Park Archeologist (Peter Gavette, 415-289-1893) will be contacted. Construction Manager will not allow work to continue in that area until Archeologist gives approval to resume.
 - c. The District shall be immediately be notified of any unanticipated discovers. The District shall be responsible for contacting the NPS.
 - d. Inadvertent discoveries will be treated in accordance with 36 CFR 800.13 (Protection of Historic Properties: Post-review discoveries). Archaeological resources will be assessed for eligibility for listing on the National Register of Historic Places and a determination of the project effects on the property will be made;
 - e. Assessment of inadvertent discoveries may require archeological excavations and/or archival research to determine resource significance. If the site will be adversely affected, a treatment plan will be prepared by the District in consultation with the State Historic Preservation Office. Treatment plans will fully evaluate avoidance, project redesign, and data recovery alternatives before outlining actions proposed to resolve adverse effects;
 - f. If human skeletal remains or burial features are encountered all work shall stop in the vicinity of the discovery, and the find shall be secured and protected in place by the Contractor. The District shall be immediately notified. The District will be responsible for contacting outside agencies.
 - g. If the remains are determined to be Native American, the NPS will initiate consultation with relevant tribes. No additional work shall take place near the find until the identified actions have been implemented. Discovered remains will be treated in accordance with the Native American Graves Protection and Repatriation Act Regulations at 43 CFR 10.4 (Inadvertent discoveries) as appropriate.

2.07 GEOLOGICAL

- A. To mitigate the loss or degradation of geologic materials associated with project, the removal of soil or rock, and importing of aggregate base rock will be performed in accordance with the Golden Gate National Recreation Area (GGNRA), Standard Operating Procedures for Managing Earth Materials. Earth materials generated from excavation activities shall be

reused in other parts of the GGNRA to mitigate the loss of geologic resources. Earth materials from developed areas near roads, parking lots, and infrastructure shall be tested for hazardous materials prior to reuse. Any chert excavated during the project that is appropriate for use as a trail, overlook, or parking area tread shall be used for tread rather than to backfill areas or for trail or road base. Good quality chert is considered valuable and should be used as tread whenever possible. The reuse of chert as tread would also mitigate the loss of radiolarian fossils commonly found in that rock. The Contractor shall sort and deliver earth material generated from the project to designated areas with the GGNRA at no additional cost to the District.

END OF SECTION 01014

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SECTION 01025

MEASUREMENT AND PAYMENT

PART 1 GENERAL

1.01 ADMINISTRATIVE SUBMITTALS

- A. Schedule of Values: Submit schedule on a form acceptable to the Construction Manager.
- B. Schedule of Estimated Progress Payments:
 - 1. Submit with initially acceptable schedule of values.
 - 2. Submit adjustments thereto upon request by the Construction Manager.
- C. Application for Payment: In accordance with Paragraph 9.2 of the General Conditions and as specified herein.
 - 1. Final Application for Payment: As specified in Paragraph 9.2.5 of the General Conditions and as specified herein.

1.02 SCHEDULE OF VALUES

- A. Reference Section 01301, Schedule of Values.
- B. Format:
 - 1. Reflect schedule of values format included in original schedule of values, specified allowances, and alternates. Provide separate value for each item or task on the progress schedule. List each item of equipment separately.
 - 2. An unbalanced or front-end loaded schedule will not be acceptable.
 - 3. List separately such items as Bonds and insurance premiums, mobilization, demobilization and contract closeout, facility startup, and other appropriate Division 1 activities.
 - 4. Include proportional amount of Contractor's overhead and profit in each line item.
 - 5. List separately an item for monthly schedule update.

1.03 SCHEDULE OF ESTIMATED PROGRESS PAYMENTS

- A. Show estimated payment requests throughout Contract Times and aggregating initial Contract Price.
- B. Base estimated progress payments on initially acceptable progress schedule. Adjust to reflect subsequent adjustments in progress schedule and Contract Price as reflected by modifications to the Contract Documents.
- C. Submit adjusted payment schedule with each Application for Payment.

1.04 APPLICATION FOR PAYMENT

- A. Reference Paragraph 9 of the General Conditions.
- B. Transmittal Summary Form:
 - 1. Provided by Construction Manager.
 - 2. Attach one Summary Form with each detailed Application for Payment for each schedule.
 - 3. Include Request for Payment of Materials and Equipment on Hand as applicable.
 - 4. Execute certification by authorized officer of Contractor.
- C. Use detailed Application for Payment Form suitable to Construction Manager.
 - 1. Provide separate form for each schedule as applicable.
 - 2. Include accepted schedule of values for each schedule or portion of Work, the unit price breakdown for Work to be paid on unit price basis, a listing of Owner-selected equipment, if applicable, and allowances, as appropriate.
 - 3. Form(s) to conform to the examples furnished by Construction Manager for Lump Sum Work and materials on hand.
- D. Preparation:
 - 1. Round values to nearest dollar.
 - 2. List each Change Order and Written Amendment executed prior to date of submission as separate line item. Totals to equal those shown on the Summary Sheet for each schedule as applicable.
 - 3. Submit Application for Payment, including a Transmittal Summary Form and detailed Application for Payment Form, a listing of materials on hand, and such supporting data as may be requested by Construction Manager.

1.05 MEASUREMENT-GENERAL

- A. Weighing, measuring, and metering devices used to measure quantity of materials for Work shall be suitable for purpose intended and conform to tolerances and specifications as specified in National Institute of Standards and Technology, Handbook 44.

1.06 PAYMENT

- A. General: See General Conditions, Paragraph 9.2.
- B. Payment for all Work shown or specified in the Contract Documents is included in the Contract Price. No measurement or payment will be made for individual items.

1.07 NONPAYMENT FOR REJECTED OR UNUSED PRODUCTS

- A. Payment will not be made for following:
 - 1. Loading, hauling, and disposing of rejected material.

2. Quantities of material wasted or disposed of in manner not called for under Contract Documents.
3. Rejected loads of material, including material rejected after it has been placed by reason of failure of Contractor to conform to provisions of Contract Documents.
4. Material not unloaded from transporting vehicle.
5. *Defective Work* not accepted by Owner.
6. Material remaining on hand after completion of Work.

1.08 PARTIAL PAYMENT FOR STORED MATERIALS AND EQUIPMENT

- A. Partial Payment: Reference Paragraph 9.2 of the General Conditions. No partial payments will be made for mechanical, electrical, or interface equipment delivered or stored unless acceptable draft operation and maintenance manuals are delivered to Construction Manager.
- B. Final Payment: Reference Paragraph 9.2.5 of the General Conditions. Final Payment will be made only for materials incorporated in Work; remaining materials, for which partial payments have been made, shall revert to Contractor unless otherwise agreed, and partial payments made for those items will be deducted from final payment.

1.09 FINAL APPLICATION FOR PAYMENT

- A. Reference Paragraph 9.2.5 of the General Conditions, Section 01700, Contract Closeout, and as may otherwise be required in Contract Documents.
- B. Prior to submitting final application, make acceptable delivery of all required documents, including, but not limited to final O&M Manuals, warranty forms, manufacturer's certificates, etc.

PART 2 PRODUCTS (Not Used)

PART 3 EXECUTION

3.01 MEASUREMENT AND PAYMENT

- A. Treatment and Wet Weather Flow Upgrade Project:
 1. Measurement for payment of work. The work includes furnishing all labor, materials and equipment for the TREATMENT AND WET WEATHER FLOW UPGRADE including but not limited to; 1) demolition of select existing facilities; 2) civil/earthwork, including soil nail retaining walls, for a new access road and process structures; 3) yard and plant utility piping, including re-routing of the Main Street and Fort Baker influent sewers; 4) relocation of the existing 12kV electrical service and new switchgear 5) new equalization storage tank and headworks structure, including all associated equipment; 6) new primary clarifier; 7) rehabilitation of the fixed film reactors, including new feed pumps and media replacement; 8) new secondary polishing disk filters including filter

feed pumps; and appurtenant work as needed to construct a complete and operational project as specified in these Contract Documents.

2. BID ITEM 1. Mobilization/Demobilization – Lump Sum: Includes preparatory work and operations, including, but not limited to, those necessary for the movement of personnel, equipment, supplies and incidentals to the project site, for the establishment of all offices, buildings and other facilities necessary for work, on the project, and for all other work and operations which must be performed or cost incurred prior to beginning work on the (Pub Cont Code § 10104) and demobilization from the project site. Mobilization/Demobilization may not exceed 10% of the Contractor's total bid amount. Payment for mobilization and demobilization will be made at the bid price in the Bid Schedule under Bid Item 1, which price shall constitute full compensation for completion of all such work as required per the Contract Documents.
3. BID ITEM 2: Sheeting, Shoring, and Bracing- Lump Sum: Includes all payment for planning, design, engineering, furnishing, construction and the removal and disposal of all temporary sheeting, shoring, and bracing as required but not limited to the provisions of any permits, and in accordance with the requirements of OSHA and the Construction Safety Orders of the State of California, pursuant to the provisions of Section 6700 through 6708 of the California Labor Code. Payment for sheeting, shoring and bracing will be made at the bid price in the Bid Schedule under Bid Item 2, which price shall constitute full compensation for completion of all such work as required per the Contract Documents.
4. BID ITEM 3: 12kV Service Relocation – Lump Sum: Includes payment for all work to relocate the District's existing 12kV service feed from PG&E and the District's Main Service Panel based upon all labor, equipment and materials necessary to complete all the work in accordance with the requirements included in the Contract Documents. Contractor shall provide all facilities require for the 12kV service relocation, except for pulling of the 12kV wires and final termination which will be performed by PG&E. Contractor shall include time required to coordinate with PG&E for final termination. Payment for 12kV service relocation will be made at the bid price in the Bid Schedule under Bid Item 3, which price shall constitute full compensation for completion of all such work as required per the Contract Documents.
5. BID ITEM 4: Off-Haul of Unsuitable Material – Unit Price: Includes payment for work associated with the off-haul of unsuitable material based upon all labor, equipment and materials necessary to complete all the work in accordance with the requirements included in the Contract Documents. The Construction Manager will establish in the field the unsuitable material, and such material may include but is not necessarily limited to bay mud, stripped top soil, stripped soil, over-excavated soils and rock, or stumps and roots from tree removal. The unsuitable material for this bid item does not include demolition debris such as concrete, paving, pipe, wood, trees not already removed prior to construction, bushes, and other materials identified in the Contact Documents for demolition. The unsuitable material for this bid item shall be off hauled to an appropriate disposal site. Payment for off-haul shall be by unit of measure cubic yard (CY) from the log at the disposal site, to the nearest cubic yard, which price named on

the Bid Schedule under Item No. 4 shall constitute full compensation for completion of all such Work as required per the Contract Documents.

6. BID ITEM 5: Off-Haul of Material for Reuse within the GGNRA- Unit Price: Includes payment for work associated with the off-haul of material for reuse within the GGNRA based upon all labor, equipment and materials necessary to complete all the work in accordance with the requirements included in the Contract Documents. The Construction Manager will establish in the field the material for reuse, and such material may include but is not necessarily limited to chert and other earth materials. Off-haul of material for reuse shall be performed in accordance with the requirement of Section 01014 Protection of the Environment. Payment for off-haul shall be by unit of measure cubic yard (CY) from the log at the GGNRA storage site, to the nearest cubic yard, which price named on the Bid Schedule under Item No. 5 shall constitute full compensation for completion of all such Work as required per the Contract Documents.
7. BID ITEM 6: Soil Nail Retaining Walls (Upper, Lower, and Admin) – Lump Sum: Includes payment for work associated with the construction of the upper, lower, and Admin soil nail walls based upon all labor, equipment and materials necessary to complete all the work in accordance with the requirements included in the Contract Documents. Work under this bid item does not include demolition, exaction or off-haul required prior to constructing the soil nail retaining walls. Payment for the soil nail retaining wall will be made at the bid price in the Bid Schedule under Bid Item 6, which price shall constitute full compensation for completion of all such work as required per the Contract Documents.
8. BID ITEM 7: Lining of Headworks, Equalization, and Primary Structures – Lump Sum: Includes payment for work associated with the lining of the headworks, equalization and primary structures based upon all labor, equipment and materials necessary to complete all the work in accordance with the requirements included in the Contract Documents. Payment for the lining will be made at the bid price in the Bid Schedule under Bid Item 7, which price shall constitute full compensation for completion of all such work as required per the Contract Documents.
9. BID ITEM 8: Eutek HeadCell Grit Removal Unit (Equipment Only) – Lump Sum: Includes payment for one, 9-foot, 12-tray Eutek HeadCell Grit Removal unit, appurtenances, two-year warranty, and freight to jobsite including the preparation of submittals and manufacturer support and training in accordance with the requirements included in the Contract Documents. Payment for the Eutek HeadCell Grit Removal Unit will be made at the bid price in the Bid Schedule under Bid Item 8, which price shall constitute full compensation for supply of this item. See Specification 11320, Part 4 – Scope of Supply and Vendor Quote for further information.
10. BID ITEM 9: All Other Work to Install Eutek HeadCell Grit Removal Unit – Lump Sum: Includes payment for all work associated with the installation and commissioning of the Eutek HeadCell Grit Removal unit based upon all labor, equipment and materials necessary to complete all the work in accordance with

the requirements included in the Contract Documents. Work under this bid item does not include supply of Eutek HeadCell Grit Removal equipment. Payment for installation and commissioning of Eutek HeadCell Grit Removal unit will be made at the bid price in the Bid Schedule under Bid Item 9, which price shall constitute full compensation for completion of all such work as required per the Contract Documents.

11. BID ITEM 10: Primary Clarifier – Lump Sum: Includes payment for work associated with primary clarifier, including tank, mechanism, grating, handrails, cover, and sludge and scum pumps, based upon all labor, equipment and materials necessary to complete all the work in accordance with the requirements included in the Contract Documents. Payment for the primary clarifier will be made at the bid price in the Bid Schedule under Bid Item 10, which price shall constitute full compensation for completion of all such work as required per the Contract Documents.
12. BID ITEM 11: Secondary Polishing Disk Filters – Lump Sum: Includes payment for work associated with secondary polishing disk filters, including filter feed pumps, filter equipment, tanks, grating, and handrails based upon all labor, equipment and materials necessary to complete all the work in accordance with the requirements included in the Contract Documents. Payment for the disk filters will be made at the bid price in the Bid Schedule under Bid Item 11, which price shall constitute full compensation for completion of all such work as required per the Contract Documents.
13. BID ITEM 12: Relocation of the 8-inch diameter Fort Baker Sewer – Lump Sum: Includes payment for work associated with the relocation of the Fort Baker Sewer from the existing Fort Baker Sewer connection to, including rehabilitating the existing manhole on the west side of East Road and installation of the new manhole on the east side of East Road, based upon all labor, equipment and materials necessary to complete all the work in accordance with the requirements included in the Contract Documents. Payment for the relocation of the Fort Baker Sewer will be made at the bid price in the Bid Schedule under Bid Item 12, which price shall constitute full compensation for completion of all such work as required per the Contract Documents.
14. BID ITEM 13: Bid allowance for to pay for demolition of unknown pipelines, 6-inch nominal diameter and smaller – Unit Price: Includes payment for work associated with the demolition of buried or exposed unknown pipelines based upon all labor, equipment and materials necessary to complete all the work in accordance with the requirements included in the Contract Documents. The Construction Manager will establish and determine in the field the identification of unknown pipelines as well as length of pipeline to be demolished. Payment for demolition of unknown pipelines shall be by unit of measure linear feet (LF), to the nearest linear foot, which price named on the Bid Schedule under Item No. 13 and shall be charged against the allowance shown in the Bid Schedule. At the completion of the work, and prior to final acceptance, any monies remaining unexpended in the allowance shall be deducted from the total Contract Price by change order and shall constitute full compensation for completion of all such Work as required per the Contract Documents. This Bid Item does not include

utilities or structures encountered within the boundaries of demolition as stated in Note 2 on Drawing D-2.

15. BID ITEM 14: Excavation of hard rock- Unit Price: Includes payment for work associated with the excavation of hard rock based upon all labor, equipment and materials necessary to complete all the work in accordance with the requirements included in the Contract Documents. Any rock conditions encountered to be claimed as hard rock need to be observed and approved in the field by the Engineer prior to being accepted as hard rock. Payment for excavation of hard rock shall be by unit of measure cubic yard (CY), to the nearest cubic yard, which price named on the Bid Schedule under Item No. 14 shall constitute full compensation for completion of all such Work as required per the Contract Documents. The unit rates established in the schedule of Bid Items will be used for payment of all hard rock excavation, regardless of actual final excavation volume.
16. BID ITEM 15: Other Excavation- Unit Price: Includes payment for work associated with all other excavation not covered or included in Bid Item 14 upon all labor, equipment and materials necessary to complete all the work in accordance with the requirements included in the Contract Documents. Payment for other excavation shall be by unit of measure cubic yard (CY), to the nearest cubic yard, which price named on the Bid Schedule under Item No. 15 shall constitute full compensation for completion of all such Work as required per the Contract Documents. The unit rates established in the schedule of Bid Items will be used for payment of all other excavation, regardless of actual final excavation volume.
17. BID ITEM 16: All Other Work- Lump Sum: Includes payment for all work required under the Contract except for work specifically being provided under Bid items 1 through 15. This item shall constitute full compensation for all such work as required per the Contract Documents. Payment for “all other work” will be made at the bid price in the Bid Schedule under Bid Item 16, which price shall constitute full compensation for completion of all such work as required per the Contract Documents.
18. OPTIONAL BID ITEM 17: Temporary Secondary Effluent Filtration – Lump Sum: As an optional work item and at the District’s sole discretion, includes payment for work associated with temporary secondary effluent filtration facilities based upon all labor, equipment and materials necessary to complete all the work in accordance with the requirements included in the Contract Documents. Payment for the temporary secondary effluent filtration will be made at the bid price in the Bid Schedule under Bid Item 17, which price shall constitute full compensation for completion of all such work as required per the Contract Documents.
19. OPTIONAL BID ITEM 18: Concrete crack repair on the interior of surface of the fixed film reactor structures – Unit Price: Includes payment for work associated with the concrete crack repair within the fixed film reactor structure based upon all labor, equipment and materials necessary to complete all the work in accordance with the requirements included in the Contract Documents.

Concrete crack repair shall be performed in accordance with Section 03740. As an optional work item and at the District's sole discretion, the Construction Manager will establish in the field, the cracks to be repaired. The cost of such work shall be charged based on the unit price shown in the Bid Schedule. At the completion of the work, and prior to final acceptance, any monies remaining unexpended in Bid Item 18 shall be deducted from the total Contract Price by change order.

20. OPTIONAL BID ITEM 19: Concrete surface repair on the interior of surface of both fixed film reactor structures – Unit Price: Includes payment for work associated with the concrete surface repair within the fixed film reactor structure based upon all labor, equipment and materials necessary to complete all the work in accordance with the requirements included in the Contract Documents. Concrete surface repair shall be performed in accordance with Section 09960. As an optional work item and at the District's sole discretion, the Construction Manager will establish in the field, the areas on the concrete surface to be repaired. The cost of such work shall be charged based on the unit price shown in the Bid Schedule. At the completion of the work, and prior to final acceptance, any monies remaining unexpended in Bid Item 19 shall be deducted from the total Contract Price by change order.
21. OPTIONAL BID ITEM 20: Coat the interior concrete surface of both fixed film reactors – Lump Sum: Includes payment for work associated with coating the concrete surface within the fixed film reactor structure including the center column and floor, based upon all labor, equipment and materials necessary to complete all the work in accordance with the requirements included in the Contract Documents. The total estimated combined interior area of the fixed film reactors is 12,000 square feet. Concrete coating shall be performed in accordance with Section 09960, Paragraph 2.2V. As an optional work item and at the District's sole discretion, the Construction Manager may direct the Contractor to coat interiors of the fixed film reactors. Payment for coating the fixed film reactors will be made at the bid price in the Bid Schedule under Optional Bid Item 20, which price shall constitute full compensation for completion of all such work as required per the Contract Documents.

3.02 ADJUSTMENT OF QUANTITY AND PAYMENT AMOUNT

- A. The quantities shown in the bid schedule are for bid purposes only. Additive or deductive quantities of the work will be adjusted by the Owner. For lump sum items, payment for quantity adjustments will be based on unit price breakdowns provided with the Schedule of Values. Final amount of payment will be adjusted based on actual quantity of work installed multiplied by the bid price for each bid item, or based on the unit price breakdowns provided with the Schedule of Values.

END OF SECTION 01025

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SECTION 01030

SPECIAL PROJECT CONSTRAINTS

PART 1 GENERAL

- 1.01 GENERAL: Construction under this Contract involves modification of facilities at the existing operating wastewater treatment plant, which must continue to meet requirements of State and Federal regulating agencies. This existing wastewater treatment plant is currently and continuously receiving and treating sewage and those functions shall not be interrupted except as specified herein. The Contractor shall coordinate the work to avoid any interference with normal operation of plant equipment and processes. Work for the upgrades requires confined entry into various locations within the treatment plant. Construction activities shall be performed safely and shall not limit or obstruct District operations.
- A. Temporary power, lighting, controls, instrumentation, alarms, security devices, and all required safety devices shall be provided by the Contractor whenever this work or interruption due to this work affects the existing power, lighting, controls, instrumentation, alarms, etc.
- C. The Contractor shall notify the Owner in writing of the Contractor's planned procedure for each shutdown of any existing facilities at least three (3) weeks before the alteration begins. The Contractor shall additionally provide written confirmation of the shutdown date and time five (5) working days prior to the actual shutdown. The time constraints for the above notifications are in addition to the time needed for the Contractor to have its shutdown plans approved in accordance with Section 01300.
1. A System Outage Request (SOR form located at the end of this section) shall accompany each outage plan. The outage plans shall be coordinated with the construction schedule and shall include the Contractor's planned method; the length of time required to complete said operation; and method for preventing bypassing of other treatment units, necessary temporary power, controls, instrumentation or alarms required to maintain control, monitoring and alarms; and the manpower, plant and equipment that the Contractor shall provide in order to ensure proper operation of affected facilities. In addition, the outage plan shall describe the Contractor's contingency plan that shall be initiated in the event that its temporary facilities fail or it becomes apparent that the time constraints described in the approved SOR cannot be met. The contingency plan shall conform to all specified outage requirements. All costs for preparing and implementing both the outage and contingency plans shall be borne by the Contractor. Table 1 defines outage limitations and constraints for the existing utilities and pipelines.

Table 1 – Outage Limitations by Process Fluid

Fluid Abbreviation	Process Fluid	SOR Limitations/Constraints			
		Seasonal	Shutdown Hours	Shutdown Length (hrs)	Other Shutdown Requirements
1W	POTABLE WATER		5pm - 5am	4	

Fluid Abbreviation	Process Fluid	SOR Limitations/Constraints			
		Seasonal	Shutdown Hours	Shutdown Length (hrs)	Other Shutdown Requirements
2W	NON-POTABLE WATER			4	
3W	TREATED PLANT EFFLUENT			4	
CA	COMPRESSED AIR	N/A		4	
CL	CHLORINE, HYPOCHLORITE			4	Case by case basis.
D	DRAIN	Dry weather			
DG	DIGESTER GAS			24	Waste gas flare shall remain in operation at all times.
DOF	DIGESTER OVERFLOW			12	
DFS	DIESEL FUEL SUPPLY			2 hours unless other arrangements are made.	
DS	DIGESTED SLUDGE			4	
DSM	DIGESTED SLUDGE MIXING			24	
DSR	DIGESTED SLUDGE RETURN			48	
DSU	DIGESTED SUPERNATANT			4	
FA	FOUL AIR			8	
FC	FERRIC CHLORIDE			24	
FOR	(DIESEL) FUEL OIL RETURN			2 hours unless other arrangements are made.	
FOS	(DIESEL) FUEL OIL SUPPLY			2 hours unless other arrangements are made.	
FT	FILTRATE			24	
INF	INFLUENT SEWER	Dry Weather	2am – 4am	2	Case by case basis
P	POLYMER	N/A			
PD	PUMPED DRAIN				Case by case basis
PE	PRIMARY EFFLUENT	Dry Weather	12am - 8am	4 hour unless other arrangements are made	

Fluid Abbreviation	Process Fluid	SOR Limitations/Constraints			
		Seasonal	Shutdown Hours	Shutdown Length (hrs)	Other Shutdown Requirements
PI	PRIMARY INFLUENT	Dry weather	12am - 8am	4 hour unless other arrangements are made	
PS	PRIMARY SLUDGE			24	
SD	STORM DRAIN	Dry weather			
SE	SECONDARY EFFLUENT	Dry weather		4 hours unless other arrangements are made.	
S or SS	SANITARY SEWER	Dry weather	12am - 8am	4 hours unless other arrangements are made.	
Main Street FM/SS	RAW INFLUENT	Dry Weather	2am – 4am	2	Case by case basis
Fort Baker Sewer	RAW INFLUENT	Dry Weather	2am – 4am	2	Case by case basis

2. The Construction Manager shall be notified in writing at least one week in advance of the required outage if the schedule for performing the work has changed or if revisions to the outage plan are required. Any changes must be approved by the Construction Manager and the District prior to the outage.
3. The Contractor shall attend a meeting with the Construction Manager and District one week before the scheduled outage to review the SOR.
4. The Contractor shall not proceed with the subject work until the System Outage Request Form has been returned to the Contractor with the approval of both the Construction Manager and the Owner.

D. General Shutdown/Operational Constraints:

1. Shutdown of existing facilities will be performed by District personnel or by the Contractor only under District supervision and with prior approval. Owner operation and maintenance personnel will cooperate in every way that is practical to facilitate Contractor's operations. However, certain shutdowns and connections may only be permissible at times other than normal working hours such as nights or weekends. No additional compensation will be paid to the Contractor because of these constraints.
2. The Contractor shall note that not all valves and gates that may be used to isolate lines and facilities will completely seal. The Contractor shall allow for leakage in planning its work and may, with the District's concurrence, test certain valves and

gates before work involving isolation is begun. The Contractor shall provide adequate temporary pumping and piping facilities to clear the work areas as necessary of water, sewage and sludge. The Contractor shall clean the work areas as required to perform work. District will empty lines to the nearest drain. Some fluid may remain in the pipelines. Contractor shall be responsible for removing and disposing of any remaining fluid.

3. The work under this contract shall be conducted in a manner that will minimize shutdowns, roadway closures, or traffic obstructions caused by construction. Shutdowns causing damage to adjacent public and private property shall not be permitted and any damage resulting shall be the sole responsibility of the Contractor.
4. No shutdowns shall be allowed to start on Fridays, Saturdays, Sundays, or holidays, unless it is so directed or approved in writing by the Owner
5. Shutdowns shall generally be scheduled during normal working hours.
6. Where shutdowns are specified not to occur during the wet weather season, this season shall be defined as starting on November 1 and ending on April 30. The dry weather season is defined as starting on May 1 and ending on October 31, excepting for years of higher than average sewage flow.
7. Disruptions to plant operations shall be permitted during dry weather periods (April 1 to October 31) and only when flow conditions are below peak levels unless otherwise noted or approved. To minimize impact on plant staff, all outages shall be limited to 8-hour periods, whenever possible -unless otherwise noted. Planned utility service shutdowns to any service area or process unit of the project shall be accomplished during periods of minimum use. In some cases this will require night or weekend work, which shall be at no additional cost to the District. The Contractor shall program work so that service will be restored in the minimum possible time and shall cooperate with the District in reducing shutdowns of the utility to a minimum.
8. Electric power outages shall be permitted for a maximum of 6 hours unless otherwise approved by the Construction Manager. Plant backup power shall be used during the outage period.
9. Prior to initiating any shutdown, the Contractor shall develop a plan to indicate how they will address the issues listed below for each shutdown. The plan shall contain sufficient detail to demonstrate that the Contractor can complete the required work safely in accordance with the specified time limits. The plan shall be submitted in accordance with Section 01300.
10. The Contractor shall note that only certain structures, tie-ins and constraints are addressed in this section. All work, whether or not addressed here, shall be governed by applicable parts of this section, and schedules and procedures shall be further submitted for approval.
11. Changes to existing utilities or any new connection thereto must be coordinated to provide the least possible interference with plant operations. Prior to any

shutdown or flow diversion all materials, fittings, supports, equipment and tools shall be on the site and all necessary labor scheduled prior to starting any connection work. The Contractor is advised that any shutdown of facilities will place a considerable burden on the District's staff before, during and after the shutdown. If through inadequate planning, lack of preparedness, faulty or inefficient workmanship or other causes controllable by the Contractor, delays, excessive time, or additional shutdowns are required that cause the District to incur extra cost including any imposed regulatory fines, said extra cost will be assessed against the Contractor.

12. The Contractor shall include all work described in this section in the construction schedule. The sequence and constraints identified in this section shall be followed in the construction of the work. However, alternatives to these sequences and constraints may be submitted by the Contractor for review by the District.
13. Vehicle access from the Maintenance level to the plant process level shall be maintained throughout construction. At a minimum, the Contractor shall provide and allow for vehicle access to the plant process level for two, one-hour period each day. The one-hour periods shall occur once in the morning and once in the afternoon at a mutually agreeable time. Any interruptions to the daily vehicle access periods shall require a submission of a SOR by the Contractor.
14. The Contractor shall provide for temporary stair access from the Maintenance level to the plant process level as shown on Sheet C100-4. Stair access shall be maintained throughout construction. Temporary stairs shall comply with OSHA and other applicable safety requirements. Temporary lighting shall also be provided for nighttime access. The Contractor shall remove the temporary stair case and lighting at the end of construction.
15. To minimize disruptions to normal plant operations, crane staging at the plant maintenance level shall be limited to one (1), five (5) day period for the purpose of setting rotating disc filter equipment. For any other work, staging at this location will require review and approval by the Owner a minimum of two weeks in advance.

E. Unlawful Bypassing

1. Bypassing of untreated or partially treated sewage to surface waters or drainage courses is prohibited during construction. In the event accidental bypassing is caused by the Contractor's operations, the District shall immediately be entitled to employ others to stop the bypassing without giving written notice to the Contractor. If a Contractor-initiated bypass occurs, the Contractor shall pay all expenses incurred by the District and any fines imposed by State and Federal agencies, courts, and third party suits.

1.02 SUBMITTALS

- A. All submittals shall be done in accordance with Section 01300, Submittals. The submittals included in this Section 01030 are:
 1. Plan for stockpiling and/or disposal of excavated materials

2. Facility Testing and Start-up Plan
3. Shutdown plans per paragraph 1.01C
4. Traffic Control Plan.

1.03 NOT USED

1.04 TRAFFIC CONTROL

- A. The Contractor shall maintain treatment plant facilities at all times and shall conduct operations in such a manner as to leave access unobstructed and in a condition satisfactory for vehicular travel during construction or non-construction hours.

PART 2 PRODUCTS

2.01 STORAGE OF MATERIALS AND EQUIPMENT

- A. No public or private property or stream area adjacent to the site shall be used for storage or disposal of the Contractor's equipment and materials, and excess excavated material, unless prior written approval is obtained from the legal owner.

PART 3 EXECUTION

3.01 CONVENIENCE AND ACCESS

- A. The Contractor shall conduct the operation so as to cause minimum obstruction or inconvenience to the District staff and neighboring facilities. Staff must be able to access the District's facilities at all times.
- B. The Contractor shall provide clear unobstructed access to all fire hydrants at all times.
- C. The Contractor shall cooperate with the collection and removal of trash and garbage and adjacent to the construction site.

Sausalito-Marín City Sanitary District
SYSTEM OUTAGE REQUEST

SOR No. _____

Date:

Project:: Project_____

To: CM

Requested By:

CM Firm

Name:

1. A Shutdown is requested on the following system:

2. Proposed date of Shutdown:

3. Estimated duration: Hrs. Beginning at _____ A.M. P.M.

4. Reason for Shutdown:

5. Operations staff assistance required: Yes No
Describe:

6. Method of Approach/Sequence of Events:

7. Equipment to be used during Shutdown:

8. Contingency Plan:

Sausalito-Marin City Sanitary District
Treatment and Wet Weather Flow Upgrade
Project No. 0055-006
SOR REVIEW

SOR No. _____

Item: _____

Construction Manager Comments:

Construction Manager Signature: _____ Date: _____

Date Transmitted to SMCSO: _____

SMCSO Comments:

District Engineering: _____ Date: _____

District Operations: Date: _____

District Maintenance: _____ Date: _____

Date Transmitted to Construction Manager: _____

SOR Acceptable with Comments Noted: _____

SOR Not Acceptable/Resubmit: _____

Date Construction Manager Transmits to Contractor: _____

END OF SECTION 01030

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SECTION 01040

COORDINATION, WORK SEQUENCE AND CONSTRAINTS

PART 1 GENERAL

1.01 SUBMITTALS

- A. Photographs and other records of examination, as required herein.

1.02 OTHER WORK

- A. Coordination of Owner's Work by Others: Reference Paragraph 7.8 of the General Conditions and Section 01010 for coordination of Owner's work by others, if any, and coordinate Contractor's Work with Owner or Owner's designated coordinator.
- B. It is anticipated that work will be performed concurrently at the plant site by others, including District forces and other contractors, during scheduled performance of Work under these Contract Documents including, but not limited to, the following projects.
- C. Other significant construction projects are not anticipated; however unexpected repairs or rehabilitation work may be required.

1.03 PROJECT MEETINGS

- A. General:
 - 1. Construction Manager: Schedule physical arrangements for meetings throughout progress of Work, prepare meeting agenda with Contractor input and distribute with written notice of each meeting, preside at meetings, record minutes to include significant proceedings and decisions, and reproduce and distribute copies of minutes within 7 days after each meeting to participants and parties affected by meeting decisions.
 - 2. Representatives of Owner, Contractor, and Subcontractors shall attend meetings, as needed, or as requested by Owner.
- B. Preconstruction Conference:
 - 1. As set forth in Section 01010, Summary of Work, a preconstruction conference will be held at site.
 - 2. Attendees may include but not be limited to:
 - a. Owner's representatives.
 - b. Contractor's office representative.
 - c. Contractor's resident superintendent.
 - d. Contractor's quality control representative.

- e. Contractor's safety program representative.
- f. Subcontractors' representatives whom Contractor may desire or Owner may request to attend.
- g. Utility agencies' representatives (as required)
- h. Others as appropriate.

C. Progress Meetings:

- 1. Construction Manager will schedule regular progress meetings at site, conducted weekly or as needed to review Work progress, progress schedule, Submittals submissions schedule, Application for Payment, contract modifications, and other matters needing discussion and resolution.
- 2. Attendees will include:
 - a. Owner's representative(s).
 - b. Contractor, and appropriate Subcontractors and Suppliers.
 - c. Others as appropriate.

D. Quality Control and Coordination Meeting(s):

- 1. Scheduled by Construction Manager on regular basis and as necessary to review test and inspection reports, and other matters relating to quality control of Work and work of other contractors.
- 2. Attendees will include Owner's Representatives, Contractor, Contractor's designated quality control representative, selected Subcontractors and Suppliers, and other equipment item suppliers.

E. Preinstallation Meetings:

- 1. When required, or as called out in individual Specification sections, convene at site prior to commencing Work of that section.
- 2. Require attendance of entities directly affecting, or affected by, Work of that section.
- 3. Notify Construction Manager four (4) days in advance of meeting date.
- 4. Provide suggested agenda to Owner's Representative to include reviewing conditions of installation, preparation and installation or application procedures, and coordination with related Work and work of others.

F. Monthly Schedule Meetings

- 1. Contractor shall schedule monthly schedule progress meetings at site, conducted to review schedule.
- 2. Contractor shall prepare and provide a current project schedule for review and discussion during the meeting.

- G. Other Meetings: In accordance with Contract Documents and as may be required by Owner.

1.04 SEQUENCE OF WORK

- A. General:
1. Include the Milestones and sequences of Work specified herein as a part of the progress schedule required under Section 01310, PROGRESS SCHEDULES.
 2. Perform Work continuously during critical connections and changeovers, and as required to prevent interruption of Owner's operations.
 3. Coordinate proposed Work with the Owner's facility operations personnel before effecting unit shutdowns. Under no circumstances cease Work at the end of a normal working day if such actions may inadvertently cause a cessation of any facility operating process, in which case, remain onsite until necessary repairs are complete.
 4. Do not close lines, divert flow, open switches, or take other action which would affect the operation of existing systems, except as specifically required by the Contract Documents and after approval of Owner.
- B. Milestones:
1. Complete 12kV relocation and new District Service Panel installation
 2. Complete grading and paving at the Admin level and storage level
 3. Substantial completion
- C. Specific Sequence and Constraints: The Contractor shall note that only certain structures, tie-ins and constraints are addressed in this section. All work, whether or not addressed here, shall be governed by applicable parts of this section and schedules and procedures further submitted for approval. The Contractor shall include all work described in this section in the construction schedule. The sequence and constraints identified in this section shall be followed in the construction of the work. However, alternatives to these sequences and constraints may be submitted by the Contractor for review by the Construction Manager. Specific sequencing constraints include the following:
1. NOT USED
 2. PG&E 12kV service relocation and new District Service Panel
 - a. Contractor shall locate the existing 12kV service lines in the field. 12kV service shall be turned off during construction activities in the vicinity of the 12kV service line, including, but not limited to, the installation of soil nails.
 - b. Sufficient power to operate the treatment plant is required at all times. Temporary power shall be provided by the Contractor at all times when the 12kV line is out of service.

- c. The Contractor shall coordinate and allow adequate time in the construction schedule to work with PG&E for the relocation of the 12kV service line and District Service Panel.
 - d. Work shall be performed in accordance with the general electrical sequence shown on drawing E-26.
- 3. Upper, lower, and admin soil nail walls
 - a. The Contractor shall review the soil nail wall layout and any new or existing utilities (including utility boxes or vaults) or structures for potential conflicts. Where soil nails will be installed in proximity to new or existing utilities or structures the Contractor shall confirm the location of said utilities or structures in the field. Any utility relocations required as part of the soil nail wall construction, shall be relocated and placed into service prior to construction of the portion of the soil nail wall that will impact said utility.
 - b. The Contractor shall use extreme caution when constructing the soil nail wall to avoid hitting existing or new utilities. If hitting a utility is a concern due to utility proximity or potential safety risks, the Contractor shall turn off, bypass, or re-route utilities during construction of the soil nail wall. Any damage, fines, or other costs resulting from construction of the soil nail wall shall be the responsibility of the Contractor at no additional cost to the District.
 - c. Upon completion of the Admin level soil nail wall shown on sheet C110-3, the Contractor shall complete the paving and grading work at the Admin and Storage levels within 60 calendar days.
- 4. Main Street Influent Sewer (Influent Sewer) and Fort Baker influent sewer relocation (U1 and U2)
 - a. As part of or prior to, construction of the upper soil nail wall, the Contractor shall relocate the Main Street and Fort Baker influent sewers. The new access road will require removal of the existing alignments of both sewers. Both sewers shall be combined in the new energy dissipation box as shown on sheet C200-1. A temporary connection between the plant and the new energy dissipation box will be required. The relocated sewers and the temporary connection to the existing plant shall be installed and in service prior to the demolition of the existing sewer lines. The temporary sewer connection shall remain in place until the new headworks process is placed into service. Temporary bypasses shall be capable of passing the full anticipated range of flows.
 - b. The existing Fort Baker sewer connection at the existing primary clarifier shall be abandoned in place. The existing valves on the sewer line shall be closed and abandoned in place in order to allow demolition of the sewer line upstream of the connection at the primary clarifier.

- c. Outage of the influent lines shall be limited to a maximum of two hours, during dry weather, during the night time low flow period (2:00am to 4:00am) in accordance with Section 01030.
 - d. The installation and construction of the new energy dissipation structure may require additional shoring and excavation. The Contractor shall develop and submit a plan for construction of the new energy dissipation structure to the Construction Manager.
 - e. The new Fort Baker Sewer manhole and the new energy dissipation structure shall be functionally tested and accepted before being put into service.
 - f. Rehabilitation of the existing Fort Baker sewer manhole structure on the west side of East Road will require isolation of the structure for an extended period of time, which may require bypass pumping or temporary storage of flow from Fort Baker. The Contractor shall develop and submit a plan for isolating the Fort Baker sewer manhole structure for review and approval by the Construction Manager and NPS.
- 5. Existing and new access road
 - a. In order to provide access for District personnel and vehicles to the treatment plant process level, either the existing or new access road shall be available for District vehicle traffic at all times, unless approved otherwise by the Construction Manager in writing.
 - b. Closure of either the existing or new access road shall be restricted and performed in accordance with Section 01030.
- 6. Fixed film reactor feed pumps
 - a. Only one fixed film reactor feed pump may be removed from service at a time.
 - b. All three fixed film reactor feed pumps shall be in service during the wet weather season
- 7. Fixed film reactor media replacement
 - a. Only one fixed film reactor may be removed from service at a time.
 - b. Both fixed film reactors shall be in service during the wet weather season. The Contractor shall schedule work to allow adequate time for completing work such that both fixed film reactors are in service at the start of the wet weather season.
 - c. Existing media removed from the fixed film reactors shall not be stored on-site for more than three (3) days, due to the potential for odor generation.

- d. For each reactor, after the media has been removed, the Contractor shall provide access including scaffolding and ventilation to the interior of the FFR for inspection by the Construction Manager for a period of two weeks.
 - e. For each reactor, after the inspection period, at the District's sole discretion, the District may require the Contractor to perform all or part of the work described under Optional Bid Item 18, 19, and/or 20 for concrete crack repair, surface repair and/or coating. Concrete crack and surface repair shall be performed in accordance with Section 03740. Coating of the interior concrete surface of the fixed film reactors shall be performed in with Section 09960. The Contractor shall complete the installation of new media after the option bid items (if required) are complete. The Contractor shall schedule work within each reactor, include work under Optional Bid Items 18, 19, and/or 20, such that all work may be completed prior to the start of the wet weather season.
 - f. Upon completion of work in one of the fixed film reactors, the reactor shall be functionally and performance tested and accepted by the District per Section 01650, prior to removing the other fixed film reactor from service.
8. Secondary effluent polishing
- a. At the District's sole discretion, the District may require the Contractor to perform all or part of the work described under Optional Bid Item 17 for temporary secondary filtration. The secondary effluent polishing sand filters shall remain in service until temporary secondary effluent filtration has been installed and performance tested. Temporary secondary effluent filtration shall remain in service until the new secondary polishing disk filters have been installed and performance tested.
 - b. Installation of the new 24" SE line and isolation gate in the influent pit to the new filter feed pump station will require isolation of the influent and effluent pits. Isolation of the influent and effluent pits will require bypass pumping from the effluent screen channel to the temporary secondary effluent polishing filters, then on to the inlet box to the chlorine contact tank.
9. Diesel fuel underground storage tank removal
- a. The District's active 1,000 gallon fiberglass diesel storage is an underground storage tank (UST), which provides diesel fuel to the standby generators, via a day tank, located in the generator room.
 - b. Temporary diesel fuel storage shall be provided by the Contractor as indicated in this specification prior to the removal of the existing storage tank and shall remain in service until the new storage tank has been accepted by the District. The District will empty the diesel fuel tank to the extent possible with the existing fuel system. The Contractor shall be responsible for any disposal of any remaining diesel fuel in the UST.

- c. The removal of the diesel storage tank is under the jurisdiction of the Marin County Certified Unified Program Agency (CUPA), Bay Area Air Quality Management District (BAAQMD), and National Park Service (NPS). The Contractor shall also contact Underground Service Alert at (800) 227-2600 at least two working days prior to the start of excavation.
- d. The Contractor shall comply with all Marin County, BAAQMD and NPS requirements for the diesel storage tank removal, including, but not limited to applying for, and obtaining a Marin County Underground Storage Tank (UST) removal permit. The Contractor shall also notify BAAQMD. The Contractor shall be responsible for developing required plans, permitting fees and for performing any soil or water testing required. For the purposes of bidding the Contractor shall assume a total of \$2,000 for permit fees and soil or water testing. Removal of the storage tank shall be performed in accordance with Section 01353. Although it is not anticipated, if any soil remediation is required, the District will coordinate with the Contractor to issue a change order or hire a third-party to perform the soil remediation work.
- e. Removal of the UST shall be performed by a Contractor with California contractor license with a Haz A designation.

10. Recycle Pump Station

- a. The Recycle Pump Station shall remain in place throughout construction. Only one Recycle Pump may be removed from service at a time and shall not be removed from service for more than 24 hours.

11. Utility Water Pump Station

- a. Utility water service shall remain in place throughout construction. Only utility water pump may be removed from service at a time.
- b. Two utility water pumps shall be in service during operation of the dewatering screw press. Alternatively, the dewatering screw press may be operated on 1W water with a single utility water pump.

12. Effluent Screen

- a. Effluent screen shall remain in service until the new disk filters have been installed and performance tested.

13. Other Facilities

- a. Unless noted otherwise, the following facilities do not have specific sequencing or constraint requirements:
 - i. Primary Clarifier No. 2
 - ii. EQ Basins
 - iii. Existing Dewatering Building Demolition

1.05 ADJACENT FACILITIES AND PROPERTIES

A. Examination:

1. After Effective Date of the Agreement and before Work at site is started, Contractor and Construction Manager shall make thorough examination of pre-existing conditions including existing buildings, structures, pipelines, and other improvements in vicinity of Work, as applicable, which might be impacted or potentially damaged by construction operations.
 2. Contractor shall take two (2) sets of photographs and videotape preexisting conditions prior to the start of the work. One set of photographs and videotape shall be given to the Construction Manager. Periodic reexamination shall be jointly performed to include, but not limited to, cracks in structures, settlement, leakage, and similar conditions. Include public roads and improvements to adjacent private property as part of preexisting condition documentation.
 3. Record observations for signature of Construction Manager and Contractor.
- B. Documentation:
1. Submit two copies of photographs, videotapes and other records documenting examination for Construction Manager's signature. Documentation shall be organized and labeled by system or process area. Construction Manager will review, sign, and return one record copy of every observation document and photograph to Contractor to be kept on file in Contractor's field office as site records.
 2. These observations and photographs and videotapes are intended for use as indisputable evidence in ascertaining whether and to what extent damage occurred as a result of Contractor's operations, and are for protection of Contractor and Owner.
 3. Contractor shall provide monthly sets of construction progress photos by system or process with labels.

1.06 OWNER'S OCCUPANCY

- A. Owner will occupy the premises during the entire period of construction for the conduct of its normal operations. Contractor shall cooperate with Owner in all construction operations to minimize conflict and to facilitate Owner usage.
- B. Continuous access to the treatment plant facility shall be provided at all times during the project. Such access shall be suitable for large vehicles, e.g. chemical delivery and sludge hauling trucks. Plant access routes shall be provided as detailed on the Contract Plans unless alternative plans are submitted by the Contractor and approved by the District. The Contractor will be responsible for providing any temporary signage and controls to notify of this traffic routing.

1.07 TEMPORARY RELOCATION OF EXISTING FACILITIES

- A. General Relocation Requirements:

1. During construction, it is expected that minor relocations of pipelines and/or utilities will be necessary.
 2. Provide complete relocation of existing structures and Underground Facilities; including piping utilities, equipment, structures, electrical conduit wiring, electrical duct banks, and other necessary items.
 3. Use only new materials for relocated facilities. Match materials of existing facilities, unless otherwise shown or specified.
 4. Perform relocations to minimize downtime of existing facilities. Install new portions of existing facilities in their relocated position prior to removal of existing facilities, unless otherwise accepted by Owner. Shutdown limitations are specified in Section 01030.
- B. Relocation of services conveying hazardous or toxic materials shall comply with all regulatory requirements for handling of these materials including, but not limited to, requirements of OSHA, PSM, EPA, AQMD, and UFC.
- C. The Contractor and Construction Manager shall both review the condition and functionality of all equipment, which will be relocated. Equipment shall be functionally tested before and after relocation.
- D. 4" Sewer from Office (U3)
- a. The Contractor shall provide temporary rerouting of the 4" sewer from the office located at the maintenance level as indicated on Sheet C21. Service from the 4" sewer line shall remain in service throughout construction.
 - b. The Contractor shall provide the permanent connection for the 4" sewer as shown in the Contract Documents. The Contractor shall remove all temporary piping or facilities after the permanent connection is completed.
- E. Ferric Chloride System (U4 and U5)
- a. The Contractor shall remove and preserve the existing ferric chloride system, including all pumps, valves, instrumentation, and the existing chemical tank (see Photo 5 on sheet D-10). The District will empty the chemical tank to the extent possible with the existing metering pump. Service from the ferric chloride system shall remain in service throughout construction.
 - b. The Contractor shall install the ferric chloride system in a temporary location and provide a complete, operational chemical feed system, including all piping, electrical, instrumentation, controls and other supporting systems as needed. Any chemical piping located in an area where drainage runs off to the Bay, shall be double contained to prevent spills.
 - c. The existing ferric chloride feed pipeline shall be temporarily relocated to allow filling of the ferric chloride tank.
 - d. The ferric chloride system shall be moved from the temporary location and installed in the permanent location shown on the Contract Documents. The Contractor shall remove all temporary piping or facilities after the permanent connection is completed.

- F. 2" 1W (U6)
- a. The Contractor shall provide temporary rerouting of the 2" 1W including a pressure regulating valve as indicated on Sheet C21. Service from the 2" 1W line shall remain in service throughout construction.
 - b. The Contractor shall provide the permanent connection for the 2" 1W as shown in the Contract Documents. The Contractor shall remove all temporary piping or facilities after the permanent connection is completed.
- G. 4" R from Return Pump Station (U7)
- a. The Contractor shall provide temporary rerouting of the 4" R from the Return Pump Station as indicated on Sheet C21. The 4" R line shall discharge to the center well of Primary Clarifier No. 1. Service from the 4" R line shall remain in service throughout construction.
 - b. The Contractor shall provide the permanent connection for the 6" R as shown in the Contract Documents. The Contractor shall remove all temporary piping or facilities after the permanent connection is completed.
- H. Two 3" Digester Gas lines to/from Secondary Digester (U8)
- a. The Contractor shall provide temporary rerouting of the two 3" DG lines to/from the secondary digester to the existing 3" Digester Gas lines located above the Plant Library as indicated on Sheet C21. Service from the 3" DG lines shall remain in service throughout construction. The existing digester gas scrubber (iron sponge) shall not be demolished until the two 3" Digester Gas lines are placed into service.
 - b. Digester gas is an explosion and fire hazard. The Contractor shall use extreme caution when work on Digester Gas lines. The Contractors shall isolate and purge the digester gas lines with nitrogen gas prior to beginning work on digester gas lines.
 - c. The Contractor shall provide the permanent connection for the two 3" DG lines as shown in the Contract Documents. The Contractor shall remove all temporary piping or facilities after the permanent connection is completed.
- I. 6" SD (U9)
- a. The Contractor shall provide temporary rerouting of the 6" SD as indicated on Sheet C21. Service from the 6" SD line shall remain in service throughout construction.
 - b. The Contractor shall provide the permanent connection for the 8" SD as shown in the Contract Documents. The Contractor shall remove all temporary piping or facilities after the permanent connection is completed.
- J. 12" SE (U10)

- a. The Contractor shall provide temporary rerouting and pumping of the 12" SE as indicated on Sheet C21. Service from the 12" SE line shall remain in service until the new secondary polishing disk filters have been accepted by the District.
 - b. The Contractor shall remove all temporary piping or facilities after the permanent connection is completed.
- K. 4" 3W (U11)
 - a. The Contractor shall provide temporary rerouting of the 4" 3W as indicated on Sheet C21. Service from the 4" 3W line shall remain in service throughout construction.
 - b. The Contractor shall provide the permanent connection for the 4" 3W as shown in the Contract Documents. The Contractor shall remove all temporary piping or facilities after the permanent connection is completed.
- L. 12" SD (U12)
 - a. The Contractor shall provide temporary rerouting of the 12" SD as indicated on Sheet C21. Service from the 12" SD line shall remain in service throughout construction.
 - b. The Contractor shall provide the permanent connection for the 12" SD as shown in the Contract Documents. The Contractor shall remove all temporary piping or facilities after the permanent connection is completed.
- M. Hillside Runoff (U13)
 - a. The Contractor shall provide temporary rerouting of the hillside runoff including the existing storm water culvert as indicated on Sheet C21, to prevent storm water runoff from flowing onto the existing or new access road or onto other process areas. Hillside runoff shall be managed throughout construction.
 - b. The Contractor shall provide the permanent hillside runoff management as shown in the Contract Documents. The Contractor shall remove all temporary piping or facilities after the permanent storm water runoff conveyance is completed.
- N. 4" Pumped Drain from Sump Pump (U14)
 - a. The Contractor shall provide temporary rerouting of the 4" Pumped Drain from the Sump Pump as indicated on Sheet C21. The 4" Pumped Drain shall discharge to the center well of Primary Clarifier No. 1. Service from the 4" Pumped Drain line shall remain in service throughout construction.
 - b. The Contractor shall provide the permanent connection for the 4" Pumped Drain as shown in the Contract Documents. The Contractor shall remove all temporary piping or facilities after the permanent connection is completed.

1.08 TEMPORARY UTILITIES FOR USE BY DISTRICT

- A. The Contractor shall furnish and install temporary utilities for the District's use during construction as required below and as indicated on the Contract Documents. The Contractors shall submit a temporary utilities plan detailing the temporary utilities to provided, location, schedule, capacities, and other pertinent information for review and approval by the Construction Manager.
- B. Plant Power (F1)
 - a. The Contractor shall relocate the 12kV service feed conduit from PG&E and District service panel as shown in the Contract Documents. During the relocation of the 12kV power feed from PG&E, the Contractor shall provide temporary power of sufficient capacity for full treatment plant operation. The 12kV power feed or power feed from the District service panel may need to be de-energized during the construction of the soil nail wall and other work performed in and around these lines.
 - b. The Contractor shall provide temporary power of sufficient capacity for full treatment plant operation at all times when the main power feed to the treatment plant is out of service due to construction activities. The temporary power shall be capable of providing 300 kW at 480V on a continuous basis. Additional details are shown on sheet E-26.
- C. Secondary Effluent Filtration (F2)
 - a. At the District's sole discretion, the District may require the Contractor to perform all or part of the work described under Optional Bid Item 17 for temporary secondary filtration. The Contractor shall provide, install, and maintain temporary secondary filtration equipment during construction. The temporary filtration equipment will be operated by the District. The Contractor shall provide a 4-hour training session for District staff, prior to startup of the temporary filtration system. The temporary secondary filtration equipment shall be installed and performance tested prior to the demolition of the existing sand filter units and shall remain in service until the new disc filters are accepted by the District. Note that process air to the sand filters is provided by an existing compressor located beneath the existing dewatering building, which will be demolished. Compressed air is required for proper operation of the existing filters. Contractor shall be responsible for providing compressed air to the existing filters.
 - b. The Contractor shall be responsible for providing all connections including power, piping (secondary effluent, filtered effluent and backwash) and pumping for the temporary secondary filtration equipment. Backwash from the temporary filtration system shall be routed to the center well of Primary Clarifier No. 1. The temporary secondary filtration equipment shall include automated control for backwashing and meet the following requirements:
 - 1. Secondary Effluent Flow: 694 gallons per minute
 - 2. Secondary Effluent TSS: 10 mg/L to 60 mg/L
 - 3. Filtered Effluent TSS: Less than 25 mg/L (daily average)

4. Backwash rate: Less than 12% of Secondary Effluent Flow

D. Diesel Fuel Storage (F3)

- a. The Contractor shall provide and install temporary diesel fuel storage during construction. The diesel fuel storage shall be installed and functionally tested prior to the demolition of the existing diesel fuel storage tank and shall remain in service until the new diesel fuel storage tank is accepted by the District.
- b. The diesel fuel tank shall have a storage capacity of 1000 gallons. The tank shall be provided with secondary containment. Contractor shall install ¾" Fuel Oil Supply (FOS) and 1" Fuel Oil Return (FOR) pipelines from the temporary storage tank to the existing day tank located in the engine generator room. Temporary piping shall include a fill connection at the Maintenance level. All fuel piping shall be double contained to prevent spills.
- c. The Contractor shall maintain access to and around the temporary fuel tank for fuel deliveries.

E. Polymer Storage (F4)

- a. The Contractor provide a nominal 300 gallon temporary polymer tote storage area at the Maintenance level of the treatment plant site.
- b. The Contractor shall install polymer 1" diameter piping including an isolation valve at the tote connection along with temporary piping from the tote to the sludge dewatering process area. All polymer chemical piping shall be double contained to prevent spills.

F. Dewatered Sludge Transfer (F5)

- a. The District produces dewatered sludge at the existing screw press, Monday through Friday, between the hours of 6:00am and 4:30pm. The screw press may be operated continuously or intermittently, at the District's discretion. Dewatered cake is discharged under the screw press into the bucket of a front loader on the main process level. Throughout construction, the Contractor shall be responsible transferring dewatered sludge from the main process level to the sludge storage bins located on the Maintenance level. The Contractor shall be responsible for providing all equipment, facilities, power, and labor required to transfer dewatered sludge.
- b. The dewatering process produces between 12 CY and 16 CY of dewatered sludge per week. The solids content of the dewatered sludge is typically between 20% and 25% solids with a maximum production rate of 1 CY per hour. Dewatered sludge shall be transferred in a timely manner such that the dewatered sludge bins can be hauled off-site (by others) within 24 hours after the dewatered sludge is produced.

1.09 PHYSICAL CONDITIONS

- A. Exercise reasonable care to verify locations of existing subsurface structures and underground facilities, proceeding in accordance with Paragraph 5.3 of the General Conditions. This shall include potholing and hand digging or vacuum excavation in those areas where underground facilities are known or suspected to exist until they have been sufficiently located to avoid damage to the facilities.
- B. Thoroughly check immediate and adjacent areas subject to excavation by visual examination (and by electronic metal and pipe detection equipment, as necessary) for indications of subsurface structures and underground facilities.
- C. Make exploratory excavations where existing Underground Facilities or structures may potentially conflict with proposed Underground Facilities or structures. Conduct exploratory excavations in presence of Construction Manager and sufficiently ahead of construction to avoid possible delays to Contractor's Work.
- D. The Contractor shall exercise care in maintaining those pipes and facilities to be abandoned and/or removed which are required for the continuing operation of the existing facilities until such time as they can be abandoned. The Contractor shall exercise extreme caution in working in any area adjacent to existing facilities. It is essential that the existing facilities be maintained in service until the new work is ready for full time operation and is placed in service.
- E. No additional compensation shall be provided the Contractor for compliance with the provisions of this section for the damage and repair of such facilities due to the lack of care.
- F. The Contractor shall be responsible for coordinating all existing project documentation, including but not necessarily limited to, the Contract Documents and existing record drawings for the determination of the location of all underground facilities. If the Contractor determines that existing facilities interfere with the new Work and such facilities were not shown or were incorrectly shown in the Contract Documents, the Contractor shall notify the Construction Manager immediately.

1.10 REFERENCE POINTS AND SURVEYS

- A. Location and elevation of bench marks, as applicable, are shown on Drawings.
- B. Dimensions for lines and elevations for grades of structures, appurtenances, and utilities are indicated on Drawings, together with other pertinent information required for laying out Work. If conditions vary from those indicated, notify Construction Manager immediately, who will make minor adjustments required.
- C. Construction Manager may perform checks to verify accuracy of Contractor's layout Work and that completed Work complies with Contract Documents.
- D. Any existing survey points or other control markers destroyed without proper authorization shall be replaced by owner of the survey points or control markers at the Contractor's expense.

E. Contractor's Responsibilities:

1. Provide survey and layout as required.
2. Locate and protect reference points prior to starting Work at site.
3. Check and establish exact location of existing facilities prior to construction of new facilities and any connections thereto.
4. In event of discrepancy in data provided by Owner, request clarification before proceeding with Work.
5. Preserve and leave undisturbed control staking until Construction Manager has completed checks it deems necessary.
6. Re-establish reference points resulting from destruction by Contractor's operations.
7. Retain professional land surveyor or civil engineer registered in California who shall perform or supervise engineering surveying necessary for additional construction staking and layout.
8. Maintain complete accurate log of survey Work as it progresses as a Record Document.
9. Submit documentation, as requested.
10. Provide competent employee(s), tools, stakes, and other equipment and materials as surveying is being done as Construction Manager may require to:
 - a. Check layout, survey, and measurement Work performed by others.
 - b. Measure quantities for payment purposes.
 - c. Cooperate with Construction Manager so that checking and measuring may be accomplished with least interference to Contractor's operations.

1.11 SPILLS, OVERFLOWS, LEAKS, ILLEGAL DISCHARGES

- A. The project involves work in and along the shoreline of the San Francisco Bay. Before beginning work in any area, the Contractor shall assess the potential for an overflow spill, discharge or leak and shall take preventative measures to prevent any unapproved discharges. The Contractor shall also assess the potential for impacts from tides when performing work in and around the shoreline.
- B. If an overflow, spill, discharge, or leak occurs due to the Contractor's operations or neglect, and any fine is levied against the Owner, the fine shall be considered direct damages caused by the Contractor. Further, if the Contractor exceeds his allotted time for any shutdown or bypass, and the Owner is thereby required to expend additional time and expenses to maintain compliance with plant discharge requirements or inspect the Contractor's work, the Contractor shall be solely liable for all such extra costs. The Contractor shall be responsible for the clean up of any spills caused by his operation.
- C. The above requirements shall be distributed, and be applicable, to all of the Contractor's Subcontractors working on the project site.

PART 2 PRODUCTS (Not Used)

PART 3 EXECUTION

3.01 PERMIT ACQUISITION

A. Unless noted otherwise, the Contractor shall obtain all required permits necessary for completion of the work.

END OF SECTION 01040

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SECTION 01060

SAFETY AND REGULATORY REQUIREMENTS

PART 1 GENERAL

1.01 CONTRACTOR'S RESPONSIBILITY FOR SAFETY

- A. See General Conditions, Paragraph 8.14 for Safety and Protection requirements.
- B. The Contractor shall at its own cost do whatever Work is necessary for safety and be solely and completely responsible for conditions of the jobsite, including safety of all persons (including employees) and property during the Contract period. This requirement shall apply continuously and not be limited to normal working hours.

1.02 FEDERAL, STATE, AND LOCAL SAFETY REQUIREMENTS

- A. Safety provisions shall conform to the Federal and State Departments of Labor Occupational Safety and Health Act (OSHA), and all other applicable federal, state, county, and local laws, ordinances, codes, the requirements set forth herein, and any regulations that may be specified in other parts of these Contract Documents. Where any of these are in conflict, the more stringent requirement shall be followed. The Contractor's failure to thoroughly familiarize itself with the aforementioned safety provisions shall not relieve Contractor from compliance with the obligations and penalties set forth therein.

1.03 SAFE ACCESS BY FEDERAL, STATE, AND LOCAL GOVERNMENT OFFICIALS

- A. The Contractor shall at all times provide proper facilities for safe access to the Work by authorized government officials.

1.04 CONSTRUCTION SAFETY PROGRAM

- A. Refer to General Conditions, Paragraph 8.14.

1.05 TRENCH OR EXCAVATION SAFETY PLAN

- A. The Contractor shall prepare and submit a Trench and/or Excavation Safety Plan for approval.

1.06 CONFINED SPACES

- A. The Contractor shall perform tests for the presence of combustible or dangerous gases and shall monitor oxygen and combustible gases levels with an approved device immediately prior to a worker entering a confined space and at intervals frequent enough to ensure a safe atmosphere during the time a worker is in such a structure. A record of such tests shall be kept at the jobsite. Post a permit at the entry point and conduct all such entries in conformance with District policy.
- 1. Sources of ignition, including smoking, are prohibited within 50 feet of any confined space including manholes, lift stations, trenches and tanks.
 - a. Note: Confined spaces for the purpose of this Section shall mean the interior of storm drains, sewers, vaults, drywells, utility pipelines, tunnels, manholes, reservoirs, and any other such structure which is similarly surrounded by confining surfaces so as to limit circulation of oxygen and/or permit the accumulation of dangerous gases or vapors, and has limited access or egress.

- B. No employee shall be permitted to enter or remain within a confined space until such confined space is free of concentrations of harmful gases, and lack of oxygen, unless the employee is wearing suitable and approved respiratory equipment.
 - 1. Confined spaces that contain or that have last been used as containers of toxic gases, light oils, hydrogen sulfide, corrosives, or poisonous substances, shall, in every case, be tested by means of approved devices or chemical analysis before being entered without wearing approved respiratory equipment.
 - 2. When entering confined spaces, the Contractor's employees shall follow all applicable safety requirements, including the use of additional employees on watch outside the confined space, the use of a lever with a lifting range to a surface tripod, etc.
- C. Before any Work is performed in a suspected confined space, a detailed procedure shall be submitted to the Engineer 14 days in advance of the Work. The Contractor shall follow as a minimum the provisions of the General Industry Safety Orders, Section 5156, Title 8, California Administrative Code.

1.07 MATERIAL SAFETY DATA SHEET (MSDS)

- A. Refer to General Conditions, Paragraph 8.14. Attention is directed to the provisions of General Industry Safety Orders, Section 5194, Title 8, California Administrative Code. The Contractor shall submit to the Engineer a Material Safety Data Sheet for each hazardous substance proposed to be used, ten days prior to the delivery of such material to the job site or use of such material at a manufacturing plant where the Engineer is to perform an inspection. Hazardous substance is defined as any substance included in the list (Director's List) of hazardous substances prepared by the Director, California Department of Industrial Relations, pursuant to Labor Code Section 6382.

1.08 CONTRACTOR'S RESPONSIBILITY FOR ENVIRONMENTAL PROTECTION

- A. Refer to Section 01014, Protection of the Environment.
- B. Coordination: Construction equipment/vehicle refueling and maintenance operations shall be performed only in designated areas that are either paved or lined and surrounded by protective dikes to provide sufficient volume to contain any spill.
- C. A spill contingency plan shall be developed; upon detection of a spill or leak of construction material, oil, or fuels, clean up procedures shall be implemented. Adequate clean up equipment and supplies shall be kept onsite.
- D. Emission controls shall be installed on applicable construction equipment, and idling of equipment shall be minimized.
- E. Disturbed areas shall be watered whenever soil moisture conditions and weather conditions result in visible dust generation. Dirt stockpiles shall be covered. Dust producing activities shall be suspended during periods of high winds if dust control measures are unable to avoid visible dust plumes.
- F. Equipment and manpower shall be available at all times during construction for watering of disturbed soil surfaces. Materials subject to wind dispersion shall be covered, as necessary, on a daily basis during site grading and leveling operations.
- G. All construction vehicles and equipment shall be equipped with manufacturer approved muffler/baffles, as applicable.

- H. In the event paleontological specimens (fossils), unanticipated archeological discoveries, or human remains are uncovered during construction activities, the Contractor shall notify the Construction Manager. All ground disturbing Work in the immediate vicinity of the discovery shall cease until the Construction Manager completes an evaluation of significance and significant specimens are scientifically removed for appropriate study and curation. Refer to Section 01040.
- I. If the Contractor discovers unnaturally stained or unnaturally odored materials or otherwise suspects contamination, the Contractor shall immediately contact the Construction Manager and stop work in the area of suspected contamination.

PART 2 PRODUCTS

2.01 SAFETY EQUIPMENT

- A. The Contractor, as part of its safety program, shall maintain at its office or other well-known place at the jobsite, safety equipment applicable to the Work as prescribed by the governing safety authorities, all articles necessary for giving first-aid to the injured, and shall establish the procedure for the immediate removal to a hospital or a doctor's care of any person who may be injured on the jobsite.
- B. The Contractor shall do all Work necessary to protect the Owner's personnel and the general public from hazards. Barricades, lanterns, and proper signs shall be furnished in sufficient amount to safeguard the public and the Work.
- C. The performance of all Work and all completed construction, particularly with respect to ladders, platforms, structure openings, scaffolding, shoring, lagging, machinery guards and the like, shall be in accordance with the applicable governing safety authorities.
- D. During construction, the Contractor shall construct and at all times maintain satisfactory and substantial temporary chain link fencing, solid fencing, railing, barricades or steel plates, as applicable at all openings, obstructions, or other hazards in floors, roofs, and walkways. All such barriers shall have adequate warning lights as necessary, or required, for safety.
- E. The Contractor shall provide temporary lighting in all Work areas sufficient to maintain a lighting level during working hours not less than the lighting level required by California OSHA standards.
- F. The Contractor shall provide workers with adequate personal protective equipment including ear protection in accordance with all applicable OSHA standards.

2.02 WARNING DEVICES AND BARRICADES

- A. The Contractor shall adequately identify and guard all hazardous areas and conditions by visual warning devices and, where necessary, physical barriers. Such devices shall, as a minimum, conform to the requirements of Cal-OSHA.

2.03 HAZARDS IN PROTECTED AREAS

- A. Excavations on sites shall be marked or guarded in a manner appropriate for the hazard.

2.04 ACCIDENT REPORTS

- A. If death or serious injuries or serious damages are caused, the accident shall be reported immediately by telephone or messenger to the Construction Manager. In addition, the Contractor must promptly report in writing to the Construction Manager all accidents whatsoever arising out of, or in connection with, the performance of the Work whether on, or adjacent to, the site, giving full details and statements of witnesses.
- B. It shall be the responsibility of the Contractor to notify Federal and State Departments of Labor Occupational Safety and Health Act in accordance with applicable laws and regulations.
- C. See also General Conditions, Paragraph 8.14, Safety Reports.

2.05 FIRE PREVENTION AND PROTECTION

- A. The Contractor shall perform all Work in a fire-safe manner. The Contractor shall supply and maintain on the site adequate fire-fighting equipment capable of extinguishing incipient fires. The Contractor shall comply with applicable federal, local, and state fire-prevention regulations. Where these regulations do not apply, applicable parts of the National Fire Prevention Standard for Safeguarding Building Construction Operations (NFPA No. 241) shall be followed.
- B. Sufficient number of fire extinguishers of the type and capacity required to protect the Work and ancillary facilities shall be provided in readily accessible locations.
- C. See also General Conditions, Paragraph 8.14, Fire Protection.

2.06 USE OF EXPLOSIVES

- A. Use of explosives is not allowed.

2.07 SITE SECURITY

- A. The Contractor, where necessary to safeguard the Work and equipment, shall at its cost, employ licensed, uniformed security guards, physically capable of adequately patrolling the whole of the Work, who shall be at the site of the Work at all times, except during ordinary working hours, from the beginning to the date of acceptance of the Work.

2.08 CONTRACTOR TO SAFEGUARD EXISTING UTILITIES

- A. The Contractor shall perform all Work, including excavation, dewatering, and demolition operations, in such a manner as to avoid damage to existing fire hydrants, power poles, lighting standards, and all other existing utilities, public or private.

2.09 PROTECTION OF PROPERTY

- A. All public and private property, pavement or improvement, shall be safely guarded from injury or loss in connection with this contract by the Contractor at all times. Should any facility, structure, or property be damaged during operations of the Contractor, he shall immediately notify the proper owners or authorities.
- B. The Contractor, at its own expense, shall rebuild, repair, restore, and make good, to the existing

conditions, all injuries and damage resulting from its operations.

END OF SECTION

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SECTION 01300

SUBMITTALS

PART 1 GENERAL

- 1.01 DESCRIPTION. This Section covers requirements for submittals and forms a part of all other Specification Sections in which submittals are specified or required. Refer to the specific Sections and Divisions of the Specifications for additional submittal requirements.

A. Submittal Requirements Included in This Section.

1. Shop drawings.
2. Samples.
3. Material lists and equipment data.
4. Sub-Contractor Qualifications.
5. Certificates including, but not limited to warranties, bonds, service agreements.

PART 2 PRODUCTS (Not applicable to this Section)

PART 3 EXECUTION

- 3.01 SUBMITTALS-GENERAL REQUIREMENTS. The Contractor shall submit to the Construction Manager for its review all shop drawings, samples, materials lists, equipment data, record documents, manufacturer's equipment manuals, and other submittals required by the Contract Documents and herein, or subsequently required by modifications. All such items required to be submitted for review shall be furnished by and at the expense of the Contractor, and any work affected by them shall not proceed without such review. Submittals and their contents shall be properly prepared, identified, and transmitted as provided herein or as the Construction Manager may otherwise direct. Except for record documents, and instructional manuals for operation and maintenance, each submittal shall be approved before the material or equipment covered by the submittal is delivered to the site.

- A. Number of Copies. Unless otherwise specified, each submittal shall be submitted in electronic PDF format. Printed copies of shop drawings shall be provided by the Contractor for field use.
- B. Submittal Review Time. Contractor shall allow a total period of not less than four (4) weeks for review and approval of submittals, not including the time necessary for delivery or mailing, and shall cause no delay in the Work. Extension of the Contract Time will not be granted because of the Contractor's failure to make timely and correctly prepared and presented submittals with allowance for the checking and review periods.
- C. Deviations. At the time of the submission, the Contractor shall give notice, in writing, in the submittal, of any deviation from the requirements of the Contract Documents. The deviations shall be clearly indicated or described. The Contractor shall state in writing, all variation in costs occasioned by the deviations, and any assumptions of the cost of all

related changes if the deviation is approved.

- D. Method of Submittal. The Contractor shall deliver submittals by means of dated, signed, and sequence numbered transmittals on the Owner provided forms (provided at the end of this section) identifying as to initial or resubmittal status, and fully describing the submittal contents. In each transmittal, the Contractor shall state the Project Number and Name, Name and Address of Contractor, Name and Address of Subcontractor, Manufacturer, Distributor, and specification Section (as applicable), Articles, and paragraphs to which the submittal pertains; accompanying data sheets, catalogs, and brochures shall be identified in the same manner. Where several types or models are contained in the literature, the Contractor shall delete non-applicable portions, or specifically indicate, which portions are intended and applicable. Submittal transmittals shall fully index all items submitted.
1. Incomplete Submittals. including those not correctly transmitted, not correctly titled and identified, or not bearing the Contractor's review and approval stamp, will be returned to the Contractor without review.
 2. Interrelated Submittals. Except where the preparation of a submittal is dependent upon the approval of a prior submittal, all submittals pertaining to the Work, shall be submitted simultaneously.
- E. Contractor's Review and Approval. Every submittal of shop drawings, samples, materials lists, equipment data, instruction manuals, and other submittals upon which the proper execution of the Work is dependent, shall bear the Contractor's review and approval stamp certifying that the Contractor: 1) has reviewed, checked and approved the submittal and has coordinated the contents with the requirements of the Contract Documents, 2) has determined and verified all quantities, field measurements, field construction criteria, materials, equipment, catalog numbers, and similar data, or will do so, and 3) states the Work covered by the submittal is recommended by the Contractor and the Contractor's guarantee will fully apply thereto. Contractor's stamp shall be dated and signed by the Contractor in every case.
- F. Construction Manager's Review. Submittals will be reviewed only for conformance with the design concept of the Project and with the information given in the Contract Documents. The review of a separate item, as such, will not indicate approval of the assembly in which the item functions, nor shall review be construed as revising, in any way, the requirements for a fully integrated and operable system, as specified. The review of submittals shall not relieve the Contractor of responsibility for any deviation from the requirements of the Contract Documents, or for any revision in resubmittals, unless the Contractor has given notice, in writing, of the deviation or revision at the time of submission or resubmission, and written acceptance has been given to the specific deviation or revision, nor shall any review relieve the Contractor of responsibility for errors or omissions in the submittals, or for the accuracy of dimensions and quantities, the adequacy of connections, and the proper and acceptable fitting, execution, and completion of the Work.
- G. Corrections and Resubmittals. The Contractor shall make all required corrections and shall resubmit the required number of corrected submittals until approved by the Construction Manager. The Contractor shall direct specific attention, in writing, to

revisions other than the corrections called for on previous submittals, and shall state, in writing, all variations in costs, and his assumption of the cost of related changes the same as is required for deviations in 3.01B. Identify each resubmittal with number of the original submittal, followed by consecutive letters starting with “A” for first resubmittal, “B” for second resubmittal, etc. Note that in addition to any applicable liquidated damages, the Construction Manager reserves the right to deduct monies from the amounts due to Contractor to cover the cost of Owner’s review time beyond the second submission.

- H. Check of Returned Submittals. The Contractor shall check submittals returned to him for correction and ascertain if the corrections result in extra cost to him above that included under the Contract Documents, and shall give written notice to the Construction Manager within five (5) days, if in his opinion, such extra cost results from corrections. By failing to notify the Construction Manager or by starting any Work covered by a submittal, the Contractor waives all claims for extra costs resulting from required corrections.
- I. Conformance. No Work represented by required submittals shall be purchased, or paid for, or commenced until the applicable submittal has been approved. Work shall conform to the approved submittals and all other requirements of the Contract Documents, unless subsequently revised by an appropriate modification, in which case, the Contractor shall prepare and submit revised submittals as may be required. The Contractor shall not proceed with any related Work which may be affected by the Work covered under submittals until the applicable submittals have been approved.
- J. Piecemeal Submittals. Piecemeal submittals will be returned unreviewed. However, for mechanical equipment and the like, separate submittals for embedded items, embedded metal work and anchors, will be reviewed, as applicable.
- 3.02 SHOP DRAWINGS. Each submittal shall be complete with respect to dimensions, design criteria, materials, connections, bases, foundations, anchors, and the like, and shall be accompanied by technical and performance data, as necessary, to fully illustrate conformance with the Contract Documents. Unless otherwise specified, each submittal shall include three (3) sets of black line or blue line printed copies. The printed copies shall be submitted folded to 8-1/2 inches x 11 inches in size. For catalog cuts and the like, which are 8-1/2 inch x 11 inch format, provide no less than three (3) copies which will be retained by the Construction Manager.
- A. Title Block and Identification. On each shop drawing, provide a space for the Construction Manager’s approval or correction stamp, and a title block showing the following:
1. Names and addresses of Contractor, sub-Contractor, manufacturer, distributor, as applicable
 2. Name and address of Owner
 3. Date, scale of drawings, and identification number
 4. Contractor’s review and approval stamp
 5. Owner’s number
 6. Plan Reference and Specification Section reference
 7. Project Name
- B. Preparation and Size. Details and information shall be clearly drawn, dimensioned, noted, and cross referenced. Unless otherwise approved, prepare shop drawings on 22 X 34, or

11 X 17, or 8-1/2 inch x 11 inch sheets, as applicable.

- C. Information Required. Shop drawings shall contain details and information fully developing the pertaining Contract Document requirements and such other information as may be specified or required for approval, including, but not limited to:
1. Related work with cross references to applicable portions of the Contract Documents.
 2. Dimensions, including variations between indicated dimensions and actual conditions.
 3. Physical configurations with critical dimensions for clearance, access and servicing.
 4. List of materials, including fasteners and connectors, as applicable.
 5. Grouting work, including grouting space and material.
 6. Anchoring details showing anchor bolt type and class, sizes, embedments, projections, and locations measured with respect to permanent structural features. An anchor bolt template shall be shown on the Shop Drawings and shall be furnished unless waived in writing by the Construction Manager.
 7. Protective coatings and factory finishes fully described as to materials, number of coats, plated and metallic coating finishes, treatments, and similar information, all based on specified requirements. The term "as specified" is not acceptable for this purpose.
 8. Machinery and equipment details. Standard catalog items need not be illustrated in detail, but indicate and detail sizes, supports, and connections.
- E. Details and Connections. Satisfactorily detail all connections required to complete the Work, including details necessary to make indicated or specified additions to existing work or to provide connections for future work. Design connections and parts of strength to withstand, without adverse deflection or stress, all loads or pressures to which they may be subjected and to develop the strength of the members or parts connected. In no case shall the connections, parts, or details be inferior to those required by the Contract Documents.
- F. Related Work. Except as provided in 3.02G., the term "by others" is not acceptable for the description of related work shown in the shop drawings. Clearly note by name or description the Contractor, Subcontractor, or trade to provide such related Work; where such name or description is missing, it shall be understood and agreed that the Contractor is to furnish and install such related Work.
- G. Work by Construction Phase Contractor. Work understood to be performed by the Construction Manager's construction phase Contractor shall be clearly called out as such by the Contractor, in the Contractor's submittal(s).

- H. Composite Shop Drawings with Installation Layouts. Prepare and submit such drawings, wherever specified or required. Construction Manager reserves the right to determine when composite drawings are required showing dimensional plans and elevations of the materials or equipment in the involved, and include complete information as to arrangements, locations, clearances, avoidance of interferences, access, sizes, supports, connections, services, assembly, disassembly, and installation. Composite shop drawings and layouts shall be coordinated in the field by the Contractor and his Subcontractors for proper relationship based on field conditions, and shall be checked and approved by them before submittal. Contractor shall have competent technical personnel readily available for such coordinating and checking.
- 3.03 INSTALLATION INSTRUCTIONS. The Contractor shall submit two copies of manufacturers' installation instructions for material and equipment incorporated in the Work to the extent specified in other Sections and Divisions of the Specifications or requested by the Construction Manager for its review. Installation instructions will be reviewed for general adequacy only. After review, the SUPPLIER shall distribute copies to all those involved with the instructions.
- 3.04 OTHER SUBMITTALS. Provide no less than four (4) copies of other submittals such as calculations, manufacturer's certified reports, operational demonstration and system validation reports specified elsewhere in the Contract Documents, three (3) of which will be retained by the Construction Manager and the rest of which will be returned to the Contractor marked to show the required corrections.
- 3.05 FORM OF REVIEW.
- A. Copies of submittals which are returned to the Contractor and which are subject to review will be marked with notations (1), (2), (3) or (4).
1. No Exceptions Taken.
 2. Make Corrections Noted
 3. Amend and Resubmit.
 4. Rejected - Resubmit.
- B. Returned copies of drawings marked with either notation (1) or (2) authorize Contractor to proceed with the fabrication, or construction, or any combination thereof, covered by such returned drawings, provided, that such fabrication, or construction shall be subject to the comments, if any, shown on such returned copies
- C. Returned copies of drawings marked with notation (3) or (4) shall be corrected as necessary and revised drawings shall be submitted in the same manner as before.
- D. Returned copies of drawings marked with either notation (3) or (4) shall be resubmitted not later than seven (7) days after date of transmittal by Construction Manager.
- 3.06 MANUALS FOR EQUIPMENT AND SYSTEMS
- A. Provide an operation and maintenance manual for each item of equipment or system as specified in the individual Specification sections. Provide four (4) copies of/for each item for initial submittals; four (4) copies each item for final submittals. For the final submittal, also include an searchable electronic file using PDF format, bookmarked for

each equipment item included. Construction Manager shall retain two (2) copies of initial submittal.

- B. Assemble operation and maintenance manuals into one set for entire Project prior to final Application for Payment.
- C. Content for each unit (or common units) and system, as appropriate, complete including Controls, Accessories, and Appurtenances:
 - 1. Description of Unit and Component Parts:
 - a. Function, normal operating characteristics, and limiting conditions.
 - b. Performance curves, engineering data, nameplate data, and tests.
 - c. Complete nomenclature and commercial number of replaceable parts.
 - d. Cost of equipment and components.
 - 2. Operating Procedures:
 - a. Startup, break-in, routine, and normal operating instructions.
 - b. Test procedures and results of factory tests, where required.
 - c. Regulation, control, stopping, and emergency instructions.
 - d. Shutdown instructions for both short and extended durations.
 - e. Summer and winter operating instructions, as applicable.
 - f. Safety precautions.
 - g. Special operating instructions.
 - h. Installation instructions.
 - 3. Maintenance and Overhaul Procedures:
 - a. Routine operations.
 - b. Guide to troubleshooting.
 - c. Disassembly, removal, repair, reinstallation, and reassembly.
 - 4. Installation Instructions: Including alignment, adjusting, calibrating, and checking.
 - 5. Original manufacturer's parts list, illustrations, detailed assembly drawings showing each part with part numbers and sequentially numbered parts list, and diagrams required for maintenance.
 - a. Preventive maintenance and overhaul instructions.
 - b. Predicted life of parts subject to wear.
 - c. Items recommended to be stocked as spare parts and ordering instructions.
 - d. Identify installed spares and other provisions for future work (e.g., reserved panel space, unused components, wiring, terminals).
 - 6. Grease/Oil Points: Instructions and diagrams.
 - 7. Manufacturer's printed operating and maintenance instructions.

8. Description of operation sequence by control manufacturer.
 9. List of electrical relay settings, and control and alarm contact settings.
 10. Electrical interconnection wiring diagram, including control and lighting systems.
 11. As-installed control diagrams by control manufacturer.
 12. Results of field functional and performance tests, as required.
 13. Contractor's coordination drawings and as-installed, color-coded, piping diagrams.
 14. Original manufacturer's recommended spare parts list, manufacturer's current prices, and recommended quantities to be maintained in storage.
 15. Other data as required under individual Specification sections.
- D. Content for each Electric or Electronic Item or System, as appropriate:
1. Description of Unit and Component Parts:
 - a. Function, normal operating characteristics, and limiting conditions.
 - b. Performance curves, engineering data, nameplate data, and tests.
 - c. Complete nomenclature and commercial number of replaceable parts.
 - d. Interconnection wiring diagrams, including all control and lighting systems.
 2. Circuit Directories of Panelboards:
 - a. Electrical service.
 - b. Controls.
 - c. Communications.
 3. As-installed, color-coded, wiring diagrams.
 4. Operating Procedures:
 - a. Routine and normal operating instructions.
 - b. Sequences required.
 - c. Safety precautions.
 - d. Special operating instructions.
 5. Maintenance Procedures:
 - a. Routine operations.
 - b. Guide to troubleshooting.
 - c. Adjustment and checking.
 - d. List of relay settings, control and alarm contact settings.

6. Manufacturer's printed operating and maintenance instructions.
 7. List of original manufacturer's spare parts, manufacturer's current prices, and recommended quantities to be maintained in storage.
 8. Cost of equipment and components.
 9. Estimated life expectancy of equipment and components.
 10. Other data as required under pertinent sections of the Specifications.
- E. Prepare and include additional data when the need for such data becomes apparent during instruction of Owner's personnel.
- F. Additional Requirements for O&M Data: See Section 01730 and individual Specification sections.
- 3.07 REVISION OF SUBMITTALS. Whenever a Modification causes a change to the information contained in previously approved submittals, the SUPPLIER shall submit information and data corresponding to the changed requirements for approval. Revision submittals shall be submitted following the procedures required for previously approved submittals.

END OF SECTION 01300

Submittal Description: _____

Submittal No: _____

Spec Section: _____

	Routing	Sent	Received
OWNER: SAUSALITO MARIN CITY SANITARY DISTRICT	Contractor/CM		
PROJECT:	CM/Engineer		
	Engineer/CM		
CONTRACTOR:	CM/Contractor		

We are sending you

☐ Attached

☐ Under separate cover via _____.

☐ Submittals for review and comment

☐ Product data for information only

Remarks: _____

Item	Copies	Date	Section No.	Description	Review action ^a	Reviewer initials	Review comments attached

^a **Note: NE = No exceptions noted; MCN = Make corrections noted; A&R = Amend and resubmit; R = Rejected**
Attach additional sheets if necessary.

Contractor
Certify either A or B:
☐ A. We have verified that the material or equipment contained in this submittal meets all the requirements, including coordination with all related work, specified (no exceptions).
☐ B. We have verified that the material or equipment contained in this submittal meets all the requirements specified except for the attached deviations.

No.

Deviation

Certified by: _____

Contractor's Signature

Corrections or comments made relative to submittals during this review do not relieve the Contractor from compliance with the requirements of the drawings and specifications. This submittal is only for review of general conformance with the design concept of the project and general compliance with the information given in the contract documents. The Contractor is responsible for confirming and correlating all quantities and dimensions, selecting fabrication processes and techniques of construction, coordinating his work with that of other trades, and performing the work in a safe and satisfactory manner.

For SMCS D: _____

Construction Manager

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SECTION 01301

SCHEDULE OF VALUES

PART 1 GENERAL

1.01 GENERAL

- A. This Section defines the process whereby the Schedule of Values (lump sum price breakdown) shall be developed and utilized by the Contractor for preparation of Contractor's Progress Payment Requests.
- B. All price breakdown items shall include all manpower, equipment and material costs such that the total of all items equals the Contract Bid Price.
- C. The Contractor shall install all equipment and appurtenances required to construct the complete system as specified and shown in order to receive payment of the full lump sum contract price upon project completion.

1.02 SCHEDULE OF VALUES

- A. Contractor shall submit a Schedule of Values for the major components of the WORK at the Preconstruction Conference in accordance with Section 01010. Overhead and profit shall not be shown as a separate item; and, each line item shall include pro-rated amounts for the Contractor's costs, overhead, profit, temporary facilities and other expenses in connection with the item of work. The total of all items listed in the schedule shall be equal to the Contract Sum. For each line item which has an installed value of \$10,000.00 or more, break down the item and list the values of major products or operations. The listing shall include, at a minimum, the proposed value for the following major WORK components; schedule separate line item cost for:
 - 1. Mobilization and Demobilization. Provide a lump sum price for each. Maximum value not to exceed five percent (5%) of total contract price for each, to be paid on completion of each.
 - 2. Each trade or class of work. As a minimum, use the Table of Contents of these Specifications, all Sections in Division 2 through 16, as format.
- B. The Contractor and Construction Manager shall meet and jointly review the preliminary Schedule of Values and make any adjustments in value allocations if, in the opinion of the Construction Manager, these are necessary to establish fair and reasonable allocation of values for the major WORK components. Front end loading will not be permitted. The Construction Manager may require reallocation of major WORK components from items in the above listing if in the opinion of the Construction Manager such reallocation is necessary. This review and any necessary revisions shall be completed within ten (10) days from the date of the Notice of Proceed.

1.03 CHANGES TO SCHEDULE OF VALUES

- A. In the event that the Contractor and Construction Manager agree to make adjustments to the original Schedule of Values because of inequities discovered in the original accepted detailed Schedule of Values, increases and equal decreases to values for activities may be made.

PART 2 PRODUCTS (Not Used)

PART 3 EXECUTION (Not Used)

END OF SECTION 01301

* * * * *

SECTION 01310

PROGRESS SCHEDULES

PART 1 GENERAL

1.01 SUBMITTALS

A. Submit with Each Progress Schedule Submission:

1. Contractor's certification that progress schedule submission is the actual schedule being utilized for execution of the Work and certification by all Subcontractors with 5 percent or more of Work that they concur with Contractor's progress schedule submission.
2. Four legible copies of the progress schedule.
3. One electronic copy of the progress schedule. See Paragraph 1.03 for format.

B. Preliminary Progress Schedule: Submit within 15 days of the Notice to Proceed and as specified in the General Conditions.

C. Initially Acceptable Progress Schedule: As provided in the General Conditions.

D. Acceptable Progress Schedule: Submit adjusted schedule or confirm validity of current acceptable schedule with each monthly Application for Payment in accordance with Paragraph 9.2 of the General Conditions, and at such other times as necessary to reflect: i) progress of Work to within 5 working days prior to submission; ii) changes in Work scope and activities modified since submission; iii) delays in Submittals or resubmittals, deliveries, or Work; iv) adjusted or modified sequences of Work; v) other identifiable changes; and vi) revised projections of progress and completion.

E. Narrative Progress Report: Submit with each monthly submission of progress schedule.

F. Precedent to final payment, provide four copies of any Critical Path Method (CPM) type schedule utilized with certification that said schedule represents correctly the way the Work was performed.

G. Progress quantity chart.

1.02 PROGRESS OF THE WORK

- A. If Contractor fails to complete activity by its latest scheduled completion date and this failure may extend Contract Times (or Milestones), Contractor shall, within 7 days of such failure, submit a written statement as to how Contractor intends to correct nonperformance and return to the acceptable current progress schedule. Actions by Contractor to complete Work within Contract Times (or Milestones) will not be justification for adjustment to Contract Price or Contract Times.
- B. Owner may order Contractor to increase plant, equipment, labor force, or working hours if Contractor fails to: i) complete a critical scheduled activity by its latest Milestone completion date; or ii) satisfactorily execute Work as necessary to prevent delay to the overall completion of the Project.

1.03 PROGRESS SCHEDULE REQUIREMENTS

A. General:

1. Schedule(s) shall reflect Work logic sequences, restraints, delivery windows, review times, Contract Times, and Milestones set forth in the Agreement and Section 01040, Coordination, and shall begin with the date of Notice to Proceed and conclude with the date of Final Completion.
2. The schedule requirement herein is the minimum required. Contractor may prepare a more sophisticated schedule if such will aid Contractor in execution and timely completion of Work.
3. Base schedule on standard 5-day Work week. Normal District hours are Monday through Friday from 6:30 AM to 3:00 PM. Work outside of these hours requires pre-approval from the District and may be limited to non-critical facilities. No premium time may be charged for working off hours or on weekends unless directed by the Owner.
4. When bar chart or network analysis schedules are specified, use Primavera P6 and provide electronic copies of P6 files and PDFs of schedule along with a "digger" or schedule analyzer report.
5. Adjust or confirm on a monthly basis.
6. Use of float suppression techniques such as preferential sequencing or logic, special lead/lag logic restraints, and extended activity times are prohibited, and use of float time disclosed or implied by use of alternate float-suppression techniques shall be shared to proportionate benefit of Owner and Contractor.
7. Pursuant to above float-sharing requirement, no time extensions will be granted nor delay damages paid until a delay occurs which: i) impacts Project's critical path; ii) consumes available float or contingency time; and iii) extends Work beyond contract completion date.
8. If Contractor provides an accepted schedule with an early completion date, Owner reserves the right to reduce the duration of the Work to match the early completion date by issuing a deductive Change Order at no change in Contract Price.

B. Network Analysis Diagram: Provide a comprehensive computer-generated schedule using CPM, generally as outlined in Associated General Contractors of America (AGC) publication "The Use of CPM in Construction – A Manual for General Contractors and the Construction Industry," latest edition, prepared on reproducible paper, not larger than 30 inches by 42 inches.

1. Show complete interdependence and sequence of construction and Project related activities reasonably required to complete the Work, identifying Work of separate stages and other logically grouped activities, and clearly identify critical path of activities.
2. Include at a Minimum: Subcontract Work; major and other equipment and critical product design, fabrication, testing, delivery and installation times including required lead time for Owner-furnished products; move-in and other preliminary activities; Project closeout and cleanup; Substantial Completion dates; Submittals that may impact critical path; and system/subsystem/component testing, facility startup, and training activities that may impact critical path.
3. Provide subschedules to further define critical portions of the Work, i.e., Process Instrumentation and Control System/Subsystems.
4. Indicate dates for early-and late-start, early-and late-finish, float, and duration.

5. No activity duration, exclusive of those for Submittals review and product fabrication/delivery, shall be less than 1 day nor more than 15 working days, unless otherwise approved by Engineer.
6. Activity duration for Submittals review shall not be less than review time specified unless clearly identified and prior written acceptance has been obtained from Engineer.
7. Monthly Schedule Submissions: Include overall percent complete, projected and actual, and percent completion progress for each listed activity.
8. Prepare a schedule report listing information for each activity in network diagram in tabular format, and sorted according to:
 - a. Early-start, within responsibility.
 - b. Early-start.
 - c. Activity number sequence.
 - d. Activity number sequence with predecessor and successor activity.

C. Disposition of Progress Schedules: In accordance with Section 01300, Submittals.

D. Weekly Schedule

1. Submit to the Construction Manager at the Weekly Progress Meetings, a progress schedule showing the activities completed during the previous week and the Contractor's schedule of activities for the following three (3) weeks.
2. The Weekly Schedule may be a CPM schedule or a bar chart but shall utilize the logic and conform to the status of the current progress schedule. In the event that the Weekly Schedule no longer conforms to the current schedule.
3. The activity designations used in the Weekly Schedule shall be consistent with those used in the Preliminary Progress Schedule and the monthly Schedule Updates.
4. The format of the Weekly Schedule shall be as agreed upon between the Contractor and the Construction Manager.

1.04 NARRATIVE PROGRESS REPORT REQUIREMENTS

A. Include, as a minimum:

1. Summary of Work, completed during the past period between Narrative Progress Reports.
2. Work planned during the next period.
3. Explanation of differences between summary of Work completed and Work planned in previously submitted Narrative Progress Report.
4. Current and anticipated delaying factors and their estimated impact on other activities and completion Milestones.
5. Corrective action taken or proposed.

1.05 CLAIMS FOR ADJUSTMENT OF CONTRACT TIMES

- A. Reference Article 14 of the General Conditions.
- B. Where Engineer has not yet rendered formal decision on Contractor's claim for adjustment of Contract Times, and parties are unable to agree as to amount of adjustment to be reflected in progress schedule, Contractor shall reflect that amount of time adjustment in progress schedule as Engineer may accept as appropriate for the interim. It is understood and agreed that such interim acceptance by Engineer will not be binding and will be made only for purpose of continuing to schedule Work, until such time as formal decision as to an adjustment, if any, of the Contract Times acceptable to Engineer has been rendered. Contractor shall revise progress schedule prepared thereafter in accordance with Engineer's formal decision.

PART 2 PRODUCTS (Not Used)

PART 3 EXECUTION (Not Used)

END OF SECTION

SECTION 01353

HAZARDOUS MATERIALS (SOIL AND GROUNDWATER)

PART 1 GENERAL

1.1 DESCRIPTION

- A. The work of this section consists of requirements and provisions that apply when the Contractor is conducting the Work and encounters, discovers, or is notified of potential soil or groundwater contamination.
- B. If the Contractor discovers unnaturally stained or unnaturally odored materials, including soil and groundwater, or suspects contamination, the Contractor shall immediately contact the Contracting Officer and stop work in the area of suspected contamination.
- C. The Construction Manager may identify to the Contractor areas of potential or suspected contamination. Upon notification, the Contractor shall immediately stop work in the area of suspected contamination.
- D. The work in this section includes actions that the Contractor may be directed by the Construction Manager to take to determine whether the discovered soil or groundwater with potential contamination described above contains hazardous substances, pollutants, or contaminants that require specific actions prior to continuing work in that area.
- E. The work in this section includes certain specific actions that the Contractor may be directed by the Construction Manager to take in response to a discovery and confirmation of soil or groundwater contamination in order to remove or address the contamination.

1.2 QUALITY ASSURANCE

- A. The Contractor shall become generally familiar with current environmental conditions existing at Fort Baker.
- B. The Contractor shall ensure that all environmental sampling work is conducted and supervised by individuals and/or a subcontract firm holding the appropriate and applicable technical and professional credentials and/or licenses required by the State of California as necessary.
- C. The Contractor shall ensure that all excavation of potentially contaminated soil or materials is conducted and supervised by individuals and/or a subcontract firm holding the appropriate and applicable technical and professional credentials and/or licenses required by the State of California as necessary.
- D. The Contractor shall ensure that any environmental sampling the contractor conducts follows EPA, California and American Society of Testing and Materials protocols and guidance.

1.3 DEFINITIONS

A. Soils Disposal:

1. For the purposes of this contract, disposal shall mean:
 - a. First, the processing of waste soils, at a facility approved for such by the appropriate State or Federal agency, in a manner that renders it no longer hazardous waste as defined by 40 CFR 260 et seq. These processes would include but are not limited to: biological treatment or remediation, chemical treatment such as neutralization and detoxification, thermal treatment such as incineration or pyrolysis, and recycling, reprocessing or recovery. The disposal by treatment method selected shall relinquish the National Park Service of all future liability for items disposed.
 - b. Second, the long-term internment (burial) in a facility approved for such materials by the appropriate State or Federal agency.
2. The mere acceptance of the hazardous waste at a properly permitted treatment, storage or disposal facility does not meet the definition of disposal under the contract. Furthermore, it is the Contractor's responsibility to obtain the landfill's certification of disposal. The Contractor shall attach the pertinent documentation to the certificate of disposal and submit via the Hazardous Materials and Waste Report with, or prior to, the invoice.

B. Contamination

1. The levels of constituents which would represent contamination have been added to the solicitation as part of Specification 02600, Section 2.1B.

1.4 SUBMITTALS

A. Hazardous Materials and Waste Work Plan

1. Work Plan Schedule:
 - a. The NPS requires completion and approval of a Hazardous Materials and Waste Workplan (HM Workplan) prior to Contractor mobilization. The Contractor shall submit one electronic and two separately bound copies of these draft HM Workplans and all associated reports, plans, blueprints, specifications and other submittals to the NPS a minimum of fifteen working days before the expected beginning date of site activities. The NPS and regulatory agencies, if applicable, will provide comments upon the draft report. The Contractor shall then supply one electronic and three separately bound copies of these approved final HM Workplans to the NPS five calendar days before the expected beginning of site activities.
2. Work Plan Format:
 - a. The Contractor shall submit a Hazardous Materials and Waste Workplan (HM Workplan) that describes how environmental media sampling (soil and water), laboratory analyses, contaminated-soil excavation, field decontamination procedures, and reporting will be conducted. The Contractor shall prescribe methodology and procedure necessary to obtain

repeatable, representative and site-specific data for encountered soil and water contamination. Prescribed sampling strategy shall be commensurate with the level of effort and detail required to accurately characterize conditions encountered and should consider previously available data; sample size; location; timing and spatial factors; field methodology; analytical methods and health and safety goals to delineate appropriate sampling methodology.

The Work Plan shall include:

b. Table of Contents

- 1) A Summary of Provisions or assumptions used for preparing the Work Plan
- 2) A Scope of Work describing the procedures and methodologies proposed for: Storage of excavated contaminated soils
- 3) Proposed Equipment Specifications: Other provisions generally supplied in workplans of this nature according to standard industry practice for similar projects in similar localities.
- 4) Disposal Facility Credentials: The Contractor shall select a disposal site in advance of field activities. For estimating purposes only, the Contractor should assume that contaminated materials will be disposed at a Class II landfill. The Contractor shall provide to the Contracting Officer, for approval, the credentials from the disposal facility prior to initiation of site activities. Credentials include: documentation that the facilities are currently permitted by the appropriate state and Federal agencies to accept the type of wastes generated from the site activities, proof that there are no outstanding relevant violations against the facility, and a copy of the most recent state and/or Federal inspection agency inspection report.
- 5) Qualifications of Workers in Contaminated Areas: Name of firm and individuals in that firm that will be conducting work in areas that are discovered and confirmed to have hazardous levels of contamination. This submittal shall include a description of the individuals and firms experience at working in areas of contaminated soils and documentation of their OSHA compliant training.

c. Uniquely and consecutively numbered pages.

- B. Record of Transport and Disposal: The Contractor shall provide a record of all transport and disposal to the Construction Manager within three days of any contaminated material transport or disposal. This record shall include:
1. The weights/volumes of all materials transported and the dates of transport. All of the corresponding identification information (tare weights, bin number, manifest number, etc.) shall be transcribed on each of the relevant documents.

C. Hazardous Materials and Waste Report:

1. Hazardous Materials Report Schedule
2. Format: The Hazardous Materials and Waste Report shall include:
 - a. Table of Contents
 - b. Description of all contaminated material storage and disposal locations
 - c. Documentation, including certificates of disposal, for all waste disposal
 - d. Uniquely and consecutively numbered pages

3. Soils Disposal: The Contractor shall provide in the Hazardous Materials and Waste Report a Certificate of Disposal for contaminated soils which shall include:
 - a. The date of soils disposal;
 - b. The point of origin of the contaminated soils;
 - c. The amount of contaminated soils disposed, in tonnage, based upon the truck scale weights and the disposal facility weights and also reported as cubic yards;
 - d. A description of the methodology use to dispose the soils;
 - e. The location where soils are disposed;
 - f. Certification that the soils disposed will not be subsequently transferred to another facility;
 - g. The Contractor's signature verifying and guaranteeing that all statements made on the Certificate of Disposal are valid; and
 - h. Any additional relevant comments that may effect soils disposal. The Contractor shall thoroughly describe and document any difference between the contract inventory and what was actually picked up or disposed. The Contractor shall use attachments to the Certificate of Disposal if necessary to provide adequate information, such as facility credentials as described below.

PART 2 PRODUCTS

2.1 SAMPLING ANALYTICAL

- A. Analytical Methodology: The Contractor shall ensure that chemical analyses performed on waste, soil, and water meet United States Environmental Protection Agency (EPA) standard methodology. The Construction Manager shall direct the Contractor to conduct sampling and analyses commensurate with expected nature of contaminated material, soil, and fill discovered. Specific analytical and sampling methods shall be proposed by the Contractor for Construction Manager approval prior to sample collection. These analyses may include, but shall not be limited to:
 1. Total Petroleum Hydrocarbons (TPH-D and TPH-MO with Silica Gel sample preparation)
 2. Polychlorinated Biphenyls (PCBs)
 3. CAM -17 Metals (results presented on a dry weight basis)
 4. VOCs
 5. Polynuclear Aromatic Hydrocarbons (PAHs)
- B. The Contractor shall ensure that analyses are performed by an analytical laboratory approved and certified by the State of California, and according to US EPA and State of California approved methods

PART 3 EXECUTION

3.1 GENERAL PRECAUTIONS

- A. The Contractor shall be aware that unknown contamination may be encountered while performing the requirements of this contract. Upon discovery of any unnaturally discolored, stained or odored materials, unnatural objects, or unusual conditions, or become aware of potential contamination, the Contractor shall immediately stop work in the affected area and contact the Construction Manager. The Contractor may be required to wait up to 25 calendar days for the Construction Manager to preliminarily evaluate the discovery, and provide guidance to the Contractor on how to proceed. Contractor shall continue work in other areas during this time.
- B. While trenching or excavating across former or current fuel line crossings or through other potentially contaminated soil areas noted in the field, the Contractor shall properly employ a field screening unit such as a photoionization detector (PID) or approved equivalent to screen for presence of hydrocarbons when field conditions indicate the existence of possible contamination through observation of staining, notice in a change of soil or fill conditions, or notice of odors. PID screening, or approved equivalent, must occur at a minimum of 10' intervals.
- C. The Construction Manager may identify additional areas along the alignment of the Work where potential soil contamination exists and assessment of the potential contamination needs to be made.
- D. Contractor shall identify and post route to nearby hospital.

3.2 CONTAMINATION DISCOVERY & ANALYSIS

- A. Upon discovery or notice of potential contamination in soil, fill, or groundwater within the project site or line of utility placement, the Construction Manager shall require the Contractor to stop excavation, trenching, and utility installation within the area of suspected contamination for up to 25 calendar days to allow for preliminary assessment of the situation. The District may utilize the Contractor to conduct sampling, testing, analysis and consulting to help the District make one of the following determinations:
 - 1. Contamination exists in soil below target remediation levels or below levels that present a threat to human health or the environment as determined by the District in consultation with state and/or federal regulatory agencies. In this case the Construction Manager shall allow the Contractor to re-commence work. Should site conditions indicate that contamination levels may be increasing as trenching or excavation continues, and/or the nature and type of contamination changes, the Construction Manager may direct, or the Contractor may request, to stop work pending re-analysis and further determination. Contractor shall ensure compliance with their worker Health and Safety Plan when working in potentially contaminated areas.
 - 2. Contamination exists in soil above target remediation levels or above levels that present a threat to human health or the environment as determined by the District in consultation with state and/or federal regulatory agencies. Contractor shall ensure compliance with their worker Health and Safety Plan when working in potentially contaminated areas.

3. The nature of contamination cannot be determined due to inconclusive results or otherwise, and that additional sampling is required prior to the District making a determination regarding the existence of contamination.

- B. Target petroleum remediation levels were established by the United States Army Corps of Engineers, on behalf of the United States Army, in the Petroleum Sites Management Plan, East Fort Baker, Marin County, California (USACE, November 2000).

3.3 ASSISTANCE WITH SOIL SAMPLING BY OTHERS

- A. Contractor shall provide assistance to the District to collect soil samples as required. Assistance may include but is not limited to:
 1. Excavating pits or trenches through or near the potentially contaminated soil to allow the District to collect soil samples at depths below the current excavation or surface depth.
 2. Surveying the current ground elevation where pits or trenches are excavated and the elevation of the sample location to determine the required depth of the remaining excavation
 3. Assisting the District with driving and retrieving soil sample tubes.
 4. Assisting the District with determining the location of the soil sample, by surveying, use of the Work control grid, or other acceptable means.
- B. Contractor shall coordinate with the District to minimize the impact of the laboratory turn-around time for sample analysis and data review time on the Work.

3.4 CONTAMINATED SOIL REMOVAL

- A. Contaminated soil removal pursuant to this section and task shall only be performed if directed by the Construction Manager.
- B. Upon determination by the District, through review of sampling results or other methods, that contaminated soils, fills, or materials exist within the project site or line of utility placement, the Construction Manager may direct the Contractor to perform one or more of the following tasks.
 1. Full Removal: The Contractor shall excavate contaminated soil and materials as directed by the Construction Manager. The extent shall be determined through visual observations and sampling conducted pursuant to paragraph 3.4 or 3.5 and shall remove contamination in soil below identified target remediation levels or below levels that present a threat to human health or the environment as determined by the District in consultation with state and/or federal regulatory agencies. Excavated, potentially contaminated materials shall be managed in accordance with paragraph 3.8.
 2. Partial Removal: The Contractor shall excavate contaminated soil and materials as directed by the Construction Manager. The extent shall be determined by the Construction Manager and may not remove contamination in soil below identified target remediation levels or below levels that present a threat to human health or the environment as determined by the District in consultation with state and/or

federal regulatory agencies. The concentration of contamination remaining in the exposed excavation face shall be determined pursuant to paragraph 3.4 or 3.5 prior to backfill placement. An approved geotextile shall be placed along the contaminated soil surface prior to backfill placement in the excavation. Excavated, potentially contaminated materials shall be managed in accordance with paragraph 3.8.

- C. In consultation with the Contractor, the Construction Manager may direct realignment of utilities to avoid areas of contamination.
- D. The District may use means other than this contract to complete the work necessary to address the contamination and inform the Contractor when contract work may resume in this area.

3.5 REPAIR OF EXCAVATED AREAS

- A. Work pursuant to this section and task shall only be performed if directed by the Construction Manager.
- B. Backfill:
 - 1. The Contractor shall load, haul, and place backfill necessary to replace the volume of the removed contaminated waste, soils, and fill. The Contractor shall restore the site to pre-excavation conditions. The Contractor is responsible for obtaining, transporting, and placing backfill materials.
 - 2. The Contractor shall ensure that back fill materials are free of contamination and certified exotic-species-free as specified by Golden Gate National Recreation Area Natural Resources personnel. All backfill material shall be submitted for approval by the Construction Manager. The NPS will supply no material to backfill excavated soil contamination unless otherwise specified by the Construction Manager. The Contractor shall have available all equipment necessary to complete this item of work.
- C. Compaction and Grading: All Backfill shall be compacted and graded as specified in Section 02200.
- D. Surface Finish Work: All Surface Finish Work shall be completed as specified in section 02200.

3.6 CONTAMINATED MATERIALS MANAGEMENT

- A. The Contractor is responsible for all storing, characterization, transfer, hauling, and disposal of contaminated soils, fills or other materials. All proposed storage locations and methods for any potentially contaminated material must be approved by the Construction Manager prior to use.
- B. Storage:
 - 1. Stockpiling
 - a. Soils contaminated above target remediation and destined for disposal shall be preferentially stored until disposal:

- 1) In rolloff bins;
 - 2) On asphaltic concrete; or
 - 3) On double layered polyethylene or other plastic sheeting.
- b. Stockpiled soils must be watered down while in use as necessary to minimize fugitive dust but not to the point of causing runoff. Soil stockpiles must be covered with weighted plastic at night and when not in use. Soil stockpiles shall be separated from public access by either temporary barriers or fencing. Wherever possible, operators shall minimize double handling of contaminated soils.

2. Characterization

- a. Contaminated soil stockpile must be characterized with respect to disposal requirements. Analyses that may help the Contractor evaluate contaminated soil for landfill class required for disposal include:
- 1) Test methods for Evaluating Solid Waste, Physical/Chemical Methods SW-846, third Edition, Update III. December 1996;
 - 2) EP Toxicity – A Toxicity characteristic determined pursuant to EPA Method 1310 from SW-846 (Replaced by Total Contaminant Leaching Potential and incorporated by reference in CA Title 22 section 66260.11); and
 - 3) Total Threshold Limits Concentrations analyses (SLTC/TTLC) per State of California Title 22 requirements.
- b. The Contractor must ensure that all analyses are performed by an analytical laboratory approved and certified by the State of California and according to US EPA and State of California approved methods.

3. Storage:

- a. All waste must remain stored in secured waste storage areas until results of waste characterization are available.
 - b. All contaminated soils shall be segregated and kept physically separate from other material piles until disposed at the proper Transfer, Storage, and Disposal Facility.
 - c. All waste storage bins or stockpiles must be properly identified or labeled
 - d. All wastes must be properly disposed within 90 days of accumulation.
4. Manifests: All excavated potentially contaminated soils must be disposed off-site. Soil will be treated as a hazardous waste for storage and disposal purposes until waste stream characterization is completed. Contractor is responsible for all manifesting requirements of soils they remove.

3.7 GROUNDWATER

- A. If excavation encounters groundwater which is unnaturally discolored or odored or exhibits a sheen or multiple phases, the contractor shall immediately stop work in the affected area and contact the Construction Manager.
- B. Sampling pursuant to this section and task shall only be performed if directed by the Construction Manager.

3.8 DECONTAMINATION

- A. The Contractor shall decontaminate all non-new excavation and sampling equipment on location, according to the requirements listed in this section.
- B. The Contractor shall ensure that decontamination of hand-held reusable sampling equipment occurs in the vicinity of each excavation. Reusable sampling equipment may include slide hammer sampler, stainless steel sleeves, and trowels. The Contractor shall decontaminate equipment immediately prior to collecting each individual sample. Following decontamination and air-drying, sampling sleeves should be placed in individual, sterile, re-sealable plastic bags with two inert plastic caps and nitrile, or Teflon squares, or equivalent. Disposable bailers and pump tubing will be used for only one sample, then discarded.
- C. Field decontamination shall follow the procedures approved in the Hazardous Materials and Waste Workplan. Contractor's alternatives for decontamination include:
 - 1. Washing and Rinsing
 - a. Equipment is washed and scrubbed with a nonphosphate detergent, such as Aquinox, in a 5-gallon bucket.
 - b. After rinsing sampling equipment with potable water, the equipment is sprayed with distilled water using a plastic spray bottle;
 - c. The sampling equipment is then sprayed with methanol using a plastic spray bottle as an additional cleaning measure; and
 - d. The sampling equipment is sprayed with distilled water for a final rinse, then air dried.
 - 2. Steam cleaning
- D. All distilled water used for decontamination shall be of one known lot number for which a source blank sample will be collected. When equipment rinsate samples are required, they will be collected immediately following decontamination.
- E. All decontaminant rinsate collected shall be the property of the Contractor and properly disposed of off-site per general provisions pertaining to soil disposal as modified for water handling as approved by the Construction Manager.

3.9 RECORD OF TRANSPORT AND DISPOSAL

- A. The District will obtain and provide Contractor with provisional Hazardous Waste EPA ID number. The Contractor shall be responsible for the transportation and the disposal of all waste generated by the project. The District will be responsible for signing each Uniform Hazardous Waste Manifest. The Contractor shall provide copies of each manifest to the Construction Manager. All trucks transporting waste and recyclable materials shall have scales.

3.10 PROJECT REPORTING

- A. Following field activities, the Contractor shall provide a Hazardous Material and Waste Report as the section reportable. Should the Contractor not encounter contaminated materials, the Contractor shall state such in a separate letter or as part of the Contractor Closeout, section 01700. The Contractor shall submit one electronic and two separately bound copies of the draft Hazardous Material and Waste Report. The

Construction Manager will review and provide comments on the draft report. Following Construction Manager review, the Contractor shall make any required report changes and submit three separately bound copies of the Final draft Hazardous Material and Waste Report.

PART 4 MEASUREMENT AND PAYMENT

4.1 PREPARATION OF A HAZARDOUS MATERIALS AND WASTE WORKPLAN

- A. This item shall include preparation and submittal of the draft and final copies of this plan as specified in Part 1, Section 1.4 Submittals.
- B. There shall be no additional payment for general precautions, as described in Part 3, Section 3.1, that are taken during the execution of the Work

4.1 CONTAMINATION DISCOVERY AND ANALYSIS

- A. There shall be no additional payment for discovery of potential contamination or associated with any work stoppages, up to 25 calendar days, in the area of potential contamination, as described in Part 3, Section 3.2, that are made during the execution of the Work.

4.2 ASSISTANCE WITH SOIL SAMPLING BY OTHERS

- A. There shall be no additional payment for work associated with this task.

4.3 CONTAMINATED SOIL REMOVAL, DISPOSAL & BACKFILL

- A. Contaminated soil removal, disposal and backfill shall be measured by weight of soil removed, in tons. There shall be no additional payment for costs associated with the onsite management and handling of the contaminated materials.

4.4 CONTAMINATED MATERIALS MANAGEMENT

- A. Measurement shall be paid for at a lump sum price for work associated with this task.

4.5 DECONTAMINATION

- A. There shall be no additional payment for work associated with this task.

4.6 PROJECT REPORTING

- A. There shall be no additional payment for work associated with this task.

END OF SECTION

SECTION 01400

QUALITY CONTROL

PART 1 GENERAL

1.01 INSPECTION AND TESTING

- A. Additional requirements for tests are described in Section 01650, Facility Startup, and other Technical Paragraphs of these Specifications.

1.02 GENERAL

- A. Where the Contract Documents require work to be field tested or approved, it shall be tested in the presence of the Construction Manager or its authorized representative. The Construction Manager shall have the right to witness all on-site tests performed by the Contractor and any shop tests. The results of any tests performed by the Contractor shall be made available for the information of the Construction Manager. Inspections, tests or favorable reviews by the Construction Manager or others shall not relieve the Contractor from its obligation to perform the work in accordance with the requirements of the Contract Documents or for its sole responsibility for the quality of workmanship and materials.
- B. Except as specifically required under the technical specifications for testing and inspection, all tests for materials furnished by the Contractor will be done in accordance with commonly recognized standards of national organizations. Where tests are to be performed by the Construction Manager or by an independent laboratory or agency, the Contractor shall furnish such samples of all materials as required by the Construction Manager without charge. The sample or samples of materials to be tested shall be selected by such laboratory or agency, or the Construction Manager, and not by the Contractor. No material for which the Contract Documents require the submittal and approval of tests, certificates of compliance or other documentation shall be incorporated in the Work until such submittal has been made and approved.
- C. The Contractor shall provide safe access for the Construction Manager and inspectors to adequately inspect the quality of work and the conformance with the Contract Documents. The Contractor shall furnish the Construction Manager the necessary labor and facilities for such things as excavation in the compacted fill to the depths required to take samples. The Contractor shall provide adequate lighting, ventilation, ladders and other protective facilities as may be necessary for the safe performance of inspections.
- D. Upon completion of the Work the Construction Manager will conduct a final inspection as provided for in Section 10.2 of the General Conditions, Final Inspection and Payment. Records shall be available at all reasonable hours for inspection by other local or State agencies to ascertain compliance with laws and regulations.

1.03 NOTICE

- A. The Contractor shall notify the Construction Manager at least 24 hours before any field testing or special inspections are required to be performed by the Construction Manager or independent laboratory furnished by the District. The Contractor shall notify the Construction Manager at least two hours before any inspection is required to be performed or to witness the Contractor's on-site field testing.
- B. Whenever the Contractor varies the period during which work is carried on each day, the Contractor shall give due notice to the Construction Manager so that proper inspection may be provided. Any work done in the absence of the Construction Manager shall be subject to rejection.
- C. The Contractor shall give the Construction Manager written notification at least 30 days prior to the shipment of materials and equipment to be tested and/or inspected at the point of origin. Satisfactory tests and inspections at the point of origin shall not be construed as a final acceptance of the materials and equipment nor shall such tests and inspections preclude retesting or reinspection at the site of the Work.

1.04 COSTS OF TESTING

- A. The Contractor shall be responsible for, and shall pay for, all quality control and off-site tests of materials required including all source and mix design tests for the approval of soil and concrete materials.
- B. The Contractor shall be responsible for, and shall pay for, all source quality control and all on-site tests of materials required, except those tests specifically noted to be performed and paid for by the District. The District will perform the soils compaction and concrete confirmation tests detailed in the Technical Specifications during the performance of the Work.
- C. Contractor to provide adequately sized cure boxes and remove testing spoils as necessary.
- D. The Construction Manager shall have the authority to require additional tests or inspections due to the manner in which the Contractor executes its work. Examples of such additional tests and inspections include; tests of materials substituted for previously accepted materials, or substituted for specified materials, or retests made necessary by failure of material to comply with the requirements of the Specifications. Where such tests and inspections are required by Contract to be performed by the District, the District will pay for the additional tests and inspections but will issue an unilateral Change Order to deduct these costs from the Contract price.

1.05 WORK COVERED PRIOR TO INSPECTION AND/OR TESTING

- A. Work requiring inspection and/or testing shall not be concealed or buried prior to the acceptance of such inspection or testing. Work covered without the favorable review or consent of the Construction Manager shall, if required by the Construction Manager, be uncovered for inspection and/or testing at the Contractor's expense.

1.06 WORK COVERED WITH PRIOR INSPECTION AND/OR TESTING

- A. If the Construction Manager considers it necessary or advisable that covered work which was favorably inspected and tested be uncovered for reinspection and/or retesting, the Contractor, at the Construction Manager's request, will uncover, expose or otherwise make available for observation, inspection or testing as the Construction Manager may require, that portion of the work in question, furnishing all necessary labor, materials, tools, and equipment. If it is found that such work is defective, the Contractor will bear all expenses of such uncovering, exposure, observation, inspection and testing and of satisfactory reconstruction. If, however, such work is not found to be defective the Contractor will be allowed an increase in the Contract price or an extension of the Contract time, or both, directly attributable to such uncovering, exposure, observation, testing and reconstruction, and a Change Order shall be issued for such additional work.

1.07 TEST WATER

- A. The Contractor shall furnish and dispose of the water which is required for testing of piping and structures. The Contractor may take water from existing hose bibbs or other service water supplies on the plant site. The Contractor shall dispose of all testing water without damage to property, and in accordance with applicable regulations.
- B. Testing water flows less than 50 gpm may be returned to the treatment plant via the plant drainage system. Contractor shall confirm that the drainage inlet, used for disposal of test water, drains to the treatment plant in an acceptable location as approved by the Construction Manager prior to discharge. Flows up to 200 gpm may returned to the treatment plant via discharge to the center inlet of the existing primary clarifier. Flows greater than 200 gpm shall be not be discharged to treatment plant without prior approval of the District. Testing water returned to the treatment plant shall be free of sediment and debris and shall not contain constituents in concentrations greater than the values listed in the following table:

CONSTITUENT	UNITS		WASTEWATER	
	Avg.	Peak	Avg.	Peak
I. GENERAL (Standard Methods for Examination of Water & Wastewater) ⁽²⁾				
Flow	GPD	GPM	X	10X
Ph	---	---	6-9	5-10
BOD	mg/L	mg/L	300	1000
Total Suspended Solids	mg/L	mg/L	500	1500
Settleable Solids	MI/L	MI/L	30	100
Oil and Grease	mg/L	mg/L	100	200
Detergent (MBAS)	mg/L	mg/L	10	30
Total Dissolved Solids	mg/L	mg/L	1000	2000
Chlorides	mg/L	mg/L	500	1000
Sulfates	mg/L	mg/L	500	1000
Dissolved Sulfides	mg/L	mg/L	0.5	1
Fluoride	mg/L	mg/L	2.5	5
Nitrates	mg/L	mg/L	25	50
Cyanide	mg/L	mg/L	0.05	0.1
Phenols	mg/L	mg/L	1	2
Color	C.U.	C.U.	25	50
II. METALS (EPA Method 3005/3010 - AA/ICP)				
Arsenic	mg/L	mg/L	0.5	1.0
Cadmium	mg/L	mg/L	0.05	0.1
Chromium	mg/L	mg/L	0.1	0.2
Copper	mg/L	mg/L	0.05	0.1
Lead	mg/L	mg/L	0.1	0.2
Mercury	mg/L	mg/L	0.001	0.002
Nickel	mg/L	mg/L	0.1	0.2
Selenium	mg/L	mg/L	0.1	0.2
Silver	mg/L	mg/L	0.05	0.1
Zinc	mg/L	mg/L	1	2
III. PURGEABLE HALOCARBONS (EPA METHOD 601)				
Carbon Tetrachloride	µg/L	µg/L	5	10
1,2-Dichloroethane	µg/L	µg/L	5	10
Vinyl Chloride	µg/L	µg/L	5	10
Tetrachlorethylene	µg/L	µg/L	10	20
1,1-Dichloroethane	µg/L	µg/L	20	40
Chloroform	µg/L	µg/L	5	10
All other 601 compounds	µg/L	µg/L	20	40

CONSTITUENT	UNITS		WASTEWATER	
	Avg.	Peak	Avg.	Peak
IV. PURGEABLE AROMATICS (EPA METHOD 602)				
Benzene	µg/L	µg/L	2	4
1,2 Dichlorobenzene	µg/L	µg/L	25	50
1,3 Dichlorobenzene	µg/L	µg/L	10	20
1,4 Dichlorobenzene	µg/L	µg/L	5	10
Toluene	µg/L	µg/L	25	50
All other 602 compounds	µg/L	µg/L	10	20
V. VOLATILE ORGANIC COMPOUNDS (EPA METHOD 624)				
Each, not covered in III or IV	µg/L	µg/L	10	20
VI. TOTAL PETROLEUM HYDROCARBONS (MODIFIED EPA METHOD 8015)				
Total	mg/L	mg/L	50	100
VII. PHTHALATES (EPA METHOD 625)				
Total	mg/L	mg/L	0.5	1
VIII. POLYNUCLEAR AROMATIC HYDROCARBONS (EPA METHOD 625)				
TOTAL	µg/L	µg/L	50	100
IX. BASE/NEUTRAL COMPOUNDS (EPA METHOD 625)				
Each	µg/L	µg/L	25	50
X. MISC. EPA 625 CMPNDS.				
2,4 dichlorophenol	µg/L	µg/L	100	200
2,4,6 Trichlorophenol	µg/L	µg/L	50	100
4-chloro-3-methylphenol	µg/L	µg/L	10	20
Fluoranthene	µg/L	µg/L	200	400
Hexachlorobenzene	µg/L	µg/L	.005	.01
Pentachlorophenol	µg/L	µg/L	50	100
XI. TOTAL CHLORINATED HYDROCARBONS				
Total halomethanes	mg/L	mg/L	5	10
Total as ID'd by 601, 602, 624, and 625	mg/L	mg/L	0.05	0.1
XII. OTHER COMPOUNDS OF POTENTIAL CONCERN (Standard Methods for Examination of Water & Wastewater Analysis) ⁽²⁾				
EDB	mg/L	mg/L	0.25	0.5
TEL	mg/L	mg/L	1	2
Aldrin	mg/L	mg/L	0.25	0.5
A-BHC	µg/L	µg/L	1	2
B-BHC	µg/L	µg/L	0.04	.1
Chlordane	µg/L	µg/L	0.04	.1
Cresols and Creosote	mg/L	mg/L	1	2

CONSTITUENT	UNITS		WASTEWATER	
	Avg.	Peak	Avg.	Peak
DDT	mg/L	mg/L	0.01	0.02
Dichloromethane	mg/L	mg/L	5	10
Dieldrin	µg/L	µg/L	0.02	0.04
Endosulfan	µg/L	µg/L	0.1	0.2
Endrin	µg/L	µg/L	0.02	0.04
G-GHC (Lindane)	µg/L	µg/L	0.5	1
Heptachlor	µg/L	µg/L	0.02	0.04
Heptachlor Epoxide	µg/L	µg/L	0.01	0.02
PCBs (total)	µg/L	µg/L	0.1	0.2
Toxaphene	µg/L	µg/L	0.005	0.01
Tributyltin	µg/L	µg/L	0.1	0.2
Organic Solvents	mg/L	mg/L	1	2

*** END OF SECTION ***

SECTION 01500

CONSTRUCTION FACILITIES AND TEMPORARY CONTROLS

PART 1 GENERAL

1.01 SUBMITTALS

- A. Meet requirements of Section 01300, SUBMITTALS, as applicable. Make Submittals required below before starting Work at the site or in accordance with accepted schedule of Submittals submissions.
- B. Administrative Submittals: Copies of permits and approvals for construction as required by Laws and Regulations and governing agencies.

1.02 MOBILIZATION

- A. Reference the General Conditions.
- B. Mobilization shall include, but not be limited to, these principal items:
 - 1. Obtaining required permits.
 - 2. Moving CONTRACTOR's plant and equipment required for first month operations onto site.
 - 3. Installing temporary construction power, wiring, and lighting facilities.
 - 4. Providing onsite communication facilities, including telephones.
 - 5. Providing onsite sanitary facilities and potable water facilities as specified and as required by Laws and Regulations, and governing agencies.
 - 6. Arranging for and erection of CONTRACTOR's work and storage yard.
 - 7. Posting OSHA required notices and establishing safety programs and procedures.
 - 8. Having CONTRACTOR's superintendent at the site full time.
 - 9. Submitting of initially acceptable schedules as required in the General Conditions.
- C. Use the staging area designated on Drawing G-8 for CONTRACTOR's temporary facilities.
- D. Payment for Mobilization. The CONTRACTOR's attention is directed to the condition that no payment for mobilization, or any part thereof will be approved for payment under the contract until all applicable mobilization items listed above have been completed.

1.03 CONTRACTOR ACCESS, STAGING/LAYDOWN AREA, USE OF PREMISES

- A. Not Used.
- B. Lands furnished by OWNER upon which CONTRACTOR shall perform the Work are as shown on the Drawings.
- C. Unless otherwise provided, specific location(s) and available area(s) for CONTRACTOR's staging/laydown, and site access, shall be as directed or finalized at the preconstruction meeting.
- D. CONTRACTOR's employees shall park their vehicles in the designated staging area. Vehicles outside of the staging area shall be limited to those necessary for transportation of equipment and shall be clearly marked with the company name.
- E. CONTRACTOR's employees shall not use OWNER's facilities including, but not limited to, buildings, restrooms/showers, or landscaped areas for break or lunch times. CONTRACTOR's employees shall be responsible for cleaning up any litter from break or lunch times.
- F. Should CONTRACTOR use a dual-gate system required for use of nonunion personnel, CONTRACTOR shall bear all costs of providing and maintaining the dual-gate system. Such costs shall include costs for gates, signs at all gates as required by OWNER, fencing or other barriers acceptable to OWNER for segregating union and nonunion staging areas, and other items.
- G. Construction access may be arranged by the CONTRACTOR from the Bay side of the treatment plant via barge or other vessel, but is not required. The use of any Bay side facilities for access shall be arranged, coordinated and permitted by the Contractor at no additional cost to the OWNER.
- H. The CONTRACTOR shall submit a staging and access plan describing planned staging areas as well as any work or access from the Bay side, for review and approval by the CONSTRUCTION MANAGER prior to beginning work.

1.04 PERMITS. Permits, Licenses, or Approvals: Obtain in accordance with Paragraph 6.06 of the General Conditions.**1.05 PROTECTION OF WORK AND PROPERTY**

- A. Not used.
- B. Comply with OWNER's safety rules.
- C. Keep CONSTRUCTION MANAGER informed of serious accidents on the site and related claims.
- D. Use of Explosives: No blasting or use of explosives will be allowed on the site.
- E. During the performance of the Work, CONTRACTOR is responsible for adapting its means, methods, techniques, sequences, and procedures of construction to allow OWNER to maintain operation as described in Section 01030, SPECIAL PROJECT CONSTRAINTS, at the existing

level of facility production and consistent with applicable permit requirements, and Laws and Regulations. In performing such Work and in cooperating with OWNER to maintain operations, it may be necessary for CONTRACTOR to plan, design, and provide various temporary services, utilities, connections, temporary piping and heating, access, and similar items that will be included within the Contract Price.

PART 2 PRODUCTS

2.01 OWNER'S TRAILER: A trailer for use as the OWNER's field office will NOT be required.

2.02 CONTRACTOR FIELD OFFICE

A. It is optional that the CONTRACTOR shall install a project field office at the WORK site. The CONTRACTOR shall provide and pay for all temporary utilities including water, sanitary connection, telephone and electric power services for its field office. The CONTRACTOR is responsible for all costs associated with obtaining and maintaining temporary utilities.

PART 3 EXECUTION

3.01 OWNER'S FIELD OFFICE. Not required.

3.02 TEMPORARY UTILITIES

A. Power:

1. Electric power is available at the site from the OWNER. The available power is a 480V, 100 amp spare breaker.
2. Electrical appurtenances required for providing temporary electric power services for the CONTRACTOR shall be provided by the CONTRACTOR and approved by the CONSTRUCTION MANAGER.
3. If the CONTRACTOR damages any of the Owner's electrical components, the Contractor shall be responsible for repairing the damage to the satisfaction of the Owner.
4. The CONTRACTOR shall provide its own diesel or gasoline engine driven air compressor system when required for its pneumatic tools or equipment if any.

B. Lighting: Provide temporary lighting at least to meet all applicable safety requirements to allow erection, application or installation of materials and equipment, and observation or inspection of the Work. Cost of temporary lighting required for performing the Work will be borne by the CONTRACTOR.

C. Heating, Cooling, and Ventilating:

1. Provide as required to maintain adequate environmental conditions to facilitate progress of the Work, to meet specified minimum conditions for the installation of materials, and

to protect materials, equipment, and finishes from damage due to temperature or humidity.

2. Provide adequate forced air ventilation of enclosed areas to cure installed materials, to dispense humidity, and to prevent hazardous accumulations of dust, fumes, vapors, or gases.
3. Pay all costs of installation, maintenance, operation, removal, and fuel consumed.
4. Provide portable unit heaters, complete with controls, oil- or gas-fired, and suitably vented to outside as required for protection of health and property.
5. If permanent natural gas piping is used for temporary heating units, do not modify or reroute gas piping without approval of OWNER. Provide separate gas metering as required by OWNER.

D. Water:

1. CONTRACTOR may use water from the OWNER'S water system only related to the WORK to be performed by the CONTRACTOR. The CONTRACTOR shall provide temporary connections, piping and valving to the OWNER'S water system at CONTRACTOR's expense. The CONTRACTOR shall not make connection to any water system without first obtaining permission from the OWNER.
2. CONTRACTOR will provide temporary facilities and piping required to bring water to the point of use, and remove them when no longer needed.
3. CONTRACTOR will provide water required for testing equipment, manholes or vaults, and piping prior to Substantial Completion, unless otherwise specifically stated in the Specifications for the equipment, systems, or facilities to be tested.
4. Recycled water is available at site for use. CONTRACTOR facilities, receiving and using recycled water shall be marked appropriately, i.e. "Recycled Water Do Not Drink."

E. Sanitary and Personnel Facilities:

1. Provide and maintain facilities for CONTRACTOR's employees, Subcontractors, and all other onsite employer's employees. Service, clean, and maintain facilities and enclosures.
2. Use of OWNER's existing sanitary facilities by CONTRACTOR's personnel will not be allowed.

F. Communication:

1. The CONTRACTOR shall make arrangements to obtain and pay for its own communication equipment such as telephone, cellular phone, and facsimile equipment.

2. Arrange and provide onsite telephone service for CONTRACTOR's use during construction. CONTRACTOR to pay all costs of installation and monthly bills.
 3. No incoming telephone calls shall be allowed to OWNER's plant telephone system.
- G. Fire Protection: Furnish and maintain on the site adequate firefighting equipment capable of extinguishing incipient fires. Comply with applicable parts of the National Fire Prevention Standard for Safeguarding Building Construction Operations (NFPA No. 241).

3.03 PROTECTION OF WORK AND PROPERTY

A. General:

1. Not Used.
2. Perform Work within rights-of-way and easements in a systematic manner that minimizes inconvenience to property owners and the public.
3. No primary access road shall be cut off from vehicular traffic for a period exceeding four (4) hours unless special arrangements have been made. Constraints to complete work in the Plant Access Road are specified in Section 01030.
4. Maintain in continuous service all existing pipelines, cables, storm drains, process drains, sewers, poles and overhead power, and all other utilities encountered along the line of Work, unless other satisfactory arrangements have been made.
5. Where completion of Work requires temporary or permanent removal and/or relocation of an existing utility, coordinate all activities with owner of said utility and perform all work to their satisfaction.
6. Protect, shore, brace, support, and maintain underground pipes, conduits, drains, and other underground utility construction uncovered or otherwise affected by construction operations.
7. Keep fire hydrants and water control valves free from obstruction and available for use at all times.
8. In areas where CONTRACTOR's operations are adjacent to or near pipelines, cables, storm drains, sewers, process drains, and such operations may cause damage or inconvenience, suspend operations until arrangements necessary for protection thereof have been made by CONTRACTOR.
9. Notify all affected parties other than OWNER, which may be affected by any construction operations, five (5) days in advance. Thereafter, provide written notice at least two (2) days in advance.
10. Do not impair operation of existing sewer systems. Prevent construction material, pavement, concrete, earth, volatile and corrosive wastes, and other debris from entering sewers, pump stations, or other sewer structures. Maintain original site drainage wherever possible.

B. Site Security:

1. Security Fence: Provide and maintain additional temporary security fences as necessary to protect the Work and CONTRACTOR's equipment, stored material, etc.

C. Barricades and Lights:

1. Provide as necessary to prevent unauthorized entry to construction areas and affected roads, streets, and alleyways, inside and outside of fenced area, and as required to ensure public safety and the safety of OWNER's, CONTRACTOR's employees, other employer's employees, and others who may be affected by the Work.
2. Provide to protect existing facilities and adjacent properties from potential damage.
3. Locate to enable access by facility operators and property owners.

D. Signs and Equipment:

1. Temporary Signage: The Contractor shall include an allowance to supply, install, maintain and remove temporary construction signs to direct and route construction and plant traffic and identify work areas as necessary. The signs shall be supplied by a professional sign shop with a minimum size of three feet by three feet. The signs shall be installed where directed by the Construction Manager or as requested by the Contractor and agreed to by the Construction Manager.
2. Conform to requirements of Caltrans Standard Specifications.
3. Barricades: Provide in sufficient quantity to safeguard public and Work.
4. Traffic Cones: Provide to delineate traffic lanes to guide and separate traffic movements.
5. Provide at obstructions, such as material piles and equipment.
6. Illuminate barricades and obstructions with warning lights from sunset to sunrise.
7. Use to alert general public of construction hazards, which would include surface irregularities, unramped walkways, grade changes, and trenches or excavations in roadways and in other public access areas.
8. No Parking signs shall be posted at least forty-eight (48) hours prior to start of Work in affected area. No Parking signs shall be posted on barricades and not on existing trees or poles.

E. Existing Structures: Where CONTRACTOR contemplates removal of small structures such as signposts and culverts that interfere with CONTRACTOR's operations, obtain OWNER's prior approval. Replace those removed in a condition equal to or better than original.

- F. Finished Construction: Protect finished floors and concrete floors exposed as well as those covered with composition tile or other applied surfacing.
- G. Waterways: Keep ditches, culverts, existing swales, and natural drainages continuously free of construction materials and debris.
- H. Dewatering: Construct, maintain, and operate channels, flume drains, sumps, pumps, or other temporary diversion and protection works. Furnish materials required, install, maintain, and operate necessary pumping and other equipment for the environmentally safe removal and disposal of water from the various parts of the Work. Maintain the foundations and parts of the Work free from water.

3.04 TEMPORARY CONTROLS

A. Water Pollution Control:

- 1. Prior to commencing excavation and construction, obtain OWNER's agreement with detailed plans showing procedures intended to handle and dispose of sewage, groundwater, and stormwater flow, including dewatering pump discharges.
- 2. Do not dispose of volatile wastes such as mineral spirits, oil, chemicals, or paint thinner in storm drains or sanitary sewers. Disposal of wastes into streams or waterways is prohibited. Provide acceptable containers for collection and disposal of waste materials, debris, and rubbish.

B. Erosion, Sediment, Runoff, and Flood Control:

- 1. Provide, maintain, and operate temporary facilities to control erosion and sediment releases, prevent runoff of recycled water, and to protect Work and existing facilities from flooding during construction period.
- 2. Obtain and comply with the General NPDES Permit for Storm Water Discharges associated with Construction Activity.

3.05 STAGING AREA

- A. The CONTRACTOR's staging area shall be approved by the Construction Manager prior to staging any equipment or vehicles. Limited staging area may be provided at the treatment plant.
 - 1. To minimize disruptions to normal plant operations, crane staging at the plant maintenance level shall be limited to one (1), five (5) day period for the purpose of setting rotating disc filter equipment. For any other work, staging at this location will require review and approval by the Owner a minimum of two weeks in advance.
- B. Temporary Storage Area: Construct temporary storage area for storage of products that are not subject to damage by weather conditions.
- C. Temporary Storage Buildings:

1. Provide environmental control systems that meet recommendations of manufacturers of equipment and materials stored.
2. Arrange or partition to provide security of contents and ready access for inspection and inventory.
3. Store combustible materials (paints, solvents, fuels, etc.) in a well-ventilated and remote building meeting safety standards.

3.06 ACCESS ROADS AND DETOURS

- A. No public road detours are anticipated for the Work. The Contractor shall provide access for District staff, to the treatment plant at all times.
- B. Maintain drainage ways.
- C. Where required, or as directed by CONSTRUCTION MANAGER, provide gravel, crushed rock, or other stabilization material to permit access by all motor vehicles at all times.
- D. Maintain road grade and crown to eliminate potholes, rutting, and other irregularities that restrict access.
- E. Where construction affects existing fences, install and maintain gates. Temporary fencing will be adequate to perform the function of the permanent fencing it will replace on a short term basis. Refer also to any permit requirements in Section 01040, COORDINATION.
- F. Upon completion of construction, leave roads and fences in same or better condition as prior to start of construction activities, and suitable for future use by OWNER.
- G. **TRAFFIC REGULATIONS**

1. General

The Contractor shall take all necessary steps to minimize inconvenience to the general public throughout all work under this Contract. No driveways or private roads shall be blocked without notifying the property owner and access must be restored during all non-working hours. Safe access must be maintained for bicycle and pedestrian traffic along East Road at all times. The maximum allowable delay during one-way traffic operations shall be 10 minutes.

At least one lane of traffic in each direction must be kept open at all times unless prior approval is provided by the District. No roads shall be blocked or made inaccessible, due to the Contractor's work, without prior written approval of the District and the affected agencies. More stringent requirements may be imposed in the right-of-way encroachment permits.

The Contractor shall not block or obstruct fire lanes at any time.

The Contractor shall adopt all practical means to minimize interference to vehicle, pedestrian and bicycle traffic and inconvenience, discomfort, or damage. The Contractor shall protect against damage, any piling, duct or structures crossing trenching or encountered in the work and shall be responsible for any damage done to such structures or damage therefrom. The Contractor shall

support or replace any such structures without delay and without any additional compensation, to the entire satisfaction of the Construction Manager. All obstructions to traffic shall be guarded by flagmen as required and by barriers and illuminated at night. The Contractor shall be responsible for all damage to persons and property directly or indirectly caused by its operations, and under all circumstances the Contractor shall comply with the regulations of the City or County, and the laws and regulations of the State of California, relative to safety of persons and property and the interruption of traffic and the convenience of the public within the respective jurisdiction, and the Contractor shall be solely responsible for any damages caused by failure to provide proper safety.

2. Haul Routes

At least two weeks prior to hauling the Contractor shall furnish proposed haul routes for all construction traffic on the Project for review and approval by the Construction Manager. Upon approval, the Contractor shall strictly adhere to that route(s) only, unless written permission is obtained from the Construction Manager. The contractor shall repair any damage to pavement or other improvements along haul routes caused by Contractor's activities including damage caused by dust. Repairs shall be made to the satisfaction of the owner of the affected facility at no cost to the District.

3. Traffic Control

Traffic control shall be in accordance with the California Department of Transportation Traffic Manual (MUTCD).

The Contractor shall submit for approval, by the District, NPS, Caltrans and the City of Sausalito, its traffic control plans, prior to work on public streets. The plan shall be prepared by a traffic control engineer. No heavy equipment or hauling truck traffic shall be permitted through the City of Sausalito. Heavy equipment and hauling trucks may use Alexander Road. The traffic control plan shall include cleaning of vehicles and streets daily or as required by the Construction Manager. Control plan shall address and minimize impacts to vehicle, bicycle and pedestrian traffic along East Road.

Traffic control shall include signs, warning lights, reflectors, barriers, and other necessary safety devices and measures, including sufficient flaggers to direct vehicular traffic through the construction areas.

No material or equipment shall be stored/parked along public roads or anywhere else where it will interfere with the free and safe passage of public traffic, and at the end of each day's work, and at other times when construction operations are suspended for any reason, the Contractor shall remove all equipment, materials and other obstructions from the public right-of-way.

Should the Contractor appear to be negligent in furnishing warning and protective measures, as above provided, the Construction Manager may direct attention to the existence of a hazard, and the necessary warning and protective measures shall be furnished and installed by the Contractor at its expense.

3.07 PARKING AREAS

- A. Control vehicular parking to preclude interference with public traffic or parking, access by emergency vehicles, OWNER's operations, or construction operations.
- B. Provide parking facilities for personnel working on the Project in CONTRACTOR's staging area. No employee or equipment parking will be permitted on OWNER's existing paved areas.

3.08 CLEANING DURING CONSTRUCTION

- A. General:
 - 1. In accordance with the General Conditions, as may be specified in specific Specification sections, and as required herein.
 - 2. Wet down exterior surfaces prior to sweeping to prevent blowing of dust and debris.
 - 3. Provide approved containers for collection and disposal of waste materials, debris, and rubbish. At least at weekly intervals, dispose of such waste materials, debris, and rubbish offsite.
 - 4. At least weekly, brush sweep the entry drive and roadways, and all other streets and walkways affected by Work and where adjacent to Work.

3.09 REMOVAL OF TEMPORARY FACILITIES AND UTILITIES

- A. At such time or times any temporary construction facilities and utilities are no longer required for the Work, CONTRACTOR shall notify CONSTRUCTION MANAGER of his intent and schedule for removal of the temporary facilities and utilities, and obtain CONSTRUCTION MANAGER's approval before removing the same. As approved, CONTRACTOR shall remove the temporary facilities and utilities from the site as his property and leave the site in such condition as specified, as directed by CONSTRUCTION MANAGER, and/or as shown on the Drawings.
- B. After completion of the project, all temporary utility services shall be disconnected or removed and all affected improvements shall be restored to their original condition by the CONTRACTOR at no cost to the OWNER.
- C. The condition of the site shall be left in a condition that will restore original drainage, evenly graded, seeded or planted as necessary, and left with an appearance equal to, or better than original.

END OF SECTION 01500

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SECTION 01600

DELIVERY, STORAGE AND HANDLING

PART 1 GENERAL

1.01 SCOPE OF WORK

- A. This Section specifies the general requirements for the delivery handling, storage and protection for all items required in the construction of the work. Specific requirements, if any, are specified with the related item.

1.02 TRANSPORTATION AND DELIVERY

- A. Transport and handle items in accordance with manufacturer's instructions.
- B. Schedule delivery to reduce long term on-site storage prior to installation and/or operation. Under no circumstances shall equipment be delivered to the site more than one month prior to installation without written authorization from the Construction Manager.
- C. Coordinate delivery with installation to ensure minimum holding time for items that are hazardous, flammable, easily damaged or sensitive to deterioration.
- D. Deliver products to the site in manufacturer's original sealed containers or other packing systems, complete with instructions for handling, storing, unpacking, protecting and installing.
- E. All items delivered to the site shall be unloaded and placed in a manner which will not hamper the Contractor's normal construction operation or those of subcontractors and other contractors and will not interfere with the flow of necessary traffic.
- F. Provide necessary equipment and personnel to unload all items delivered to the site.
- G. Promptly inspect shipment to assure that products comply with requirements, quantities are correct and items are undamaged. For items furnished by others (i.e. Owner, other Contractors), perform inspection in the presence of the Construction Manager. Notify Construction Manager verbally, and in writing, of any problems.

1.03 STORAGE AND PROTECTION

- A. Store and protect products in accordance with the manufacturer's instructions, with seals and labels intact and legible. Storage instruction shall be studied by the Contractor and reviewed with the Construction Manager by him/her. Instruction shall be carefully followed and a written record of this kept by the Contractor. Arrange storage to permit access for inspection.
- B. Store loose granular materials on solid flat surfaces in a well-drained area. Prevent mixing with foreign matter.
- C. Cement and lime shall be stored under a roof and off the ground and shall be kept completely dry at all times. All structural, miscellaneous and reinforcing steel shall be stored off the ground or otherwise to prevent accumulations of dirt or grease and in a position to prevent accumulations of

standing water and to minimize rusting. Beams shall be stored with the webs vertical. Precast concrete shall be handled and stored in a manner to prevent accumulations of dirt, standing water, staining, chipping or cracking. Brick, block and similar masonry products shall be handled and stored in a manner to reduce breakage, cracking and spalling to a minimum.

- D. All mechanical and electrical equipment and instruments subject to corrosive damage by the atmosphere if stored outdoors (even though covered by canvas) shall be stored in a weathertight building to prevent injury. The building may be a temporary structure on the site or elsewhere, but it must be satisfactory to the Construction Manager. Building shall be provided with adequate ventilation to prevent condensation. Maintain temperature and humidity within range required by manufacturer.
1. All equipment shall be stored fully lubricated with oil, grease and other lubricants unless otherwise instructed by the manufacturer.
 2. Moving parts shall be rotated a minimum of once weekly to ensure proper lubrication and to avoid metal-to-metal "welding". Upon installation of the equipment, the Contractor shall start the equipment, at least half load, once weekly for an adequate period of time to ensure that the equipment does not deteriorate from lack of use.
 3. Lubricants shall be changed upon completion of installation and as frequently as required thereafter during the period between installation and acceptance. New lubricants shall be put into the equipment at the time of acceptance.
 4. Prior to acceptance of the equipment, the Contractor shall have the manufacturer inspect the equipment and certify that its condition has not been detrimentally affected by the long storage period. Such certifications by the manufacturer shall be deemed to mean that the equipment is judged by the manufacturer to be in a condition equal to that of equipment that has been shipped, installed, tested and accepted in a minimum time period. As such, the manufacturer will guaranty the equipment equally in both instances. If such a certification is not given, the equipment shall be judged to be defective. It shall be removed and replaced at the Contractor's expense.

END OF SECTION

SECTION 01612 – SEISMIC DESIGN CRITERIA

PART 1 GENERAL

1.1 THE REQUIREMENT

- A. All products to be furnished under this contract shall be designed, constructed, and installed in conformance with the seismic requirements contained within the 2016 California Building Code (CBC), Seismic Soil Profile Type "B", and the following seismic design parameters:
 - 1. Design Spectral Response Acceleration for Short Period (S_{DS}) = 1.500g
 - 2. Design Spectral Response Acceleration for 1-second Period (S_{D1}) = 0.639g
 - 3. Risk Category III
 - 4. Seismic Design Category D
 - 5. $I_E = 1.25$ for entire structure
 - 6. $I_P = 1.5$ for elements of structures and equipment

1.2 REFERENCE SPECIFICATIONS, CODES AND STANDARDS

- A. California Building Standards Commission (CBSC)
 - 1. California Building Code
- B. American Society of Civil Engineers (ASCE)
 - 1. ASCE/SEI 7 – Minimum Design Loads for Buildings and Other Structures
- C. American Concrete Institute (ACI)
 - 1. ACI 318 – Building Code Requirements for Structural Concrete
- D. International Code Council Evaluation Services (ICC-ES)
 - 1. Manufacturer Evaluation Reports, as appropriate.
- E. International Association of Plumbing and Mechanical Officials Uniform Evaluation Services (IAPMO-UES)
 - 1. Manufacturer Evaluation Reports, as appropriate.
- F. Sheet Metal and Air Conditioning Contractors National Association (SMACNA)
 - 1. Seismic Restraint Manual – Guidelines for Mechanical Systems

- G. Where reference is made to one of the above standards, the revision in effect at the time of bid opening shall apply.

1.3 SUBMITTALS

- A. General – CONTRACTOR shall submit administrative, shop drawings, calculations, samples, quality control and contract closeout submittals of items covered under this Section and referenced Sections.
- B. Design Data:
 - 1. Equipment Qualification – CONTRACTOR shall submit for review and approval (if required). Structural seismic qualification of the equipment to demonstrate that it is capable of withstanding forces as specified.
 - 2. Anchorage System – CONTRACTOR shall submit for review and approval. Structural calculations, of the proposed anchorage system, certified by a Professional Civil or Structural Engineer licensed within the State of California.

1.4 FIXTURE AND EQUIPMENT ANCHORAGE

- A. Anchorage and other supports for all important equipment shall be designed to resist seismic forces occurring at each of the three principal directions separately as well as simultaneously. When combining seismic forces in the orthogonal directions simultaneously, the combination of 100-percent F_{h1} , plus 30-percent F_{h2} shall be used. Where inclusion of vertical loads results in a less conservative design, vertical effects shall be neglected. Alternatively, the orthogonal effects may be combined on a square-root-of-the-sum-of-the-squares (SRSS) basis, using 100-percent of the forces.
- B. Structural design of equipment anchorage will be submitted for pre-qualified structurally rugged equipment. Calculations shall be sealed by a Civil or Structural Engineer licensed within the State of California.
- C. Architectural elements (racks, shelving, cladding, windows, doors, non-engineered partition walls, parapets, ornamentation, gutters and downspouts, etc.) mechanical and electrical components, equipment housings and their attachments, supporting structures, and anchorage:
 - 1. Shall be designed and constructed to resist the seismic forces in accordance with Chapter 16 of the CBC. This force shall be considered acting at the center of gravity of the piece under consideration. No equipment shall be anchored to vertical structural elements without written approval of the ENGINEER.
 - 2. Component Amplification Factor (a_p) equal to 2.5 for nonbuilding structures with flexible dynamic characteristics or $a_p = 1.0$ for nonbuilding structures with rigid dynamic characteristics.

3. Vibration isolated equipment shall be provided with snubbers capable of retaining the equipment in its designated location without any material failure or deformation of the snubbers when exposed to a vertical or horizontal force at the contact surface equal to 100 percent of the operating weight of the equipment. Air gaps between retainer and equipment shall not exceed ¼-inch.
 4. Piping with flexible connection and/or expansion joints shall be anchored such that the intended uses of these joints are maintained in the piping system.
 5. Calculations and shop drawings shall be submitted for all anchorage details. All calculations shall be made and signed by a Professional Civil or Structural Engineer licensed in the State of California. Inasmuch as all anchorage of equipment is to be made of poured-in-place concrete elements, it is imperative that types of anchorage be coordinated with the concrete contractor so that anchorage may be installed at time of concrete placement. If calculations and anchorage details are not submitted prior to placing concrete, the CONTRACTOR will become responsible for any strengthening of concrete elements because of superimposed seismic loading.
- D. Cast-in anchor bolts are preferred for support of critical equipment and framing. Post-installed concrete anchors will not be used, without approval from the ENGINEER, for critical fastening such as extreme vibratory conditions, impact loads, seismic connections, and overhead installations.
- E. Expansion and adhesive post-installed concrete anchors will have an associated research report issued by The International Code Council Evaluation Service, Inc. (ICC-ES) and/or International Association of Plumbing and Mechanical Officials Uniform Evaluation Services (IAPMO-UES). Design values and installation requirements for anchors will be as presented in the appropriate ICC-ES and/or IAPMO-UES reports. Edge distance, bolt spacing, inspection requirements and operating temperatures will be considered when determining the appropriate allowable design values.

1.5 VIBRATION ISOLATION

- A. In general, equipment should be rigidly mounted to supporting foundations and structures, without the aid of vibration isolation devices. Exceptions are mechanical equipment in which vibrations transmitted from the equipment would be troubling to building occupants and/or other equipment within the building.
- B. If vibration isolation mountings are required for equipment. The mountings, and their attachments to the supporting structure, shall be designed as flexible mountings in accordance with governing Code. The supplier of the vibration isolation mounting hardware shall be required to submit certified calculations, sealed by a Civil or Structural Engineer licensed within the State of California. Indicating the adequacy of the hardware and attachment anchorage to meet these criteria.

1.6 ABOVE GROUND PIPING

- A. Steel piping shall as a minimum, be provided with braces that satisfy the latest edition of SMACNA requirements for Seismic Hazard Level A unless demonstrated to the satisfaction of the OWNER that it is capable of resisting the required seismic forces under other support conditions. Connection Level I shall be used for all piping.
- B. Plastic piping shall be braced laterally at intervals not exceeding twice that recommended by the manufacturer for vertical support.
- C. Piping crossing expansion joints between adjacent structures shall be provided with expansion fittings, multiple bends, or other suitable provisions to ensure capacity to sustain expected differential movement between structures.

PART 2 PRODUCTS

NOT USED

PART 3 EXECUTION

3.1 GENERAL

- A. All equipment designed to be fixed in position shall be securely fastened in place in conformance with the CBC, ASCE 7, or as specified herein the Technical Specifications for a specific piece of equipment under Division 2 through 16. For other equipment, the equipment manufacturer shall provide recommended anchorage information to the CONTRACTOR for use in the installation of the equipment.
- B. See also Section 01614 for Wind Design Requirements.

3.2 STRUCTURAL INTEGRITY AND ANCHORAGE

- A. It shall be the responsibility of the equipment manufacturer/supplier to provide the engineering anchorage calculations and figures to the CONTRACTOR for submission to the ENGINEER. As a minimum, the equipment manufacturer/supplier shall determine the number, dimensions, material, location, embedment and installation conditions of all anchor bolts to be set in concrete in accordance with Contract Specifications and Drawings. At the option of the CONTRACTOR, the CONTRACTOR or equipment manufacturer/supplier shall furnish the anchor bolts and associated hardware as specified herein and as determined by the manufacturer/supplier's engineering anchorage calculations for installation by the CONTRACTOR.
- B. Engineering anchorage calculations and figures shall be prepared, stamped and signed by a Professional Civil or Structural Engineer licensed in the State of California. Calculations shall include the following steps as a minimum:
 - 1. Determination of the operating equipment weight and centroid of the equipment.
 - 2. Determination of the shear and overturning forces at each anchorage due to the force determined, as specified below, being applied at the equipment's centroid.

3. Determination of the shear and tension forces that must be developed by the anchorage at each support to resist the forces calculated.
 4. Selection of the anchorage details based upon the maximum shear and tension forces calculated above. As a minimum, details shall include number of bolts, materials, diameter, total length, embedded length, required edge distance and bolt dimensions. The embedded length of bolts shall be suitable to develop the ultimate tensile capacity of the anchorage for ductile failure.
- C. For all equipment weighing 400 pounds or more, the minimum anchor bolt size shall be 5/8-inch diameter, with 5-inch minimum embedment. The minimum anchor bolt size for all other equipment shall be 3/8-inch diameter, with 4-inch minimum embedment. All anchor bolts securing equipment to be grouted shall be furnished with leveling nuts, the faces of which shall be tightened against the flat surfaces to not less than 10 percent of the bolts safe tensile stress.
 - D. Cast-in-place anchor bolts shall be set before concrete has been placed and shall be carefully held in position with suitable templates of an acceptable design.
 - E. No equipment shall be anchored to vertical structural elements without the written approval of the ENGINEER, with the exception of pipe hangers/supports or anchorage as specified.

3.3 SEISMIC REQUIREMENTS

- A. The seismic qualification for the above equipment shall be demonstrated by structural calculation(s) or engineering shake table test(s).

3.4 PROOF OF COMPLIANCE

- A. Equipment with complex component structural systems, (i.e. systems involving components with multiple degrees of freedom and higher order modes of vibration), contains low weight components (e.g. circuit boards, relays, or solenoids), an additional empirical evaluation for such low weight components shall be certified in writing by a Professional Civil or Structural Engineer, licensed in the State of California, to satisfy the requirements set forth above. At a minimum, such certification shall be based on an empirical evaluation of direct observation of such equipment as part of the factory or shop witness testing including physical "hand" shake and pull tests, and general calculations (if required to verify capacity overload) necessary to satisfy the ENGINEER of compliance with the above requirements. Certification shall be in the form of a letter from the licensed engineer incorporating the nature of the observations and/or calculations performed including the licensed engineer's seal and signature

END OF SECTION

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SECTION 01614 – WIND DESIGN CRITERIA

PART 1 GENERAL

1.1 THE REQUIREMENT

- A. All products to be furnished under this contract shall be designed, constructed, and installed in conformance with the wind design requirements contained within the 2016 California Building Code (CBC), and the following design parameters:
 - 1. Risk Category, III
 - 2. Fastest Mile Wind Speed (3 Second Gust) 100 miles per hour
 - 3. Wind Exposure Category "D"
 - 4. Importance Factor, $I_w = 1.15$

1.2 REFERENCE SPECIFICATIONS, CODES AND STANDARDS

- A. California Building Standards Commission (CBSC)
 - 1. California Building Code
- B. American Society of Civil Engineers (ASCE)
 - 1. ASCE/SEI 7 – Minimum Design Loads for Buildings and Other Structures
- C. American Concrete Institute (ACI)
 - 1. ACI 318 – Building Code Requirements for Structural Concrete
- D. International Code Council Evaluation Services (ICC-ES)
 - 1. Manufacturer Evaluation Reports, as appropriate.
- E. International Association of Plumbing and Mechanical Officials Uniform Evaluation Services (IAPMO-UES)
 - 1. Manufacturer Evaluation Reports, as appropriate.
- F. Where reference is made to one of the above standards, the revision in effect at the time of bid opening shall apply.

1.3 SUBMITTALS

- A. General – CONTRACTOR shall submit administrative, shop drawings, calculations, samples, quality control and contract closeout submittals of items covered under this Section and referenced Sections:

B. Design Data:

1. Anchorage System – CONTRACTOR shall submit for review and approval. Structural calculations, of the proposed anchorage system, certified by a Professional Civil or Structural Engineer licensed within the State of California.

1.4 FIXTURE AND EQUIPMENT ANCHORAGE

- A. Anchorage and other supports for all important equipment shall be designed to resist wind forces occurring along each of the three principal directions.
- B. Architectural elements (racks, shelving, cladding, windows, doors, non-engineered partition walls, parapets, ornamentation, gutters and downspouts, etc.) mechanical and electrical components, equipment housings and their attachments, supporting structures, and anchorage:
 1. Calculations and shop drawings shall be submitted for all anchorage details. All calculations shall be made and signed by a Professional Civil/Structural Engineer licensed in the State of California. Inasmuch as all anchorage of equipment is to be made of poured-in-place concrete elements, it is imperative that types of anchorage be coordinated with the concrete contractor so that anchorage may be installed at time of concrete placement. If calculations and anchorage details are not submitted prior to placing concrete, the CONTRACTOR will become responsible for any strengthening of concrete elements because of superimposed wind loading.
- C. Cast-in anchor bolts are preferred for support of critical equipment and framing. Post-installed concrete anchors will not be used, without approval from the ENGINEER
- D. Expansion and adhesive post-installed concrete anchors will have an associated research report issued by The International Code Council Evaluation Service, Inc. (ICC-ES) and/or International Association of Plumbing and Mechanical Officials Uniform Evaluation Services (IAPMO-UES). Design values and installation requirements for anchors will be as presented in the appropriate ICC-ES and/or IAPMO-UES reports. Edge distance, bolt spacing, inspection requirements and operating temperatures will be considered when determining the appropriate allowable design values.

PART 2 PRODUCTS

NOT USED

PART 3 EXECUTION

3.1 GENERAL

- A. All equipment designed to be fixed in position shall be securely fastened in place in conformance with the CBC, ASCE 7, or as specified herein the Technical Specifications for a specific piece of equipment under Division 2 through 16. For other equipment, the equipment manufacturer shall provide recommended anchorage information to the CONTRACTOR for use in the installation of the equipment.

- B. See also Section 01612 for Seismic Design Requirements.

3.2 STRUCTURAL INTEGRITY AND ANCHORAGE

- A. It shall be the responsibility of the equipment manufacturer/supplier to provide the engineering anchorage calculations and figures to the CONTRACTOR for submission to the ENGINEER. As a minimum, the equipment manufacturer/supplier shall determine the number, dimensions, material, location, embedment and installation conditions of all anchor bolts to be set in concrete in accordance with Contract Specifications and Drawings. At the option of the CONTRACTOR, the CONTRACTOR or equipment manufacturer/supplier shall furnish the anchor bolts and associated hardware as specified herein and as determined by the manufacturer/supplier's engineering anchorage calculations for installation by the CONTRACTOR.
- B. Engineering anchorage calculations and figures shall be prepared, stamped and signed by a Professional Civil or Structural Engineer licensed in the State of California. Calculations shall include the following steps as a minimum:
 - 1. Determination of the shear and overturning forces at each anchorage due to the force determined, as specified below, being applied.
 - 2. Determination of the shear and tension forces that must be developed by the anchorage at each support to resist the forces calculated.
 - 3. Selection of the anchorage details based upon the maximum shear and tension forces calculated above. As a minimum, details shall include number of bolts, materials, diameter, total length, embedded length, required edge distance and bolt dimensions. The embedded length of bolts shall be suitable to develop the ultimate tensile capacity of the anchorage for ductile failure.
- C. Cast-in-place anchor bolts shall be set before concrete has been placed and shall be carefully held in position with suitable templates of an acceptable design.
- D. No equipment shall be anchored to vertical structural elements without the written approval of the ENGINEER, with the exception of pipe hangers/supports or anchorage as specified.

END OF SECTION

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SECTION 01650

FACILITY STARTUP

PART 1 GENERAL

1.01 DEFINITIONS

- A. Facility Startup: Includes putting Project in operating order, cleaning, adjusting and balancing equipment, initial operation (startup) of equipment item, operating equipment, starting systems, operation of systems, testing of equipment and systems, and demonstration and verification of the completed facility as a unit.
- B. Functional Test: A test or tests in the presence of the Construction Manager to demonstrate that the installed equipment or system meets manufacturer's installation and performance requirements and other requirements specified including, but not limited to, pressure testing, leak testing, vibration testing, and proper mechanical connections and operability for all valves and appurtenances.
- C. Operation Period: The operation period begins when the facility has been successfully started up as defined under Paragraph Startup Test Period and has met all Substantial Completion requirements.
- D. Performance Test: A test performed in the presence of the Owner and after any required functional test specified, to demonstrate and confirm that the equipment and/or system meets the specified performance requirements.
- E. Significant Interruption: May include any of the following events:
 - 1. Failure of Contractor to maintain qualified onsite startup personnel as scheduled
 - 2. Failure to meet specified performance for more than 2 consecutive hours.
 - 3. Failure of any critical equipment unit, system, or subsystem that is not satisfactorily corrected within 5 hours after failure.
 - 4. Failure of noncritical unit, system, or subsystem that is not satisfactorily corrected within 8 hours after failure.
 - 5. As may be determined by Owner.
- F. Startup Test Period:
 - 1. Startup of the entire facility or any portion thereof includes coordinated operation of the facilities by the Contractor, Subcontractors, Owner operating personnel, and Supplier or manufacturer's representatives for equipment items and systems after all required functional tests have been completed and those performance tests deemed necessary for the safe operation of the entire facility have been completed.
 - 2. Startup of the entire facility or any portion thereof shall be considered complete when, in the opinion of the Owner, the facility or designated portion has operated in the manner intended for five (5) continuous days without significant interruption. This period is in addition to any training, functional, or

performance test periods specified elsewhere. A significant interruption will require the startup then in progress to be stopped and restarted after corrections are made.

- G. System: The overall process, or a portion thereof, that performs a specific function. A system may consist of two or more subsystems as well as two or more types of equipment.

1.02 SUBMITTALS

A. Administrative Submittals:

1. Functional and performance test schedules and plan for equipment, units, and systems at least fourteen (14) days prior to start of related testing. Include test plan and procedures.
2. Schedule and plan of facility startup activities at least fourteen (14) days prior to commencement.

B. Quality Control Submittals:

1. Manufacturer's Certificate of Proper Installation as required.
2. Test Reports: Functional and performance testing, in format acceptable to Owner and certification of functional and performance test for each piece of equipment or system specified.
3. Operation and maintenance data as required.
4. Certifications of Calibration: Testing equipment including vibration test equipment.

1.03 FACILITY STARTUP; CONTRACTOR RESPONSIBILITIES

A. General:

1. Perform Work for tests specified, including items furnished by Owner.
2. Demonstrate proper installation, adjustment, function, performance, and operation of equipment, systems, control devices, and required interfaces individually and in conjunction with existing system.
3. Provide water, power, chemicals, and other items as required for testing, unless otherwise indicated.
4. Service from the Manufacturer Representative shall be provide as required in Section 01730 – Operation and Maintenance.

1.04 FACILITY STARTUP; OWNER'S RESPONSIBILITIES

A. General:

1. Review Contractor's test plan and schedule.
2. Witness each functional or performance test.
3. Coordinate other plant operations, if necessary, to facilitate Contractor's tests.
4. Provide reclaimed water, as available.

- B. Startup Test Period: Operate process units and devices, with support of Contractor.

PART 2 PRODUCTS (Not Used)

PART 3 EXECUTION

3.01 TESTING PREPARATION

A. General:

1. Complete Work associated with the unit and related processes before testing, including related manufacturer's representative services.
2. Provide related operating and maintenance manuals, and spare parts and special tools as specified before testing any unit or system. **These manuals shall be provided two weeks in advance of any on site testing.**
3. Furnish qualified manufacturer's representatives when required to assist in testing.
4. Schedule and attend pretest (functional and performance) meetings related to test schedule; plan of test; materials, chemicals, and liquids required; facilities' operations interface; and Owner involvement. A sample functional testing form is included at the end of this specification.
5. Designate and provide one or more persons to be responsible for coordinating and expediting Contractor's facility startup duties. The person or persons shall be present during facility startup meetings and shall be available at all times during the facility startup period.
6. Provide temporary valves, gauges, piping, test equipment and other materials and equipment required to conduct testing.

B. Cleaning and Checking: Prior to starting functional testing:

1. Calibrate testing equipment for accurate results.
2. Inspect and clean equipment, devices, connected piping, and structures so they are free of foreign material.
3. Lubricate equipment in accordance with manufacturer's instructions.
4. Turn rotating equipment by hand and check motor-driven equipment for correct rotation.
5. Open and close switches by hand and operate other devices to check for binding, interference, or improper functioning.
6. Check power supply to electric-powered equipment for correct voltage.
7. Adjust clearances and torques.
8. Test piping for leaks.

C. Ready-to-test determination will be by Owner, based at least on the following:

1. Notification by Contractor of equipment and system readiness for testing.
2. Acceptable testing plan.

3. Acceptable operation and maintenance manuals incorporating review comments.
4. Adequate completion of Work adjacent to, or interfacing with, equipment to be tested, including items to be furnished by Owner.
5. Availability and acceptability of supplier or manufacturer's representative, when specified, to assist in testing of respective equipment, and satisfactory fulfillment of other specified manufacturers' responsibilities.
6. All spare parts and special tools delivered to Owner.

3.02 FUNCTIONAL TESTING

A. General:

1. Begin testing at a time mutually agreed upon by the Owner, Supplier, manufacturer's representative(s), and Contractor.
2. Notify in writing Owner, and Supplier or manufacturer's representative at least five (5) working days prior to scheduled date of functional tests.
3. Separate items of equipment demonstrated to function properly during subsystem testing may require no further functional test if documentation of subsystem testing is acceptable to Owner.
4. Conduct functional test until each individual component item or system has achieved three (3) continuous hours of satisfactory operation. Demonstrate all operational features and controls function during this period while in automatic modes.
5. If, in Owner's opinion, each system meets the functional requirements specified, such system will be accepted as conforming for purposes of advancing to performance testing phase, if required. If, in Owner's opinion, functional test results do not meet requirements specified, the systems will be considered as nonconforming.
6. Performance testing shall not commence until the equipment or system meets functional tests specified.

3.03 PERFORMANCE TESTING

A. General:

1. Begin testing at time mutually agreed upon by the Owner, Supplier, manufacturers' representative(s), and Contractor, as appropriate.
 - a. Owner will be present during test.
 - b. Notify Owner at least five (5) working days prior to scheduled date of test.
2. Follow approved testing plan and detailed procedures specified.
3. Source and type of fluid, gas, or solid for testing shall be as specified.
4. Unless otherwise indicated, provide all labor, materials, and supplies for conducting the test and taking all samples and performance measurements.
5. Prepare performance test report summarizing test method. Include test logs, pertinent calculations, and certification of performance.

3.04 STARTUP TEST PERIOD

- A. Test Reports: As applicable to the equipment furnished, certify in writing that:
 - 1. Tanks, pumps, piping systems, and valves have been successfully tested and are fully operational.
 - 2. Equipment systems and subsystems have been checked for proper installation, started, and successfully tested to indicate that they are operational and can perform their intended function.
 - 3. Systems and subsystems are capable of performing their intended functions.
 - 4. Facilities are ready for final testing and their intended operation.
- B. Attend planning meetings and arrange for attendants by key major equipment supplier or manufacturer representatives and required, or as required by the Contract Documents.
- C. Designate and provide one or more persons to be responsible for coordinating and expediting Contractor's facility startup duties.
- D. When facility startup has commenced, schedule remaining Work so as not to interfere with or delay the completion of facility startup. Support the facility startup activities with adequate staff to prevent delays and process upsets. This staff shall include, but not be limited to, major equipment and system manufacturers' representatives, Subcontractors, electricians, instrumentation personnel, millwrights, pipefitters and plumbers.
- E. Supply and coordinate specified manufacturer's facility startup services, as applicable.
- F. Make adjustments, repairs, and corrections necessary to complete facility startup.
- G. After the facility is operating, complete the testing of those items of equipment, systems, and subsystems which could not be or were not adequately or successfully tested prior to startup test period.

3.05 PARTIAL UTILIZATION

- A. After successful performance testing of a particular equipment type or system, Owner may elect to start up a portion of the equipment or system for continuous operation in accordance with Paragraph 10 of the General Conditions. Such operation will not interfere with testing of other equipment and systems that may still be underway, and shall not preclude the need to startup that portion operated in combination with the rest of the facility when testing is completed.

3.06 CONTINUOUS OPERATIONS

- A. Owner will accept equipment and systems as substantially complete and ready for continuous operation only after successful facility startup is completed and documented, and reports submitted, and manufacturers' services completed for training of Owner's personnel.

SAMPLE FUNCTIONAL TESTING FORM**PROCESS SYSTEM:** Plant 3 Water**P&ID:** P1000-1**SCHEM DIAG NO.:** 900**EQUIPMENT:** 09-PMP-001
09-PMP-002
PIT-9-33W Pump No.1
3W Pump No.2

Testing Step	Mode Set-up	Operational Test	Required Result	Initial Complete	
				Kr	CM
1	09-PMP-001 LOR-"Off"	Depress Local Start	a. Pump does not start b. Off indic at DCS c. No Remote indic at DCS		
2	09-PMP-002 LOR-"Off"	Depress Local Start	a. Pump does not start b. Off indic at DCS c. No Remote indic at DCS		
3	09-PMP-001 LOR-"Off"	Depress MCC Start	a. Pump does not start b. Off indic at DCS c. No Remote indic at DCS		
4	09-PMP-002 LOR-"Off"	Depress MCC Start	a. Pump does not start b. Off indic at DCS c. No Remote indic at DCS		
5	09-PMP-001 LOR-"Off" DCS Auto/Man-"Manual"	Depress DCS Start	a. Pump does not start b. Off indic at DCS c. No Remote indic at DCS		
6	09-PMP-002 LOR-"Off" DCS Auto/Man-"Manual"	Depress DCS Start	a. Pump does not start b. Off indic at DCS c. No Remote indic at DCS		
7	09-PMP-001 LOR-"Off" DCS Auto/Man-"Automatic" Select 09-PMP-001 as "Duty"	Reduce 3W system pressure below start pressure	a. Pump does not start b. Off indic at DCS c. No Remote indic at DCS d. Duty indic at DCS		
8	09-PMP-002 LOR-"Off"	Reduce 3W system pressure	a. Pump does not start		
	DCS Auto/Man-"Automatic"	below start pressure	b. Off indic at DCS		
	Select 09-PMP-002 as "Duty"		c. No Remote indic at DCS		
			d. Duty indic at DCS		
9	09-PMP-001 LOR- "Local" Depress local LOS	Depress Local Start	a. Pump does not start b. Off indic at DCS c. No Remote indic at DCS		
10	09-PMP-002 LOR- "Local" Depress local LOS	Depress Local Start	a. Pump does not start b. Off indic at DCS c. No Remote indic at DCS		

PROCESS SYSTEM: Plant 3 Water

P&ID: P1000-1

SCHEM DIAG NO.: 900

EQUIPMENT: 09-PMP-001
09-PMP-002
PIT-9-33W Pump No.1
3W Pump No.2

Testing Step	Mode Set-up	Operational Test	Required Result	Initial Complete Kr CM
11	09-PMP-001 LOR- "Local" Depress local LOS	Depress MCC Start	a. Pump does not start b. Off indic at DCS c. No Remote indic at DCS	
12	09-PMP-002 LOR- "Local" Depress local LOS	Depress MCC Start	a. Pump does not start b. Off indic at DCS c. No Remote indic at DCS	
13	09-PMP-001 LOR- "Local" Depress local LOS	Depress DCS Start	a. Pump does not start b. Off indic at DCS c. No Remote indic at DCS	
14	09-PMP-002 LOR- "Local" Depress local LOS	Depress DCS Start	a. Pump does not start b. Off indic at DCS c. No Remote indic at DCS	
15	09-PMP-001 LOR- "Remote" Depress local LOS DCS Auto/Man-"Manual"	Depress DCS Start	a. Pump does not start b. Off indic at DCS c. Remote indic at DCS	
16	09-PMP-002 LOR- "Remote"	Depress DCS Start	a. Pump does not start	
	Depress local LOS DCS Auto/Man-"Manual"		b. Off indic at DCS c. Remote indic at DCS	
17	09-PMP-001 LOR- "Remote" Depress local LOS DCS Auto/Man-"Automatic" Select 09-PMP-001 as "Duty"	Reduce 3W system pressure below start pressure	a. Pump does not start b. Off indic at DCS c. Remote indic at DCS d. Duty indic at DCS	
18	09-PMP-002 LOR- "Remote" Depress local LOS DCS Auto/Man-"Automatic" Select 09-PMP-002 as "Duty"	Reduce 3W system pressure below start pressure	a. Pump does not start b. Off indic at DCS c. Remote indic at DCS d. Duty indic at DCS	
19	09-PMP-001 LOR- "Local"	Depress Local Start	a. Pump starts b. On indic at DCS	
20	09-PMP-002 LOR- "Local"	Depress Local Start	a. Pump does not start	
21	09-PMP-001 LOR- "Local"	Depress Local Stop	a. Pump stops	
22	09-PMP-002 LOR- "Local"	Depress Local Start	a. Pump starts b. On indic at DCS	
23	09-PMP-001 LOR- "Local"	Depress Local Start	a. Pump does not start	

PROCESS SYSTEM: Plant 3 Water

P&ID: P1000-1

SCHEM DIAG NO.: 900

EQUIPMENT: 09-PMP-001
09-PMP-002
PIT-9-33W Pump No.1
3W Pump No.2

Testing Step	Mode Set-up	Operational Test	Required Result	Initial Complete Kr CM
24	09-PMP-002 LOR- "Local"	Depress Local Stop	a. Pump stops	
25	09-PMP-001 LOR- "Local"	Depress MCC Start	a. Pump starts	
26	09-PMP-001 LOR- "Local"	Depress MCC Stop	a. Pump stops	
27	09-PMP-002 LOR- "Local"	Depress MCC Start	a. Pump starts	
28	09-PMP-002 LOR- "Local"	Depress MCC Stop	a. Pump stops	
29	09-PMP-001 LOR- "Local"	Depress DCS Start	a. Pump does not start	
30	09-PMP-002 LOR- "Local"	Depress DCS Start	a. Pump does not start	
31	09-PMP-001 LOR- "Remote" DCS Auto/Man- "Manual"	Depress Local Start Depress MCC Start	a. Pump does not start	
32	09-PMP-002 LOR- "Remote" DCS Auto/Man- "Manual"	Depress Local Start Depress MCC Start	a. Pump does not start	
33	09-PMP-001 LOR- "Remote" DCS Auto/Man- "Manual"	Depress DCS Start	a. Pump starts	
34	09-PMP-001 LOR- "Remote" DCS Auto/Man- "Manual"	Depress DCS Stop	a. Pump stops	
35	09-PMP-002 LOR- "Remote" DCS Auto/Man- "Manual"	Depress DCS Start	a. Pump starts	
36	09-PMP-002 LOR- "Remote" DCS Auto/Man- "Manual"	Depress DCS Stop	a. Pump stops	
37	09-PMP-001 LOR- "Remote" DCS Auto/Man- "Manual" Depress DCS Start	Depress Local Stop	a. Pump stops	
38	09-PMP-001 LOR- "Remote" DCS Auto/Man- "Manual" Depress DCS Start	Depress MCC Stop	a. Pump stops	
39	09-PMP-002 LOR- "Remote" DCS Auto/Man- "Manual" Depress DCS Start	Depress Local Stop	a. Pump stops	
40	09-PMP-002 LOR- "Remote" DCS Auto/Man- "Manual" Depress DCS Start	Depress MCC Stop	a. Pump stops	

PROCESS SYSTEM: Plant 3 Water

P&ID: P1000-1

SCHEM DIAG NO.: 900

EQUIPMENT: 09-PMP-001
09-PMP-002
PIT-9-33W Pump No.1
3W Pump No.2

Testing Step	Mode Set-up	Operational Test	Required Result	Initial Kr	Complete CM
41	09-PMP-001 LOR- "Remote" DCS Auto/Man- "Automatic" Select 09-PMP-001 as "Duty"	Reduce 3W system pressure below start pressure	a. Pump starts automatically at start PSI		
42	09-PMP-001 LOR- "Remote" DCS Auto/Man- "Automatic" Select 09-PMP-001 as "Duty"	Depress Local Stop	a. Pump stops		
43	09-PMP-002 LOR- "Remote" DCS Auto/Man- "Automatic" Select 09-PMP-002 as "Duty"	Reduce 3W system pressure below start pressure	a. Pump starts automatically at start PSI		
44	09-PMP-002 LOR- "Remote" DCS Auto/Man- "Automatic" Select 09-PMP-002 as "Duty"	Depress Local Stop	a. Pump stops		
45	09-PMP-001 LOR- "Remote" DCS Auto/Man- "Automatic" Select 09-PMP-001 as "Duty"	With pump running, activate low water level alarm	a. Pump stops b. Cannot start either pump until low water alarm clears c. Low Lvl alarm at DCS		
46	09-PMP-002 LOR- "Remote" DCS Auto/Man- "Automatic" Select 09-PMP-002 as "Duty"	With pump running, activate low water level alarm	a. Pump stops b. Cannot start either pump until low water alarm clears c. Low Lvl alarm at DCS		
47	09-PMP-001 LOR- "Remote" DCS Auto/Man- "Automatic" Select 09-PMP-001 as "Duty"	With pump running, activate high pressure alarm	a. Pump stops b. Cannot start pump until alm clears and Rst is pushed c. High Press alarm at DCS		
48	09-PMP-002 LOR- "Remote" DCS Auto/Man- "Automatic" Select 09-PMP-002 as "Duty"	With pump running, activate high pressure alarm	a. Pump stops b. Cannot start pump until alm clears and Rst is pushed c. High Press alarm at DCS		
49	09-PMP-001 LOR- "Remote" DCS Auto/Man- "Automatic" Select 09-PMP-001 as "Duty"	With pump running, activate low pressure alarm	a. Pump continues running b. Low Press alarm at DCS		

PROCESS SYSTEM: Plant 3 Water**P&ID:** P1000-1**SCHEM DIAG NO.:** 900**EQUIPMENT:** 09-PMP-001
09-PMP-002
PIT-9-33W Pump No.1
3W Pump No.2

Testing Step	Mode Set-up	Operational Test	Required Result	Initial Complete	
				Kr	CM
50	09-PMP-002 LOR- "Remote" DCS Auto/Man- "Automatic" Select 09-PMP-002 as "Duty"	With pump running, activate low pressure alarm	a. Pump continues running b. Low Press alarm at DCS		
51	Both pumps in "Remote" Both pumps in "Automatic" Select 09-PMP-001 as "Duty"	With 09-PMP-001 running, open MCC breaker	a. 09-PMP-002 automatically starts b. 09-PMP-001 "Off" indic at DCS		
52	-----	-----	Verify local PIT and DCS pressure readings match		

All Operational Tests Successfully Completed:

Contractor's Initials: _ Date: _____

Engineer's Initials: _ Date: _____

END OF SECTION

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SECTION 01700

CONTRACT CLOSEOUT

PART 1 GENERAL

1.01 CONTRACT CLOSEOUT SUBMITTALS

- A. Reference: Paragraph 10, General Conditions and as otherwise required in the Contract Documents.
- B. Record Documents: As required in Section 01720, Record Documents.
- C. Approved Shop Drawings and Samples: As required in Section 01300, Submittals, of the specifications.
- C. Operations and Maintenance Manuals: Provide as required; or in accordance with the individual Specification sections.
- E. Certificates of Testing and Inspection: As required in Paragraph 3.3 of the General Conditions and the individual Specification sections.
- F. Certificate of Substantial Completion as required in Paragraph 10 of the General Conditions.
- G. Special Bonds, Special Warranties, and Service Agreements:
 - 1. Form of Submittals:
 - a. Bind in commercial quality, 8-1/2 by 11-inch three-ring side binders with hardback, clear, plastic covers. Label cover of each binder with typed or printed title 'WARRANTIES AND BONDS,' with title of Project; name, address, and telephone number of Contractor and equipment Supplier; and name of responsible principal.
 - b. Table of Contents: Neatly typed, in the sequence of the Table of Contents of the Project Manual, with each item identified with the number and title of the Specification section in which specified, and the name of the product or Work item.
 - c. Separate each warranty of Bond with index tab sheets keyed to the Table of Contents listing. Provide full information, using separate typed sheets as necessary. List Subcontractor, Supplier, and manufacturer, with name, address, and telephone number of responsible principal.
 - 2. Preparation for Submission: Obtain notarized warranties and bonds, executed in duplicate by responsible Subcontractors, Suppliers, and manufacturers, within ten (10) days after completion of the applicable item or Work. Except for items put into use with Owner's permission, leave date of beginning of time of warranty

until the date of Substantial Completion is determined. Retain warranties, Bonds, service agreements until time specified for submission.

3. Time of Submission:

- a. For equipment or component parts of equipment put into service during construction to be utilized by Owner in accordance with Paragraph 9.2 of the General Conditions, submit documents within ten (10) days after the date of Substantial Completion for that part of the work.
- b. Submit other Submittals within twenty (20) days after the date of Substantial Completion and prior to submission of final Application for Payment.
- c. For item of Work, when acceptance is delayed beyond date of Substantial Completion, submit within 10 days after Owner's written acceptance, listing the date of acceptance as the beginning of the warranty period.

G. Certificates of Evidence of Insurance: As required in Paragraph 8.8, General Conditions.

H. Consent of Surety to Final Payment: As required in Paragraph 9.2.5, General Conditions.

I. Releases or Waivers of Liens and Claims: As required in Paragraph 9.2, General Conditions.

J. Spare parts and special tools.

K. Other Required Submittals: In accordance with the Contract Documents.

1.02 FINAL APPLICATION FOR PAYMENT. Submit final Application for Payment in accordance with procedures and requirements of Article 9, General Conditions; Section 01025, Measurement and Payment; and as may otherwise be specified herein.

1.03 FINAL INSPECTION. Reference Paragraph 10.2, General Conditions. Also, all applicable permitting agencies.

PART 2 PRODUCTS (Not Used)

PART 3 EXECUTION

3.01 FINAL CLEANING

A. At completion of Work or of a part thereof and immediately prior to Contractor's request for certificate of Substantial Completion; or if no certificate is issued, immediately prior to Contractor's notice of completion, clean entire site or parts thereof, as applicable.

- 1. Leave the Work and adjacent areas affected in a clean condition satisfactory to Owner.

2. Remove grease, dirt, dust, paint or plaster splatter, stains, labels, fingerprints, and other foreign materials from exposed surfaces. Broom clean exterior paved driveways and parking areas. Hose clean sidewalks, loading areas, and others contiguous with principal structures.
 3. Repair, patch, touch up marred surfaces to specified finish and match adjacent surfaces.
 4. Rake clean all other surfaces.
 5. Leave water courses, gutters, and ditches open and in condition satisfactory to Owner.
- B. Use only cleaning materials recommended by manufacturer of surfaces to be cleaned.

END OF SECTION 01700

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SECTION 01720

RECORD DOCUMENTS

PART 1 GENERAL

1.01 SUBMITTALS

- A. Quality Control Submittals: Written procedures for maintaining and markup of record documents.
- B. Contract Closeout Submittal: Submit Record Documents in accordance with the requirements of this section. Submit prior to application for final payment.

1.02 QUALITY ASSURANCE

- A. Furnish qualified and experienced person, whose duty and responsibility shall be to maintain record documents.
- B. Accuracy of Records:
 - 1. Coordinate changes within record documents, making legible and accurate entries on each page of Specifications and each sheet of Drawings and other documents where such entry is required to show change.
 - 2. Purpose of Project record documents is to provide factual information regarding aspects of Work, both concealed and visible, to enable future modification of Work to proceed without lengthy and expensive site measurement, investigation, and examination.
- C. Make entries within 24 hours after receipt of information that a change in Work has occurred.
- D. Prior to submitting each request for progress payment, request Owner's review and approval of current status of record documents. Failure to properly maintain, update, and submit record documents may result in return of Contractor's Application for Progress Payment by Owner as provided in Paragraph 9.2 of the General Conditions.

1.03 DELIVERY, STORAGE, AND HANDLING

- A. Maintain record documents completely protected from deterioration, loss, and damage until completion of Work.
- B. In event of loss of recorded data, use means necessary to again secure data to Owner's acceptance.
 - 1. Such means shall include, if necessary in Owner's opinion, removal and reconstruction of covering materials, at no cost to Owner.

PART 2 PRODUCTS

2.01 RECORD DOCUMENTS

- A. Promptly following commencement of Contract Times, secure from Owner at no cost to Contractor, one complete set of Contract Documents. Drawings will be half size, 11 by 17 inches.

PART 3 EXECUTION

3.01 MAINTENANCE OF RECORD DOCUMENTS

- A. General:
1. Label or stamp each record document with title, "RECORD DOCUMENTS," in neat large printed letters.
 2. Record information concurrently with construction progress and within 24 hours after receipt of information that change has occurred. Do not cover or conceal Work until required information is recorded.
- B. Preservation
1. Maintain documents in a clean, dry, legible condition and in good order. Do not use record documents for construction purposes.
 2. Make documents and Samples available at all times for observation by Owner.
- C. Making Entries on Drawings
1. Using an erasable colored pencil (not ink or indelible pencil), clearly describe change by graphic line and note as required.
 - a. Color Coding:
 - i. Green when showing information deleted from Drawings.
 - ii. Red when showing information added to Drawings.
 - iii. Blue and circled in blue to show notes.
 2. Date entries
 3. Call attention to entry by "cloud" drawn around area or areas affected.
 4. Legibly mark to record actual changes made during construction, including, but not limited to:
 - a. Depths of various elements of foundation in relation to finished first floor data if not shown or where depth differs from that shown.

- b. Horizontal and vertical locations of existing and new Underground Facilities and appurtenances, and other underground structures, equipment or Work. Reference to at least two measurements of permanent surface improvements.
 - c. Location of internal utilities and appurtenances concealed in the construction referenced to visible and accessible features of the structure.
 - d. Locate existing facilities, piping, equipment, and items critical to the interface between existing physical conditions or construction and new construction.
 - e. Changes made by Addenda and Field Orders, Work Change Directive, Change Order, Written Amendment, and Owner's written interpretation and clarification using consistent symbols for each and showing appropriate document tracking number.
- 5. Dimensions on Schematic Layouts: Show on record drawings, by dimension, the centerline of each run of items such as are described in previous subparagraph above.
 - a. Clearly identify the item by accurate note such as "cast iron drain," galv. Water," and the like.
 - b. Show, by symbol or note, vertical location of item ("under slab," "in ceiling plenum, " "exposed," and the like).
 - c. Make identification so descriptive that it may be related reliably to Specifications.
- D. Make entries in other pertinent documents as accepted by Owner.
- E. If documents are not accepted by Owner, secure a new copy of that document from Owner at Owner's usual charge for reproduction and handling, and carefully transfer change data to new copy to acceptance of Owner.

END OF SECTION

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SECTION 01730

OPERATING AND MAINTENANCE DATA

PART 1 GENERAL

1.01 SCOPE OF WORK

- A. Compile, organize, submit, and revise, as directed by the Engineer an Operation and Maintenance Manual for each piece of equipment furnished, as required by the Specifications.
- B. Compile, organize, submit, and revise, as required, the attached Equipment Manufacturer's Certificate of Installation Testing and Instruction for acknowledgement by the Owner.
- C. Compile, submit, and revise as directed by the Engineer, the following attached Computerized Maintenance Management System (CMMS) datasheets for each piece of equipment furnished on this project:
 - 1. CMMS Information Worksheet
 - 2. Spare Parts List
 - 3. PM Program Worksheet
 - 4. Equipment Nameplate data Record

1.02 CONTENT OF MANUAL

- A. Each manual shall be specific to this Contract. All non-applicable information shall be crossed out, and the applicable information shall be highlighted or otherwise indicated in a manner to prevent confusion of those utilizing the manuals.
- B. Each manual shall contain the following information:
 - 1. Neatly typewritten Title Page/Cover Sheet to include:
 - a. Identification of equipment covered by the manual by providing the process name and equipment tag numbers.
 - b. Name of responsible principal, address, telephone number and area of responsibility of:
 - (1) Contractor.
 - (2) Subcontractor or installer.
 - (3) Product manufacturer.
 - (4) Nearest service center or maintenance contract or, as appropriate.
 - (5) Nearest source of supply for parts, materials, supplies or replacement products.

2. Neatly typewritten Table of Contents sheet to include the following manual section headings:
 - a. CMMS Data Sheets
 - b. System and Component Description
 - c. Maintenance Schedule
 - d. Installation Instructions
 - e. Operation Procedures
 - f. Maintenance Instructions
 - g. Troubleshooting Guide
 - h. Drawings and Spare Parts Lists
 - i. Technical Data
 - j. Other Components
 - k. Warranties, Bonds and Service Contracts
3. Manual sections shall be manufacturer's original printed information or neatly typewritten pages. Each section shall be tabbed in consecutive order such that the first tab will be Table of Contents.

1.03 MANUALS FOR ELECTRICAL AND ELECTRONIC EQUIPMENT

- A. In addition to the required content as listed in Paragraph 1.02, manuals for electric and electronic equipment shall include:
 1. Circuit directories of panelboards.
 - a. Electrical service.
 - b. Controls and control loops.
 - c. Communications.
 2. As-installed color coded wiring diagrams.
 3. Refer to Division 16 for further requirements.

1.04 MANUALS FOR MATERIALS AND FINISHES

- A. Submit two copies of complete manuals for applied materials, finishes, moisture protection and weather-exposed products in final form only.

B. Content

1. Manufacturer's data, giving full information on product.
2. Instructions for care and maintenance.
3. Additional pertinent information as required by the respective Specification sections for the products.

1.05 SUBMITTAL SCHEDULE

A. Manuals shall be submitted according to the following schedule:

1. Submit preliminary electronic "draft" copies of manuals to the Construction Manager prior to equipment delivery and no later than 30 days following approval of the shop drawings for each piece of equipment. Engineer will review and return one copy with comments.
2. Submit three revised copies of manuals to the Construction Manager, incorporating comments and revisions required by the Construction Manager and/or Engineer 30 days after initial receipt of the reviewed preliminary manuals and comments from the Engineer. When manufacturer training is required for the subject equipment/system, the training shall not occur until after the revised copies have been approved by the Engineer. These revised copies shall be the source document for such training.
3. Submit s three final copies of the manuals to the Construction Manager, identical to the revised copies as approved by the Engineer, within 60 days of initial receipt of the approved revised copies from the Engineer, or prior to issuance of a certificate of substantial completion, whichever is earlier. The seven final copies shall be submitted in binders, as detailed in Paragraph 1.06.
4. Construction Manager will be responsible for compiling final O&M manuals (inserting supplemental pages) and delivering to District.

1.06 FORM OF MANUAL SUBMITTALS

A. Format

1. Printed and typewritten sheets shall be standard 8-1/2 inch X 11 inch size.
2. Paper shall be 20 pound minimum, white, with standard three hole punch pattern, with punched edges of each sheet of final submittals reinforced with plastic, cloth or metal.
3. All text shall be manufacturer's original printed sheets or neatly typewritten pages.
4. Sections shall be separated with tabbed index sheets to correlate with the Table of Contents of the manual.

5. Drawings that are standard 8-1/2 inch x 11 inch size shall also have standard three hole punch pattern with punched edges of each sheet of final submittals reinforced with plastic, cloth or metal. Drawings larger than standard 8-1/2 inch X 11 inch size shall be folded and inserted into standard three hole punch pattern, 8-1/2 inch X 11 inch size, 0.0035 gauge standard pocket plastic sheet protectors.
6. All diagrams, drawings and illustrations shall be of original quality, reproducible by the dry copy method.

B. Binding:

1. Preliminary and revised manual submittals.
 - a. Commercial quality three ring binders.
 - (1) Cleanable, oil, moisture and wear resistant, vinyl sealed stiff board covers with full size clear plastic/vinyl pockets on front and spine.
 - (2) Ring size to suit thickness of manual content.
2. Final manual submittals.
 - a. Four copies shall be bound in uniform three ring binders as detailed in Paragraph 1.06.B. 1.
 - b. Submit a searchable electronic version of the entire O&M manual on CDs using PDF format, with bookmarks for each piece of equipment included.

1.07 INSTRUCTION OF OWNER PERSONNEL

- A. Before final inspection, instruct Owner's designated personnel in operation, adjustment and maintenance of products, equipment and systems, at agreed upon times.
- B. Use operation and maintenance manuals as basis for instruction. Review contents of manual with personnel in detail to explain all aspects of operation and maintenance.
- C. Prepare and insert additional data in Operation and Maintenance Manual when need for such data becomes apparent during instruction.

1.08 SERVICES OF MANUFACTURER'S REPRESENTATIVE

- A. Equipment furnished under Divisions 11, 13, 15 and 16 shall include the cost of a competent representative of the manufacturers of all equipment to supervise the installation, adjustment and testing of the equipment and to instruct the Owner's operating personnel on operation and maintenance. This supervision may be divided into two or more time periods as required by the installation program or as directed by the Engineer.

- B. See the detailed specifications for additional requirements for furnishing the services of manufacturer's representatives.
- D. A certificate in the form attached to this Section, from the manufacturer and signed by Owner's representative stating that the installation of the equipment is satisfactory, that the unit has been satisfactorily tested, is ready for operation and that the operating personnel have been suitably instructed in the operation, lubrication and care of the unit shall be submitted for each piece of equipment furnished on the project.

1.09 TRAINING OF DISTRICT PERSONNEL

- A. General
 - 1. Operation and maintenance training of District's personnel shall be provided for all equipment identified in the technical specifications. Training content is to be tailored to the needs of the operations group and the maintenance group.
 - 2. Training shall be conducted by competent representatives who are certified by the manufacturer to be thoroughly familiar with the subject matter as well as instructional methods.
 - 3. These training services shall be conducted onsite by the manufacturer's representative and shall ensure that District's personnel are trained to perform equipment task requirements, including essential knowledge and skills. The District may conduct objective evaluations of its employees receiving this training to verify compliance with the requirement. In addition the District will have the trainees provide an evaluation of the trainer and the training materials. If either evaluation process determines that the training was deficient, the Contractor shall be required to have the manufacturer re-perform the training at a schedule to be defined by the District and with an approved representative from the factory.
 - 4. Training materials shall be submitted to the District for review. Training materials shall include a list of task statements which the District's employees may perform with the equipment, the learning objectives (derived from the task list and by which the training will be evaluated) and the training plan (or lesson plan) to demonstrate how the learning objectives will be achieved. Acceptance of training materials is required prior to start of training. The Contractor shall provide an adequate number of printed trainee materials for all persons being trained. One electronic copy of training material shall be provided to the District.
 - 5. The Contractor shall submit, within 250 days of Notice To Proceed, a list of all equipment items or systems for which training will be provided in accordance with the specifications. The list shall include item number, specification section, description and required training in hours.
 - 6. The District shall have the right to videotape all training sessions, or may designate separate sessions or portions thereof for the sole purpose of videotaping.
- B. Training Coordinator

1. The Contractor shall designate and provide one or more persons to be responsible for coordinating and expediting the training duties. The person or persons so designated shall be present at all training coordination meetings with the District.

C. Training Schedule

1. The Contractor's coordinator shall coordinate the training periods with the Construction Manager and shall submit a training schedule and the training materials for each piece of equipment or system for which training is to be provided. Said training schedule and materials shall be submitted not less than sixty (60) calendar days prior to the time that the associated training is to be provided, and the training materials shall be approved at least twenty (20) calendar days before the associated training is provided.
2. Equipment and/or systems shall be deemed suitable for use in training upon satisfactory completion of functional testing. Training for equipment in a process system must be completed prior to commencement of the Process Test for that area.
3. Training sessions for each piece of equipment shall be four (4) hours total except as otherwise noted. Training sessions shall be scheduled on Tuesdays through Thursdays. Training sessions shall be provided during the day between the hours of 8:00 a.m. and 4:00 p.m.
4. The Contractor shall schedule separate training sessions for both operations and maintenance personnel and meet the following criteria:
 - a. Maintenance training shall be provided for each piece of equipment listed in the approved Operation and Maintenance manual submitted by the Contractor. Training shall emphasize theory of operations, troubleshooting, preventative maintenance, predictive maintenance, and repair procedures. The training shall encompass issues relating to instrumentation, electrical and mechanical systems.
 - b. Operations training shall be provided for each piece of equipment listed in the approved Operation and Maintenance manual submitted by the Contractor. Training shall emphasize theory of operations, startup and shutdown instructions, normal operation, abnormal and emergency operations (where applicable), lockout procedures, troubleshooting, preventative maintenance and alarm and control logic including fail-safe mode of operation.
5. The Contractor shall confirm each training period a minimum of three (3) working days prior to the scheduled time.

PART 2 PRODUCTS (Not Used)

PART 3 EXECUTION (Not Used)

END OF SECTION

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EQUIPMENT MANUFACTURER'S CERTIFICATE OF INSTALLATION TESTING
AND INSTRUCTION

Owner: _____

Project: _____

Contract No. _____

EQUIPMENT SPECIFICATION SECTION _____

EQUIPMENT DESCRIPTION _____

I _____, Authorized representative of
(Print Name)_____
(Print Manufacturer's Name)hereby CERTIFY that _____
(Print equipment name and model with serial No.)

installed for the subject project [has] [have] been installed in a satisfactory manner, [has] [have] been satisfactorily tested, [is] [are] ready for operation, and that Owner assigned operating personnel have been suitably instructed in the operation, lubrication, and care of the unit[s] on Date: _____ Time: _____.

CERTIFIED BY: _____ DATE: _____
(Signature of Manufacturer's Representative)OWNER'S ACKNOWLEDGMENT OF MANUFACTURER'S INSTRUCTION

[I] [We] the undersigned, authorized representatives of the _____ and/or Plant Operating Personnel have received classroom and hands on instruction on the operation, lubrication, and maintenance of the subject equipment and [am] [are] prepared to assume normal operational responsibility for the equipment:

DATE: __________
DATE: __________
DATE: _____

CMMS Information Worksheet

Asset #	Crit Factor	Asset Location	Safety Require	Asset Name	Asset Description	Cost	Replace Cost	Depreciation No. of Mo.	Warr Exp Date	Manufacturer	Model #	Part #	Serial #	Supplier	Install Date	Purchase Date	Manufactured Date

Spare Parts List

Asset #	Asset Location	Asset Name	Recommended Spare Part	Cost	Manufacturer/Address/Ph #/Contact Name	Supplier/Address/Ph #/Contact Name	Model #	Part #	Serial #	Purchase Date	Manufactured Date

PM Program Worksheet

Asset #	Asset Name	Task Description	Est Hours	Work Group	Priority 1-4	Freq	LPM Date	Recom Due Date

Form Completed By: _____

Date: _____

EQUIPMENT NAMEPLATE DATA RECORD	
Asset No.:	Location:
Asset Name:	Description:
Supplier Name:	Address/Phone/Contact:
PUMP	
Manufacturer Name:	Address/Phone/Contact:
Description:	
Output:	TDH: Model No.: Serial No.:
Size:	RPM: Type:
Installed Date:	Impeller Data:
Project No.:	Purchase Cost: Vendor:
Remarks:	
MOTOR	
Manufacturer Name:	Address/Phone/Contact
Model No.:	Serial No.:
RPM: Volts:	H.P.: Ph:
Amps: Hz:	EFF/SF: Code:
Frame: Type:	Insul Class:
Design:	Duty:
Remarks:	
COMPONENT	
Manufacturer Name:	Address/Phone/Contact
Model No.:	Serial No.:
Remarks/Specifications:	
GENERIC	
Manufacturer Name:	Address/Phone/Contact:
Remarks/Specifications:	

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SECTION 01740

WARRANTIES

PART 1 GENERAL

1.01 SCOPE OF WORK

- A. Preparation and submittal of warranties.
- B. Time and schedule of submittals.

1.02 RELATED SECTIONS

- A. NOT USED
- B. Section 01700 - Contract Closeout: Contract closeout procedures.
- C. Section 01730 - Operation and Maintenance Data.
- D. Individual Specifications Sections: Warranties required for specific Products or Work.

1.03 FORM OF SUBMITTALS

- A. Bind in commercial quality 8-1/2 x 11 binders with durable plastic covers.
- B. Cover: Identify each binder with typed or printed title WARRANTIES with title of Project; name, address and telephone number of Contractor [and equipment supplier]; and name of responsible company principal.
- C. Table of Contents: Neatly typed, in the sequence of the Table of Contents of the Project Manual, with each item identified with the number and title of the specification section in which specified, and the name of Product or work item.
- D. Separate each warranty with index tab sheets keyed to the Table of Contents listing. Provide full information, using separate typed sheets as necessary. List Subcontractor, supplier, and manufacturer, with name, address, and telephone number of responsible principal.

1.04 PREPARATION OF SUBMITTALS

- A. Obtain warranties executed by responsible Subcontractors, suppliers, and manufacturers, within 15 days after completion of the applicable item of work. Except for items put into use with Owner's permission, leave date of beginning of time of warranty until the Date of Substantial completion is determined.
- B. Verify that documents are in proper form, contain full information, and are notarized.

- C. Co-execute submittals when required.
- D. Retain warranties until time specified for submittal.

1.05 TIME OF SUBMITTALS

- A. For equipment or component parts of equipment put into service during construction with Owner's permission, submit documents within ten days after acceptance.
- B. Make other submittals within ten days after Date of Substantial Completion, prior to final Application for Payment.
- C. For items of Work for which acceptance is delayed beyond Date of Substantial Completion, submit within ten days after acceptance, listing the date of acceptance as the beginning of the warranty period.

PART 2 PRODUCTS (Not Used)

PART 3 EXECUTION (Not Used)

END OF SECTION