

DOCUMENT 00912

**ADDENDUM NUMBER 2**

Issued: February 15, 2011

**Russian River County Sanitation District Treatment Plant Disinfection Upgrade Project**

FROM: Russian River County Sanitation District  
404 Aviation Boulevard  
Santa Rosa, CA 95403-9019

TO: Prospective Bidders

This Addendum forms a part of and modifies the Project Manual dated January 2011 and Addendum Number 1 dated January 25, 2011. Bidder shall acknowledge receipt of this Addendum in the space provided in Document 00400 (Bid Form).

Modified text is indicated as follows: Double-underline designates text to be inserted; ~~strikethrough~~ designates text to be deleted.

Addendum Number 2 consists of 21 pages (size 8 1/2" x 11") and 4 revised Drawings.

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**I. General Changes**

A. No changes.

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**II. Changes to Prior Addenda**

A. Subsequent change to Addendum Number 1, Paragraph III.B.2.:

1. Document 00200 (Instructions to Bidders):

a. Modify the introductory paragraph of Paragraph 22 as follows:

**DOCUMENTATION OF GOOD FAITH EFFORT.** The following forms shall be submitted by Apparent Low Bidder within 10 Business Days of Bid Opening. Forms are available from Owner and on Owner’s website. Form content is included in Document 01415 (Regulatory Requirements – Funding). Owner has conducted an outreach effort and created a DBE solicitation list. The list can be viewed on Owner’s website. Bidder represents and agrees that in submitting its Bid, it is not relying on any information regarding the DBE Solicitation List supplied by Owner. Each DBE solicited and included in the Bid must be certified by the US EPA, US Small Business Association, US Department of Transportation, or by another state, local, tribal or private entity whose certification criteria match those of the aforementioned federal agencies. Evidence of such certification is required, and the certification must have been valid at the time of the Bid submission.

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### III. Changes to Introductory Information and Bidding Requirements

#### A. Document 00010 (Table of Contents):

1. Insert Section 05313 (Metal Deck) after Section 05120 (Structural Steel).
2. Delete Section 10530 (Aluminum Canopies).

#### B. Document 00400 (Bid Form):

##### 1. Paragraph 4:

- a. Delete Bid Item 6, Construction Survey and Staking, from Schedule of Bid Prices. Renumber remaining items accordingly.
- b. Add the following after the Schedule of Bid Prices as Paragraph 5; renumber remaining paragraphs accordingly:
  - 1) 5. The price for Item 8, Furnish Disinfection System, does not include sales tax.
- c. Add the following after the Schedule of Bid Prices as Paragraph 6; renumber remaining paragraphs accordingly:
  - 1) 6. Owner will issue a Change Order to adjust the price for Item 8 of the Schedule of Bid Prices in this Document 00400 by an amount equal to any price adjustment, pursuant to the "Potential Time and Price-Impacted Materials" provision of the manufacturing agreement (Exhibit 1 of Document 00525 [Assignment and Novation Agreement]).

[Bidder shall use the revised Document 00400 (Bid Form) attached, marked "REVISED 2/15/11" in its Bid.]

#### C. Document 00450 (Statement of Qualifications for Construction Work):

1. Modify item 8 of Statement of Qualifications Checklist as follows:
  - a.  Cal/OSHA 300 A log for ~~2009~~ 2010

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### IV. Changes to Contracting Requirements

#### A. Document 00520 (Agreement):

##### 1. Insert the following as Paragraph 3.3.1:

- a. 3.3.1 For exceedences of guaranteed peak power use resulting in liquidated damages which are solely caused by the product supplied by, or the services provided by Ozonia North America, LLC, liquidated damages for such exceedences shall be limited to \$43,050.00. For exceedences of guaranteed peak power use resulting in liquidated damages due to some other cause, there shall be no limit on liquidated damages.

[This change will be made in the final Contract Documents.]

##### 2. Paragraph 4.1:

- a. Delete Item 6, Construction Survey and Staking, from table of prices. Renumber remaining items accordingly.

[This change will be made in the final Contract Documents.]

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### V. Changes to Conditions of the Contract

#### A. No changes.

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### VI. Changes to Specifications

#### A. Section 01100 (Summary):

1. In Paragraphs 1.3 D.8. through 1.3 D.11.: Change "some" to "sum" (four places).

2. Delete paragraph 1.3 D.5. in its entirety. Renumber remaining paragraphs accordingly.
- B. Section 01415 (Regulatory Requirements - Funding):
1. Insert the following at the end of Section 3, Paragraph 1.4 J (page 01415-13):
    - a. Note: Owner notified the SBA/MBDA web sites of this contracting bid opportunity. Documentation of such notice is available on Owner's website.
  2. Modify Paragraph 1.4 V.2. (page 01415-44), as follows:
    - a. 2. A copy of the Federal Wage Decision is included as general information at the end of this Section 01415 as Attachment B. Attachment B was the most current Federal Wage Decision available at the time the Project Manual was assembled. The Federal Wage Decision is updated periodically by the U.S. Department of Labor. ~~If there are changes to the Federal Wage Decision applicable for this Project, the Federal Wage Decision will be updated prior to the Bid opening date and will be made part of the Contract by Addendum.~~
  3. Insert the following as Paragraph 1.4 W.2. (page 01415-44):
    - a. 2. Owner's 30 day advertisement of the Project satisfies EPA's 30 day advertisement requirement on page 01415-C2, Six Good Faith Efforts.
- C. Section 02200 (Earthwork):
1. Modify Paragraph 3.7D.2.a. as follows:
    - a. Do not backfill around any part of structures until each part has reached specified 28-Day compressive strength and backfill material has been approved. Do not start backfilling until concrete forms have been removed, trash removed from excavations, pointing of masonry Work, concrete finishing, ~~dampproofing and waterproofing~~ have been completed.
- D. Section 03002 (Concrete):
1. Delete Paragraph 1.3 A.1. in its entirety. Renumber remaining paragraphs accordingly.
  2. Delete Paragraphs 3.4 A and 3.4 B in their entirety. Renumber remaining paragraphs accordingly.
- E. Section 05120 (Structural Steel):
1. Modify Paragraph 1.2 G.1. as follows:
    - a. California Building Code, ~~2007~~.
  2. Add the following as Paragraph 1.4 A.1.b.5)a):
    - a. Calculations to include column base plates and anchor bolts.
  3. Add the following as Paragraph 1.4 A.1.b.6):
    - a. 6) Bridge crane support frame design requirements:
      - a) Design to 2010 CBC requirements seismic and wind loadings. See drawings for site conditions. Refer to Specification Section 11005 (Equipment: Basic Requirements) for additional requirements.
      - b) Design bridge crane support to comply with ASCE 7 Section 12 story drift requirements.
      - c) Assure proper load path from metal decking to support columns. Submit load path description with structure calculations.
      - d) Contractor responsible for the design of all structural members, their connections and anchorage in the foundation. Submit stamped and signed calculations by civil or structural engineer licensed in the state of California.
      - e) See Specification Section 05313 (Metal Deck) for additional requirements.

- f) Design support structure anchorage in accordance with ACI 318 Appendix D for cracked concrete.
  - g) Contractor responsible for the design and detailing of any additional reinforcing required for support structure anchorage. Include design of additional reinforcing in design calculations and submit reinforcing with foundation shop drawing per Specification Section 03002 (Concrete). Contractor to coordinate the location of anchor, assure adequate edge distance and anchor spacing. Contractor to submit on any required modification to foundation.
- F. Section 05505 (Metal Fabrications):
- 1. Modify Paragraph 1.2 I.1. as follows:
    - a. California Building Code, ~~2001~~.
- A. Insert Section 05313 (Metal Deck), attached (seven pages), after Section 05120 (Structural Steel).
- B. Section 05522 (Aluminum Railings):
- 1. Modify Paragraph 1.2 G.1. as follows:
    - a. California Building Code, ~~2007~~.
- C. Section 06600 (Fiberglass Reinforced Plastic Launder Covers):
- 1. Modify Paragraph 2.3 B.5. as follows:
    - a. 5. Provision shall be made to support the cover in such a manner that the panels are held securely in place, with the panels hinged to provide access to the launder and weir for inspection and maintenance. Neither the cover nor the means used to support it shall interfere with effluent flow over the weir or within the trough. A means of limiting the travel of the hinged cover section, in the form of a stainless steel restraint cable or tether, ~~may also~~ shall be provided to protect against damage.
- D. Section 09905 (Painting and Protective Coatings):
- 1. Insert the following as Paragraph 2.2 E.11.:
    - a. 11. SYSTEM #50 - Polyurethane and Epoxy Coating Systems.
      - a. Prime coat: 80 MILS.
      - b. Acceptable manufacturers:
        - 1) Raven 405
        - 2) Endura-Flex 1988
        - 3) Polibrid 705
        - 4) Or Approved Equal
  - 2. Insert the following as Paragraph 3.3 L.:
    - a. L. Interior concrete surface of flocculation tank: System 50.
- E. Delete Section 10530 (Aluminum Canopies) in its entirety (two pages).
- F. Section 11005 (Equipment: Basic Requirements):
- 1. Delete Paragraph 1.5 in its entirety and replace with the following:
    - a. 1.5 REQUIREMENTS FOR BRACING AND ANCHORING EQUIPMENT
      - A. General: All equipment, including machinery, pumps, fans, tanks, piping, electrical panels, generators, and their components and appurtenances, including their bracing, supports and anchorages, supplied by manufacturers of suppliers, shall be designed for wind and seismic forces per the 2010 California Building code (CBC) as follows:

1. Design for all applicable Load Combinations as defined in CBC Section 1605.2 or Section 1605.3.1 and Section 1605.4.
  2. Design all equipment subject to wind forces per ASCE 7-05 Chapter 6.
    - a. Design tanks and similar equipment for empty condition and wind forces.
    - b. Wind Importance Factor  $IP = 1.15$
  3. The equipment determined to be Nonstructural Components shall comply with all requirements of ASCE 7-05 Chapter 13.
    - a. Indicate in submittal calculations Component Type used per ASCE 7-05 Chapter 13 Table 13.6-1.
    - b. Seismic Importance Factor  $IP = 1.5$ .
    - c.  $WP =$  Operating Weight of the Equipment Including Contents.
  4. The equipment determined to be Nonbuilding Structures Not Similar to Buildings or Nonbuilding Structures Similar to Buildings shall comply with all requirements of ASCE 7-05 Chapter 15.
    - a. Indicate in submittal calculations Structure Type used per ASCE 7-05 Chapter 15 Table 15.4-1 or Table 15.4-2.
    - b. Seismic Importance Factor  $IP = 1.5$
    - c.  $WP =$  Operating Weight of the Equipment Including Contents
  5. Anchorage design shall comply with Appendix D of ACI 318 (Building Code Requirements for Structural Concrete).
    - a. For Nonbuilding Structures Not Similar to Buildings or Nonbuilding Structures Similar to Buildings anchors shall comply with IBC Section 1908.1.16.
  6. See Drawings for site design criteria.
  7. Each piece of equipment shall be anchored to resist a minimum lateral seismic force required either by Building Code or by the manufacturer of the equipment, or a minimum lateral seismic force of 40 percent of the operating weight of the equipment, whichever is greater. No equipment shall be anchored to vertical structural elements without written approval of the Owner.
- B. All liquid storage tanks, including their supports and anchorages, shall be designed as essential facilities in conformance with AWWA D100, Section 13 for seismic forces per ASCE 7-05.
- C. Seismic forces shall be considered acting at the center of gravity of the piece under consideration.
- D. Anchorages shall be designed and detailed assuming that they will not receive special Inspection as defined in the 2010 CBC.
- E. Anchorage of equipment shall be coordinated with the concrete subcontractor so that anchorage may be installed at the time of concrete placement. If calculations and anchorage details are not submitted prior to placement of concrete, the Contractor shall be responsible for any strengthening of concrete elements to resist superimposed seismic or wind loading.
- F. Equipment with vibration isolators 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 base shall not exceed 1/4 IN. Deflection must be considered with respect to piping attached to the equipment. Equipment without vibration isolators shall be anchored directly to the supporting floor system.

- G. In addition to the anchorage, all equipment shall be internally designed so that all static and moving parts are anchored to the supporting framework to resist the imposed seismic forces. All forces must be transmitted to the base in order to be anchored as required.
- H. All piping, raceways, ductwork, accessories, appurtenances, and other items furnished with equipment shall be anchored to resist lateral considered acting at the center of gravity of the piece under consideration.
- I. Lighting fixtures shall be provided with safety cable attached to the structure and to the fixture at each support point capable of supporting four times the vertical load.
- J. All piping installed shall be anchored to the floor system(s) to resist lateral seismic forces without excessive deflection. This force shall be considered acting at the center of gravity of the pipe under consideration.
- K. Piping with flexible connections and/or expansion joints shall be anchored such that the intended uses of these joints are maintained in the piping system.

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## VII. Changes to Drawings

- A. Delete Drawing SP01 and replace with attached Drawing SP01, marked "2/15 ADDENDUM No. 2."
- B. Drawing SP05:
  - 1. Change "#5 REBAR @ 9" EW/EF (TYP)" in two locations to read:  
"#5 REBAR @ 6" EW/EF (TYP)"
- C. Drawing SP06:
  - 1. Detail Markers in Sections A, B, and C: change Detail Number from "9" to "1."
- D. Delete Drawing SP07 and replace with attached Drawing SP07, marked "2/15 ADDENDUM No. 2."
- E. Delete Drawing SP08 and replace with attached Drawing SP08, marked "2/15 ADDENDUM No. 2."
- F. Delete Drawing SP09 and replace with attached Drawing SP09, marked "2/15 ADDENDUM No. 2."

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## VIII. Question(s)/Answer(s)

- A. Owner's responses to Bidder questions shall be for the purposes of interpretation and clarification of the Contract Documents only, and shall not be construed as changing, superseding, or contradicting any express term in the Contract Documents. If any Bidder believes that a response to a question warrants a change in any term in the Contract Documents, the Bidder shall so request the change be made in writing addressed to Owner and received no later than the latest date for submitting Bidder questions. In the absence of a change in any term of the Contract Documents, the express terms of the Contract Documents shall have precedence. Bidder questions are listed below verbatim.

## B. HD Supply Waterworks:

1. In specification section 15062-2, 2.2D it indicates that the specification for the flange gaskets is in section 15060. I have found the requirement that flange gaskets are full face but not the material requirement. Please provide specification for gaskets.

Owner's response: This is in the Bidding Documents.

2. In specification section 15062-2, 2.2C1 it states that buried nuts and bolts will be 316 SST. Please provide class/grade specification for SST nuts and bolts.

Owner's response: Bid per Bid Documents.

3. Please identify which lines/systems need to be restrained pipe.

Owner's response: This is in the Bidding Documents.

## C. G S E Construction Company Inc:

1. In the above mentioned project the following forms: 00451, 00463, 00465, 00471 & 00473 are not mentioned in the Table of Contents in any of the volumes neither are they addressed in the addendum.

I've downloaded such from the following website:

<http://www.scwa.ca.gov/lower.php?url=capital-improvement-projects&projectid=russian-river-county-sanitation-district-disinfection-upgrade-project>

Please advise if these forms are correct and should be part of the contract documents.

Owner's response: This is in the Bidding Documents.

## D. EDuarte@azteccm.com:

1. The Pre-Qualification sheet refers to the Experience of the Designated Bioassay Subcontractor or the Prime Contractor as having installed several similar projects.

As there not that many UV projects built in Northern California, many GC's may not have yet installed such a system. Does experience in Chlorination, aeration, centrifuge and other major WWTP equipment suffice as similar experience?

Owner's response: Bid per Bid Documents.

## E. Critical Path Steel Buildings:

1. Please refer to specifications 05120 and 10530; also refer to plan pages 20, 21, and 22.

Both specification sections stipulate that their work be designed to support the loads of the bridge crane. Drawings appear to indicate the canopy and bridge crane support structure are one in the same. In my experience it is unlikely that the aluminum structure could support the loads of the crane; no steel roof decking is specified. Plans show steel columns, but not canopy columns as described in the canopy specification.

Please clarify your intent.

Owner's response: Answered in this Addendum above.

## F. K.G. Walters Construction:

1. Reference Specification Section 00520 & 00525. The contract includes liquidated damages both for substantial completion and final completion of the project. The Water

Agency has pre-negotiated a purchase agreement with Ozonia for the UV Treatment Equipment on this project. This agreement is to be assigned to the contractor after award of the contract. The pre-negotiated agreement with Ozonia limits their liability for liquidated damages to a max of \$43,050.00. This limited amount only covers 24 days of liquidated damages. If delays are caused by Ozonia, the owners pre-selected pre-negotiated supplier, it does not seem right to limit their liability and force the contractor to be exposed for damages caused by Ozonia that are out of the contractors control. Will the Agency consider one of the following?

- a. Remove Ozonia's limit so that they are liable for liquidated damages caused by their performance.
- b. Limit or waive our liability for damages caused by Ozonia's performance.

Owner's response: Bid per Bid Documents.

2. Reference Specification Section 00520 & 00525. The contract provides for Liquidated Damages for Exceeding Guaranteed Peak Power Usage. Again the Water Agency has pre-negotiated an agreement with Ozonia that limits their liability if they fail to meet this requirement. Ozonia's liability is limited to \$43,050.00. The prime contract does not limit the contractor's liability if Ozonia cannot meet this requirement. It does not seem right to limit the liability of the key manufacture that is responsible for the equipment meeting this requirement and not providing the same limit to the contractor. Will the agency limit the liability of the contractor to the same limit it has negotiated with Ozonia?

Owner's response: Answered in this Addendum above.

3. The success of this project is tied to Ozonia's performance in providing the equipment in a timely manor and the performance of their equipment once it is installed and tested. Since Ozonia is such a critical player in this project with a pre-negotiated agreement for which the contractor has had no input, we would like to ask if the Water Agency if they can have Ozonia provide a performance bond for their performance on this project. The agreement includes many performance guarantees' some of which extend out past the normal 1 year warranty. It does not seem right to have the general contractor on the hook with his bonds for performance guarantees and extended warranties without having a bond from the key equipment manufacture. Section 11300 1.6 C states that "District may require the UV System to be removed within thirty days after rejection or replaced with a UV System able to meet effluent quality requirements at no additional cost. With out a bond the contractor has no means to enforce this should there be a problem.

Owner's response: Bid per Bid Documents.

4. The Specifications require the contractor to hire a "Checkpoint Bioassay Subcontractor" to help in testing and preparation of the reporting necessary to submit to CDPH for review and acceptance. It is unusual to put this requirement on the contractor when the contractor has had no involvement in the design and equipment selected for this project. What happens if the new facilities are constructed as designed and the equipment does not perform as required to achieve CDPH approval without changes? Will any extra testing, work and or reporting be considered a change to the contract? Will the owner consider removing this requirement from the contract and handling this permitting issue directly?

Owner's response: Bid per Bid Documents.

5. Reference Section 00700 – 13 9.1.B. This section requires the contractor to act as co-guarantor for guarantee's that extend out past 1 year. This is an unusual requirement that we do not normally see in public works projects. Can you provide a list of guarantees that extend out past the 1 year guarantee on this project? Will the Water Agency consider changing this requirement to providing a written guarantee direct from the manufacture or supplier on all guarantees' that extend out past 1 year?

Owner's response: Bid per Bid Documents.

6. Reference Specification 00525-17 20. The exhibit 1 agreement with Ozonia includes an adjustment in price section. Can you confirm that the price included in the specifications \$387,450.00 is the correct price and that no price adjustments will be incurred by the contractor that cannot be passed on to the owner via a change order?

Owner's response: Answered in this Addendum above.

7. Does the Ozonia price include sales tax? Many times when public owners are quoted prices sales tax is excluded since many public owner are exempt when they buy direct.

Owner's response: Answered in this Addendum above.

G. Pacific Mechanical Corporation:

1. The good faith effort process requirement of 15 working days for the SBA, on page 01415-12, will require an extension of time of at least one week for bidders to meet this requirement. The good faith effort requirement of 30 days for the EPA, on page 01415- C2, will require an extension of time of at least 3 weeks. Can you waive the requirements, shorten the requirements or provide an extension?

Owner's response: Answered in this Addendum above.

END OF DOCUMENT



DOCUMENT 00400

**BID FORM**

To be submitted as part of Envelope "A" by the time and date specified in Document 00200 (Instructions to Bidders), paragraph 1.

TO THE HONORABLE BOARD OF DIRECTORS OF THE RUSSIAN RIVER COUNTY SANITATION DISTRICT

THIS BID IS SUBMITTED BY:

\_\_\_\_\_  
(Firm/Company Name)

Re: CONTRACT NUMBER 70-13-7 #11, RUSSIAN RIVER COUNTY SANITATION DISTRICT TREATMENT PLANT DISINFECTION UPGRADE PROJECT

1. The undersigned Bidder proposes and agrees, if this Bid is accepted, to enter into an agreement with the Russian River County Sanitation District, a local district of the State of California ("Owner") in the form included in the Contract Documents, Document 00520 (Agreement), to perform and furnish all Work as specified or indicated in the Contract Documents for the Contract Sum and within the Contract Time indicated in this Bid and in accordance with all other terms and conditions of the Contract Documents.
2. Bidder accepts all of the terms and conditions of the Contract Documents, Document 00100 (Advertisement for Bids), and Document 00200 (Instructions to Bidders), including, without limitation, those dealing with the disposition of Bid Security. This Bid will remain subject to acceptance for 90 Days after the day of Bid opening.
3. In submitting this Bid, Bidder represents:
  - (a) Bidder has examined all of the Contract Documents and the following Addenda (receipt of all of which is hereby acknowledged).

Addendum Number	Addendum Date	Signature of Bidder

- (b) Bidder acknowledges receipt of Pre-Bid Conference minutes.

- (c) Bidder has visited the Site and performed all tasks, research, investigation, reviews, examinations, and analysis and given notices, regarding the Project and the Site, as set forth in Document 00520 (Agreement), Article 5.
  - (d) Bidder has given Owner prompt written notice of all conflicts, errors, ambiguities, or discrepancies that it has discovered in or among the Contract Documents and as-built drawings and actual conditions and the written resolution thereof through Addenda issued by Owner is acceptable to Contractor.
4. Based on the foregoing, Bidder proposes and agrees to fully perform the Work within the time stated and in strict accordance with the Contract Documents for the following sums of money listed in the following Schedule of Bid Prices:

SCHEDULE OF BID PRICES

All Bid items, including lump sums and unit prices, must be filled in completely. Bid items are described in Section 01100 (Summary of Work). Quote in figures only, unless words are specifically requested.

ITEM	DESCRIPTION	ESTIMATED QUANTITY	UNIT	UNIT PRICE	TOTAL
1.	Bonds	XXXXXX	Lump Sum	XXXXX	\$
2.	Insurance	XXXXXX	Lump Sum	XXXXX	\$
3.	Safety Program	XXXXXX	Lump Sum	XXXXX	\$
4.	Mobilization/ Demobilization	XXXXXX	Lump Sum	XXXXX	\$
5.	Shoring and Bracing	XXXXXX	Lump Sum	XXXXX	\$
6.	Demolition	XXXXXX	Lump Sum	XXXXX	\$
7.	Coagulation/ Flocculation System and Accessories	XXXXXX	Lump Sum	XXXXX	\$
8.	Furnish Disinfection System	XXXXXX	Lump Sum	XXXXX	\$387,450.00
9.	Install Disinfection System	XXXXXX	Lump Sum	XXXXX	\$
10.	Laundry Cover and Filter Covers	XXXXXX	Lump Sum	XXXXX	\$
11.	Installation, Operation, and Maintenance Manuals	XXXXXX	Lump Sum	XXXXX	\$
12.	Commissioning	XXXXXX	Lump Sum	XXXXX	\$
13.	All Other Work	XXXXXX	Lump Sum	XXXXX	\$

ITEM	DESCRIPTION	ESTIMATED QUANTITY	UNIT	UNIT PRICE	TOTAL
<b>TOTAL BID PRICE</b>					\$
14.	Contingency Reserve	XXXXXX	XXXXXX	XXXXX	\$25,000.00
<b>TOTAL</b>					\$

Total: \_\_\_\_\_  
 (Words)

5. The price for Item 8, Furnish Disinfection System, does not include sales tax.
6. Owner will issue a Change Order to adjust the price for Item 8 of the Schedule of Bid Prices in this Document 00400 by an amount equal to any price adjustment, pursuant to the "Potential Time and Price-Impacted Materials" provision of the manufacturing agreement (Exhibit 1 of Document 00525 [Assignment and Novation Agreement]).
7. Subcontractors for work included in all Bid items are listed on the attached Document 00430 (Subcontractors List).
8. The undersigned Bidder understands that Owner reserves the right to reject this Bid.
9. If written notice of the acceptance of this Bid, hereinafter referred to as Notice of Award, is mailed or delivered to the undersigned Bidder within the time described in paragraph 2 of this Document 00400 or at any other time thereafter unless the Notice of Award is withdrawn, the undersigned Bidder will execute and deliver the documents required by Document 00200 (Instructions to Bidders) within the times specified therein. These documents include, but are not limited to, Document 00520 (Agreement), Document 00610 (Construction Performance Bond), Document 00620 (Construction Labor and Material Payment Bond), and Document 00525 (Assignment and Novation Agreement).
10. Notice of Award or request for additional information may be addressed to the undersigned Bidder at the address set forth below.
11. The undersigned Bidder herewith encloses cash, a cashier's check, or certified check of or on a responsible bank in the United States, or a corporate surety bond furnished by a surety authorized to do a surety business in the State of California, in form specified in Document 00200 (Instructions to Bidders), in the amount of ten percent (10%) of the Total Bid Price and made payable to "Russian River County Sanitation District."
12. The undersigned Bidder agrees to commence Work under the Contract Documents on the date established in Document 00700 (General Conditions) and to complete all work within the time specified in Document 00520 (Agreement). The undersigned Bidder acknowledges that Owner has reserved the right to delay or modify the commencement date. The undersigned Bidder further acknowledges Owner has reserved the right to perform independent work at the Site, the extent of such work may not be determined until after the opening of the Bids, and that the

undersigned Bidder will be required to cooperate with such other work in accordance with the requirements of the Contract Documents.

- 13. The undersigned Bidder agrees that, in accordance with Document 00700 (General Conditions), liquidated damages for failure to complete all Work in the Contract within the time specified in Document 00520 (Agreement) shall be as set forth in Document 00520 (Agreement).
- 14. The names of all persons interested in the foregoing Bid as principals are:

(IMPORTANT NOTICE: If Bidder or other interested person is a corporation, give the legal name of corporation, state where incorporated, and names of president and secretary thereof; if a partnership, give name of the firm and names of all individual co-partners composing the firm; if Bidder or other interested person is an individual, give first and last names in full).

**NAME OF BIDDER:** \_\_\_\_\_  
licensed in accordance with an act for the registration of Contractors, and with license number: \_\_\_\_\_ Expiration: \_\_\_\_\_.

\_\_\_\_\_  
Where incorporated, if applicable

\_\_\_\_\_  
Principals

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

\_\_\_\_\_  
Signature of Bidder

\_\_\_\_\_  
Date of Execution

\_\_\_\_\_  
Place of Execution

NOTE: If Bidder is a corporation, set forth the legal name of the corporation together with the signature of the officer or officers authorized to sign contracts on behalf of the corporation. If Bidder is a partnership, set forth the name of the firm together with the signature of the partner or partners authorized to sign contracts on behalf of the partnership.

Business Address: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Contractor's Representative(s), (name, title):

\_\_\_\_\_  
\_\_\_\_\_

Officers authorized to sign contracts:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

\_\_\_\_\_  
Signature of Officer

\_\_\_\_\_  
Title

\_\_\_\_\_  
Date of Execution

\_\_\_\_\_  
Place of Execution

Telephone Number(s):

\_\_\_\_\_

Fax Number(s):

\_\_\_\_\_

Email address(es):

\_\_\_\_\_

Date of Bid:

\_\_\_\_\_

END OF DOCUMENT



SECTION 05313  
METAL DECK

**PART 1 - GENERAL**

**1.1 SUMMARY**

A. Section Includes:

1. Manufactured metal roof deck.

**1.2 QUALITY ASSURANCE**

A. Referenced Standards:

1. American Iron and Steel Institute (AISI):
  - a. S100, Specification for the Design of Cold-Formed Steel Structural Members.
2. ASTM International (ASTM):
  - a. A36, Standard Specification for Carbon Structural Steel.
  - b. A653, Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process.
  - c. A780, Standard Practice for Repair of Damaged and Uncoated Areas of Hot-Dip Galvanized Coatings.
  - d. A924, Standard Specification for General Requirements for Steel Sheet, Metallic-Coated by the Hot-Dip Process.
  - e. A1008, Standard Specification for Steel, Sheet, Cold-Rolled, Carbon, Structural, High-Strength Low-Alloy and High-Strength Low-Alloy with Improved Formability, Solution Hardened, and Bake Hardenable.
  - f. D746, Standard Test Method for Brittleness Temperature of Plastics and Elastomers by Impact.
  - g. D1056, Standard Specification for Flexible Cellular Materials-Sponge or Expanded Rubber.
3. American Welding Society (AWS):
  - a. D1.1, Structural Welding Code - Steel.
  - b. D1.3, Structural Welding Code - Sheet Steel.
4. Steel Deck Institute (SDI):
  - a. 31, Design Manual for Composite Decks, Form Decks and Roof Decks.
5. Underwriters Laboratories, Inc. (UL):
  - a. Fire Resistance Directory.

B. Qualifications:

1. Manufacturer:
  - a. Member of SDI.
  - b. Structural design of manufactured deck shall be prepared by a qualified professional engineer retained by the manufacturer.
2. Welding work:
  - a. Qualify welding processes, operations, and operators in accordance with requirements of AWS D1.1 and AWS D1.3.

- b. Welding operators to have been qualified during the 12-month period prior to commencement of welding, and be experienced in welding light gage metal.

### 1.3 SUBMITTALS

#### A. Shop Drawings:

1. Fabrication and/or layout drawings:
  - a. Detailed Shop Drawings showing the following:
    - 1) Complete framing and erection layouts.
    - 2) Location, length, type, cross section, thickness, and markings of metal deck units.
      - a) Size and location of openings.
      - b) Accessories and reinforcing.
    - 3) Sequence and procedure to be followed for erecting, fastening, and securing the deck units.
    - 4) Shop applied coatings.
    - 5) Location of required shoring for form decks.
    - 6) Details and gages of accessories and miscellaneous items showing sump pans, cant strips, ridge and valley plates, closure strips and insulation supports.
    - 7) Welding procedures for installation including size, number, type and location of all welds required to install deck units.
      - a) See requirements for structural calculations in Section 05120 (Structural Steel). Metal deck to act as shear diaphragm for bridge crane support frame.
    - 8) Recommended welding rod size, type, burn off rate and welder setting for deck thickness to be joined.
      - a) Define welds by use of standard AWS welding symbols.
    - 9) Correct fitting of members and accessories.
    - 10) Size and location of all openings in deck and all conditions requiring closure panels and supplementary framing.
    - 11) Shop Drawings shall not be reproductions of the Contract Drawings.
  2. Product technical data including:
    - a. Metal deck manufacturer's specifications and installation instructions.
    - b. Manufacturer's specifications and installation instructions for:
      - 1) Welds and welding procedure.
      - 2) Galvanizing repair paint.
      - 3) Screws.
      - 4) Joint sealing compound.
    - c. Manufacturer's load tables for deck to be furnished on this project, including:
      - 1) Allowable gravity load for metal roof deck.
      - 2) Allowable diaphragm shear values for metal roof deck.
      - 3) Allowable superimposed load for metal deck.
      - 4) Allowable unshored span lengths for form deck.
  3. Manufacturers certification that metal deck complies with specified requirements:

- a. Manufacturer member of SDI.
- b. Deck material, manufacturing, and shop testing and inspection are in accordance with SDI requirements.
- c. Welders.
4. Test reports.

#### **1.4 DELIVERY, STORAGE, AND HANDLING**

- A. Deliver, store, and handle metal deck as recommended by SDI.
  1. Exercise care to avoid damage to deck.
- B. Protect materials from rusting, denting or crushing.
  1. Store metal deck on project site off the ground with one end elevated to provide drainage and protected from the elements with a waterproof covering, ventilated to avoid condensation.
  2. Prevent rust, deterioration and accumulation of foreign material.

#### **1.5 PROJECT CONDITIONS**

- A. Do not overload supporting members.
  1. Until the entire assembly is complete, the structural elements may not be stable or capable of supporting code or stated design loads.

### **PART 2 - PRODUCTS**

#### **2.1 ACCEPTABLE MANUFACTURERS**

- A. Subject to compliance with the Contract Documents, the following manufacturers are acceptable:
  1. 3IN deep metal roof deck:
    - a. Vulcraft.
    - b. United Steel Deck, Inc.
    - c. Consolidated Systems, Inc., Metal Dek Group.
    - d. New Millennium Building Systems.
    - e. Or Approved Equal.

#### **2.2 METAL ROOF DECK**

- A. Design of the metal deck to be supplied to have been checked by the SDI and found to conform to the standard specifications and load tables.
  1. The allowable superimposed live uniform loading per square foot for metal roof deck supplied for the spans indicated shall equal or exceed the allowable superimposed live uniform load per square foot for the same spans as indicated in the SDI latest tables.
  2. Maximum deflection: Less than 1/240 of span under live load.
- B. Use deck configurations complying with SDI 31and as indicated.
  1. Painted deck: ASTM A1008.
  2. Galvanized deck: ASTM A653 with ASTM A924 G60 zinc coating.
- C. Metal Roof Deck, 3 IN Deep:
  1. Rib type, sheet steel, 18 GA, minimum, with minimum uncoated thickness of 0.0474 IN, shop primed.

2. Deep rib deck: Depth 3 IN, ribs spaced approximately 8 IN OC; width of rib opening at top surface maximum 2-3/4 IN; width of bottom rib surface minimum 1-1/2 IN.

**2.3 FABRICATION**

A. Standard Deck Profiles:

DEPTH	TYPE	RIB SPACING	TOP SURFACE MAXIMUM RIB OPENING	MINIMUM BOTTOM OF RIB WIDTH
3 IN	Roof Deck ('N')	8 IN	2-3/4 IN	1-1/2 IN

B. Minimum Deck Thickness:

1. Where gage of metal is indicated, provide the following:
  - a. Minimum uncoated decimal thickness:

GAGE	DESIGN THICKNESS
18	0.0474 IN
16	0.0598 IN

- b. The delivered thickness of the uncoated steel shall not be less than 95 percent of the design thickness.
  2. The steel used shall have a minimum yield stress of 33 ksi.

C. Fabrication:

1. Fabricate deck units in lengths to span three or more support spacings with flush, telescoped or nested 2 IN end laps.
  - a. End laps shall occur on supporting members.
  - b. Provide deck units having overlapping male and female type side laps or joints to provide positive vertical and lateral alignment of adjacent deck units.

**2.4 ACCESSORIES**

A. Metal Closure Strips:

1. Form to configuration required to provide tight-fitting closures at open ends and sides of deck.
2. Minimum thickness before galvanizing: 0.0358 IN (20 GA).

B. Metal Closures and Pour Stops: Form to configuration required to provide mortar-tight closures at open sides and ends of deck.

C. Primer Paint Required for Metal Deck: Deck manufacturer's baked on, rust-inhibitive paint applied to chemically cleaned and phosphate chemically treated metal surfaces.

- D. Galvanized coating for metal deck accessories shall conform to ASTM A924 G60 zinc coating.
- E. Galvanized Repair Paint: Comply with Specification Section 09905 and ASTM A780 for repair of damaged galvanized surfaces.
- F. Screws:
  - 1. Self-drilling, self-tapping, #12 size minimum hex washer head sheet metal screws.
  - 2. Carbon steel by Hilti.
    - a. Organic zinc chromate coated, Hilti Kwik-cote.
- G. Miscellaneous Steel Shapes: Comply with ASTM A36.
- H. Sheet Metal Accessories (including gutter): Same material and finish as deck members.
- I. Flexible Closure Strips for Deck:
  - 1. Vulcanized, closed cell expanded chloroprene elastomer, complying with ASTM D1056, Grade SCE 41.
  - 2. Brittleness temperature: -40 DegF, ASTM D746.
  - 3. Flammability resistance: "Self-extinguishing."
  - 4. Install with adhesive in accordance with manufacturer's instructions.
    - a. Ensure complete closure.

## **PART 3 - EXECUTION**

### **3.1 PREPARATION**

- A. Examine areas and conditions under which metal deck is to be installed for conditions detrimental to proper and timely completion of work.
- B. Do not proceed with work until unsatisfactory conditions have been corrected.
- C. Do not start placement of metal deck until supporting work is in place and secured.
- D. Deck will be subject to rejection if:
  - 1. Metal deck units do not comply with requirements of SDI specifications and requirements herein.
  - 2. Metal deck is improperly manufactured, painted or installed.
  - 3. Metal deck is damaged so that strength is impaired.
  - 4. Metal deck is not installed as indicated on Drawings.

### **3.2 INSTALLATION**

- A. Install roof deck units, and accessories as indicated, in accordance with SDI 31, manufacturer's recommendations, final approved Shop Drawings and as specified herein.
  - 1. Furnish manufacturer's standard accessories as needed to complete the deck installation.
- B. Locate deck bundles to prevent overloading of structure.
- C. Do not overload metal deck or supporting members:

1. Contractor is solely responsible for safety, construction means, methods and sequencing of the Work.
  2. Until the entire assembly is complete, the structural elements may not be stable or capable of supporting code or stated design loads.
  3. Use care to assure deck construction loads are less than the recommendation of the SDI 31, except where temporary shoring is installed.
- D. Place each deck unit on supporting structural frame, adjust to final position, accurately align with ends bearing on supporting members.
1. Lap roof deck units at ends no less than 2 IN.
  2. Interlock units at sides without stretching, contracting, or deforming.
  3. Place deck units flat and square and secure to framing without warp or excessive deflection.
  4. Place units in accurate and close alignment for entire length of run and with close registration of flutes of one unit with those of abutting unit.
- E. Plug weld sizes specified are effective fusion diameter of welds.
1. Weld metal shall penetrate all layers of deck material and have good fusion to supporting members.
  2. Do not burn through deck.
- F. Prevent overtightening of screw fasteners by using a tool with a depth limiting nosepiece and a clutch.
- G. Fastening of 3 IN Deep Metal Roof Deck:
1. Secure deck units to supporting frame and side laps as follows:
    - a. Fasten edge ribs of panels at each support.
    - b. At all interior supports and at ends of deck use:
      - 1) Per requirements of structural calculations.
    - c. At perimeter supports:
      - 1) Per requirements of structural calculations.
    - d. At side laps:
      - 1) Per requirements of structural calculations.
- H. Remove and replace deck which is structurally weak or unsound or which has burn holes due to improper welding or damage which Owner declares defective.
- I. Cut and fit deck units and accessories around other work projecting through or adjacent to decking.
1. Make cutting and fitting neat, square and trim.
    - a. Cut deck by mechanical means, not by burning.
  2. Neatly and accurately install reinforcing at all openings except:
    - a. Circular openings less than 6 IN DIA.
    - b. Rectangular openings having no side dimension greater than 6 IN.
  3. Reinforce openings that have not been framed between 6 and 12 IN with 20 GA flat steel sheet 12 IN greater in each dimension than opening.
    - a. Place sheet around opening and fusion weld to top surface of deck at each corner and midway along each side.

- J. Install metal closure strips at all open uncovered ends and edges of roof deck, and in voids between deck and other construction.
  - 1. Weld into position to provide a complete decking installation.
  - 2. Provide flexible closure strips instead of metal closures, at Contractor's option and when approved by Owner wherever their use will ensure complete closure.
    - a. Install with elastomeric type adhesive in accordance with written directions and recommendations of manufacturers of closure strips and adhesives.
- K. Install metal closures to close all openings and gaps between form deck and other construction, at objects projecting through deck, at locations where deck changes direction, and at open ends of deck units where deck units terminate.
  - 1. Weld into position to provide a complete installation.
- L. Clean and Touch Up:
  - 1. Remove all surplus materials and debris from surface of deck after installation.
  - 2. Repair damaged galvanized surfaces in accordance with Specification Section 09905.

### **3.3 FIELD QUALITY CONTROL**

- A. Remove and replace defective or damaged deck units.
- B. Testing:
  - 1. The following test shall be made in the presence of the Owner on the first deck panel to be installed.
  - 2. Place one (1) end of panel over a perimeter support and attach it only to that support with two (2) welds as specified 6 IN apart.
  - 3. The opposite end of the panel shall be moved in plane parallel to the span of the panel until shear distress is noted in the weld.
  - 4. The welds shall be of sufficient quality to cause local distortions in the panel around the welds and show good perimeter contact between the welds and the panel.
  - 5. When the results of this test are satisfactory and approved by the Owner, the remainder of the deck may be installed using the same weld rod size and type, amperage setting, and procedures used in the tested deck.
  - 6. The remainder of the welds shall be visually inspected.
    - a. When in the opinion of the Owner any weld is of poor quality, an additional weld shall be provided adjacent to the rejected weld.
    - b. It shall be a sufficient distance away from the rejected weld so that the new weld will be done on sound, unburned deck.

**END OF SECTION**



**GENERAL**

G1 SCOPE  
THE NOTES ON THIS SHEET AND THE STANDARD STRUCTURAL DETAILS ARE GENERAL AND APPLY TO THE ENTIRE PROJECT WHETHER SPECIFICALLY CALLED OUT OR NOT, EXCEPT WHERE THERE ARE SPECIFIC INDICATIONS TO THE CONTRARY ON STRUCTURAL SHEETS. IF THERE ARE QUESTIONS, THEY SHALL BE SUBMITTED TO THE STRUCTURAL ENGINEER AND ANSWERED IN WRITING PRIOR TO CONSTRUCTION.

G2 APPLICABLE SPECIFICATIONS AND CODES  
A. INTERNATIONAL BUILDING CODE, CBC 2010 WITH APPLICABLE EDITIONS OF THE CODE REFERENCED STANDARDS.  
B. ACI 318  
C. ASCE7-05

G3 DESIGN CRITERIA  
1. APPLIES TO ALL STRUCTURES (UNO)  
A. DEAD LOAD:  
1. ACTUAL TRIBUTARY STRUCTURE WEIGHT  
2. SUPERIMPOSED DEAD LOAD: ACTUAL WT. OF ANY MECHANICAL EQUIPMENT.  
B. LIVE LOAD:  
1. ELEVATED FLOORS: 100 PSF  
2. WALKWAYS, STAIRS, GRATING: 100 PSF  
3. SLAB ON GRADE: 250 PSF  
4. ROOF: 20 PSF (NOT REDUCIBLE)  
C. WIND:  
1. BASIC WIND SPEED: 85 MPH  
2. EXPOSURE: C  
3. IMPORTANCE FACTOR: 1.15  
4. ALL STRUCTURES ARE TO BE DESIGNED AS ENCLOSED.  
D. SEISMIC:  
1. ABOVE GRADE, NON WATER BEARING AND BELOW GRADE, WATER BEARING STRUCTURES:  
a. OCCUPANCY CATEGORY: III  
b. IMPORTANCE FACTOR: 1.25  
c. SPECTRAL RESPONSE ACCELERATION,  $S_s$ : 1.5  
d. SPECTRAL RESPONSE ACCELERATION,  $S_1$ : 0.607  
e. SITE CLASS: D  
f. SEISMIC DESIGN CATEGORY: D  
g. SPECTRAL RESPONSE COEFFICIENT,  $SD_s$ : 1.0  
h. SPECTRAL RESPONSE COEFFICIENT,  $SD_1$ : 0.607  
i. BASIC SEISMIC FORCE RESISTING SYSTEM SEE TABLE BELOW.  
j. ANALYSIS PROCEDURE AND EQUIVALENT LATERAL FORCE ANALYSIS.

G4 THE FOLLOWING NON-CONTRACTUAL GEOTECHNICAL REPORT WAS DEVELOPED FOR THIS PROJECT AND IS THE BASIS OF THIS STRUCTURAL DESIGN:  
GEOTECHNICAL FIRM NAME: - GIBLIN ASSOCIATES  
ADDRESS: - PO BOX 6172, SANTA ROSA, CA 95406  
REPORT NUMBER: - JOB NO. 3008.1.2  
REPORT DATE: - SEPTEMBER 6, 2002  
ALLOWABLE [NET] SOIL BEARING = 2000 PSF  
PASSIVE EARTH PRESSURE = 300 PCF/FT  
FRICTION FACTOR = 0.30  
ACTIVE PRESSURE = 45 PCF/FT DRAINED, 60 PCF/FT RESTRAINED

G5 SAFETY  
SAFETY AND STRUCTURE STABILITY DURING CONSTRUCTION ARE THE SOLE RESPONSIBILITY OF THE CONTRACTOR. STRUCTURES HAVE BEEN DESIGNED TO RESIST THE DESIGN LIVE LOADS ONLY AS A COMPLETED STRUCTURE.

G6 OPENINGS  
OPENINGS FOR PIPES, DUCTS, CONDUITS, ETC. ARE NOT ALL SHOWN ON THE STRUCTURAL DRAWINGS. COORDINATE AND PROVIDE OPENINGS AS REQUIRED TO ACCOMMODATE ALL WORK SHOWN OR SPECIFIED IN THE CONTRACT DOCUMENTS AND OTHERWISE REQUIRED FOR THE FURNISHING OF A FUNCTIONALLY COMPLETE PROJECT. REINFORCE AROUND OPENINGS PER STANDARD STRUCTURAL DETAILS UNLESS OTHERWISE SHOWN.

G7 SPECIAL INSPECTIONS  
SPECIAL INSPECTIONS ARE REQUIRED IN ACCORDANCE WITH CHAPTER 1 AND CHAPTER 17 OF THE IBC. PAYMENT FOR THESE INSPECTIONS IS NOT THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL PROVIDE FOR FULL ACCESS TO THE WORK BY THE SPECIAL INSPECTOR AND SHALL PROVIDE FOR THESE INSPECTIONS IN HIS CONSTRUCTION SCHEDULE IN ACCORDANCE WITH THE SPECIFICATIONS.

G8 STANDARD DETAILS  
THE STANDARD DETAILS DEPICT TYPICAL DETAILING TO BE USED ON THIS PROJECT. IF CONDITIONS ARE NOT EXPLICITLY SHOWN ON THE DRAWINGS THEY SHALL BE MADE SIMILAR TO THE STANDARD DETAILS. OBTAIN APPROVAL OF ENGINEER IN WRITING FOR SIMILAR CONDITIONS PRIOR TO CONSTRUCTION.

G9 THE CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS AND ELEVATIONS OF EXISTING CONSTRUCTION AS REQUIRED TO COORDINATE NEW CONSTRUCTION. SUBMIT REQUIRED CHANGES FOR APPROVAL.

G10 CONTRACTOR TO SUBMIT FOR REVIEW ALL EQUIPMENT SIZES, OPERATING WEIGHTS, VIBRATION FORCES, SUPPORT LOCATIONS, ALONG WITH ANY FLOOR OPENINGS, NOTCHES, AND RECESSES REQUIRED BY SUCH EQUIPMENT. CONCRETE SUPPORT PADS AND/OR FRAMING REQUIRED TO SUPPORT SAID EQUIPMENT SHALL NOT BE FABRICATED AND PLACED UNTIL THE CONCRETE SUPPORT PADS AND/OR FRAMING IS APPROVED TO SUPPORT THE EQUIPMENT.

**CONCRETE**

C1 DESIGN STRENGTHS:  
 $f'_c$  = 4000 PSI  
 $f_y$  = 60,000 PSI

C2 CONCRETE COVER  
UNLESS OTHERWISE NOTED, PROVIDE CONCRETE COVER FOR REINFORCING PER DETAIL 1/SP01.

C3 SEE SPECIFICATIONS FOR REINFORCING PLACEMENT REQUIREMENTS.

C4 REFER TO OTHER DISCIPLINE DRAWINGS PRIOR TO CONSTRUCTION FOR EMBEDDED ITEMS AND PENETRATIONS NOT SHOWN ON STRUCTURAL DRAWINGS. AS REQUIRED TO ACCOMMODATE ALL WORK SHOWN OR SPECIFIED IN THE CONTRACT DOCUMENTS AND OTHERWISE REQUIRED FOR THE FURNISHING OF A FUNCTIONALLY COMPLETE PROJECT. REINFORCE AROUND OPENINGS PER STANDARD STRUCTURAL DETAILS UNLESS OTHERWISE SHOWN.

C5 PROVIDE 3/4" CHAMFERS AT ALL EXPOSED EDGES AND 1/2" CHAMFERS AT JOINTS AS SHOWN. NOT ALL CHAMFERS MAY BE SHOWN ON DRAWINGS.

C6 FIELD ADJUST REINFORCING AT OPENINGS AND EMBEDDED ITEMS AS INDICATED.

C7 ANCHOR BOLTS NOT SPECIFIED BY ENGINEER SHALL BE DESIGNED AND CERTIFIED BY A REGISTERED PROFESSIONAL ENGINEER, RETAINED BY THE CONTRACTOR, IN ACCORDANCE WITH APPLICABLE PROJECT AND CODE REQUIREMENTS. SUBMIT AS A SHOP DRAWING FOR REVIEW AND APPROVAL BY THE ENGINEER. COORDINATE LOCATION, SIZE, EMBEDMENT, AND EDGE DISTANCE PRIOR TO CASTING CONCRETE.

C8 CONTINUOUS WATERSTOP SHALL BE INSTALLED IN JOINTS SUBJECT TO STATIC WATER PRESSURE.

C9 ABSOLUTELY NO WELDING OF REINFORCING BARS OR TORCHING TO BEND REINFORCING BARS SHALL BE ALLOWED WITHOUT SPECIFIC AUTHORIZATION FROM THE STRUCTURAL ENGINEER IN WRITING.

C10 CONTRACTOR SHALL SUBMIT A CONCRETE PLACEMENT PLAN PER SPECIFICATION 03002 IDENTIFYING JOINT TYPES, JOINT LOCATIONS AND CONCRETE PLACEMENT SEQUENCE.

C11 ALL CAST IN PLACE AND POST-INSTALLED ANCHORS SHALL COMPLY WITH APPENDIX D OF ACI 318 AND CHAPTER 19 OF THE IBC. ALL EXPANSION AND ADHESIVE ANCHORS SHALL HAVE THE ICC REPORT SHOWING EQUIVALENT LOAD CAPACITY. SUBMIT AND INSTALL PER THE ICC EVALUATION REPORT.

C12 UNLESS OTHERWISE NOTED, ALL WALL REINFORCING BARS SHALL BE CONTINUOUS AROUND CORNERS AND THROUGH COLUMNS OR PILASTERS. REINFORCEMENT SHALL BE EXTENDED INTO CONNECTING WALLS, AND LAPPED ON THE OPPOSITE FACE OF THE CONNECTING WALLS, AS INDICATED ELSEWHERE ON THIS SHEET OR ON THE DRAWINGS. VERTICAL WALL BARS SHALL BE LAPPED WITH DOWELS FROM BASE SLABS AND EXTENDED INTO THE TOP FACE OF ROOF OR FLOOR SLABS AND LAPPED WITH TOP SLAB REINFORCEMENT. UNLESS INDICATED OTHERWISE, CONTRACTOR MAY SPLICE CONTINUOUS SLAB OR LONGITUDINAL BEAM BARS AT LOCATIONS OF IT'S CHOOSING, EXCEPT THAT TOP BAR SPLICES SHALL BE LOCATED AT MIDSPAN AND BOTTOM BAR SPLICES SHALL BE LOCATED AT SUPPORTS. ALL REINFORCEMENT BENDS AND LAPS, UNLESS OTHERWISE NOTED, SHALL SATISFY STANDARD DETAIL 1/SPO2.

C13 UNLESS OTHERWISE NOTED, WALL VERTICAL REINFORCING LAYER SHALL BE CLOSEST TO WALL SURFACE, AND WALL HORIZONTAL REINFORCING LAYERS SHALL BE PLACED ATTACHED TO & BETWEEN VERTICAL LAYERS.

C14 **MINIMUM REINFORCEMENT**  
ALL CONCRETE CONSTRUCTION SHALL BE REINFORCED CONCRETE EXCEPT WHERE PLAIN CONCRETE IS INDICATED ON THE DRAWINGS. IF NO REINFORCING SIZE IS CALLED OUT, QUESTION SHALL BE ASKED AND ANSWERED IN WRITING PRIOR TO CONSTRUCTION. FOR BID PURPOSES ONLY, IF NO REINFORCING SIZE IS CALLED OUT, MINIMUM REINFORCING STEEL SHALL BE PROVIDED IN ACCORDANCE WITH THE FOLLOWING SCHEDULES:  
**A. SLAB REINFORCEMENT**  
SLAB THICKNESS SIZE SPACING, EW  
4" #4 12" CENTERED  
5" THRU 7" #5 12" CENTERED  
8" THRU 9" #6 12" CENTERED  
10" THRU 13" #7 12" T & B  
14" THRU 20" #8 12" T & B  
21" THRU 24" #9 12" T & B  
**B. WALL REINFORCEMENT**  
WALL THICKNESS SIZE SPACING, EW  
6" THRU 7" #5 12" CENTERED  
8" THRU 9" #6 12" CENTERED  
10" THRU 13" #5 12" EF  
14" THRU 20" #6 12" EF  
21" THRU 24" #7 12" EF  
25" THRU 30" #8 12" EF  
MASS CONCRETE SHALL BE REINFORCED WITH #6 @ 12" EW MINIMUM IN ALL FACES.

**STEEL**

S1 DESIGN STRENGTHS:  
WIDE FLANGE AND TEES:  $F_y$ =50 KSI  
PIPES:  $F_y$ =35 KSI  
STAINLESS STEEL:  $F_y$ =33 KSI  
HSS SECTIONS:  $F_y$ =46 KSI  
ALL OTHER PLATES AND SHAPES:  $F_y$ =36 KSI

S2 DIMENSIONS:  
TO CENTERLINES OF COLUMNS AND BEAMS, TOP SURFACES OF BEAMS AND TUBES AND BACKS OF CHANNELS AND ANGLES UNO.

S3 ELEVATIONS:  
TOP OF STEEL REFERS TO TOP SURFACE OF MEMBER OR FLANGE UNO.

S4 WHEN FILLET WELD SIZE IS NOT INDICATED, PROVIDE MAXIMUM WELD SIZE BASED ON MATERIAL THICKNESS IN ACCORDANCE WITH AISC SPECIFICATIONS.

S5 ALL BOLTED STRUCTURAL CONNECTIONS ARE BEARING TYPE CONNECTIONS UNLESS OTHERWISE SPECIFIED TO BE SLIP-CRITICAL. PROVIDE LOAD INDICATING WASHERS AT SLIP-CRITICAL CONNECTIONS.

S6 CONFORM TO AISC 360, STEEL CONSTRUCTION MANUAL AND AISC 341, SEISMIC DESIGN MANUAL.

**ALUMINUM**

A1 STRUCTURAL ALUMINUM YIELD STRENGTHS  
STRUCTURAL ALUMINUM:  $F_y$ =35 KSI  
STRUCTURAL ALUMINUM IS ALLOY 6061-T6 UNO

A2 DIMENSIONS:  
TO CENTERLINES OF COLUMNS AND BEAMS, TOP SURFACES OF BEAMS AND TUBES AND BACKS OF CHANNELS AND ANGLES UNO.

A3 ELEVATIONS:  
TOP OF ALUMINUM REFERS TO TOP SURFACE OR FLANGE OF MEMBER UNLESS NOTED OTHERWISE.

A4 WHEN FILLET WELD SIZE IS NOT INDICATED, PROVIDE MAXIMUM WELD SIZE FOR THE MATERIAL THICKNESS IN ACCORDANCE WITH THE LATEST EDITION OF THE "ALUMINUM DESIGN MANUAL" BY THE ALUMINUM ASSOCIATION.

A5 ALUMINUM IN CONTACT WITH DISSIMILAR MATERIALS OR CONCRETE: CONTACT SURFACES SHALL BE PROVIDED WITH GALVANIC SEPERATION PER SPECIFICATIONS.

**SPECIAL NOTES:**

CONTRACTOR TO FURNISH, DESIGN, DETAIL, AND INSTALL STRUCTURAL COMPONENTS LISTED BELOW AND ANY OTHER ITEMS AS REQUIRED BY SPECIFICATIONS. INSTALLATION AND DESIGN SHALL BE IN CONFORMANCE WITH THE 2010 CALIFORNIA BUILDING CODE, OSHA REGULATIONS, DRAWINGS, AND SPECIFICATIONS. CALCULATIONS FOR ALL MEMBERS AND CONNECTIONS (INCLUDING ANCHOR BOLTS ATTACHING STRUCTURAL COMPONENTS TO THEIR FOUNDATIONS) MUST BE PREPARED, STAMPED AND SIGNED BY A REGISTERED CIVIL OR STRUCTURAL ENGINEER LICENSED IN THE STATE OF CALIFORNIA AND MUST BE SUBMITTED WITH SHOP DRAWINGS. SHOP DRAWINGS MUST BE STAMPED AND SIGNED BY THE REGISTERED CIVIL OR STRUCTURAL ENGINEER THAT PREPARES THE CALCULATIONS.

1. BRIDGE CRANE
2. BRIDGE CRANE SUPPORT FRAME
3. MOTOR CONTROL CENTER ANCHORAGE
4. ANCHORAGE AS SPECIFIED IN NOTE C7
5. STAIRS AND PLATFORMS
6. WALKWAY AT FLOCCULATION TANK

**LOCATION**

**\* MINIMUM COVER**

UNFORMED SURFACES ADJACENT TO EARTH	3"
FORMED OR TOP SURFACES EXPOSED TO WEATHER OR SATURATED AIR, SUBMERGED OR IN CONTACT WITH EARTH:	2"
OTHER LOCATIONS: BARS IN BEAMS OR GIRDERS, INCLUDING STIRRUPS AND COLUMN SPIRALS OR TIES	1 1/2"
SLABS, WALLS AND JOINTS #9 AND LARGER #8 AND SMALLER	BAR DIA + 1/4" 1 1/2"

\* COVER FOR REINFORCING STEEL SHALL NOT BE LESS THAN THE MINIMUM GIVEN ABOVE (NO MINUS TOLERANCE), AND SHALL NOT EXCEED THE MINIMUM BY MORE THAN 1/4 INCH WHERE THE CONCRETE THICKNESS IS 24" OR LESS, OR MORE THAN 1/2 INCH WHERE THE CONCRETE THICKNESS IS MORE THAN 24 INCHES.

**REINFORCEMENT CONCRETE COVER**

NTS

ISSUED SHEET AS NEW

FILE: 4015\_SP01.dwg DATE: Feb 15, 2011 12:01:23pm, bdown



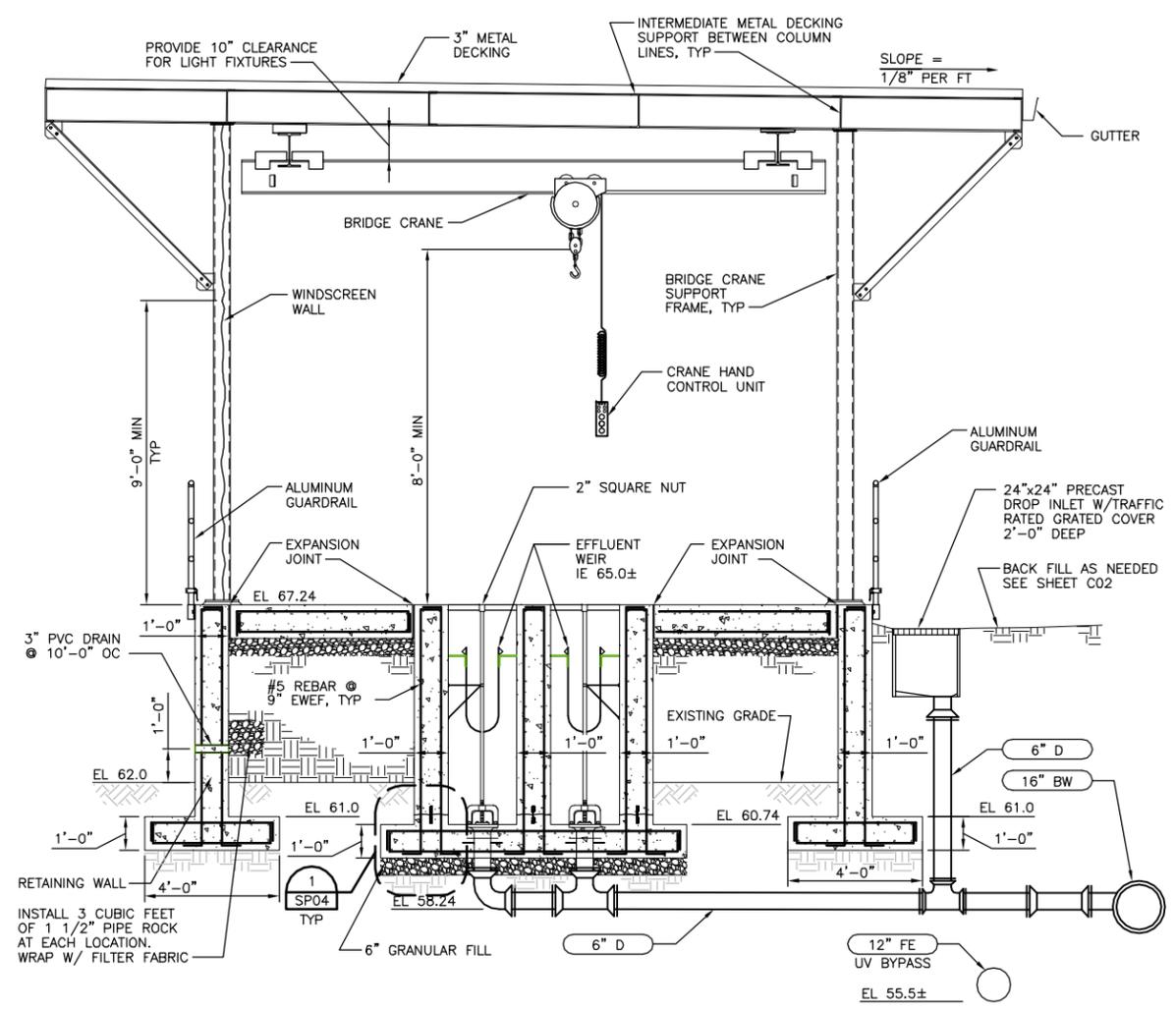
NO.	DATE	REVISION	BY
B	2/15	ADDENDUM No. 2	CAO
A	1/11	ISSUED FOR BIDS	JL CAO

**RUSSIAN RIVER COUNTY SANITATION DISTRICT**

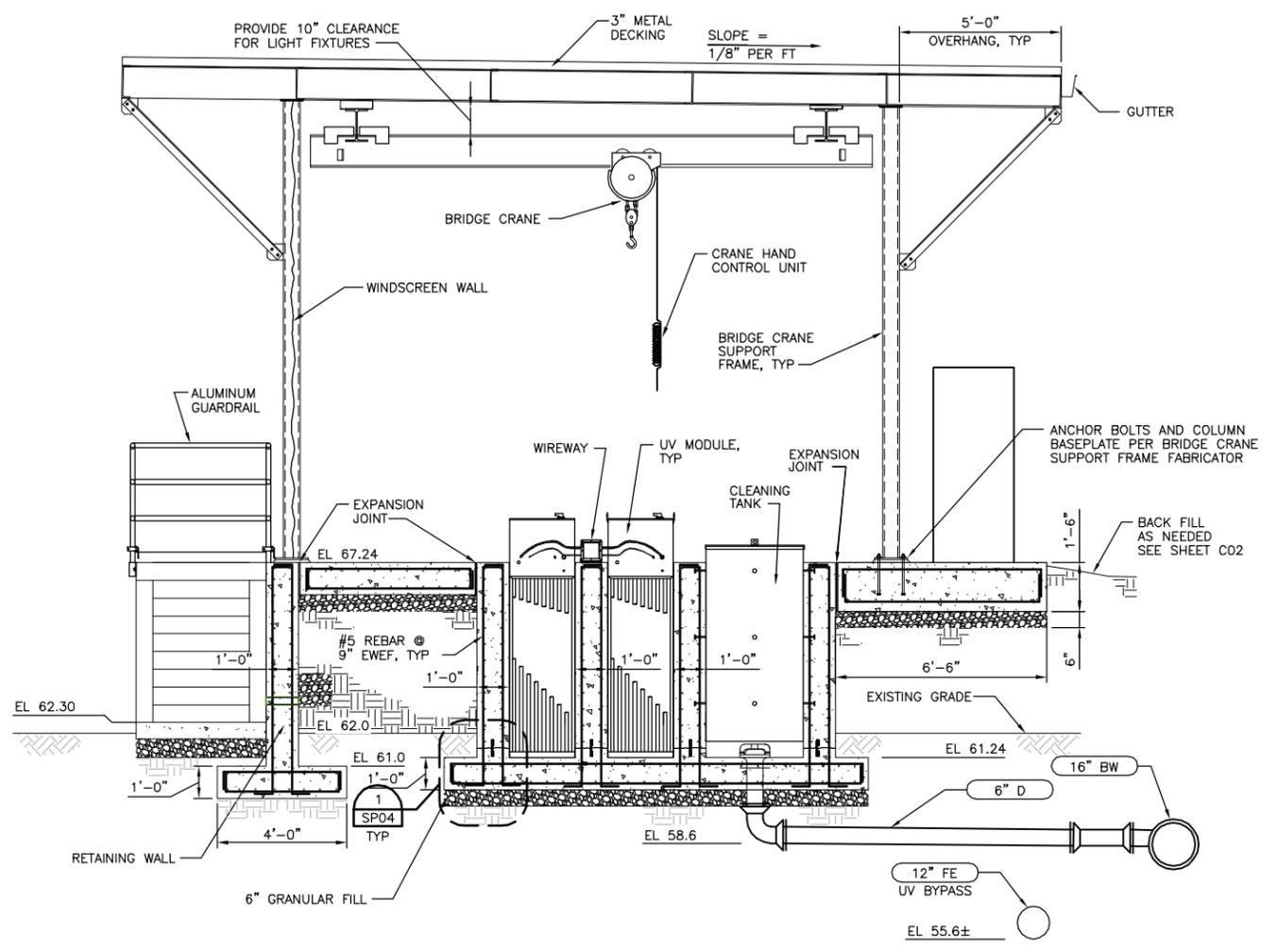
SCALE: NONE	DATE: JAN 2011
DRAWN: V. RUSSO	
REVIEWED:	

**DISINFECTION UPGRADE PROJECT  
STANDARD STRUCTURAL NOTES**





SECTION B  
3/8" = 1'-0"



SECTION C  
3/8" = 1'-0"

ISSUED SHEET AS NEW

FILE: 4015\_SP08.dwg  
DATE: Feb 15, 2011 12:01:23pm, bdown



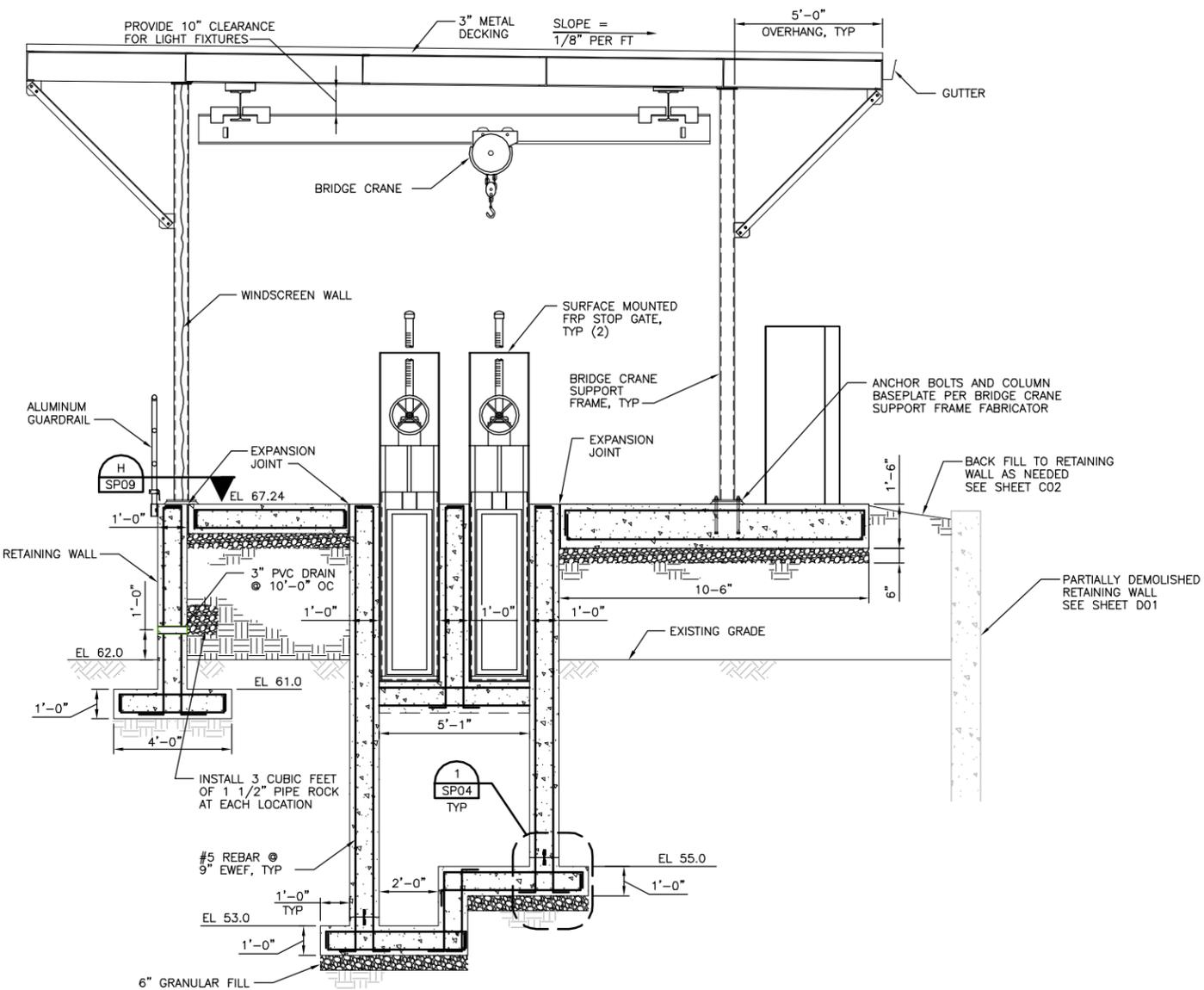
NO.	DATE	REVISION	BY
B	2/15	ADDENDUM No. 2	CAO
A	1/11	ISSUED FOR BIDS	JL CAO

RUSSIAN RIVER  
COUNTY SANITATION DISTRICT

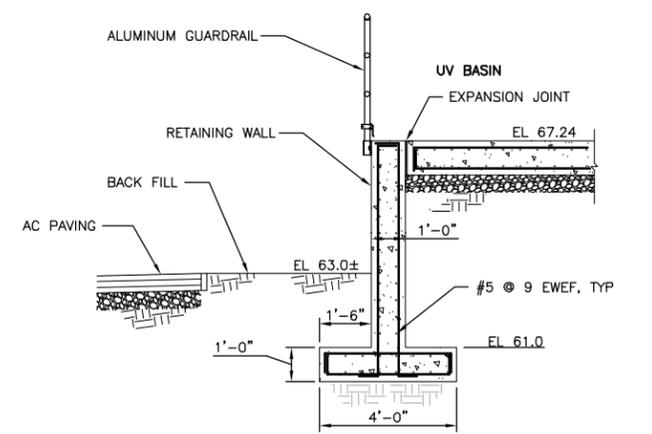
SCALE: AS NOTED	DATE: JAN 2011
DRAWN: V. RUSSO	
REVIEWED:	

DISINFECTION UPGRADE PROJECT  
DISINFECTION BASIN SECTIONS I

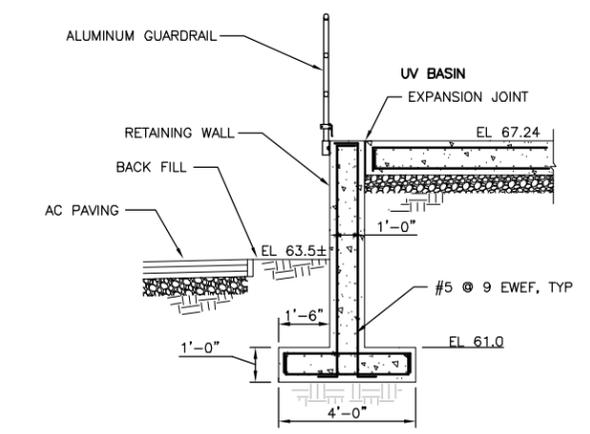
SCMA FILE NAME: 4015_SP08.dwg	DRAWING NUMBER: SP08	SHEET NO. 21 OF 34
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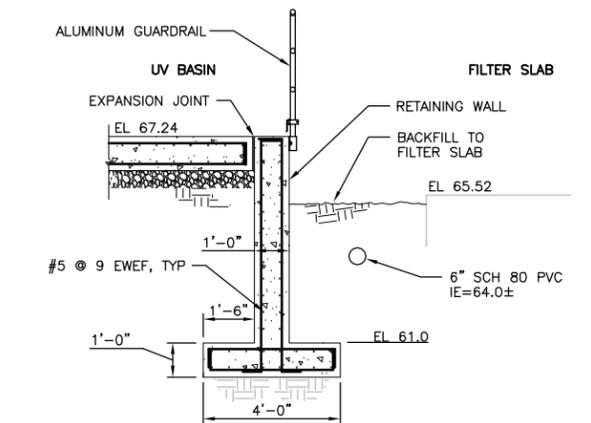
SECTION D  
3/8" = 1'-0"



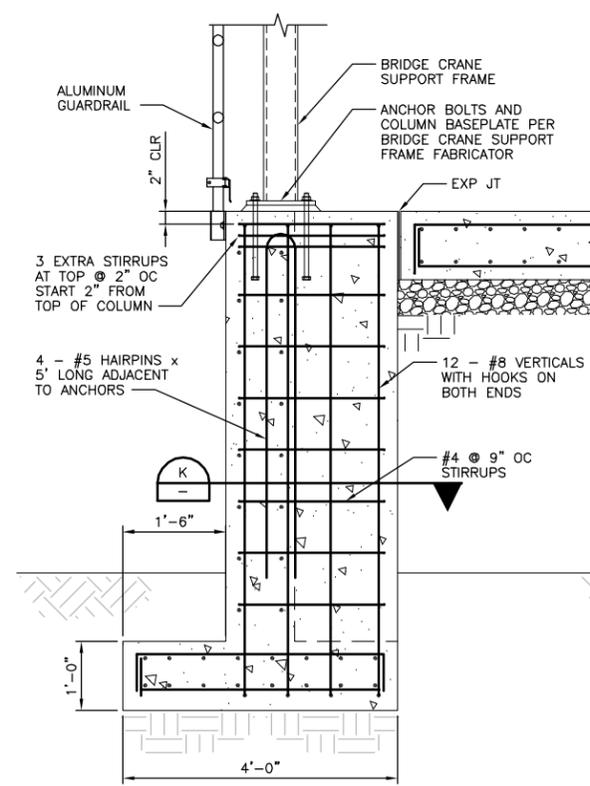
SECTION E  
3/8" = 1'-0"



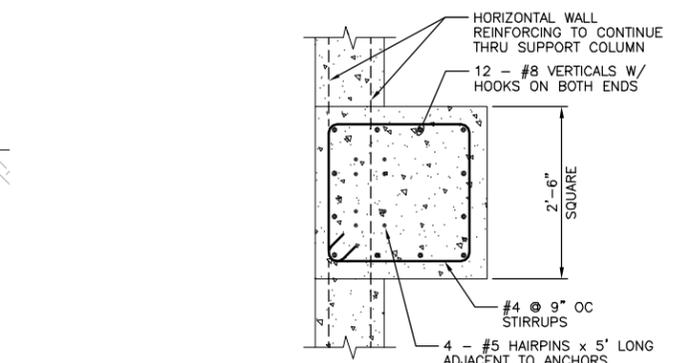
SECTION F  
3/8" = 1'-0"



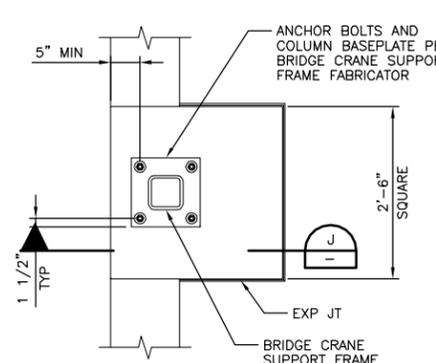
SECTION G  
3/8" = 1'-0"



SECTION H  
3/4" = 1'-0"



SECTION J  
3/4" = 1'-0"



SECTION K  
3/4" = 1'-0"

ISSUED SHEET AS NEW

FILE: 4015\_SP09.dwg  
DATE: Feb 15, 2011-11:57:23am, bdown



NO.	DATE	REVISION	BY
B	2/15	ADDENDUM No. 2	CAO
A	1/11	ISSUED FOR BIDS	JL

RUSSIAN RIVER COUNTY SANITATION DISTRICT

SCALE: AS NOTED	DATE: JAN 2011
DRAWN: V. RUSSO	
REVIEWED:	

DISINFECTION UPGRADE PROJECT  
DISINFECTION BASIN SECTIONS II