ADDENDUM NO. 1

TO
CONTRACT DOCUMENTS AND TECHNICAL SPECIFICATIONS
FOR THE
WATER TREATMENT PLANT DISINFECTION IMPROVEMENTS
IN
ANTIOCH, CALIFORNIA
P.W. 246-29

ISSUED
February 27, 2017

This Addendum No. 1 must be signed by the bidder and attached to the CONTRACT PROPOSAL PACKAGE for consideration by the City. The City reserves the right to disregard any proposal, which does not include this Addendum. The City may waive this requirement at its sole discretion.

SEE ATTACHED ADDENDUM ITEMS

Prepared By:

Michael A. Zafer

Michael A. Zafer, P.E.

BIDDER'S CERTIFICATION

I acknowledge receipt of this Addendum No. 1 and accept all conditions contained herein.

Bidder _____

By: _____

ADDENDUM NO. 1

TO

CONTRACT DOCUMENTS AND TECHNICAL SPECIFICATIONS

FOR

CITY OF ANTIOCH

WATER TREATMENT PLANT DISINFECTION IMPROVEMENTS (P.W. 246-29)

February 24, 2017

This Addendum No. 1 shall become part of the contract and all provisions of the contract shall apply thereto.

Bidder shall acknowledge receipt of this addendum.

RESPONSES TO REQUESTS FOR INFORMATION (RFIs)

RFI #1

1. ***Is there another way to transmit questions, i.e. e-mail?***

   Response: No. Per Notice Inviting Bids Page vi, all questions prior to award of the Contract shall be directed to the attention of Public Works Director via fax at (925) 779-7062.

2. ***The specifications state that award will be within 60 days, but also state we need to keep our bids open for 90 days. If the project will be awarded within 60 days, why do we need to keep our bids open for 90 days? Can this be clarified?***

   Response: The reference to the 60-day period will be deleted from the Specifications. See modifications to the Specifications below. Award of the contract, if it is to be awarded, will be made at a meeting of the Antioch City Council within 90 days of the opening of the proposal, in accordance with the Notice to Contractors.

3. ***The fixed prices in the bid schedule match the supplied equipment quoted which all exclude sales tax. Please verify that these items are not tax exempt, and we will need to include the sales tax with our bid.***

   Response: No equipment will be supplied by the Owner for this project. This project is not tax exempt (e.g., all equipment, materials, services, etc. are subject to taxes that shall be included in the Contractors' bids).

4. ***Specification Section 02090 tells us to review a Hazmat report for the project. I did not see a report in the specifications. Please either direct me to this report, or confirm that the only abatement required on the project is that covered in Specification Section 13282.***

   Response: Reference to a Hazmat report will be deleted from the Specifications. See modifications to the Specifications below. Per Section 02090 Paragraph 1.01.C refer to Section 13282 for requirements and procedures for the abatement and removal of treatment chemicals and materials to be demolished.

5. ***Specification Section 01400 states the soils and concrete testing will be covered by the owner. Specification section 02300 states the contractor is to hire an independent testing agency for the soils compaction testing, and specification section 03301 is not clear but appears to indicate the contractor is to hire the independent testing***

agency for the concrete confirmation testing. Please clarify if we need to include hiring an independent testing lab to perform this work with our bid.

Response: City of Antioch will conduct soils and concrete field testing. The Contractor is financially responsible for any re-testing required. See modification to Specifications for Sections 02300 and 03301.

RFI #2

6. ***Going through the specs for the Water Treatment Plant Disinfection Improvements Project (P.W. 246-29) I didn't see any reference to having to perform formal and documented Good Faith Effort. Can you please confirm there is no GFE for this project?***

   Response: "Good Faith Effort" (GFE) is not required for this project.

RFI #3

7. ***On Sheet D-1 please provide details of the wall demo at the caustic tank pad in order for us to accurately quote.***

   Response: Means and methods of demolition and repair of existing concrete are included in Specification Section 03741 Paragraphs 3.01 and 3.02. Top of modified concrete is noted on the structural drawings.

8. ***Detail 2/C-3 note 4 states to use Class B concrete to provide underpinning below Reservoir Footing. The vault excavation is in the ballpark of 8 ft deep. How deep is the reservoir footing?***

   Response: The bottom of the filtered water reservoir footing is approximately six to seven feet deep, measured from finished grade. Contractor shall verify in field the elevation of the finished grade.

9. ***Detail 4/C-3 references note 1 in regard to the footing size. No note 1 was found please provide or direct us to the referenced note.***

   Response: Reference to note 1 and the "2'-8" SQ" dimension of the concrete pad will be deleted from Detail 4 Sheet C-3. See modifications to the Drawings below.

10. ***Similarly, how should we space the supports per note 3 on C-2 and referenced as 4/C-3? Specification Section 15061 3.01 B states to space supports for plastic pipe or tubing every 3.5 feet. Are we going to install one of these footings every 3.5 feet?***

    Response: Footings for the chemical pipe support in non-structural areas, as shown on Detail 4 Sheet C-3, shall be installed every 5 feet. Plastic pipe and pipe/hose (pipe/tubing) shall be supported every 3.5 feet in all other areas per Specification 15061.

RFI #4

11. Which of the Special Inspections listed on Drawing GS-2 will be performed by the City (or its representatives) and which (if any) are required to be performed by the Contractor? Spec 01400 Quality Control, Drawings: GS-2 Schedule of Special Inspections.

Response: City of Antioch will conduct soils and concrete field testing. The Contractor is financially responsible for any re-testing required. See modification to Specifications for Sections 02300 and 03301.

RFI #5

12. On Sheet D-1 the existing tank equipment pads are not shown as being demolished, in fact they are not shown at all. Are these going to be demolished as part of the project or is the district going to handle this work?

Response: Contractor is responsible for the demolition of the existing tank equipment pads. See modifications to Drawings below for Sheet D-1.

RFI #6

13. Sheet M-3 shows what appears to be 5 new 4" high equipment pads for chemical pumps, and 2 equipment pads which need to be demolished prior to installation of these pads. While onsite yesterday it was noticed that there are equipment pads at all of the locations. Are we to re-use the existing short equipment pads, or should we demolish these as well and install new equipment pads?

Response: Contractor is responsible for the demolition of six existing equipment pads in the chemical pump room. See modifications to Drawings below for Sheet M-3.

14. There are some electrical panels and transformers shown on sheet E-5, and it is not clear which ones are pad mounted and which ones will be support mounted. Also, I did not find a detail for an equipment pad in the asphalt. Please clarify.

Response: See modifications to Drawings below for Sheet E-5.

RFI #7

15. The existing scrubber shown on D-2 is labeled "Caustic Soda". Is the Contractor responsible for removing this material? What concentration is the caustic soda? How many gallons?

Response: Contractor is responsible for the removal and disposal of caustic soda from the existing scrubber. The caustic strength is approximately 15% by weight and the volume of the tank is approximately 3,370 gallons.

RFI #8

16. ***Specification 11242 Paragraph 2.03.D states that the VFDs are to be provided by the ISS per Specification 16481. Specification 16481 Paragraph 2.01.A.1.a states that the VFDs are to be provided by the chemical metering supplier. Please confirm who is to provide the VFDs and the OCLCP panel.***

    Response: VFDs and OCLCP panel shall be provided by the ISS. See modifications to Specifications below.

RESPONSES TO QUESTIONS DURING PRE-BID MEETING

1. ***Electrical drawing indicates a conduit running between the LAS panel and the sodium hypochlorite panel for the network connection. The network cable routed between the two control panels may have exceeded its distance limitation.***

    Response: See modifications to Drawings below for Sheets GI-4 and E-9.

SPECIFICATIONS

NOTICE INVITING BIDS

Page vi, first paragraph: Delete "sixty (60)" and replace with "ninety (90)".

DIVISION A – DESCRIPTION OF PROJECT

Section A-1, second paragraph: Delete "sixty (60)" and replace with "ninety (90)".

DIVISION 2 – SITE WORK

Section 02090

Paragraph 3.01.A: Delete this paragraph in its entirety and replace with "NOT USED".

Section 02300

Paragraph 1.01.A.3: Delete "by the Contractor using an independent Testing Agency."

Paragraph 1.04.E: Delete "Field compaction and moisture test data verbally as it is taken and in writing within 5 days of each tests' completion."

Paragraph 1.05.B, first sentence: Delete "for testing of subgrades" and replace with "for laboratory testing of subgrades."

Paragraph 1.05.B, third sentence: Delete "Contractor's Testing Agency shall" and replace with "City will".

Paragraph 1.05.B: At the end of the paragraph, add "Provide access for the City Inspectors to conduct field compaction and moisture test."

DIVISION 3 – CONCRETE

Section 03301

Paragraph 1.05.D: Delete the first sentence of the paragraph and replace with "Provide access for all field testing and inspections services and related laboratory tests required."

Paragraph 3.10.A: Delete "Take" at the beginning of the paragraph and replace with "Provide access for City Inspectors to".

Paragraph 3.10.C: Add "Provide access to" at the beginning of the paragraph.

Paragraph 3.10.D: Add "Provide access to" at the beginning of the paragraph.

DIVISION 11 – EQUIPMENT

Section 11242

Paragraph 2.01.I: Delete this paragraph in its entirety and replace with "NOT USED".

Paragraph 1.05.C: Delete this paragraph in its entirety and replace with "Pump manufacturers shall be responsible for the pump, motor and drive combination."

DIVISION 13 – SPECIAL CONSTRUCTION

Section 13421

Paragraph 3.03: Revise paragraph numbering from "3.03 TRAINING" TO "3.04 TRAINING".

Add to Specification Section 13421: Paragraph 3.03 FIBER OPTIC CABLE TESTING. See following paragraph:

"**3.03. FIBER OPTIC CABLE TESTING**

A. General: The Contractor shall perform pre-installation and post-installation FOC tests. The Engineer shall be notified a minimum of 10 days in advance so that these tests are witnessed. All test equipment shall be traceable to NIST standards.

B. Test equipment: The Contractor shall use the following to perform pre-installation and post-installation FOC tests:

1. Optical time domain reflectometer (OTDR). The OTDR shall be laser precision, and be able to test single mode or multimode systems with a visual fault locator. The

OTDR shall be as manufactured by Corning, Agilent Technologies, Fluke Networks, or equal.

C. Pre-installation Tests:

1. The purpose of these tests is to perform acceptance tests on the cable prior to installation to verify that the cable conforms to the manufacturer's specifications; is free of defects, breaks, and damages by transportation and manufacturing processes; and to provide baseline readings in dB.

2. Prior to removal of each cable from the delivery reel, all optical fibers within the cables shall be tested by the Contractor using an OTDR. The OTDR tests shall consist of end-to-end length and fiber attenuation (dB/km) measurements to ensure proper performance of the fiber optic cable. The tests shall be performed from both ends of each fiber to ensure complete fiber continuity within the cable structure.

3. Pre-installation, "on-reel" test results shall be compared with the manufacturer's test report delivered with the cable. Gross dissimilarities shall be noted and remedied between the Contractor and manufacturer. In all cases, all fibers shall meet the optical attenuation specifications prior to cable installation.

4. Perform tests on all reels of cable. The Engineer shall be notified a minimum of 15 days prior to any test.

5. Document each test and submit the report to the Engineer for review. Documentation shall consist of both hard copy and a CD complete with all application software.

6. Cable shall not be installed until the Engineer has reviewed and approved the test report.

D. Post-installation tests: After FOC has been installed and connected, the following tests shall be performed:

1. Visually inspect terminal connectors for out-of-round condition and surface defects such as micro-chips and cracks using a 200X (minimum) inspection microscope.

2. A recording OTDR shall be used to test for end-to-end continuity and attenuation of each optical fiber. The OTDR shall have an X-Y plotter to provide a hard copy record of each trace of each fiber. The OTDR shall be equipped with sufficient internal masking to allow the entire cable section to be tested. This may be achieved by using an optical fiber pigtail of 30 feet or more to display the required cable section.

3. The OTDR shall be calibrated for the correct index of refraction to provide proper length measurement for the known length of reference fiber.

4. A transmission test shall be performed with the use of a 850 nm stabilized light sources and 850 nm power meters for multimode fiber. This test shall be conducted in both directions on each fiber of each cable.

5. Hard and electronic copies of test documentation shall be submitted to the Engineer. The documentation shall include:
   a. The trace plot.
   b. Index.
   c. dB/km loss.
   d. Cable length.
   e. Date and time of test.
   f. Wavelength.
   g. Pulse width.
   h. The test site.
   i. Cable ID.
   j. Fiber number and type.
   k. Operator's initials.
   l. Compare the pre-installation test results to the post-installation results. If a deviation of greater than one dB occurs, the Engineer shall be notified in writing by the Contractor, and the cable shall be removed and replaced at no additional cost to the City.

6. Upon completion of the previous tests, all FOC coils shall be secured with ends capped to prevent intrusion of dirt and water.

E. Certification of completion of pre- and post-fiber installation testing including test results shall be provided to the Engineer. Test results shall be submitted on paper in a binder, including results indicated in tables or a spreadsheet. Test results that exceed specification limits shall be noted. The electronic copy shall be included in the binder.

F. Required OTDR Trace Information:

1. All traces shall display the entire length of cable under test, highlighting any localized loss discontinuities (installation-induced losses and/or connector losses). The trace shall display fiber length (in kilofeet), fiber loss (dB), and average fiber attenuation (in dB/km), as measured between two markers placed as near to the opposite ends of the fiber under test as is possible while still allowing an accurate reading. Care shall be taken to ensure that the markers are placed in the linear region of the trace, away from the front-end response and far-end Fresnel reflection spike. Time averaging shall be used to improve the display signal to noise ratio. The pulse width of the OTDR shall be set to a sufficient width to provide adequate injected power to measure the entire length the fiber under test.

2. If connectors exist in the cable under test, then two traces shall be recorded. One trace shall record the fiber loss (dB) and average attenuation (dB/km) of the entire cable segment under test, including connectors. The second trace shall display a magnified view of the connector regions, revealing the connector losses (dB). All connector losses shall be measured using the five-point splice loss measurement technique.

3. The OTDR trace shall also include the following information:
   a. The date and time of the test.

b. The cable ID number.
c. The cable segment ID number.
d. The fiber color or sub-cable number.
e. Launch point connector number.
f. The optical wavelength used for the test.
g. The refractive index setting of the OTDR.
h. The pulse width setting of the OTDR.
i. The averaging interval of the test."

DIVISION 16 – ELECTRICAL

Section 16481

Paragraph 2.01.A.1.a: Delete "the chemical metering pump supplier who shall take single source responsibility for pump, motor and drive combination." Replace with "the Instrumentation System Supplier (ISS). The chemical metering pump supplier shall be responsible for pump, motor and drive combination."

DRAWINGS

D-1

Delete sheet in its entirety and replace with the attached Sheet D-1.

C-3

Detail 4: Delete "(2'-8" SQ. 1 LOCATION SEE NOTE 1)".

Detail 4: Delete "PER DET 3/-" and replace with "PER DET M103/TYP".

SD-1

Delete sheet in its entirety and replace with the attached Sheet SD-1.

M-3

Add NOTE 3: "DEMO FOUR EXISTING CONC. PEDESTALS WITHIN NEW SODIUM HYPOCHLORITE METERING PUMP CONTAINMENT AREA, APPROX. 2'-4" x 1'-6" x 4"H EA., PER SECTION 03741."

E-5

Add NOTE 2: "PROVIDE NEW EQUIPMENT PADS FOR XFMR-B, XFMR-B1 AND LASCP PER DETAIL G ON SHEET SD-1."

E-9

For conduit number N001, delete SIGNAL conductor "1CAT6" and replace with "(1) 6 FIBER OPTIC CABLE".

GI-4

Delete sheet in its entirety and replace with the attached Sheet GI-4.

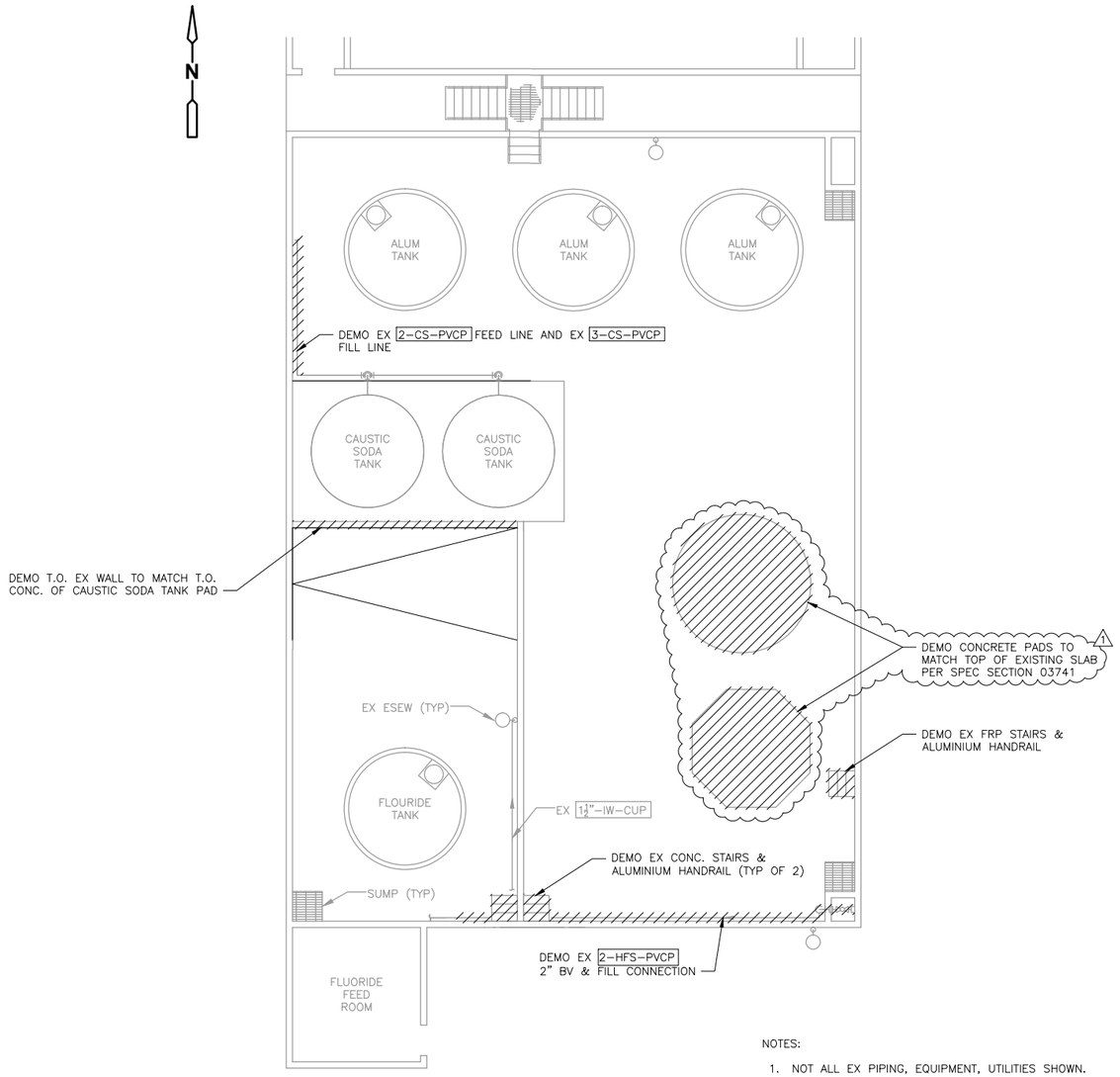
This Addendum No. 1, (including pages 1 through 10, and all referenced drawings and specifications), shall become part of the Contract and all provisions of the Contract shall apply thereto.

The date and time for submittal of the Bid is not changed.

CDM Smith Inc.

Michael A. Zafer

Michael A. Zafer, P.E.



NOTES:

1. NOT ALL EX PIPING, EQUIPMENT, UTILITIES SHOWN.

BULK CHEMICAL STORAGE AREA

PLAN

1/8" = 1'-0"

REV. NO.	DATE	DRWN	CHKD	REMARKS
1	2/24/17	MAR	HYL	ADDENDUM NO. 1

DESIGNED BY: HYL
DRAWN BY: MAR
SHEET CHK'D BY: HYL
CROSS CHK'D BY: MAZ
APPROVED BY: MAZ
DATE: DECEMBER 2016

CDM Smith
100 Pringle Ave, Suite 300
Walnut Creek, CA 94596
Tel: (925) 933-2900
Fax (925) 933-4174

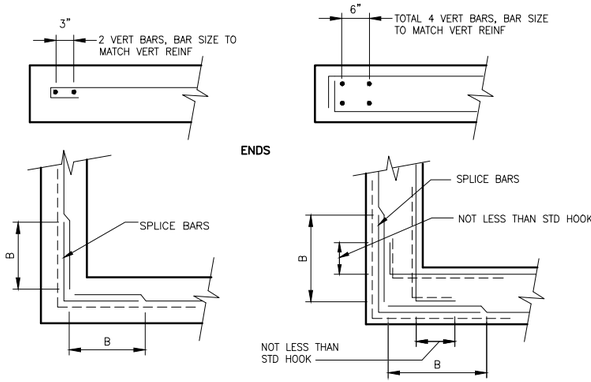
REGISTERED PROFESSIONAL ENGINEER — HOI YU LAI — No. C-78516 — Exp. 12/31/16 — CIVIL — STATE OF CALIFORNIA — 2/6/16

City of Antioch
Water Treatment Plant
Disinfection Improvements Project

VERIFY SCALES
0 1"
BAR IS ONE INCH ON ORIGINAL DRAWING IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

BULK CHEMICAL STORAGE AREA DEMO PLAN

PROJECT NO. P.W. 246-29
109835AK0001_Addendum-1.dwg
SHEET NO.
D-1

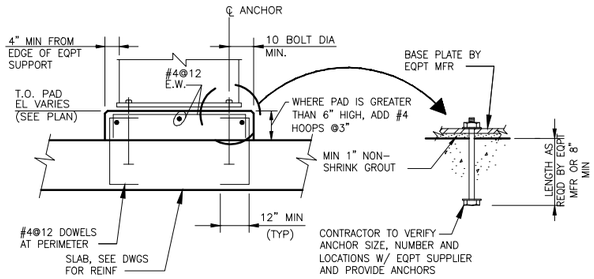


NOTES:

1. ——— DENOTES TYPICAL WALL REINFORCING
2. – – – – DENOTES ADDED WALL REINFORCING WHERE NOTED ON DRAWINGS.
3. B = LAP SPLICE LENGTH. SEE TABLE IN DETAIL F/–.
4. SPLICE BARS TO BE SAME SIZE & SPACING AS LARGER OF BARS BEING SPLICED, UNO. SPLICE BARS SHALL BE LAPPED WITH TYPICAL WALL REINFORCING.
5. EXTEND BAR HOOKED ENDS TO FAR FACE OF WALL.
6. ALTERNATE THE TYPICAL AND ADDED BARS. ADDED BARS TO BE IN SAME VERTICAL PLANE AS TYPICAL REINFORCING.

WALL REINFORCING PLANS (UNO)

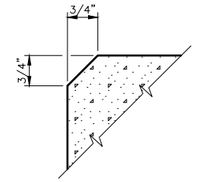
DETAIL A — NTS



NOTE: WHEN ATTACHING TO EXISTING CONCRETE, PROVIDE EQUIVALENT SIZE ADHESIVE ANCHORS WITH MIN 5" EMBED.

NEW EQUIPMENT PAD

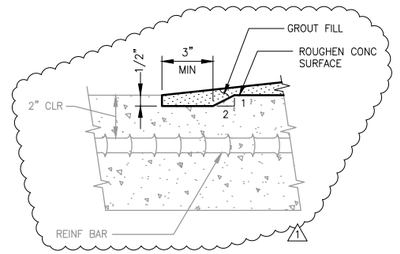
DETAIL B — NTS



UNO ON DRAWINGS

CONCRETE CHAMFER

DETAIL C — NTS



GROUT FILL KEY

DETAIL D — NTS

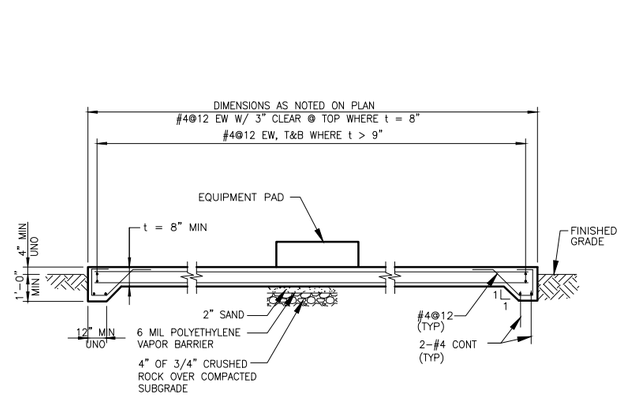
f'c = 4000 PSI, fy = 60,000 PSI, BAR SPACING ≥ 3 db				
REINF SIZE	ld (INCHES) FOR A STRAIGHT BAR		LAP SPLICE LENGTH	
	TOP BAR	OTHER BARS	TOP BAR	OTHER BARS
# 3	20	14	25	18
# 4	26	19	34	24
# 5	32	23	42	30
# 6	39	28	50	36
# 7	45	32	58	42
# 8	52	37	62	48
# 9	58	42	75	54
# 10	64	46	83	60

NOTES:

1. ld = DEVELOPMENT LENGTH, db = BAR DIAMETER
2. TOP BAR IS ANY HORIZONTAL BAR IN WALLS AND SLABS WITH MORE THAN 12" CONCRETE CAST IN ONE LIFT BENEATH IT. HORIZONTAL BARS IN WALLS SHALL BE CONSIDERED AS TOP BARS. VERTICAL BARS IN WALLS MAY BE CONSIDERED AS OTHER BARS.
3. SPLICES IN HORIZONTAL BARS SHALL BE STAGGERED.
4. WHEN LAPPING DIFFERENT SIZE BARS USE LENGTH BASED ON LARGER BAR DIAMETER, UNO.

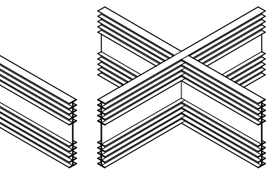
DEVELOPMENT LENGTH AND LAP SPLICE LENGTH (UNO)

DETAIL F — NTS

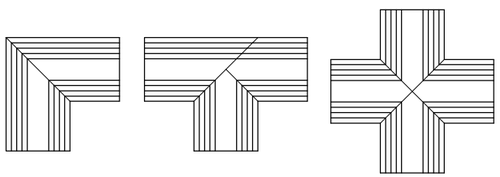


EXTERIOR EQUIPMENT SLAB (UNO)

DETAIL G — NTS



VERTICAL ELL VERTICAL TEE VERTICAL CROSS



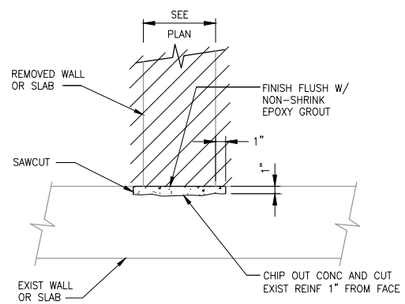
FLAT ELL FLAT TEE FLAT CROSS

NOTES:

1. PVC WATERSTOPS SHOWN. SIMILAR FOR TERMOPLASTIC WATERSTOPS.
2. WATERSTOP FOR NEW CONCRETE SHOWN. SIMILAR FOR RETROFIT WATERSTOPS.
3. ALL FITTINGS SHALL BE FACTORY MADE OR SHOP WELDED IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS.
4. ONLY STRAIGHT BUTT SPLICES MAY BE MADE IN FIELD.

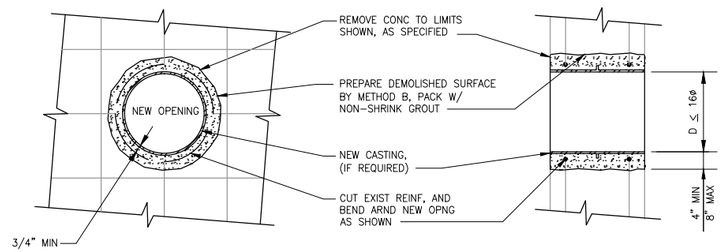
WATERSTOP FITTINGS

DETAIL E — NTS



REMOVAL OF EXISTING WALL, CURB OR SLAB

DETAIL H — NTS



NEW PENETRATION THROUGH EXIST CONCRETE

DETAIL I — NTS

REV. NO.	DATE	DRWN	CHKD	REMARKS
1	2/24/17	MAR	CNO	ADDENDUM NO. 1

DESIGNED BY: JSM
DRAWN BY: JSM
SHEET CHK'D BY: LGS
CROSS CHK'D BY: CNO
APPROVED BY: MAZ
DATE: DECEMBER 2016

CDM Smith
100 Pringle Ave, Suite 300
Walnut Creek, CA 94596
Tel: (925) 933-2900
Fax (925) 933-4174

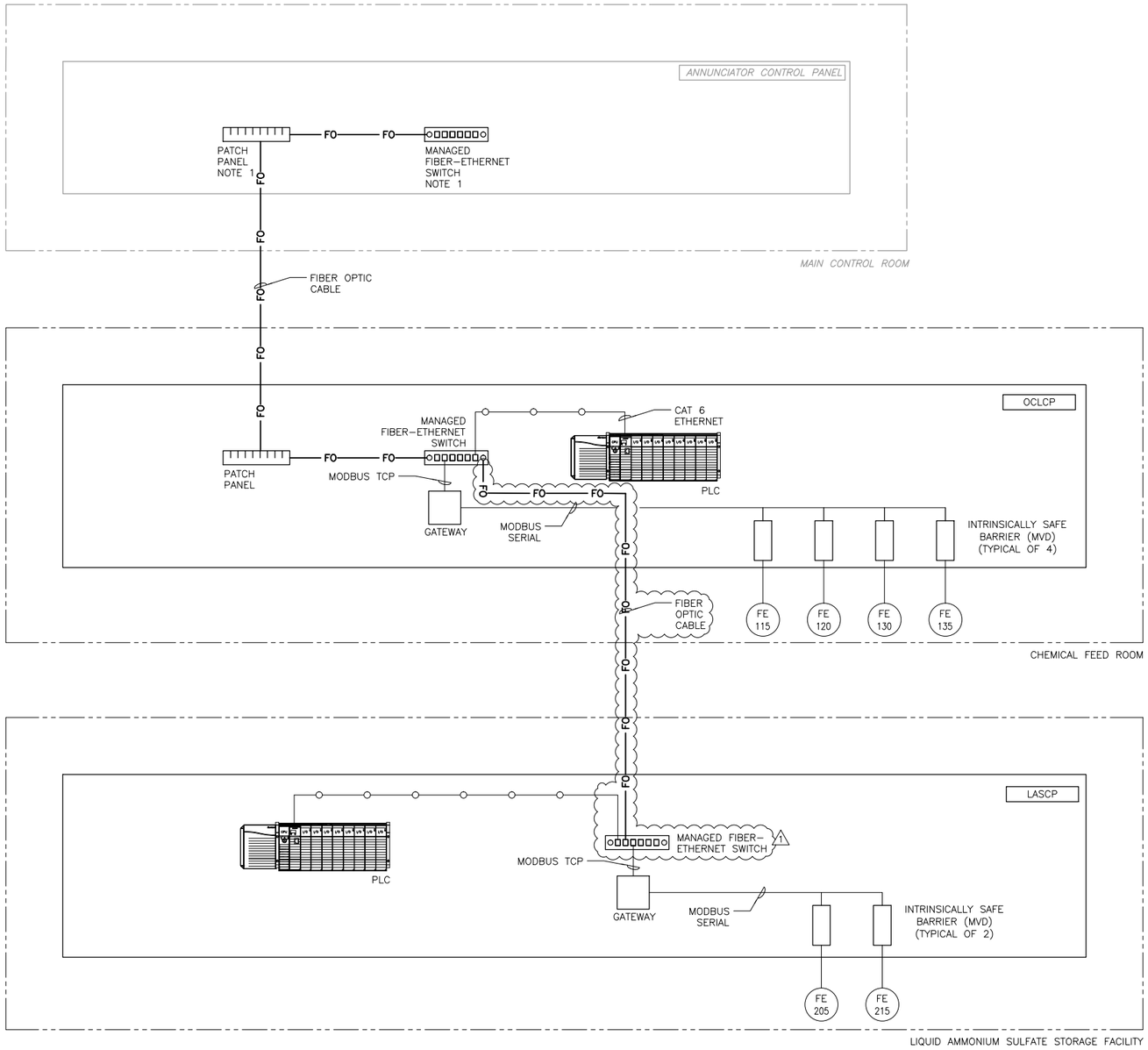
REGISTERED PROFESSIONAL ENGINEER — No. S 9371 — Exp. 6/30/17 — STATE OF CALIFORNIA

City of Antioch
Water Treatment Plant
Disinfection Improvements Project

VERIFY SCALES
0 1"
BAR IS ONE INCH ON ORIGINAL DRAWING
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

TYPICAL STRUCTURAL DETAILS

PROJECT NO. P.W. 246–29
109835A&E01_Addendum–1.dwg
SHEET NO.
SD-1



NOTES:

1. CONTRACTOR SHALL COORDINATE LOCATIONS OF PATCH PANEL AND MANAGED FIBER–ETHERNET SWITCH WITH THE CITY'S PROGRAMMER. SEE DETAIL F/ED–1.

REV. NO.	DATE	DRWN	CHKD	REMARKS
1	2/24/17	MAR	JLJM	ADDENDUM NO. 1

DESIGNED BY: HYL/MAH
DRAWN BY: MRK
SHEET CHK'D BY: JLJM
CROSS CHK'D BY: MAZ
APPROVED BY: MAZ
DATE: DECEMBER 2016

CDM Smith
100 Pringle Ave, Suite 300
Walnut Creek, CA 94596
Tel: (925) 933-2900
Fax (925) 933-4174

REGISTERED PROFESSIONAL ENGINEER — LAWRENCE J. MARTINEZ — No. E 16738 — Exp. 09/30/2018 — ELECTRICAL — STATE OF CALIFORNIA

City of Antioch
Water Treatment Plant
Disinfection Improvements Project

VERIFY SCALES
0 1"
BAR IS ONE INCH ON ORIGINAL DRAWING IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

SYSTEM ARCHITECTURE DIAGRAM

PROJECT NO. P.W. 246–29
FILE NAME 109835-GI04_Addendum–1.dwg
SHEET NO.
GI-4