



## **ADDENDUM NO. 2**

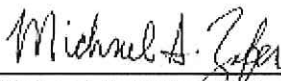
**TO  
CONTRACT DOCUMENTS AND TECHNICAL SPECIFICATIONS  
FOR THE  
WATER TREATMENT PLANT DISINFECTION IMPROVEMENTS  
IN  
ANTIOCH, CALIFORNIA  
P.W. 246-29**

**ISSUED  
March 16, 2017**

This Addendum No. 2 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, P.E.

**BIDDER'S CERTIFICATION**

**I acknowledge receipt of this Addendum No. 2 and accept all conditions contained herein.**

\_\_\_\_\_  
Bidder

\_\_\_\_\_  
By:

ADDENDUM NO. 2  
TO  
CONTRACT DOCUMENTS AND TECHNICAL SPECIFICATIONS  
FOR

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

March 15, 2017

This Addendum No. 2 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 #9

- 1. Specification Section 01140 1.04 tells the contractor to hire an engineer and/or grade T3, T4 or T5 Water Operator if necessary. Who determines if this is necessary, and what is the intent of this section? Are we going to be required to hire an outside consultant for this section?***

Response: The City's Construction Manager and/or Engineer will determine if the Contractor must hire a registered engineer or licensed water treatment operator. The intent of this section is to: 1) require the Contractor to provide a qualified and knowledgeable team to execute the work at an operating drinking water treatment plant; and 2) describe the minimum qualifications with respect to water treatment operations and processes.

Contractors are encouraged to submit project references demonstrating the required qualifications and experience with the specific chemical systems identified in the drawings and specifications. The information shall be included in the Bidder's Statement of Qualifications and Business References.

Per Addendum No. 2, bidders are required to submit the resume(s) of individual(s) employed by the Contractor that will direct work activities and coordinate operational activities with the City's Construction Manager, plant operations and maintenance staff, and/or Engineer. The resume(s) for the individual(s) proposed by the Contractor shall document experience and "required knowledge" of water treatment operations and processes per Section 01140, Paragraph 1.04 and further described in Paragraph 1.05.

Should the City and/or Engineer determine at any time during the project that the Contractor is not demonstrating compliance with the requirements of Section 01140, Paragraph 1.04, the City and/or Engineer will require the Contractor to hire a registered engineer or licensed water treatment operator at no cost to the City.

RFI #10

- 2. Drawings C-1 and C-2 show all chemical lines to be PVC hose inside a PVC containment pipe, except for the 2" pipe that goes from the hypochlorite tanks to the metering pumps. On drawings M-5, M-9, M-10, M-11 the OCL carrier pipes are shown as PVC pipe, not hose. Please clarify.***

Response: See modification to Drawings for Sheets C-1, C-2, M-3, M-5, M-9, M-11, and M-12 for clarification.

3. ***Detail M-206 on drawing MD-2 shows centralizers for supporting PVC hose. According to our PVC supplier, this application is not used and cannot be installed. Can the centralizers be eliminated for PVC hose?***

Response: Centralizers for PVC hose support are eliminated. See modification to Drawings below.

4. ***The piping schedule in Section 15062 calls for all exposed chemical piping to be insulated. Section 15238, Paragraph 2.04.A.6 calls for all exposed containment piping to be clear. Since this piping is insulated, can normal S80 gray containment pipe be used?***

Response: Pipe schedule is included in Section 15052, not Section 15062. Section 15052 requires pipe insulation if the pipe is located outdoors. Section 15238 Paragraph 2.04.A.6 requires clear, Schedule 80 containment pipe and fittings for exposed pipes that are within building. The specification requirements apply to two different pipe locations. No changes are made to the specifications.

5. ***Note 2 on Drawing M-1 calls for heat tracing of the caustic soda feed line. The electrical drawings do not show any heat trace panels or wiring. Please identify the quantity and locations for these heat trace panels.***

Response: Heat trace panels are not required for this application. See modification to Drawings below.

RFI #11

6. ***Heat Tracing Specification 16859 is not found in the bid documents as called out in Pipe Schedule 15052. Please advise.***

Response: Reference is deleted. See modification to Specifications below.

## **SPECIFICATIONS**

### **DIVISION 15 – MECHANICAL**

#### **Section 15052**

Table 15052-1, Notes for PVCP Caustic Soda: Delete "Section 16859" and replace with "Sheet M-1"

Table 15052-1, Notes for PVCH Caustic Soda: Delete "Section 16859" and replace with "Sheet M-1"

## **DRAWINGS**

### **C-1**

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

### **C-2**

Delete sheet in its entirety and replace with the attached Sheet C-2.

### **M-1**

Revise last sentence of Note 2 to read: "PROVIDE NEW HEAT TRACE CABLE ROUTED ALONG EXISTING PIPE. REUSE EXISTING HEAT TRACE CABLE CIRCUIT RECEPTACLE LOCATED IN THE TANK FARM AREA LOCATED BY THE CAUSTIC STORAGE TANKS. REPLACE EXISTING HEAT TRACE CABLE SYSTEM. THE NEW HEAT TRACE CABLE SYSTEM SHALL BE RAYCHEM WINTERGARD PARALLEL SELF REGULATING HEATING CABLE H612 WITH A PLUG-IN POWER CONNECTION KIT OR EQUAL."

### **M-3**

Delete sheet in its entirety and replace with the attached Sheet M-3.

### **M-5**

Delete sheet in its entirety and replace with the attached Sheet M-5.

### **M-9**

Delete sheet in its entirety and replace with the attached Sheet M-9.

### **M-11**

Delete sheet in its entirety and replace with the attached Sheet M-11.

### **M-12**

Delete sheet in its entirety and replace with the attached Sheet M-12.

### **MD-2**

Delete sheet in its entirety and replace with the attached Sheet MD-2.

This Addendum No. 2, (including pages 1 through 5, and all referenced drawings and specifications), shall become part of the Contract and all provisions of the Contract shall apply thereto.

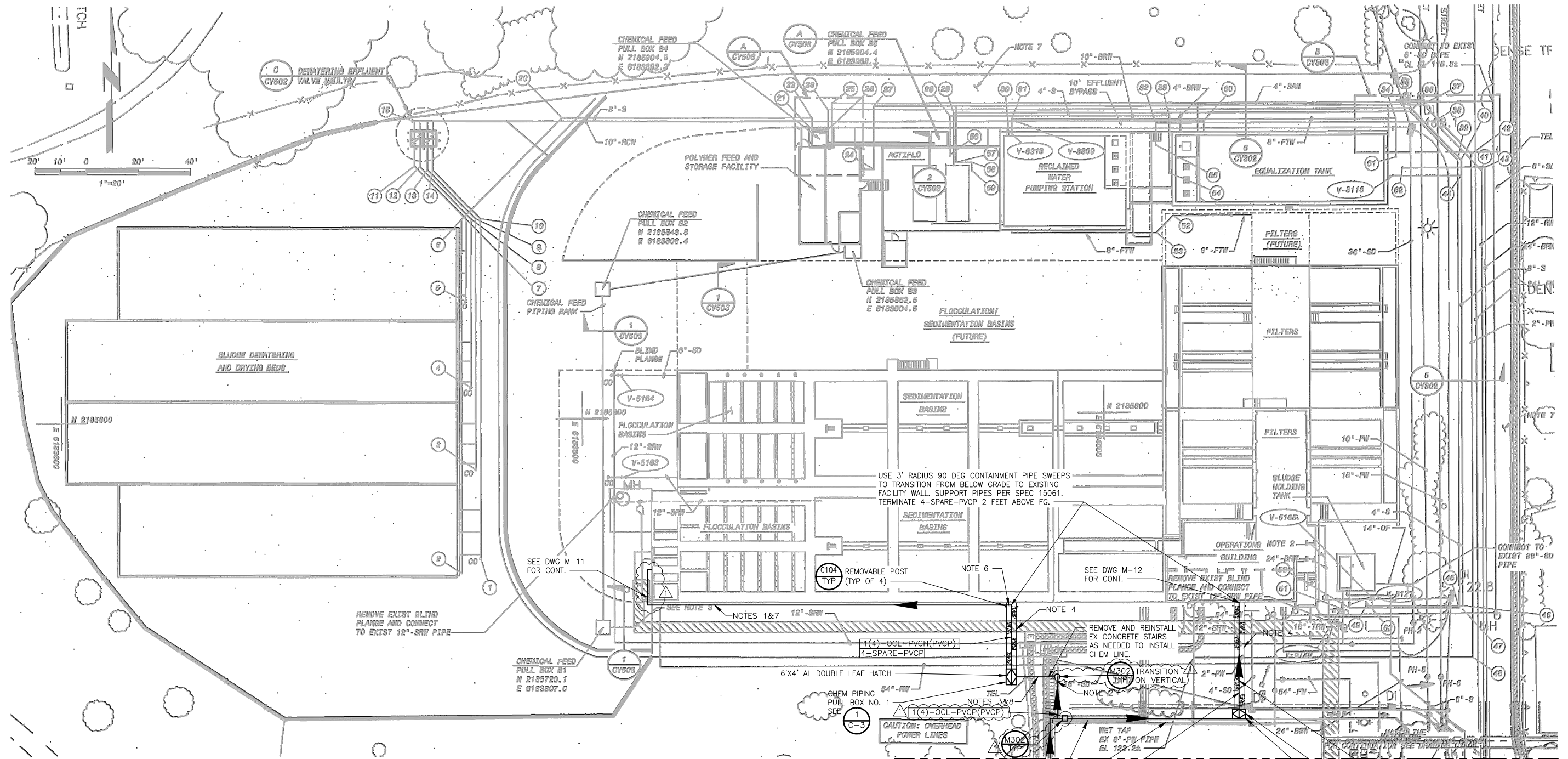
The date and time for submittal of the Bid is not changed.

Bidders shall acknowledge receipt of all Addenda by number in the space provided in the Bid Letter on page P-4.

CDM Smith Inc.

  
\_\_\_\_\_  
Michael A. Zafer, P.E.

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NOTES:

1. MOUNT PIPES ON WALL OF EX STRUCTURE APPROXIMATELY 3 FEET +/- AFG AS DIRECTED BY THE CITY.
2. SUPPORT PIPES ON TOP OF EX CONC RETAINING WALL.
3. INSTALL PIPES IN EX SLOPED, UNPAVED AREA. RESTORE EX GRADES AFTER PIPE INSTALLATION.
4. RESTORE AC PAVEMENT TO EX GRADE PER DET C107/TYP AND C207/TYP.
5. CAP 4" SPARE CONTAINMENT PIPE. AT OTHER END OF TRENCH BRING 4" SPARE CONTAINMENT PIPE ABOVE GROUND AND CAP AT 2' ABOVE FG.

6. PROVIDE DEGASSING VALVE IN CONTAINMENT BOX AT PIPING HIGH POINT. DEGASSING VALVE SHALL BE PER SPEC 11242. CONTAINMENT BOX SHALL BE 2'X2'X12" WITH HINGED LID AND GASKET MOUNT TO WALL WITH 4 EA 1/2"X3 1/2" MIN EMBED HILTI 316SS KWIK BOLT, OR EQUAL. NO SECONDARY CONTAINMENT PIPE NECESSARY WITHIN CONTAINMENT BOX. DGV DRAIN SHALL PENETRATE CONTAINMENT BOX AND EXTEND TO 6 INCHES ABOVE FG.
7. INSULATE PIPES PER SPEC 15120
8. INSTALL 1(4)-OCL ABOVE EXISTING ELECTRICAL DUCT BANKS; WHERE COVER OVER 1(4)-OCL IS LESS THAN 3 FEET, CONCRETE ENCASE PER DETAIL C203 ON CD-2.
9. FOR DOUBLE CONTAINED PIPING WITH CARRIER HOSE, USE 3 FOOT RADIUS PIPE SWEEPS FOR 90 DEGREE BENDS.

SITE PLAN

1" = 20'

MATCHLINE SEE C-2

REV. NO.	DATE	DRWN	CHKD	REMARKS
1	3/15/17	MAR	APS	ADDENDUM NO. 2

DESIGNED BY:	HYL
DRAWN BY:	WKT
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



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

CIVIL SITE PLAN 1

PROJECT NO.	P.W. 246-29
109835-0001_Addendum-2.dwg	
SHEET NO.	C-1

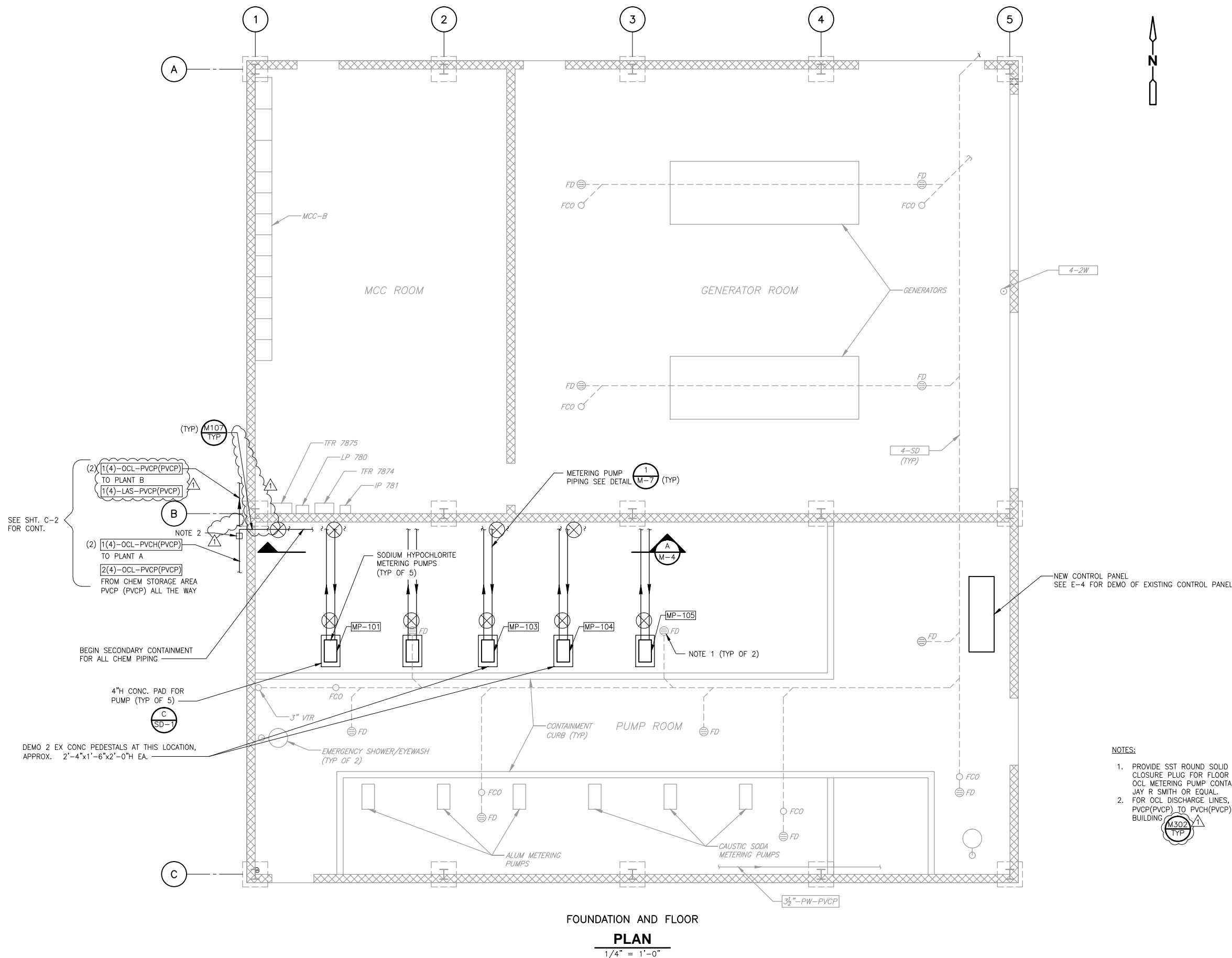


1. MOUNT PIPES ON WALL OF EX STRUCTURE APPROXIMATELY 5 FEET +/- AFG AS DIRECTED BY THE CITY.
2. BETWEEN ADJACENT STRUCTURES, SUPPORT PIPES ON PAVEMENT PER DETAIL 4/C-3 (SIM, OVEREXCAVATE 6 INCHES INSTEAD OF 2 FEET). PROVIDE CROSSOVER STEP STAND OVER PIPES.
3. SUPPORT PIPES PER DETAIL 4 ON C-3, AT ELEVATION AS DIRECTED BY THE CITY.
4. CAP 4" SPARE CONTAINMENT PIPE. AT OTHER END OF TRENCH BRING 4" SPARE CONTAINMENT PIPE ABOVE GROUND AND CAP AT 2' ABOVE FG.
5. RESTORE AC PAVEMENT TO EX GRADE PER C107/TYP AND C207/TYP.
6. INSULATE PIPES PER SPEC 15120.
7. FOR DOUBLE CONTAINED PIPING WITH CARRIER HOSE, USE 3 FOOT RADIUS PIPE SWEEPS FOR 45 AND 90 DEGREE BENDS.

C-2



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FOUNDATION AND FLOOR  
**PLAN**  
1/4" = 1'-0"

REV. NO.	DATE	DRWN	CHKD	REMARKS
1	3/15/17	MAR	APS	ADDENDUM NO. 2

DESIGNED BY: APS  
DRAWN BY: WKT  
SHEET CHK'D BY: APS  
CROSS CHK'D BY: HYL  
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



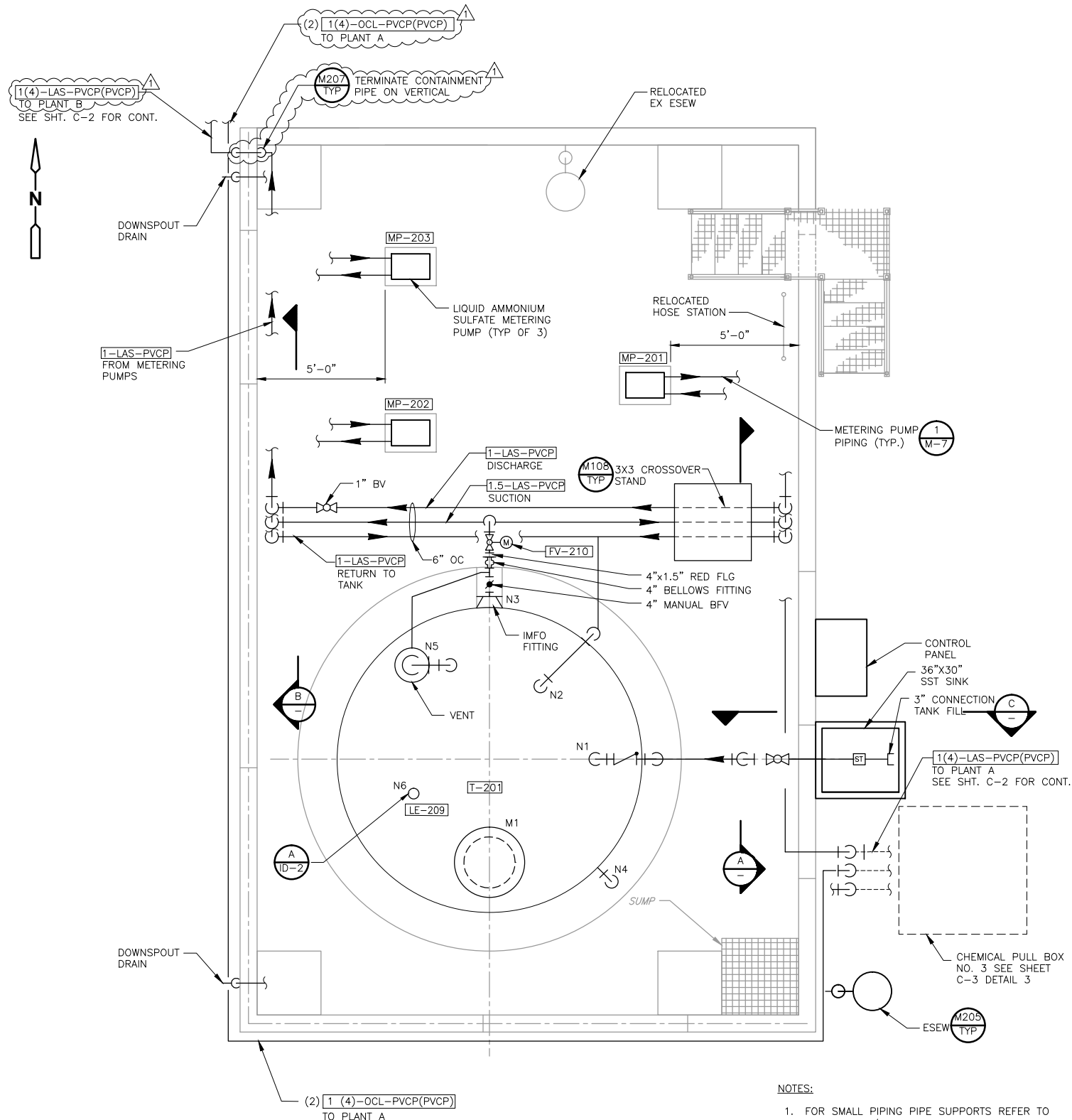
City of Antioch  
Water Treatment Plant  
Disinfection Improvements Project

VERIFY SCALES  
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**CHEMICAL FEED BUILDING  
PLAN**

PROJECT NO. P.W. 246-29  
010835-M003\_Addendum-2.dwg  
SHEET NO.  
**M-3**

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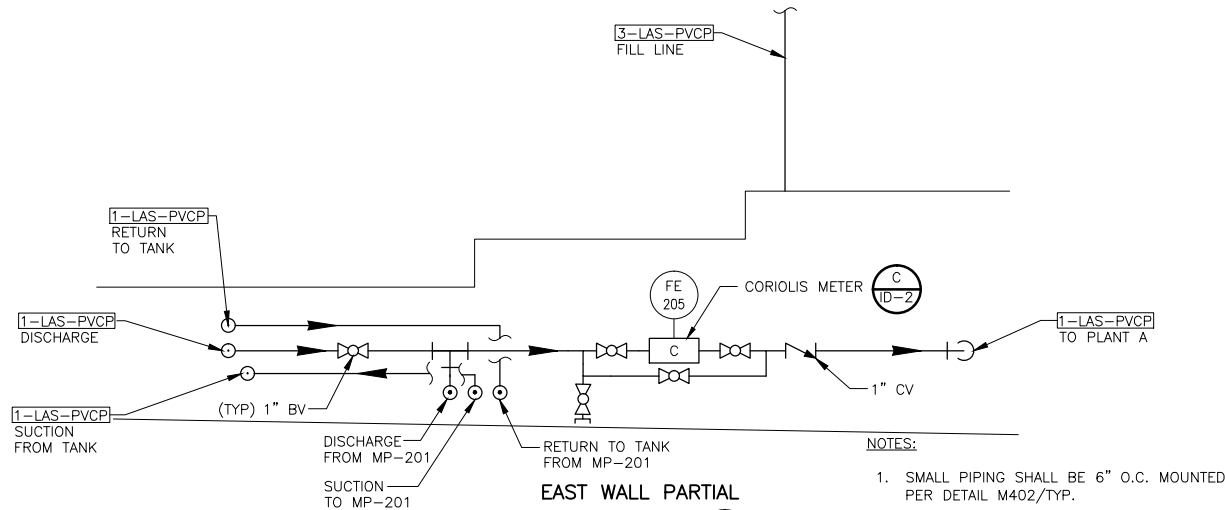
LIQUID AMMONIUM SULFATE FEED & STORAGE AREA

PLAN

3/8" = 1'-0"

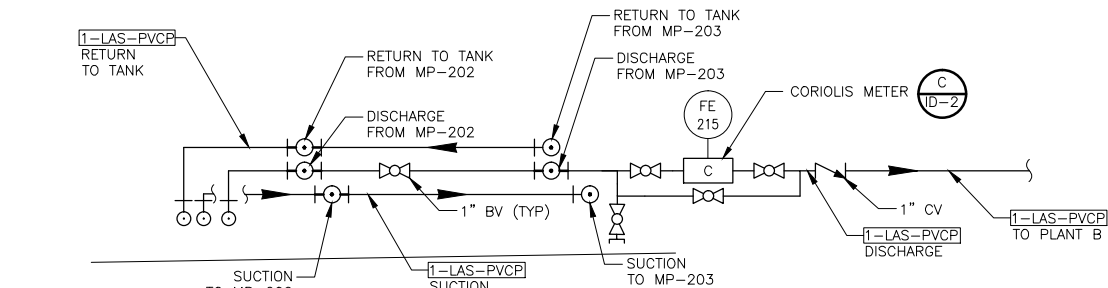
NOTES:

1. FOR SMALL PIPING PIPE SUPPORTS REFER TO DETAIL M402/TYP, UNO.



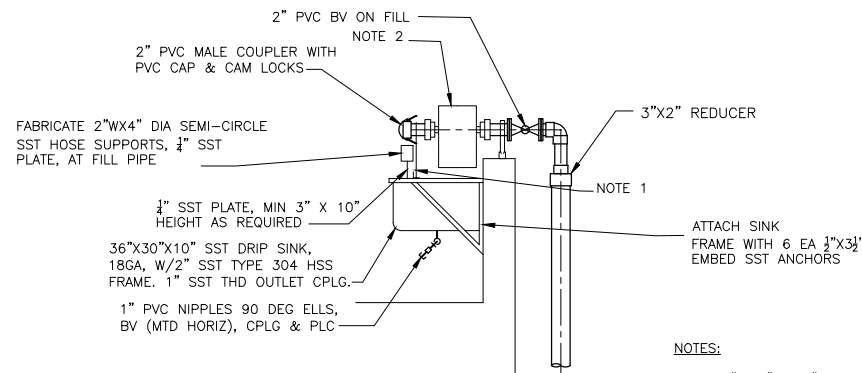
EAST WALL PARTIAL  
SECTION A

NTS



WEST WALL PARTIAL  
SECTION B

NTS



SECTION C

NTS

REV. NO.	DATE	DRWN	CHKD	REMARKS
1	3/15/17	MAR	APS	ADDENDUM NO. 2

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



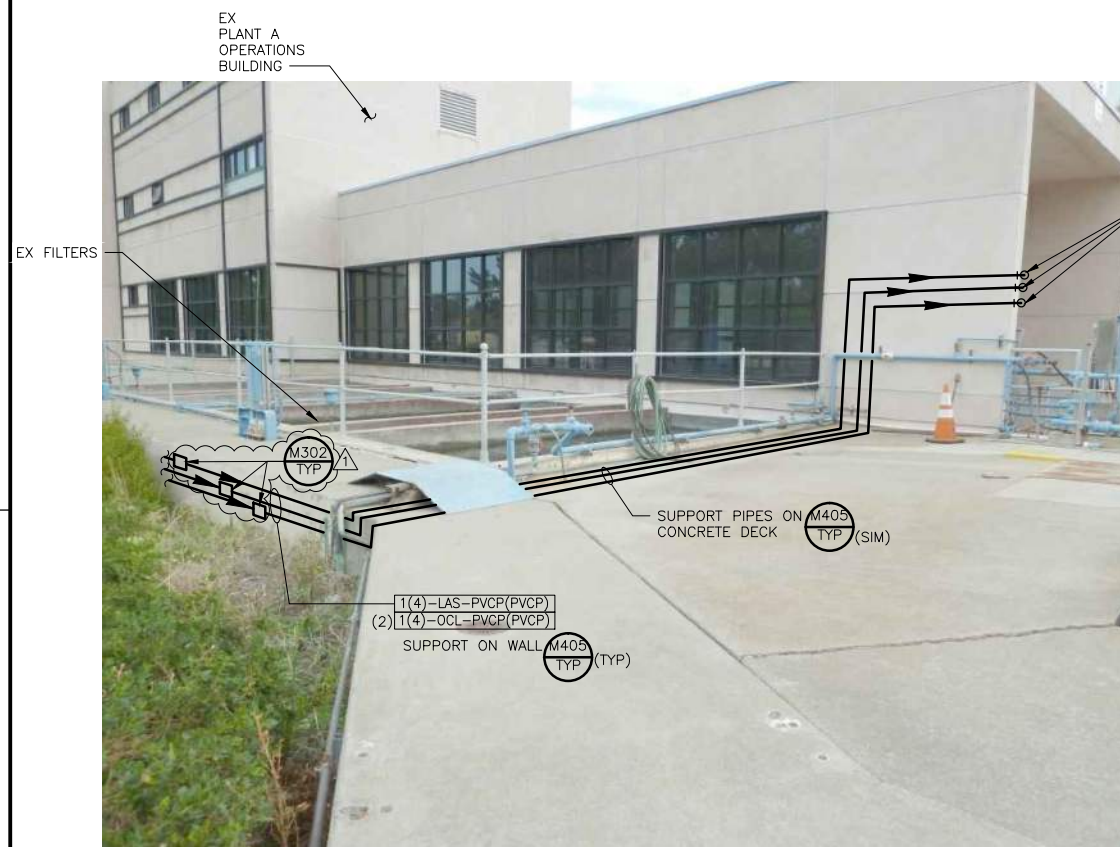
City of Antioch  
Water Treatment Plant  
Disinfection Improvements Project

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LIQUID AMMONIUM SULFATE  
STORAGE AREA  
PLAN AND SECTIONS

PROJECT NO. P.W. 246-29  
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SHEET NO.  
**M-5**

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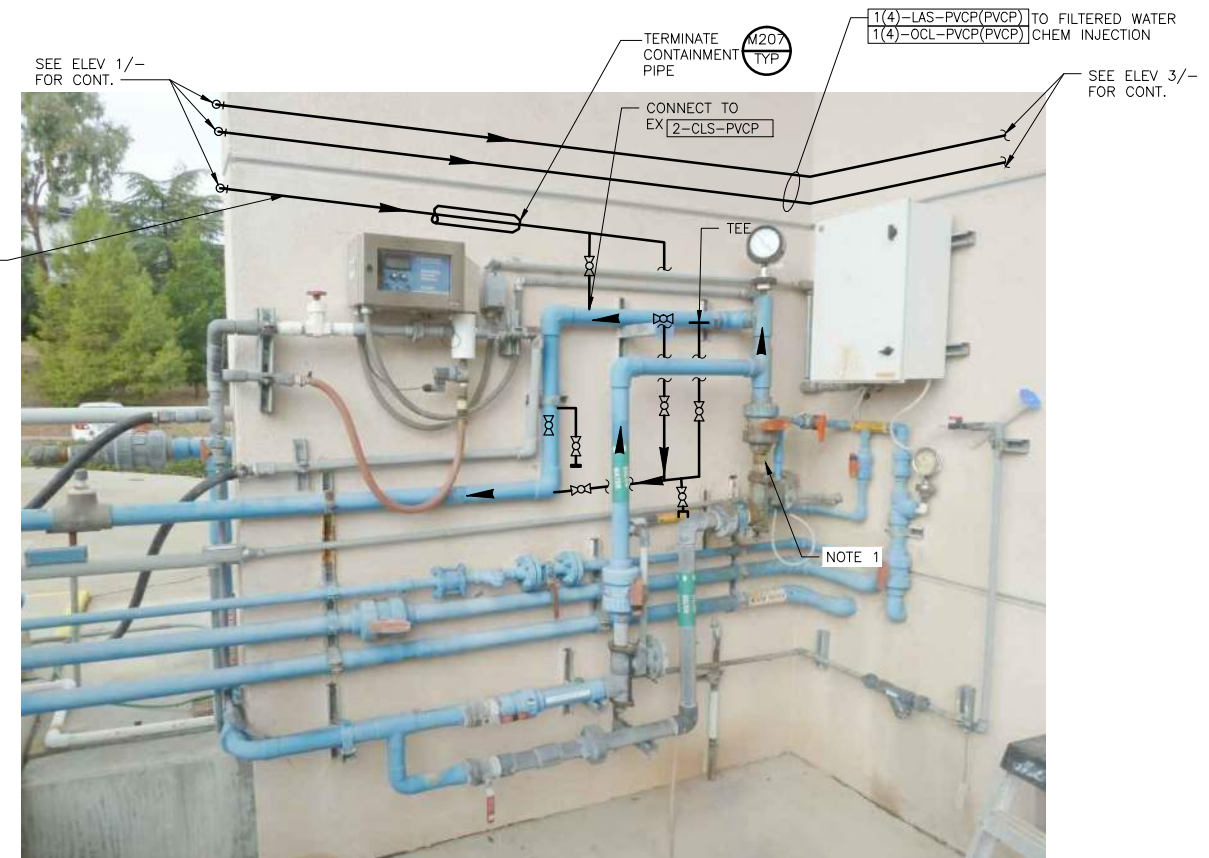
NEW CHEMICAL PIPING TO PLANT A

**ELEVATION** 1  
NTS -



CHEM PIPING TO FILTERED WATER CHEM INJECTION

**ELEVATION** 3  
NTS —



PLANT A RAW WATER OCL INJECTION TIE-IN


**ELEVATION** 2  
NTS —

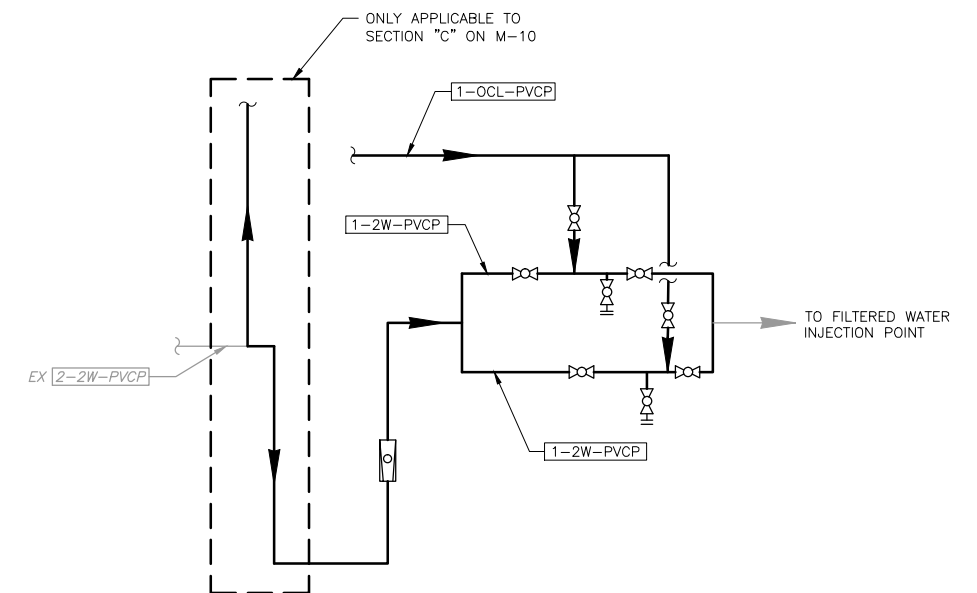
NOTES:

1. REPLACE ROTAMETER IN KIND

NOTES:


1. AFTER PENETRATING INTO BUILDING, ROUTE PIPES VERTICALLY DOWN THROUGH OPENING IN FLOOR SLAB TO BASEMENT. PIPES IN BASEMENT SHALL BE SUPPORTED FROM CEILING.





NEW CHEMICAL PIPING SCHEMATIC

**DETAIL** 1  
NTS M-10

	3/15/17	MAR	APS	ADDENDUM NO. 2
REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY:_____	HYL
DRAWN BY:_____	CJR
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



City of Antioch  
Water Treatment Plant  
Disinfection Improvements Project

VERIFY SCALES
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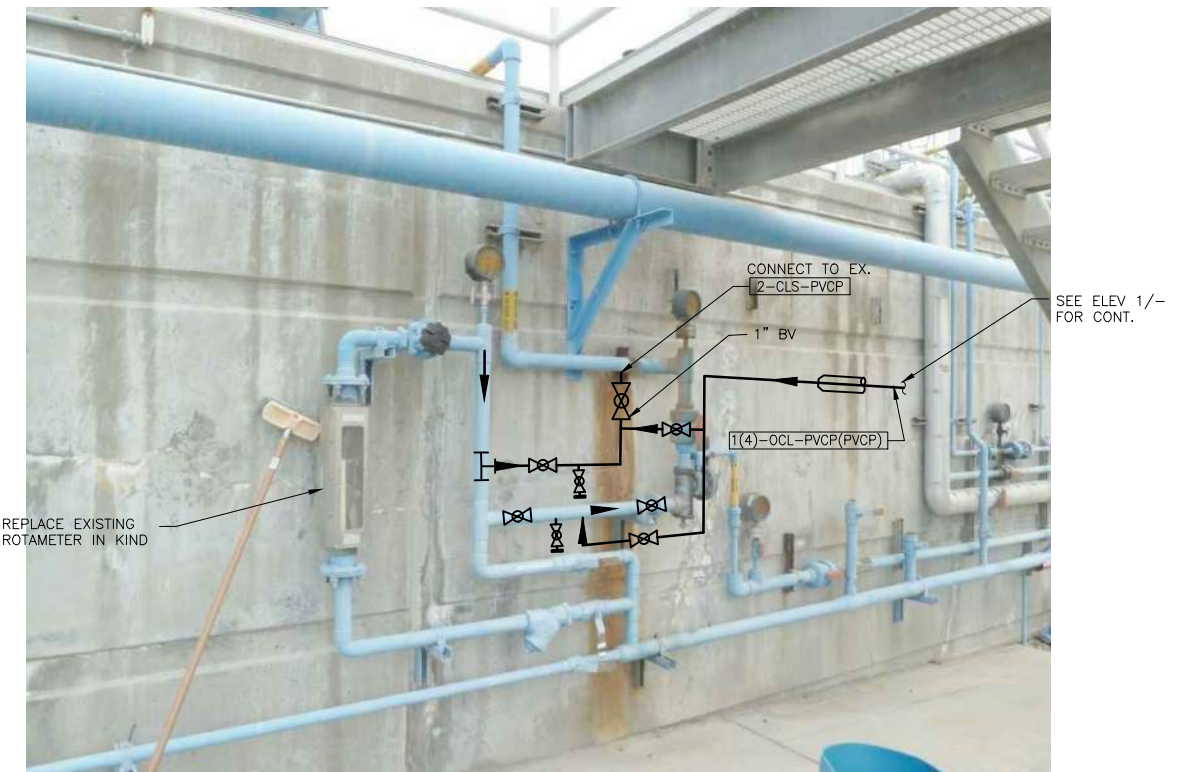
## PLANT A RAPID MIX & FILTERED WATER CHEMICAL INJECTION MODIFICATIONS 1

PROJECT NO. P.W. 246-29  
00835AMD09\_Addendum-2.dwg

SHEET NO.





**M-9**





PLANT B RAW WATER OCL PIPING TIE-IN (LOOKING SE)

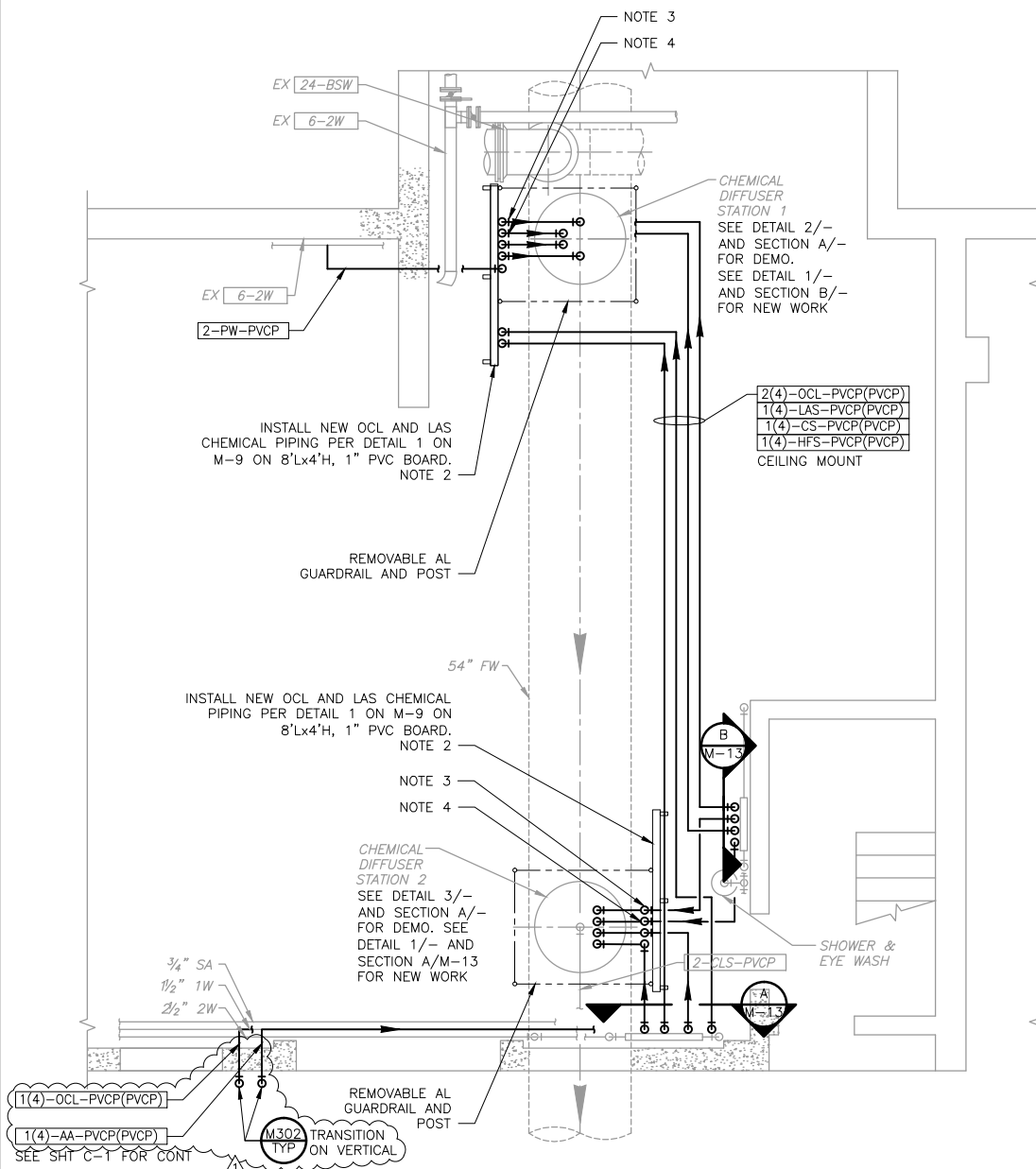
**ELEVATION** 2  
NTS —

	3/15/17	MAR	APS	ADDENDUM NO. 2		DESIGNED BY: HYL	 100 Pringle Ave, Suite 300 Walnut Creek, CA 94596 Tel: (925) 933-2900 Fax: (925) 933-4174		City of Antioch Water Treatment Plant Disinfection Improvements Project	VERIFY SCALES  BAR IS ONE INCH ON ORIGINAL DRAWING IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY	PROJECT NO. P.W. 246-29 DESIGN: 11_Addendum-2.dwg
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					SHEET CHK'D BY: HYL	<b>M-11</b>					
					CROSS CHK'D BY: MAZ						
REV. NO.	DATE	DRWN	CHKD	REMARKS		APPROVED BY: MAZ					
						DATE: DECEMBER 2016					

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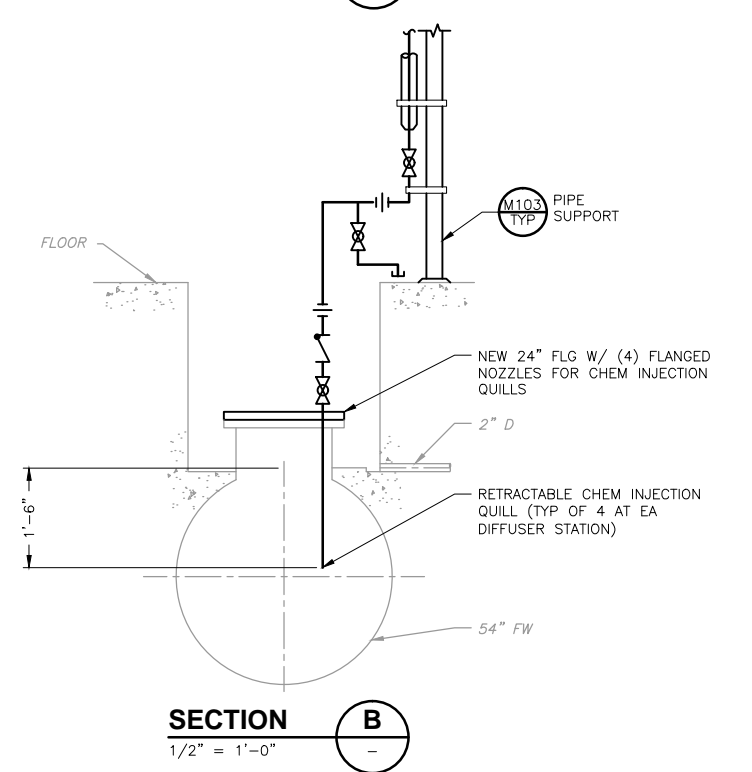
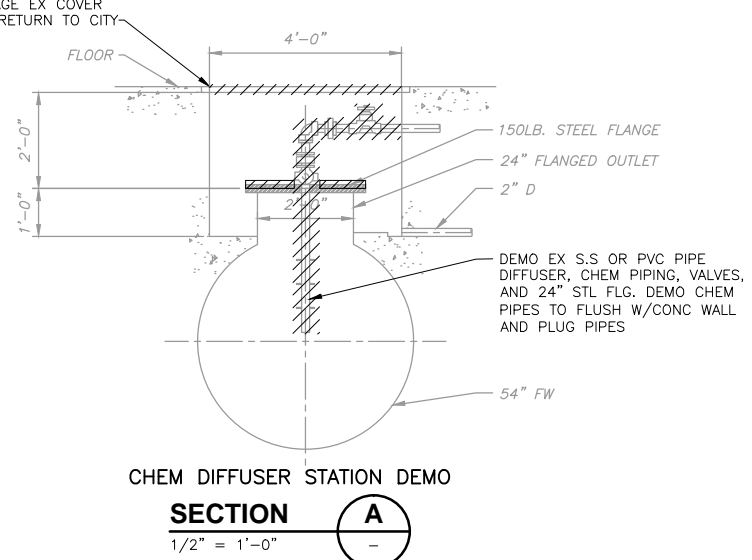
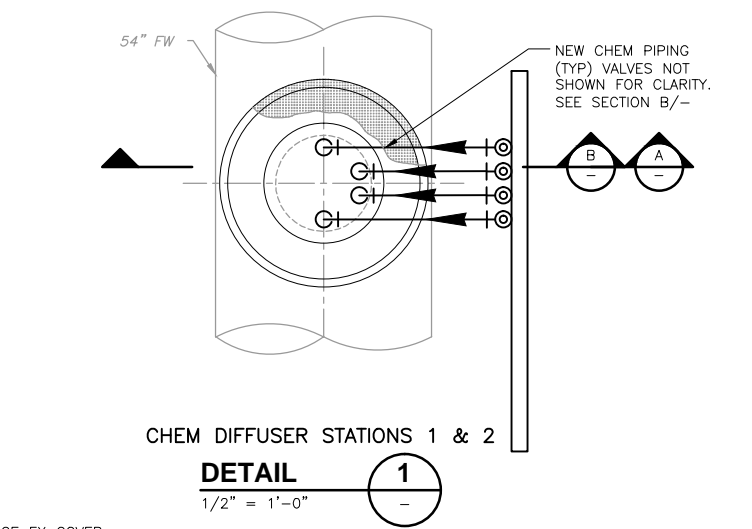
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PLANT B OPERATIONS BUILDING GROUND FLOOR  
**PARTIAL PLAN**  
1/4" = 1'-0"

**NOTES:**

1. NOT ALL EX PIPING AND EQUIPMENT SHOWN.
2. USE HOT DIPPED GS PREFORMED CHANNEL PIPE SUPPORT FRAME TO SUPPORT PVC BOARD.
3. MOUNT HFS ON NEW PVC BOARD.
4. MOUNT CS ON NEW PVC BOARD.
5. AFTER INSTALLATION OF NEW INJECTION QUILLS, CONNECT EX AMMONIA LINE TO NEW LAS INJECTION QUILL. PROVIDE PIPING AND VALVING NECESSARY TO ALLOW FOR ISOLATION OF EX AMMONIA LINE SUCH THAT LINE CAN BE DEMOLISHED WITHOUT CAUSING DISRUPTION OF NEW LAS INJECTION AFTER COMPLETION OF THE LAS SYSTEM.



CHEM DIFFUSER STATION 1 DEMO  
**DETAIL 2**  
NTS



CHEM DIFFUSER STATION 2 DEMO  
**DETAIL 3**  
NTS

REV. NO.	DATE	DRWN	CHKD	REMARKS
1	3/15/17	MAR	APS	ADDENDUM NO. 2

DESIGNED BY: HYL  
DRAWN BY: CJR  
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  
No. C-78516  
Exp. 12/31/16  
2/6/16  
STATE OF CALIFORNIA

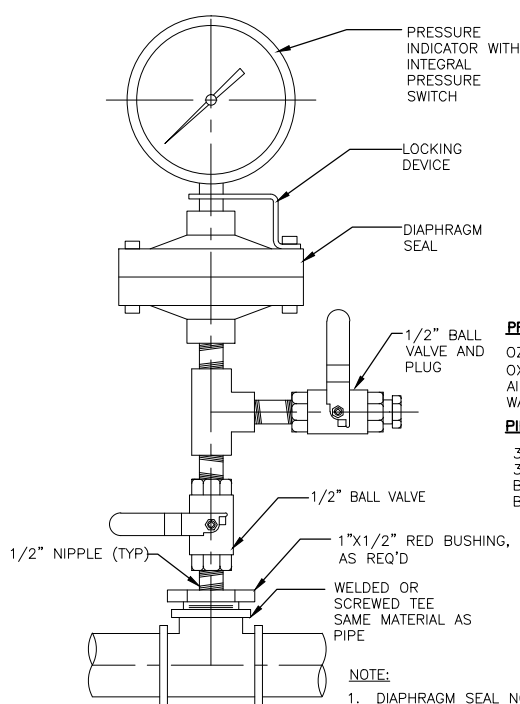
City of Antioch  
Water Treatment Plant  
Disinfection Improvements Project

VERIFY SCALES  
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**PLANT B RAW WATER AND FILTERED WATER  
CHEMICAL INJECTION MODIFICATIONS 2**

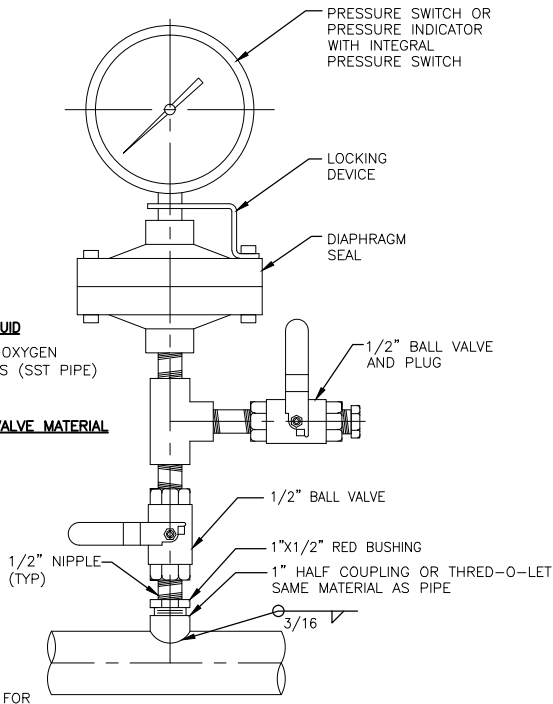
PROJECT NO. P.W. 246-29  
DRAWING NAME: 12\_Addendum-2.dwg  
SHEET NO.  
**M-12**

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**PROCESS FLUID**  
OZONE-IN-OXYGEN  
OXYGEN GAS (SST PIPE)  
AIR  
WATER

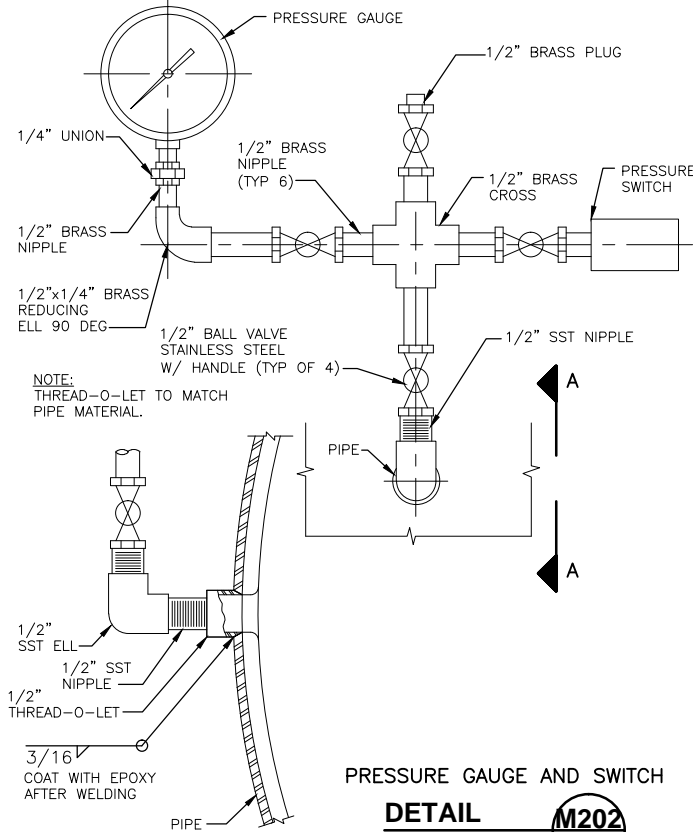
**PIPING & VALVE MATERIAL**  
316L SST  
316 SST  
BRASS  
BRASS



TYPICAL PRESSURE GAUGE OR SWITCH

**DETAIL**  
NTS

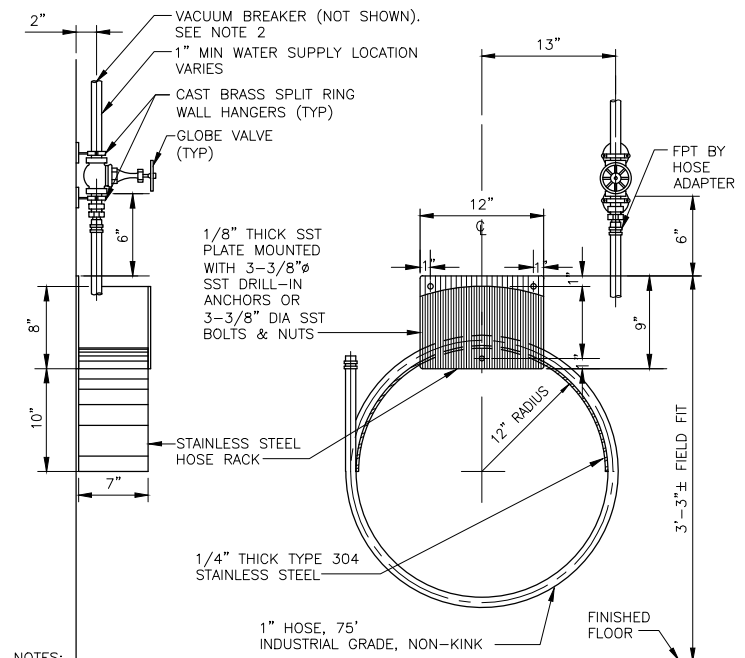
**M201**  
TYP



PRESSURE GAUGE AND SWITCH

**DETAIL**  
NTS

**M202**  
TYP

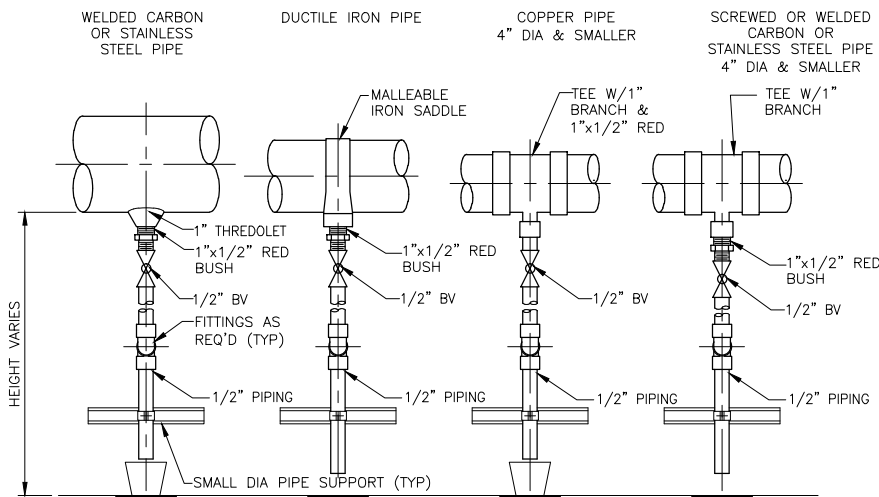


TYPICAL CHEMICAL PIPE  
TYPICAL WASH HOSE STATION

**DETAIL**  
NTS

**M203**  
TYP

- NOTES:
1. FOR OUTDOOR STATIONS, INSTALL STOP AND BLEED VALVE UPSTREAM OF GLOBE VALVE AND INSULATE ALL OUTDOOR PIPING (INCLUDING INSULATING ALL VALVES AND APPURTENANCES).
  2. VANDAL-PROOF, BRONZE VACUUM BREAKER, SAME DIAMETER AS SUPPLY PIPE. MOUNT ON HORIZ PIPE CONNECTION AT EACH WASH HOSE STATION.



- NOTES:
1. THIS DETAIL IS APPLICABLE TO PIPING CARRYING WATER OR COMPRESSED AIR ONLY. DRAIN INSTALLED AT LOW POINT OF PIPING.
  2. DRAIN PIPE SHALL BE ROUTED ALONG WALLS, COLUMNS, FRAMING, OR SUPPORTS TO DISCHARGE INTO DRAINS OR NEAR FLOOR LEVEL. DRAIN PIPING SHALL BE EXTENDED TO 1" ABOVE EQUIPMENT OR FLOOR DRAINS. IF DRAIN IS EQUIPPED WITH A FUNNEL, THE PIPING SHALL BE EXTENDED BELOW THE RIM OF THE FUNNEL. PIPING WHICH DOES NOT DISCHARGE OVER A DRAIN SHALL TERMINATE 18" ABOVE FLOOR LEVEL AND BE FITTED WITH A THREADED CAP.
  3. DRAIN PIPING MATERIALS:

**PIPE MATERIAL**  
CARBON STEEL,  
DUCTILE IRON  
COPPER  
STAINLESS\*

**DRAIN PIPING**  
GSP, SCH 40  
TYPE L  
STAINLESS\*

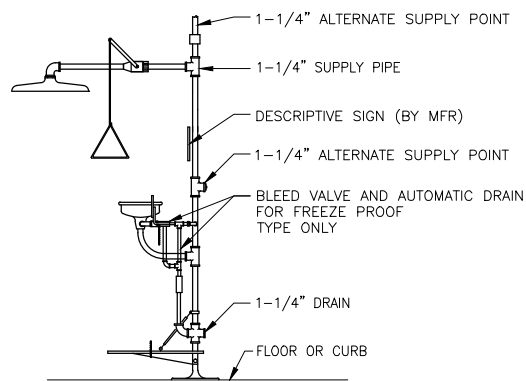
**BALL VALVE**  
BRASS  
BRASS  
STAINLESS\*

\* MATERIAL WILL BE EITHER ALL TYPE 304, TYPE 316, OR TYPE 316L TO MATCH PIPE MATERIAL.

TYPICAL PIPING DRAIN

**DETAIL**  
NTS

**M204**  
TYP

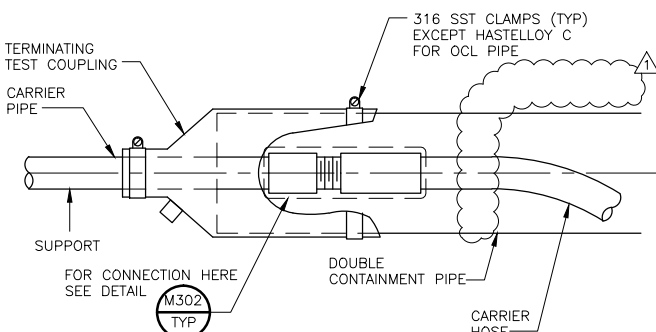


TYPICAL EMERGENCY SHOWER  
WITH EYE/FACE WASH

**DETAIL**  
NTS

**M205**  
TYP

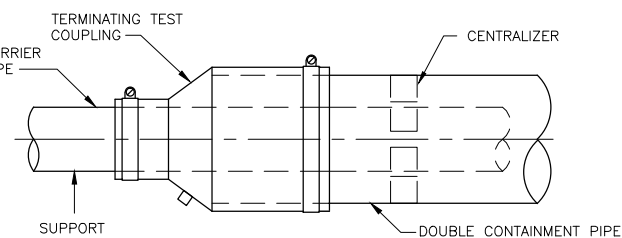
- NOTES:
1. FLOW SWITCH TO BE PROVIDED IN WATER SUPPLY PIPING FOR EACH EMERGENCY SHOWER WITH EYE/FACE WASH.
  2. ALL EXPOSED PIPE TO BE INSULATED FOR SHOWERS LOCATED OUTSIDE. INSULATION JACKET SHALL BE SUITABLE FOR THE SURROUNDINGS.



TYPICAL CHEMICAL HOSE  
CONTAINMENT TERMINATION

**DETAIL**  
NTS

**M206**  
TYP



TYPICAL CHEMICAL PIPE  
CONTAINMENT TERMINATION

**DETAIL**  
NTS

**M207**  
TYP

3/15/17	MAR	APS	ADDENDUM NO. 2
REV. NO.	DATE	DRWN	CHKD
			REMARKS

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



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 MECHANICAL DETAILS 2

PROJECT NO. P.W. 246-29  
000350AM02\_Addendum-2.dwg  
SHEET NO.  
**MD-2**