



CITY AND COUNTY OF SAN FRANCISCO
Port of San Francisco

Contract No. 2852
Amador Street Infrastructure Improvements

ADDENDUM No. 1
Issued: August 7, 2024

The following clarifications, changes, additions or deletions are incorporated into the Bid Documents as if a part of the original released Bid Documents. All other terms and conditions of the Bid Documents remain in full force and effect. Respondents to the Advertisement for Bids solicitation must acknowledge receipt of this addendum in their submittal by submitting a signed and completed copy of Section 00 43 20 (Acknowledgement of Receipt of Addenda).

CHANGES TO SPECIFICATIONS:

- 1) **Section 00 41 00** – Revision to Address QBD 15. Bid item #14 quantity revision.
- 2) **Section 09 90 00** – Revision to address QBD 13. Ductile iron pipe coating requirements.
- 3) **Section 33 41 00.10** – Revision to address QBD 17. Questions about ASTM A-361 requirement waiver request

CHANGES TO PLANS:

- 1) **Sheets H-4 and H-7** - To address Callout discrepancies.
- 2) **Sheets M-2 and M-4** – To address QBD 6. Sheet pile clearance clarifications.

If the Bidder has any questions regarding this addendum, please contact Noel Aquino, Project Manager, at (415) 653-9517.

REMINDER: Bidders are required to acknowledge receipt of this addendum in Document 00 43 20.

Bids are due 08/15/24 at 10:00 A.M.

DocuSigned by:
Uday Prasad 8/7/2024
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Uday Prasad
*Acting Chief Harbor Engineer,
Engineering*
Port of San Francisco
Pier 1, SF, CA 94111

SECTION 00 41 00

BID FORM
Addendum 01

Date of Bid: _____

TO THE **SAN FRANCISCO PORT COMMISSION**, CITY AND COUNTY OF SAN FRANCISCO

In response to the Advertisement for Bids for the following public work:

**AMADOR STREET INFRASTRUCTURE IMPROVEMENTS
 (Port of San Francisco Contract No. 2852)**

the undersigned Bidder hereby proposes and agrees to execute the required Contract, should it be awarded to said Bidder, and to do all the work and furnish all the materials therefor all in accordance with the Specifications and Drawings referred to in said Advertisement for Bids and at the prices named in the attached Schedule of Bid Prices.

The undersigned declares: That it is the Bidder (or by holding the position below indicated is authorized to execute this Bid Form on behalf of the Bidder); that said Bidder submits this Bid; that said Bidder has not, nor have any of its agents, officers, representatives or employees, been guilty of collusion with any officer or representative of the City and County of San Francisco, or with any other party or parties in the submission of this Bid; nor has said Bidder received any preferential treatment by any officer or employee of the City and County in the making or submitting of this Bid. The undersigned declares under penalty of perjury that all representations made on this Bid Form are true and correct.

The undersigned declares, under penalty of perjury under the laws of the State of California that the Bidder has read and agrees to the requirements of the San Francisco Administrative Code and applicable requirements of the California Labor Code for each of the attached list Sections:

<i>Section No.</i>	<i>Title</i>
00 43 20	Acknowledgment of Receipt of Addenda
00 43 50	Proposed Subcontractors Form
00 43 51	Bidder's List of Subcontractors Not Selected
00 45 13	Bidder's Qualifications
00 45 61	Highest General Prevailing Rate Certification – Federal
00 45 65	Certificate of Bidder Regarding Apprenticeship Training Program
00 45 80	Non-collusion Affidavit
00 45 82	Certification of Bidder Regarding Debarment and Suspension
00 45 84	Nonlobbying Certification for Federal-Aid Contracts
00 45 85	Disclosure for Lobbying Activities
00 45 87	Equal Opportunity Certification

The undersigned acknowledges that he or she has read and agrees to these Sections (initial): _____



**INITIAL
HERE**

BUSINESS TAX REGISTRATION DECLARATION: The undersigned further declares and understands that if I am awarded the Contract, each of my Subcontractors and I must maintain a current business tax registration number. If the Tax Collector of the City and County of San Francisco determines that any of my Subcontractors or I do not have or maintain a current business tax registration number, the City may either cancel the Contract or withhold payment.

BOND OR CHECK REQUIRED: There is herewith attached, as required by law, bid security in accordance with the Section 00 21 13 - Instructions to Bidders, Article "Bid Security".

NON-DISCRIMINATORY EMPLOYMENT PRACTICES: All provisions of San Francisco Labor and Employment Code Article 131, excluding subsection 131.2(b), and deleting all references to "domestic partners" and "domestic partner status" in subsection 131.2(a), are hereby incorporated by reference and made a part of the Bid Documents as though fully set forth herein. The Bidder and all subcontractors and suppliers shall comply with these provisions and shall submit all required documents in a timely manner.

The undersigned, having examined all referenced documents and the Drawings, understanding the terms and conditions of the Contract Documents and the local conditions affecting the performance and costs of the Work, and having fully inspected the Site in all particulars, hereby proposes and agrees to fully perform the Work as indicated on the Drawings and in accordance with the requirements of the Contract Documents within the time stated therein, and for the following price(s):

SCHEDULE OF BID PRICES

Bid Item	Bid Item Description	Estimated Quantity	Unit*	Unit Price	Extension
1	MOBILIZATION AND DEMOBILIZATION (MAXIMUM 5% OF THE SUM OF BID ITEMS NO. 1 THROUGH NO. 45 AND WD-1A THROUGH WD-12)	---	LS	---	\$ _____
2	TRAFFIC CONTROL WORK	---	LS	---	\$ _____
2A	FURNISH AND INSTALL TEMPORARY TRAFFIC STRIPING TAPE	140	LF	\$ _____	\$ _____
3	TRENCH AND EXCAVATION SUPPORT WORK FOR SEWER WORK ON H-DRAWINGS	---	LS	---	\$ _____
4	TRANSPORTATION OF SURPLUS CALIFORNIA CLASS I (NON-RCRA) HAZARDOUS WASTE (SOILS) TO A CLASS I DISPOSAL FACILITY	1,235	TN	\$ _____	\$ _____
5	DISPOSAL OF SURPLUS CALIFORNIA CLASS I (NON-RCRA) HAZARDOUS WASTE (SOILS) AT A CLASS I DISPOSAL FACILITY	1,235	TN	\$ _____	\$ _____
6	TRANSPORTATION OF SURPLUS NON-HAZARDOUS SOILS (CLASS II & III) CALIFORNIA DESIGNATED WASTE (SOILS) TO A CLASS II & III DISPOSAL FACILITY	140	TN	\$ _____	\$ _____

Bid Item	Bid Item Description	Estimated Quantity	Unit*	Unit Price	Extension
7	DISPOSAL OF SURPLUS NON-HAZARDOUS SOILS (CLASS II & III) CALIFORNIA DESIGNATED WASTE (SOILS) AT A CLASS II & III DISPOSAL FACILITY	140	TN	\$ _____	\$ _____
8	4-FOOT DIAMETER CONCRETE MANHOLE WITH 52-INCH DIAMETER FRAME AND COVER	2	Each	\$ _____	\$ _____
9	5-FOOT DIAMETER CONCRETE MANHOLE WITH 52-INCH DIAMETER FRAME AND COVER	1	Each	\$ _____	\$ _____
10	STANDARD CONCRETE MANHOLE FOR 12-INCH TO 24-INCH DIAMETER SEWERS WITH NEW FRAME AND COVER, PER SFDPW STANDARD PLAN 87,181	5	Each	\$ _____	\$ _____
11	CLEAN AND MORTAR EXISTING MANHOLE	4	Each	\$ _____	\$ _____
12	8-INCH DIAMETER VCP ON CRUSHED ROCK BEDDING WRAPPED IN GEOTEXTILE FABRIC	20	LF	\$ _____	\$ _____
13	10-INCH DIAMETER VCP CULVERT (CONTINGENCY BID ITEM)	322	LF	\$ _____	\$ _____
14	12 -INCH DIAMETER RCP ON CRUSHED ROCK BEDDING WRAPPED IN GEOTEXTILE FABRIC	530	LF	\$ _____	\$ _____
15	15 -INCH DIAMETER RCP ON CRUSHED ROCK BEDDING WRAPPED IN GEOTEXTILE FABRIC	50	LF	\$ _____	\$ _____
16	FURNISH AND INSTALL 6 - INCH DIAMETER NOMINAL SIZE SDR-17 HDPE FORCE MAIN AND FITTINGS ON CRUSHED ROCK ENCASEMENT AND WRAPPED IN GEOTEXTILE FABRIC	1,401	LF	\$ _____	\$ _____

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Bid Item	Bid Item Description	Estimated Quantity	Unit*	Unit Price	Extension
17	FURNISH AND INSTALL 16-INCH DIAMETER NOMINAL SIZE SDR-17 HDPE CRUSHED ROCK ENCASEMENT AND WRAPPED IN GEOTEXTILE FABRIC	19	LF	\$ _____	\$ _____
18	FURNISH AND INSTALL 34 LF OF 10-INCH DIAMETER STEEL CASING UNDER RAILROAD TRACKS BY PIPE JACKING METHOD AND FURNISH AND INSTALL 34 LF OF 6-INCH DIAMETER NOMINAL SIDE SDR 17 HDPE INSIDE STEEL CASING.	---	LS	---	\$ _____
19	JACKING PIT FOR STEEL CASING INSTALLATION	1	Each	\$ _____	\$ _____
20	CLEANOUTS FOR 6-INCH DIAMETER NOMINAL SIZE SDR-17 HDPE INSIDE MANHOLE	3	Each	\$ _____	\$ _____
20A	CLEANOUTS FOR 6-INCH DIAMETER NOMINAL SIZE SDR-17 HDPE (CONDITIONAL BID ITEM)	11	Each	\$ _____	\$ _____
21	FURNISH AND INSTALL 2" AIR VALVE AND BLOW-OFF ASSEMBLY AND ACCESSORIES	1	Each	\$ _____	\$ _____
22	CONTROLLED DENSITY FILL INSIDE MANHOLE	9	CY	\$ _____	\$ _____
23	TELEVISION INSPECTION OF EXISTING 10-INCH DIAMETER VCP WHERE INDICATED ON H-DRAWINGS	3	EA	\$ _____	\$ _____
24	TELEVISION INSPECTION OF EXISTING 4-INCH OR 6-INCH DIAMETER CIP SIDE SEWER (CONDITIONAL BID ITEM)	6	EA	\$ _____	\$ _____
25	4-INCH OR 6-INCH DIAMETER CIP SIDE SEWER REPAIR, REPLACEMENT OR CONSTRUCTION AND CLEANOUTS, AS NECESSARY (CONDITIONAL BID ITEM)	368	LF	\$ _____	\$ _____

Bid Item	Bid Item Description	Estimated Quantity	Unit*	Unit Price	Extension
26	POST-CONSTRUCTION TELEVISION INSPECTION OF NEWLY CONSTRUCTED GRAVITY MAIN SEWERS, STORM DRAINS, CULVERTS, AND LATERALS	---	LS	---	\$ _____
27	EXPLORATORY HOLES (CONDITIONAL BID ITEM)	15	CY	\$ _____	\$ _____
28	PLUG AND FILL EXISTING 6-INCH DIAMETER FORCE MAIN WITH SLURRY GROUT AS INDICATED ON H-DRAWINGS	10	CY	\$ _____	\$ _____
29	CAST IRON WATER TRAP FOR CATCH BASIN TO REMAIN INCLUDING CLEANOUT CAP PER SFDPW STD. PLAN 87,194 (CONDITIONAL BID ITEM)	14	EA	\$ _____	\$ _____
30	IMPORT BACKFILL MATERIAL FOR SEWER WORK (CONDITIONAL BID ITEM)	524	CY	\$ _____	\$ _____
31A	HIGH-FLOW TRASH COLLECTION DEVICE - CROSSLINKED HIGH-DENSITY POLYETHYLENE	3	EA	\$ _____	\$ _____
31B	HIGH-FLOW TRASH COLLECTION DEVICE - DEFLECTIVE SEPARATOR	1	EA	\$ _____	\$ _____
32	MECHANICAL WORK	---	LS	---	\$ _____
33	STRUCTURAL WORK	---	LS	---	\$ _____
34	ELECTRICAL WORK	---	LS	---	\$ _____
34A	ELECTRICAL WORK – INTERIM	---	LS	---	\$ _____
35	FULL DEPTH PLANING PER 2-INCH DEPTH OF CUT	5160	SF	\$ _____	\$ _____
36	ASPHALT CONCRETE (TYPE A, 1/2 INCH MAXIMUM WITH MEDIUM GRADING)	1147	TON	\$ _____	\$ _____
37	10-INCH THICK CONCRETE BASE	78240	SF	\$ _____	\$ _____
38A	CONCRETE ROADWAY SWALE	1156	SF	\$ _____	\$ _____

Bid Item	Bid Item Description	Estimated Quantity	Unit*	Unit Price	Extension
38B	18-INCH WIDE CONCRETE SWALE	100	LF	\$ _____	\$ _____
39	6-INCH WIDE CONCRETE CURB	30	LF	\$ _____	\$ _____
40	6-INCH THICK CONCRETE DRIVEWAY PAVEMENT	170	SF	\$ _____	\$ _____
41	CLASS II AGGREGATE BASE	1200	CY	\$ _____	\$ _____
42	RAIL ROAD TRACK REMOVAL	1400	LF	\$ _____	\$ _____
43	ADJUST CITY-OWNED MANHOLE FRAME AND CASTING TO GRADE (CONDITIONAL BID ITEM)	10	EA	\$ _____	\$ _____
44	ADJUST CITY-OWNED HYDRANT AND WATER MAIN VALVE BOX CASTING TO GRADE (CONDITIONAL BID ITEM)	6	EA	\$ _____	\$ _____
45	LANDSCAPE WORK	---	LS	---	\$ _____
46	ALLOWANCE FOR ENVIRONMENTAL WORK	---	AL	---	\$ 100,000
47	ALLOWANCE FOR REMOVAL OF RAILROAD TRACK FACILITIES FROM THE SEWER AND FORCE MAIN TRENCH IF ENCOUNTERED BENEATH THE PAVEMENT AND WHERE INDICATED ON H-DRAWINGS AND OUTSIDE OF RAILROAD TRACK REMOVAL LIMITS ON C-DRAWINGS	---	AL	---	\$ 10,000
48	ALLOWANCE TO PERFORM NECESSARY WORK DUE TO UNFORESEEN CONDITIONS RELATED TO SEWER WORK UNDER H-DRAWINGS	---	AL	---	\$ 50,000
49	ALLOWANCE FOR SAN FRANCISCO UNIFORMED OFFICERS	---	AL	---	\$ 21,469
50	PARTNERING ALLOWANCE	---	AL	---	\$ 20,000
WD-1A	EXCAVATION AND BACKFILL FOR 4-, 6- AND 8-INCH PIPE TRENCH	200	LF	\$ _____	\$ _____

Bid Item	Bid Item Description	Estimated Quantity	Unit*	Unit Price	Extension
WD-1B	EXCAVATE AND BACKFILL FOR 16-INCH PIPE TRENCH	1,700	LF	\$ _____	\$ _____
WD-1C	FURNISH AND INSTALL SAND BACKFILL (CONDITIONAL BID ITEM)	700	TON	\$ _____	\$ _____
WD-2	ADDITIONAL EXCAVATION AND BACKFILL	300	CY	\$ _____	\$ _____
WD-3	REMOVAL AND INSTALLATION OF METER BOX	6	EA.	\$ _____	\$ _____
WD-4A	FURNISHING OF 4-, 6- AND 8-INCH DUCTILE IRON TYTON JOINT AND FLANGE JOINT PIPE	200	L.F.	\$ _____	\$ _____
WD-4B	INSTALLATION OF 4-, 6- AND 8-INCH DUCTILE IRON TYTON JOINT AND FLANGE JOINT PIPE WITH POLYETHYLENE ENCASMENT	200	L.F.	\$ _____	\$ _____
WD-4C	FURNISHING OF 16-INCH DUCTILE IRON RESTRAINED PUSH-ON JOINT PIPE	1,700	L.F.	\$ _____	\$ _____
WD-4D	INSTALLATION OF 16-INCH DUCTILE IRON RESTRAINED PUSH-ON JOINT PIPE WITH POLYETHYLENE ENCASMENT	1,700	L.F.	\$ _____	\$ _____
WD-5A	FURNISHING OF 4-, 6- AND 8-INCH DUCTILE IRON FITTINGS	1421	LBS.	\$ _____	\$ _____
WD-5B	INSTALLATION OF 4-, 6- AND 8-INCH DUCTILE IRON FITTINGS WITH POLYETHYLENE ENCASMENT	1,421	LBS.	\$ _____	\$ _____
WD-5C	FURNISHING OF 16-INCH DUCTILE IRON FITTINGS	13,895	LBS.	\$ _____	\$ _____
WD-5D	INSTALLATION OF 16-INCH DUCTILE IRON FITTINGS WITH POLYETHYLENE ENCASMENT	13,895	LBS.	\$ _____	\$ _____
WD-6A	FURNISHING AND INSTALLATION OF 4- AND 6-INCH DUCTILE IRON GATE VALVES	7	EA.	\$ _____	\$ _____

Bid Item	Bid Item Description	Estimated Quantity	Unit*	Unit Price	Extension
WD-6B	FURNISHING AND INSTALLATION OF 16-INCH DUCTILE IRON GATE VALVES	4	EA.	\$ _____	\$ _____
WD-7	FURNISHING AND INSTALLATION OF 2-INCH AIR VALVE/BLOW OFF ASSEMBLY	6	EA.	\$ _____	\$ _____
WD-8	TRENCH SHORING AND BRACING PER ALL APPLICABLE SAFETY ORDERS (CONDITIONAL BID ITEM)	22,000	S.F.	\$ _____	\$ _____
WD-9	FURNISHING AND INSTALLATION OF SCREW TAPS	10	EA.	\$ _____	\$ _____
WD-10	SUPPORT FOR INSTALLATION OF SERVICE PIPE - OPEN CUT	160	L.F.	\$ _____	\$ _____
WD-11	REMOVAL OF SFWD - OWNED VALVE BOXES AND COVERS	8	EA.	\$ _____	\$ _____
WD-12	PIPE ABANDONMENT	1700	L.F.	\$ _____	\$ _____
WD-13	ALLOWANCE FOR FURNISHING AND INSTALLING HYDRANT BOLLARDS FOR NEW LOW PRESSURE FIRE HYDRANTS	---	AL	---	\$ 6,000
WD-14	CONDITIONAL ALLOWANCE FOR UNFORESEEN CONDITIONS RELATED TO WATER WORK.	---	AL	---	\$ 50,000
WD-15	CONDITIONAL ALLOWANCE FOR WORKING OUTSIDE NORMAL WORK HOURS	---	AL	---	\$ 25,000
WD-16	CONTRACT SAFETY REQUIREMENTS	---	AL	---	\$ 25,000
TOTAL BID PRICE (summation above Bid items):					\$ _____

*Note: LF = Linear Feet, LS = Lump Sum, SF = Square Feet, EA = Each, AL = Allowance, CY = Cubic Yard, TN = US Short Ton, LBS = Pounds

Bidder acknowledges that quantities are not guaranteed and final payment will be based on the actual quantities determined as provided in the Contract Documents.

The City reserves the right after opening Bids to reject any or all Bids, and to waive any minor irregularity in a Bid. In case of discrepancy between the sum of Bid item amounts and the Total Bid Price, the sum of said amounts shall prevail. In the case of discrepancy between words and figures, the words shall prevail. In case of discrepancy between unit prices Bid and extensions thereof, said unit prices shall prevail.

Mobilization Bid Item: Bidder agrees that: (a) if the mobilization amount exceeds the limitation provided, the City will include the full line item amount in calculating the Total Bid Price, but will pay the excess amount over the course of the Contract based on the progress of the work, and (b) if the Bidder leaves the mobilization line item blank, the City will read the item as \$0 for purposes of calculating the Total Bid Price and the Bidder shall NOT be able to claim a clerical error on that basis.

Bidder acknowledges and agrees that this Bid, if not withdrawn prior to the scheduled time for receipt of Bids, shall not be withdrawn for a period of **90** days thereafter.

Time allowed for completion of all Work shall be as specified in Section 00 73 02, beginning with and including the official date of Notice to Proceed as established by the Executive Director of the Port of San Francisco.

Bidder acknowledges and agrees that it will perform not less than 30% of the Contract Work with its own forces.

Department of Industrial Relations Registration: The undersigned further declares that the Bidder is compliant with the registration requirements of the California Department of Industrial Relations (“DIR”) under California Labor Code section 1725.5, and that its registration with the DIR will be current as of March 1, 2015 for any Bid submitted on or after March 1, 2015, and/or that its registration with the DIR will be current as of April 1, 2015, should the Contract be awarded on or after April 1, 2015, regardless of the Bid date.

Executed on _____ 20 _____

Name of Firm, Corporation, Partnership or Joint Venture

E-mail Address

Signature of Bidder or Authorized Representative

Telephone Number

Print Name of Authorized Representative

Contractor's California License No.

Position in Firm or Corporation

License Expiration Date

Address of Firm or Corporation

S.F. Business Tax Registration Certificate Number

City State Zip Code

Contractor's DIR Registration No.

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.

END OF SECTION

SECTION 09 90 00 – PAINTING & COATING

Addendum 01

PART 1 GENERAL

1.1 SECTION INCLUDES BUT IS NOT LIMITED TO:

- A. This specification covers preparation of surfaces and completion of coating of all sewage piping, and painting of pipe hangers.
- B. All materials delivered to the jobsite/painting shop shall be in the original sealed and labeled container of the coating manufacturer.

1.2 SCOPE

- A. Structural items to be painted include, but are not limited to, the following:
 - 1. Galvanized Surfaces where components are covered under Divisions :
Clean galvanized surfaces with nonpetroleum-based solvents so that the surface is free of oil and surface contaminants. Remove pretreatment from galvanized sheet metal fabricated from coil stock by mechanical methods.
- B. Mechanical items to be painted include, but are not limited to, the following:
 - 1. Painting includes field-painting exposed bare and covered pipes (including color coding), hangers, supports, exposed steel and iron work, and primed metal surfaces of mechanical and electrical equipment.
 - 2. Supports.
 - 3. Accessory items.
 - 4. Operating parts not to be painted include moving parts of operating equipment, such as the following:
 - a. Hardware such as nut, washers and bolts.

1.3 RELATED SECTIONS

- A. All Division 22 Specification Sections
- B. All Division 33 Specification Sections

1.4 SUBMITTALS

- A. Submit complete product data and four (4) samples, 8 inches by 10 inches, of each color for painting and finishing sufficiently in advance so that no delay shall occur in the work. The submittals shall include, but not limiting to, the following:
 - 1. Product Data:
Submit manufacturer's technical information, including label analysis and instructions for handling, storing, and applying each coating material proposed for use.
 - 2. Material List:

Provide an inclusive list of required coating materials. Indicate each material with specific coating, finish system, color designation, sheen, and application methods. Identify each material by the manufacturer's catalog number and general classification.

3. VOC Compliance:
Provide manufacturer's certified documentation that products supplied comply with local regulations controlling use of volatile organic compounds.
4. Samples for Initial Color Selection:
Submit samples in the form of manufacturer's color.
5. Applicator qualification:
Submit the year of experience which is similar to this project. Similar projects in the past 5 years with reference's contact phone number.

1.5 REFERENCE STANDARDS

- A. Perform surface preparation in strict accordance with the methods currently published by the Steel Structures Painting Council (SSPC) as listed in this Section.
- B. Comply with the safety coating colors specified in the Occupational Safety and Health Standards, Section 1910.44, "Safety Color Code For Marking Physical Hazards". Parts of mechanical equipment to be painted with these colors are identified in these OSHA Standards. Such equipment includes but is not limited to: belt guards; emergency stop buttons for machinery; dangerous parts of machines which may cut crush, shock or otherwise injure operating personnel. The Contractor shall identify such requirements and provide safety color coatings accordingly.
- C. Standard coating terms defined in ASTM D16 (latest version) apply to this section.

1.6 QUALITY ASSURANCE

- A. **Applicator Qualification**
A firm or individual experienced in applying paints and coatings similar in material, design, and extent to those indicated for this Project, whose work has resulted in applications with a record of successful in-service performance.
- B. **Single Source Responsibility**
Provide primers and intermediate coats for each coating system from the same manufacturer as the finish coats.
- C. **Material Compatibility**
Provide primers and intermediate coats for each coating system from the same manufacturer as the finish coats.
- D. **Material Quality**
Provide the manufacturer's best quality paint material of the various coating types specified. Paint material containers not displaying manufacturer's product identification is not acceptable.
- E. **Project Conditions**
Apply paints only when the temperature of surfaces to be painted and surrounding air temperatures are between 45°F and 95°F (7°C and 35°C). Do not paint in snow, rain,

fog or mist, when the relative humidity exceeds 85 percent, at temperature less than 5°F (3°C) above dew point, or to damp or wet surfaces.

1.7 WARRANTY

- A. Furnish a two (2) year Warranty for work covered by this section per the requirements of Section 01 78 36, "Warranties."

PART 2 PRODUCTS

2.1 GENERAL REQUIREMENTS

- A. Compatibility: All coating and lining materials within a system must be the product of a single manufacturer or the manufacturer's approved supplier.
- B. The color for each coat within a system must be a different color. The final topcoat color must be as determined by the City Representative. The color chart for coating material must be provided to the City Representative for color selection acceptance.
- C. When the primer is coated in the factory and if the intermediate coat and topcoat are to be coated in the field, the shop coating applicator and the field Coating Contractor must coordinate and check for the compatibility of the coating/lining materials to be used prior to the submittal.
- D. Manufacturer's Certification: That products furnished meet applicable Bay Area Air Quality Management District regulations as to allowable volatile organic compound (VOC) content for the place of application and use intended.
- E. The product data sheet of the coating materials must be submitted to the City Representative for final acceptance.

2.2 STRUCTURAL, MECHANICAL AND ELECTRICAL PAINTING SYSTEMS

- A. Coating System for Exposed Steel and Ductile Iron
 - 1. Coating system must be one of the following:
 - a. Three (3) coats of thin film moisture-cured polyurethane-- each coat must be single component, moisture-cured polyurethane. First coat must be Wasser MC-Zinc 100, or approved equal. Intermediate coat must be Wasser Miomastic 100, or approved equal. Topcoat must be Wasser MC-Ferrox A 100, Wasser MC-Luster 100, or approved equal. The dry film thickness must be 3-5 mils per coat. The total dry film thickness must be 9-15 mils.
 - b. Three (3) coat system of liquid epoxies in combination with the polyurethane topcoat--the total dry film thickness must be 16-20 mils. The system must consist of zinc rich primer, epoxy intermediate coat and polyurethane topcoat for UV stability. The manufacturer must be Carboline, Sherwin Williams, International, or approved equal.
 - 2. Surface Preparation for steel surfaces must be in accordance with SSPC-SP10, Near-White Metal Blast Cleaning.
 - 3. Surface Preparation for ductile iron surfaces must be in accordance with NAPF 500-03

- B. Manufacturers:
 - 1. International - Heavy Duty Group
 - 2. Ameron
 - 3. Sinclair
 - 4. Or equal.

- C. Coating Systems: Indicated in the table below, primer and finish numbers shown are based on International as the manufacturer.



(DFT = Dry Film Thickness)

COATING SYSTEM No.	SUBSTRATE	SURFACE PREP.	PRIMER	DFT MILS	FINISH	DFT MILS
1	Steel, Submerged Sewage	SP.1 & SP.10	Intertuf 708	8	Intertuf 708	8
2	Galvanized Steel, Submerged Sewage	SP.1 & SP.7	Interline 982	2	Intertuf 708	16
3	Structural Steel, Zinc Coated	SP.1 & SP.2,		0	Interseal 385	6-8

COATING SYSTEM No.	SUBSTRATE	SURFACE PREP.	PRIMER	DFT MILS	FINISH	DFT MILS
4	Galvanized Steel, Non- Submerged	SP.1 & SP.2		0	Interseal 385	6-8
5	Steel, Submerged Potable Water	SP.1 & SP.10	Interline 925	5	Interline 925	5
6	Steel Submerged, Treated Sewage	SP.1 & SP.10	Interline 925	5	Interline 925	5
7	Black Iron Piping	SP.1 & SP.6		0	Interseal 385	6-8
8	Insulated Piping	Clean & Dry	Intercryl 530	2	Intercryl 530	2
9	Steel Stacks, Breeching, Manifolds, etc. (to 800 deg. F)	SP.1 & SP.10	Interterm 875	1	Interterm 875	1
10	Steel Buried In Concrete	SP.1 & SP.2		4	7100	12
11	Asphalt Coated Pipes	Clean and Dry	Intercryl 530	2	Intercryl 530	2
12	Motors, Pumps, Compressor (Factory Primed)	SP.1	Interseal 670HS		Interthane 990HS	2

13	Copper Piping	clean/ dry			Interthane 990HS	2
14	Cast Iron/ Ductile Iron				Interthane 990HS	2
15	(Outdoor Exposed) PVC Pipe	Solvent Wipe	Interseal 670HS	2	Interthane 990HS	2
16	Stainless Steel (304, 316)	SP.1 & SP.2			Interthane 990HS	2
17	FRP Duct and Equipment	Solvent Wipe	Interseal 670HS	2	Interthane 990HS	2

2.3. SAFETY COATINGS:

- A. American Standard OSHA colors; OSHA orange, yellow, red, blue, green, white, black.
- B. Use colors specified to comply with the Occupational Safety and Health Standards, Section 1910.44, "Safety Color Code for Marking Physical Hazard." Parts of mechanical equipment to be painted with these colors are specified in this particular section of the OSHA standards.

PART 3 EXECUTION

3.0 DELIVERY, STORAGE AND HANDLING

- A. Delivery materials to the job site in manufacturer's original, unopened packages and containers bearing manufacturer's name and label, product description, date of manufacture, color name, and manufacturer's thinning and application instructions.
- B. Store materials not in use in tightly covered containers in a well ventilated area at minimum ambient temperature of 45°F (7°C). Protect from freezing. Keep storage area neat and orderly. Remove oily rags and waste daily.

3.1 PREPARATION

- A. Under-pier Sewage Cast Iron Pipe: Prepare all under-pier cast iron sewage pipe surfaces in accordance with the procedures in SSPC-SP1 followed by SSPC-SP6 Commercial Blast Cleaning. Ensure all protective coating applied to the pipe during fabrication is removed prior to blasting. Prepared surface shall be a 2-3 mil angular blast profile.
- B. For other surfaces other than under-pier sewage pipe sewage, prepare surfaces as indicated in the tables above.
- C. Galvanized Metal: Prepare surface with procedure SP.1 followed by SP.7 or Galvarep.

3.2 APPLICATION

- A. Apply coating systems in strict accordance with the manufacturer's written instructions and recommendations.
- B. Air and surface temperatures shall be applied within limits set forth by the manufacturer for the coatings being applied and work area shall be reasonably free of air-borne dust at the time of application and while coating is drying.
- C. If a substrate requires a primer and several finish coats, apply painting in one prime coat and two finish coats, each of which shall be a different shade or hue so that a visual inspection can be made to verify the number of coats applied.
- D. In the event that the requirements of this Section conflict with any manufacturer's specific coating or painting requirements for the service intended by the Contract Documents, the more stringent requirement or standard shall govern.
- E. Labels: Do not paint over Underwriters Laboratories, Factory Mutual or other code-required labels or equipment name, identification, performance rating, or nomenclature plates.

3.3 ACCEPTANCE OF WORK

- A. All surface preparation and repairs shall be approved by the Engineer or Inspector before primer is applied. Request acceptance of each coat by engineer or inspector before applying in next coat. Correct work that is not acceptable and request re-inspection by engineer/inspector.

END OF SECTION

SECTION 33 41 00.10

REINFORCED CONCRETE PIPE

Addendum 01

PART 1 - GENERAL

1.1 SUMMARY

This section covers the material specifications, factory and field testing for the reinforced concrete pipe (RCP).

1.2 RCP AND FITTINGS

Precast reinforced concrete pipe and fittings will be installed under the requirements of Section 33 33 00 and the applicable requirements in Section 304 of the Standard Specifications.

1.3 SUBMITTALS

- A. Refer to Section 01 33 00 for submittal procedures.
- B. Within a minimum of five (5) working days prior to commencement of plant testing, the Contractor shall notify the City Representative so that tests may be witnessed if desired. Three edge bearing testing of RCP shall be in accordance with ASTM C76.
- C. Shop Drawings and Design Calculations: Detailed shop drawings showing the D-load, cement type, concrete strength, and details of the wall class, and fittings. These details shall include the type of cage or cages, the location of the cage or cages in the pipe wall, the size and spacing of circumferential and longitudinal reinforcing steel, and the cross-sectional area of reinforcing steel in each cage per lineal foot of pipe. Submit design calculations.
 - 1. The gasket details shall include the diameter of the cross-section and the unstretched diameter and volume. Pipeline layout drawings shall include pipe numbers, where applicable, stationing, manhole and structure locations, and all other pertinent details required to construct locations, and all other pertinent details required to construct the pipeline. No pipe manufacturing will be allowed prior to acceptance of the calculations and drawings by City Representative.
 - 2. Product Data: Gaskets.
 - 3. Certifications: Test certificates guaranteeing that the pipe furnished hereunder is in compliance with the requirements of the Specifications.
- D. The Contractor shall prepare, submit for review, and not begin trench construction, until given approval by the City Representative of a Joint Layout Plan of the entire pipe under this contract. This plan shall include all details necessary for the construction. Such details shall be in accordance with the standards of the respective manufacturing industry, ASTM, AWWA, etc., except as modified by requirements within these Specifications.
- E. The Joint Layout Plan shall include but not be limited to the following:
 - 1. Steel wall bell detail including gasket spigot pipe connecting to reinforced concrete structures.
 - 2. Rubber or Neoprene rubber gaskets.

3. All RCP bells shall be placed in the same direction unless otherwise approved by the City Representative.
 4. Closing joint detail including coupling as necessary.
 5. Proposed pipe delivery schedule.
 6. Layout plan for proposed alignment showing customized spigot end pipe length, graphical layout and spreadsheet count of pipes.
- F. Submit for review test reports of the physical properties of the O-ring gaskets.
- G. The Contractor's installation drawings, after approval by the RE, shall be used to supplement the Contract Drawings. The installation and detail drawings shall utilize an identification system for piping elements that will ensure their correct placement when received in the field.

1.4 QUALITY ASSURANCE

Quality control records of tests required by the Specifications.

1.5 MAKING OF PIPE

- A. Each pipe section shall be identified by indicating the following:
1. Name of manufacturer.
 2. Date of manufacture.
 3. Inside diameter of pipe, in inches.
 4. Length of pipe, in feet.
 5. Class of pipe or D-loading in pounds.
 6. Top of pipe if elliptical reinforcing is used.
 7. Sequential numbering of each piece of pipe.

PART 2 - PRODUCTS

2.1 CLASS V RCP

RCP materials designated on Plans as Class V shall conform to the requirements of latest ASTM Designation C76 and the applicable requirements of Section 304 of the Standard Specifications. The designated D-load to produce a 0.01-inch crack of pipe shall be 2000. The D-load to produce the ultimate load shall be 3000. Class V RCP shall be designed and manufactured with concrete strength at 5000 psi with wall C design. The RCP shall be spun pipe or vertically cast (dry cast) pipe. **Concrete shall have a minimum slump of 2 ½ inches and pipe shall remain in the form for a minimum of 6 hours.**

2.2 GENERAL REQUIREMENTS FOR ALL RCP

All RCP shall be designed and manufactured with minimum wall B Design. For all RCP, double circular steel reinforcements shall be provided. The area of the outer cage steel reinforcement shall not be less than 75 percent of the inner cage. Joints of RCP shall be of Deep Bell (Flared Bell) with gasket type. Design calculations shall be submitted for approval. No wire fabric/mesh or welded wire design shall be allowed. All pipe to pipe connections shall be of a water-tight bell/spigot connection. No cast-in-place joint connections will be allowed.

2.3 LONGITUDINAL BARS

Not less than 12 longitudinal bars at approximately equal spacing shall be provided for each cage. A minimum 3/8-inch diameter size shall be used for the longitudinal bars.

2.4 CONCRETE COVERING

A minimum 1-1/2 inches concrete covering over reinforcing steel from the outside and one inch from the inside surface of the pipe shall be provided. Cement shall be Type II conforming to ASTM C150.

2.5 INTERNAL WORKING PRESSURE

Internal working pressure shall be designed for 20 feet.

2.6 PIPE JOINTS

A. The pipe shall be furnished with bell-spigot ends for the open cut construction. Pipe joints of 12-inch and 15-inch shall be single gasket design. Refer to 3.14 of this Section for details on hydrostatically testing single gasket joints.

B. The joint surfaces shall be of such shape and dimensions that the joints will be self-centering when the pipes are laid, so that the gasket will not be required to support the weight of the adjoining pipe. The joint shall be designed and made so that when completed, the pipe will form a continuous line without projections, indentations, offsets, or irregularities of any kind, and shall be capable of satisfying the pressure and leakage requirements specified.

C. Gaskets shall be rubber O-rings. Only manufacturer-recommended lubricants shall be used.

D. Steel pipe wall bells or fittings to be encased in the reinforced concrete structures shall be fabricated as shown on Plans.

2.7 PIPE LENGTH

The length of each pipe section shall be determined by the Contractor based on the field conditions. Pipe ends shall be square with the axis of the pipe within 1/4 inch except when beveled ends are furnished. In areas where the pipe ends connect to RC structures, the first joint on both sides of the structure must be a maximum of 4' from the edge of structure. Pipe joints shall not be located where an existing side sewer or culvert is supposed to reconnect.

2.8 BEDDING

Bedding material and details shall be as shown on H-drawings.

PART 3 - EXECUTION

3.1 DISTRIBUTING MATERIALS

Distribute materials along the trench only as will be used each day unless otherwise approved by the City Representative. Store materials in a manner that will not be a hazard to traffic or to the public in general, will not obstruct access to adjacent property, or will not obstruct other Contractor's working in the area.

3.2 HANDLING AND TRANSPORTATION

- A. During loading, transportation, unloading, storage, and laying, every precaution shall be taken to prevent damage to the pipe. Trucks, trailers, or railway cars used for transporting coated pipe shall be provided with bolsters between each layer of pipe curved to fit the outside of the pipe.
- B. Lifting of pipe during unloading shall be done using two slings placed at the quarter points of the pipe sections. Pipe may be lifted into the trench using one sling near the center of the pipe, provided the pipe is guided to prevent uncontrolled swinging and no damage will result to the pipe or harm to the workers. The slings shall bear uniformly against the pipe. When not being handled, the pipe shall be supported on timber cradles or on properly prepared ground, graded to eliminate all rock points and to provide uniform support along the full length. Any unit of pipe that, in the opinion of the City Representative, is damaged beyond repair shall be removed from the site of the work and replaced with another unit.
- C. Pipe and fittings shall not be stored on rocks or gravel, or other hard material which might damage the pipe or lining and coating. No pipe shall be allowed to rest on the bell end of the pipe. This shall include storage areas and along the pipe trench.
- D. Heavy canvas, or nylon slings of suitable strength shall be used for lifting and supporting materials; do not use chains or cables.

3.3 RUBBER GASKET STORAGE

- A. Store all rubber gaskets in a cool, well-ventilated place and do not expose to the direct rays of the sun. Do not allow contact with oils, fuels, petroleum, or solvents.

3.4 PIPE PREPARATION AND HANDLING

- A. Each pipe and fitting shall be carefully inspected before being installed. The interior and exterior shall be inspected, and all damaged areas patched in the field with material equal to the original. Any pipe or coating system which, in the opinion of the City Representative, is damaged beyond repair shall not be used and shall be promptly removed from the site. Clean ends of pipe thoroughly. Remove foreign matter and dirt from inside of pipe and keep clean during and after installation.
- B. Use proper implements, tools, and facilities for the safe and proper protection and installation of the pipe. Carefully handle pipe in such a manner as to avoid any physical damage to the pipe. Do not drop or dump pipe into trenches under any circumstances.

3.5 PREPARATION OF TRENCH

- A. Line and Grade:
 - 1. For pipelines intended to be straight, do not deviate more than 1 inch from line or 1/8 inch from grade. Measure for grade at the pipe invert, not at the top of the pipe, because of permissible variation in pipe wall thickness.
 - 2. Grade the bottom of the trench by hand to the line and grade to which the pipe is to be laid, with proper allowance for pipe thickness and pipe base. Remove hard spots that would prevent a uniform thickness of bedding. Before laying each section of the pipe, check the grade with a straightedge and correct any irregularities found. The trench bottom shall form a continuous and uniform bearing and support for the pipe at every point between bell holes, except that the grade may be disturbed for the removal of lifting tackle.

3. Geo-Fabric, if required, shall be placed inside the trench and thoroughly compacted as shown on Plan before any bedding to be put on.
4. Pipe bedding shall be compacted in a single lift to a minimum of 90 percent relative compaction. Thickness shall conform to the Drawings.

If during pipe installation it is found that a pipe section will be at an incorrect grade, that piece shall be removed and the base regraded to the proper elevation.

- B. Bell (Joint) Holes: At the location of each joint, dig bell (joint) holes of ample dimensions in the bottom of the trench and at the sides as required to permit the joint to be made properly and to permit easy visual inspection of the entire joint and checking the joint gap and the gasket with a feeler gauge.
- C. Removal of Water: The trench shall be kept dry until the pipe laying and jointing are completed.
- D. Corrosion protection, if required, shall be used to protect pipe from corrosion in areas of soil contamination.

3.6 PREPARING PIPE FOR TRENCH

- A. Inspect each pipe and fitting before the pipe and/or fitting is lowered into the trench.
- B. Damaged portions of coating or lining shall be cleaned and repaired by experienced personnel, so that the protective coating or lining is equal to the original. Manufacturer's recommendations for repairs shall be followed.
- C. Wipe the joints of pipe, fittings, and appurtenances clean of all dirt, grease, and foreign matter before the pipe is lowered into trench.

3.7 LAYING PIPE

- A. Installation: All pipe, fittings, and appurtenances shall be installed in accordance with the manufacturer's instructions and these Specifications.
- B. Laying Plan: The pipe and fittings shall be laid in accordance with the laying plan, except as modified by the City Representative.
- C. All pipe shall be prepared as herein before specified and shall be laid on the prepared pipe bedding and bedded to ensure uniform bearing. No pipe shall be laid in water or when, in the opinion of the City Representative, trench conditions are unsuitable. Joints shall be made as specified for the respective types.
- D. Where the pipe is connected to concrete structures or manholes, the connection shall be made as shown. A standard pipe joint shall be located no more than 18 inches from the structure or manhole.
- E. Joining Pipe: Assemble joint in accordance with manufacturer's instructions, or as modified by these Specifications. As the next section of pipe is being readied for laying, clean the bell of the previously laid pipe of all foreign material and apply a thin film of the specified lubricant to the entire surface of the bell ring. At the same time, lubricate the gasket and install in the spigot groove. The gasket tension shall be uniform around the groove before placing the pipe in the trench. Lower the pipe section to be laid into the trench until it is

approximately in line with the previously laid pipe section and the spigot is centered in the bell. Then force the pipe home and secure to proper alignment and grade with the specified pipe zone material, well tamped. The gasket position shall be checked with a feeler gauge, furnished by the pipe manufacturer, to assure proper seating.

- F. The Contractor shall submit a procedural description of how he intends to effectively make field connections of joints without damaging the neoprene gasket or the pipe. The Contractor's submittal must include a structure or method that positively centers and concentrically controls the closing of the joint without damaging the neoprene gaskets or the pipe.
- G. In the event that the Contractor cannot adequately demonstrate the ability of not damaging the neoprene gasket, even with absolute control for centering and concentrically making the joint connection, the City Representative may require all concrete surfaces in contact with the neoprene gasket to be coated with an approved epoxy to reduce the abrasive effect from the concrete.
- H. Prevent foreign material from entering the pipe while it is being placed in the trench. Remove all foreign material from the pipe or joint ring before the next pipe is placed. If the pipe laying crew cannot put the pipe into the trench and in place without getting earth into the pipe, the City Representative may require that snugly fitted, tightly woven canvas bags be placed over each end before lowering the pipe. The bags shall be left in place until the connection is to be made to the adjacent pipe. During laying operations, keep debris, tools, clothing, or other materials out of the pipe.
- I. Take all precautions necessary to prevent the "uplift" or floating of the line prior to the completion of the backfilling operation.
- J. Follow pipe laying operations closely with backfilling of the trenches with sufficient material to prevent the pipe from moving. Place backfill carefully and simultaneously on both sides of the pipe to avoid displacement of the pipe and damage to the joints and coating.
- K. Bell End to Face Direction of Laying: Unless otherwise allowed, lay pipe with bell end facing in the direction of the laying.

3.8 PERMISSIBLE DEFLECTION AT JOINTS

Where it is approved by the City Representative to deflect pipe from a straight line, either in the vertical or horizontal plane, do not exceed 50 percent of the amount of deflection recommended by the pipe or coupling manufacturer and as reviewed by the City Representative.

3.9 PIPE ZONE MATERIAL

- A. Particular attention must be given to the area of the pipe zone from the flow line to the centerline of the pipe to ensure that firm support is obtained to prevent any lateral movement of the pipe during the final backfilling of the pipe zone.
- B. Place the pipe zone backfill material around the pipe in even lifts on each side of the pipe not exceeding 8 inches prior to compaction, then compact to 90 percent relative compaction. Operate compaction equipment in such a manner as to prevent damage to the pipe. The limits of the pipe zone backfill material shall be as shown on the Drawings.

3.10 PIPELINE CLOSING

Take the necessary precautions required to prevent excavated or other foreign material from entering the pipe during the laying operation. At all times, when laying operations are not in

progress, at the close of the day's work, or whenever the workers are absent from the job, close and block the open end of the last laid section of pipe with a watertight plug to prevent entry of foreign material or creep of the gasket joints. End closure shall be sufficient to prevent trench water from entering pipe. Keep water out of the trench.

3.11 PIPELINE

Pipelines shall not be used as conductors for trench drainage during construction.

3.12 SIDE SEWER AND CULVERT CONNECTIONS

Side sewer and culvert connections to RCP shall be constructed per detail on H-drawings.

3.13 INSPECTION, TESTS AND ACCEPTANCE

A. Acceptance will be on the basis of the successful results of the tests of materials, the required D-load bearing tests, pressure tests, and inspection of the complete product. The quality of all materials used in the pipe, the process of manufacture, and the finished pipe shall be subject to inspection by the City Representative. Inspection may be conducted at the place of manufacture, or at the work site after delivery, or both. The pipe shall be subject to rejection at any time due to failure to meet any of the specification requirements, even though sample units may have been accepted as satisfactory at the place of manufacture. All pipe which is rejected shall be immediately removed from the project site by the Contractor.

B. Certified copies in triplicate of test results will be required for the materials and the finished pipe units as described herein. In addition, the City reserves the right to have any or all pipe units inspected or tested, or both, by an independent testing laboratory at either the manufacturer's plant or elsewhere. Such additional inspection and/or tests shall be at the City's expense and shall be the test results of record. The Contractor shall notify the City Representative minimum 5 working days in advance prior to the D-load testing. Pipe units to be tested may be selected at random at the option of the City Representative.

3.14 HYDROSTATICAL TEST FOR DOUBLE GASKET JOINT – NOT USED



3.15 HYDROSTATICALLY TESTED FOR SINGLE GASKET JOINT

A. The Contractor shall submit his joint testing procedure and equipment for the City Representative's review prior to testing.

B. All pipe shall be tested for leakage and thoroughly cleaned of any obstructions or debris. Pipes shall be tested and retested, at the Contractor's cost, per the following paragraphs until acceptance by the City Representative. All pipe shall be joint-tested prior to backfill.

C. Prior to placement of backfill, the joint shall be tested in a sequential operation with tests conducted on each joint as they become available two or three pipe sections behind the last section being installed, as directed by the City Representative, in order that the pipe laying operations shall have no adverse effect upon the security of the completed joint after testing.

D. Joints shall be tested in accordance with ASTM C-1103-03.

Joints which show leakage shall be repaired or the joint relayed subject to the approval of the City Representative, and the joint retested. All joints shall have been tested and shall comply with the above leakage requirement prior to acceptance of the work.

E. The Contractor shall maintain a current log of all pipe testing, including, but not limited to, the following information:

- Type of test: i.e., hydrostatic, initial test, or retest number.
- Time, beginning, and end.
- Maximum pressure and pressure drop over test time.
- All special precautions, considerations, or remarks concerning the particular test.

. See Exhibit "A" and "B"

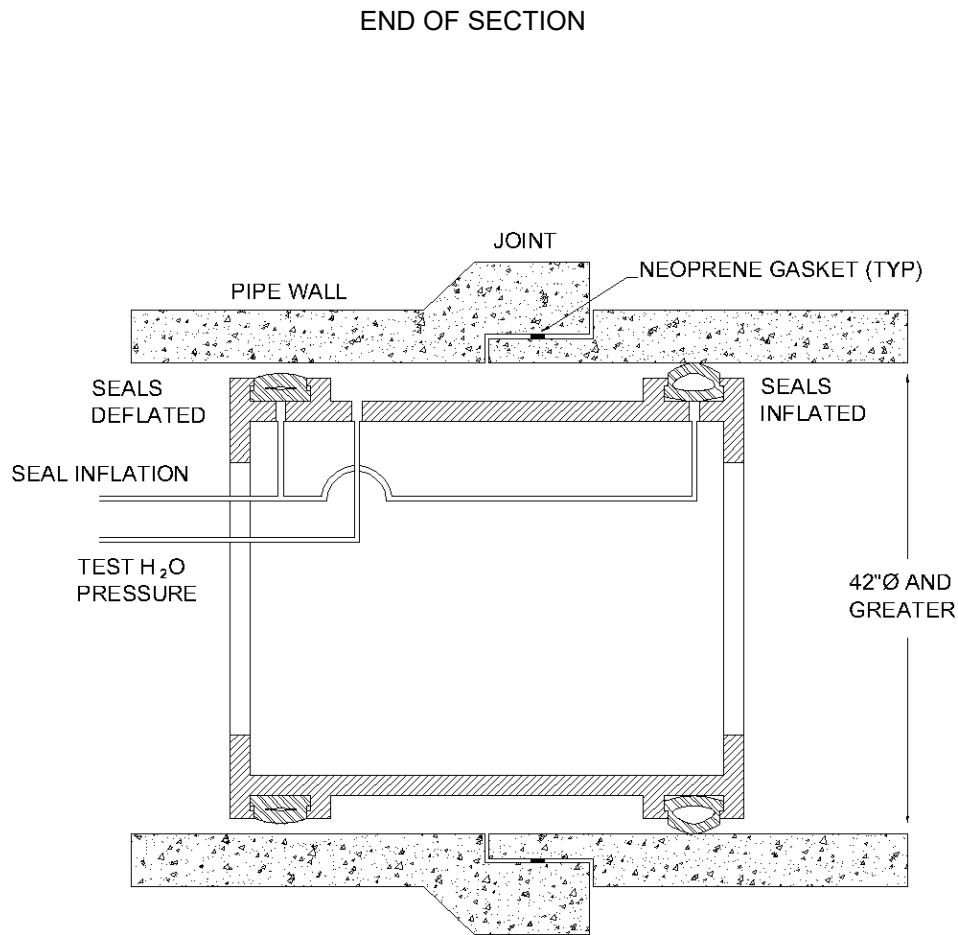


EXHIBIT "A" (NOT USED)



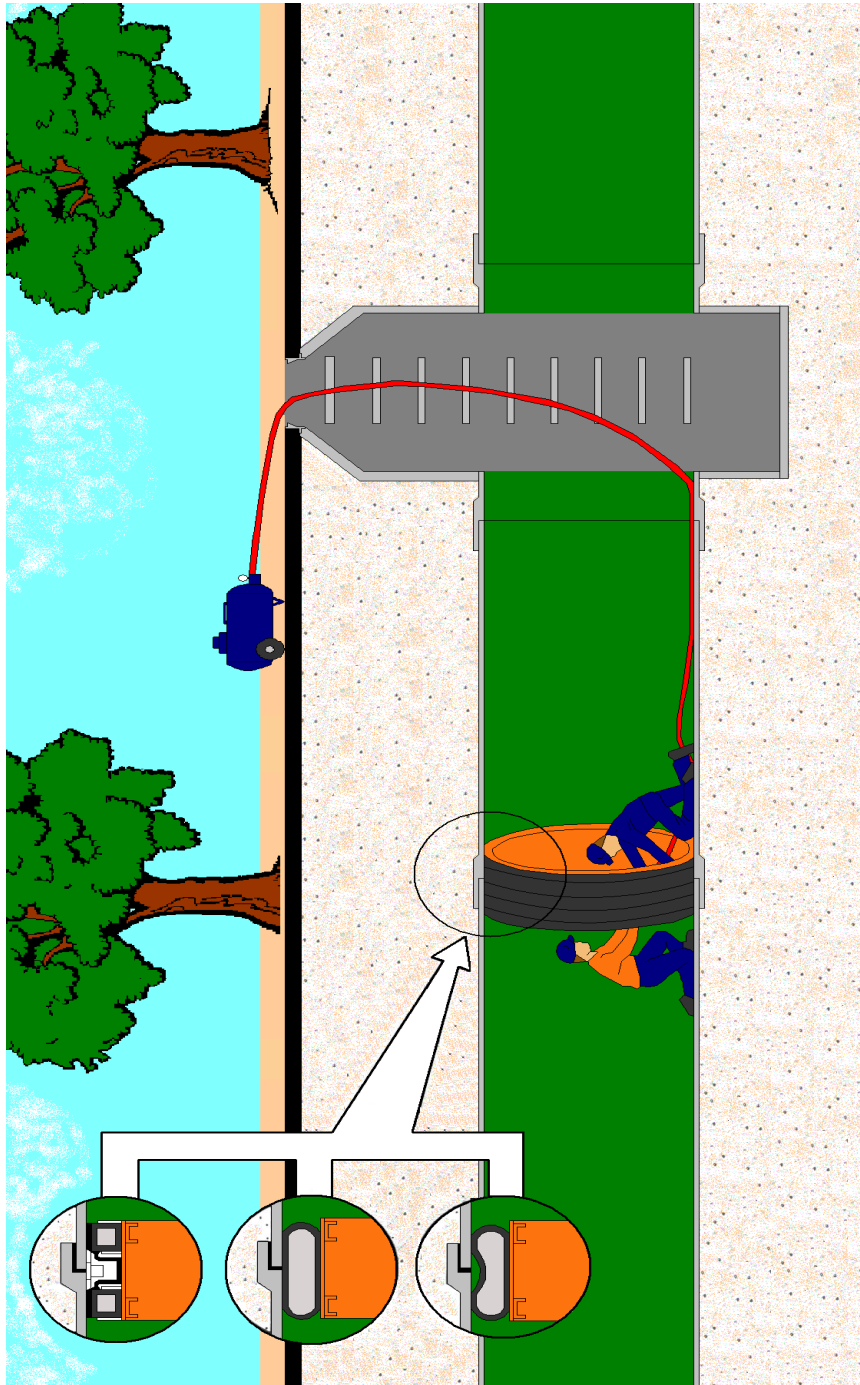
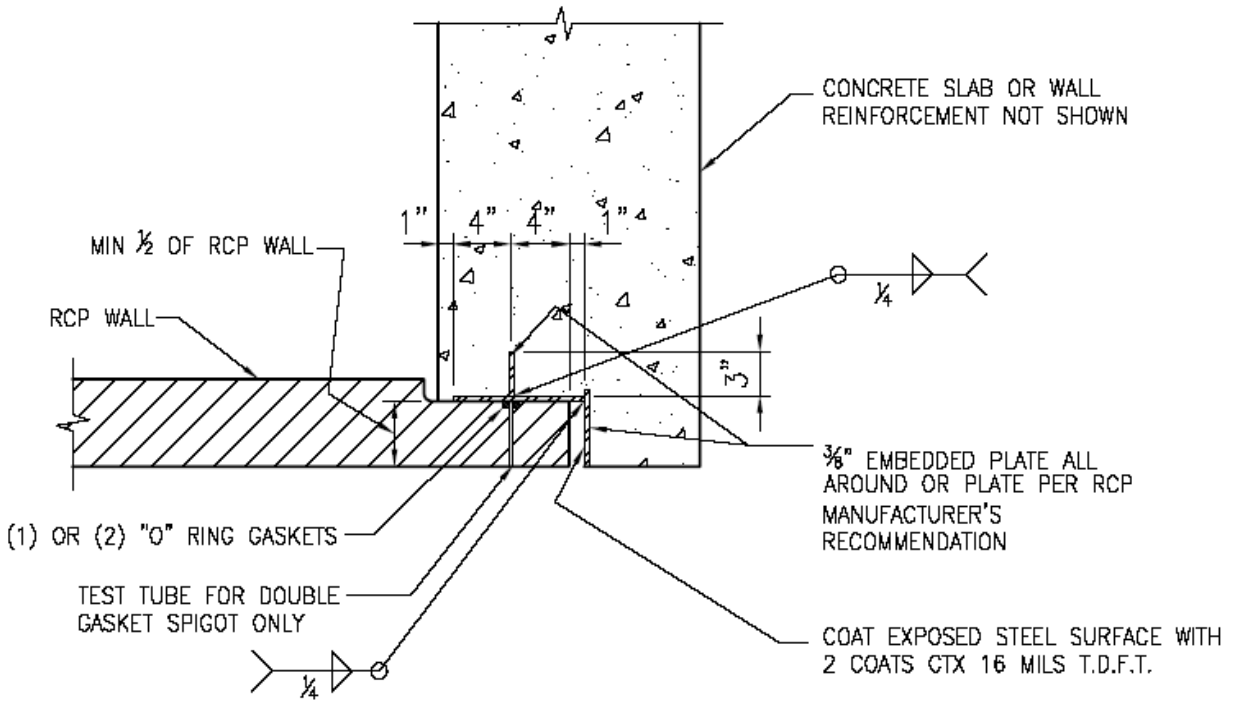


EXHIBIT "B"

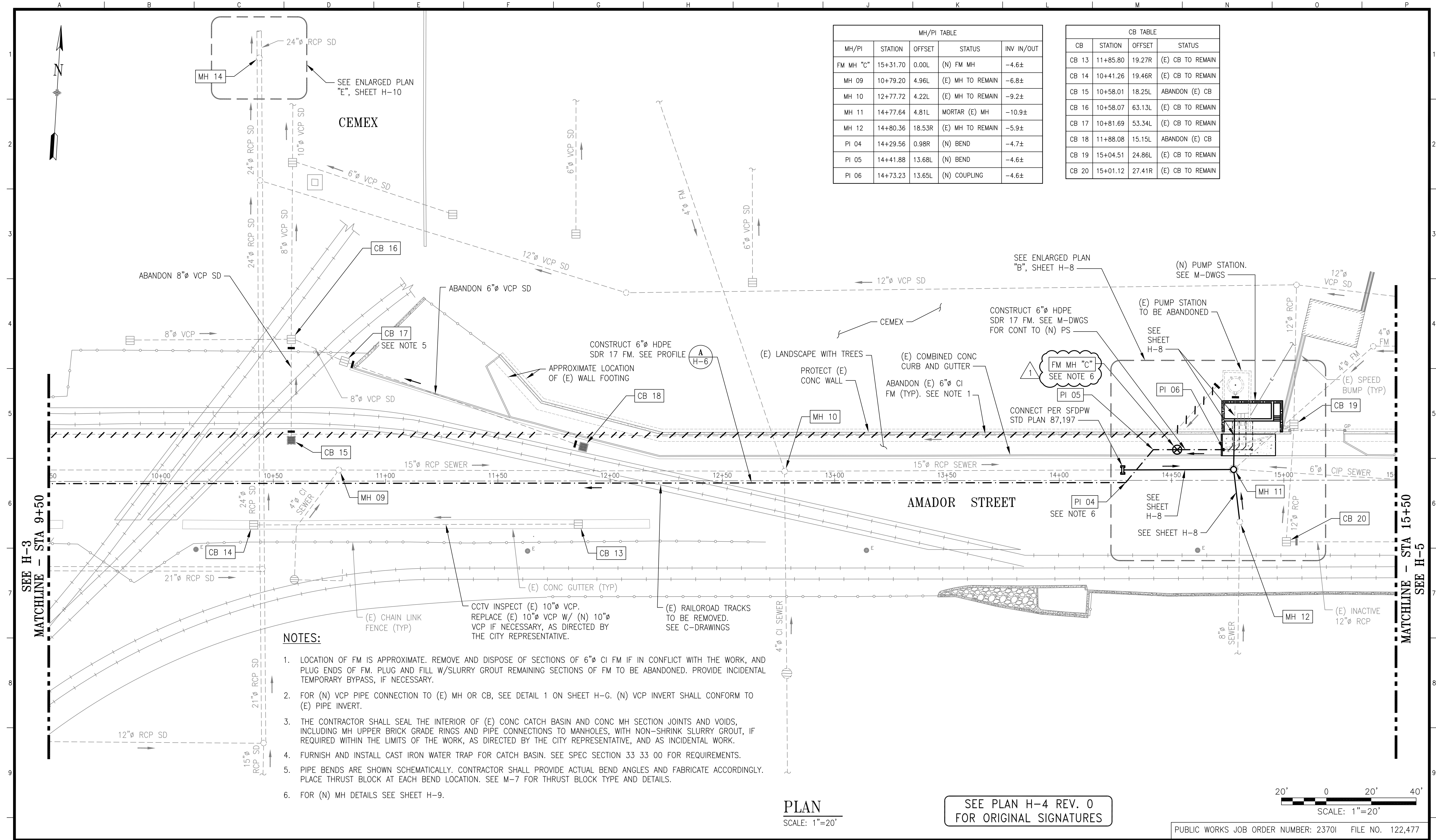


STEEL WALL BELL DETAIL

SCALE: N.T.S.

NOTE: DETAIL TO BE USED W/ ALL CAST-IN-PLACE
RCP STRUCTURES CONNECTING TO 42" Ø RCP
OR GREATER, INCLUDING DPW STANDARD PLANS
87,182 AND 87,183.

DETAIL NO. 1



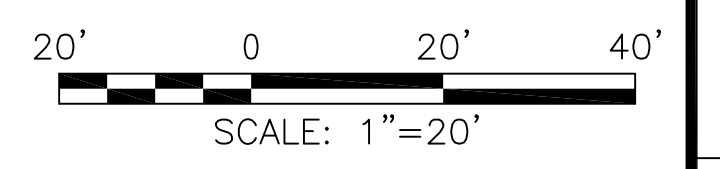
MH/PI TABLE				
MH/PI	STATION	OFFSET	STATUS	INV IN/OUT
FM MH "C"	15+31.70	0.00L	(N) FM MH	-4.6±
MH 09	10+79.20	4.96L	(E) MH TO REMAIN	-6.8±
MH 10	12+77.72	4.22L	(E) MH TO REMAIN	-9.2±
MH 11	14+77.64	4.81L	MORTAR (E) MH	-10.9±
MH 12	14+80.36	18.53R	(E) MH TO REMAIN	-5.9±
PI 04	14+29.56	0.98R	(N) BEND	-4.7±
PI 05	14+41.88	13.68L	(N) BEND	-4.6±
PI 06	14+73.23	13.65L	(N) COUPLING	-4.6±

CB TABLE			
CB	STATION	OFFSET	STATUS
CB 13	11+85.80	19.27R	(E) CB TO REMAIN
CB 14	10+41.26	19.46R	(E) CB TO REMAIN
CB 15	10+58.01	18.25L	ABANDON (E) CB
CB 16	10+58.07	63.13L	(E) CB TO REMAIN
CB 17	10+81.69	53.34L	(E) CB TO REMAIN
CB 18	11+88.08	15.15L	ABANDON (E) CB
CB 19	15+04.51	24.86L	(E) CB TO REMAIN
CB 20	15+01.12	27.41R	(E) CB TO REMAIN

- NOTES:**
- LOCATION OF FM IS APPROXIMATE. REMOVE AND DISPOSE OF SECTIONS OF 6" CI FM IF IN CONFLICT WITH THE WORK, AND PLUG ENDS OF FM. PLUG AND FILL W/SLURRY GROUT REMAINING SECTIONS OF FM TO BE ABANDONED. PROVIDE INCIDENTAL TEMPORARY BYPASS, IF NECESSARY.
 - FOR (N) VCP PIPE CONNECTION TO (E) MH OR CB, SEE DETAIL 1 ON SHEET H-G. (N) VCP INVERT SHALL CONFORM TO (E) PIPE INVERT.
 - THE CONTRACTOR SHALL SEAL THE INTERIOR OF (E) CONC CATCH BASIN AND CONC MH SECTION JOINTS AND VOIDS, INCLUDING MH UPPER BRICK GRADE RINGS AND PIPE CONNECTIONS TO MANHOLES, WITH NON-SHRINK SLURRY GROUT, IF REQUIRED WITHIN THE LIMITS OF THE WORK, AS DIRECTED BY THE CITY REPRESENTATIVE, AND AS INCIDENTAL WORK.
 - FURNISH AND INSTALL CAST IRON WATER TRAP FOR CATCH BASIN. SEE SPEC SECTION 33 33 00 FOR REQUIREMENTS.
 - PIPE BENDS ARE SHOWN SCHEMATICALLY. CONTRACTOR SHALL PROVIDE ACTUAL BEND ANGLES AND FABRICATE ACCORDINGLY. PLACE THRUST BLOCK AT EACH BEND LOCATION. SEE M-7 FOR THRUST BLOCK TYPE AND DETAILS.
 - FOR (N) MH DETAILS SEE SHEET H-9.

PLAN
SCALE: 1"=20'

SEE PLAN H-4 REV. 0
FOR ORIGINAL SIGNATURES



PUBLIC WORKS JOB ORDER NUMBER: 23701 FILE NO. 122,477

NO.	DATE	DESCRIPTION	BY	APP.
7/25/24		ADDENDUM #1	JF	CL
TABLE OF REVISIONS				

REFERENCE INFORMATION & FILE NO. OF SURVEYS	
8216-344-1	
7040-344-4	
8108-96-1	
8109-96-1	
5578-344-1	
5579-344-1	
7669-344-1	

SAN FRANCISCO PORT COMMISSION
PORT OF SAN FRANCISCO
DEPARTMENT OF ENGINEERING

DESIGNED:	DATE:	PUBLIC WORKS APPROVALS
J.FLORES	12/2023	L.WONG 07/26/2024
DRAWN:	DATE:	SECTION MANAGER DATE:
A.K./A.H.	12/2023	I.DHAPA
CHECKED:	DATE:	DEPUTY BUREAU MANAGER DATE:
C.LINH	12/2023	P.RIVERA
		BUREAU MANAGER DATE:

APPROVED BY
SAN FRANCISCO PORT COMMISSION
8/7/2024

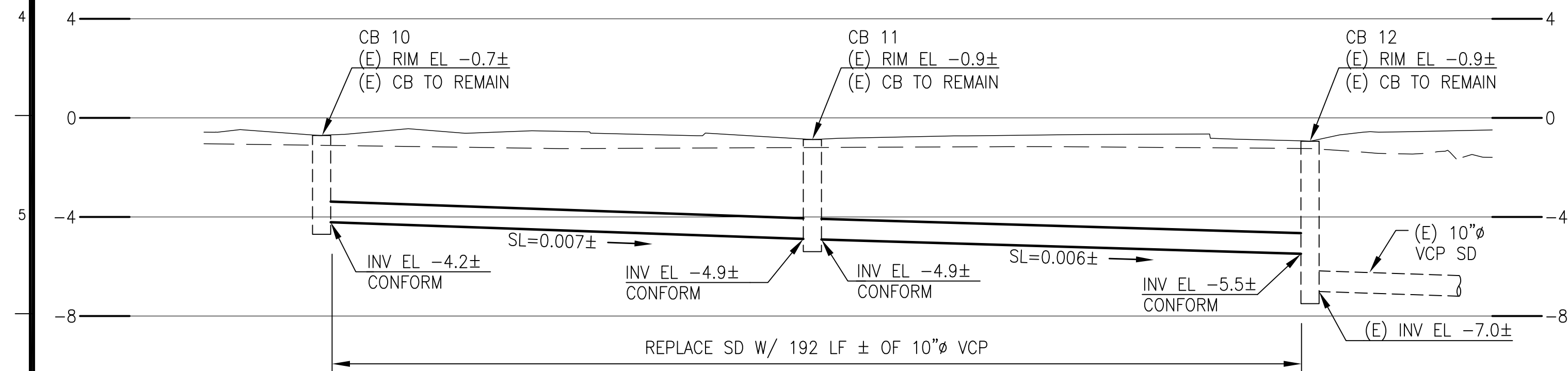
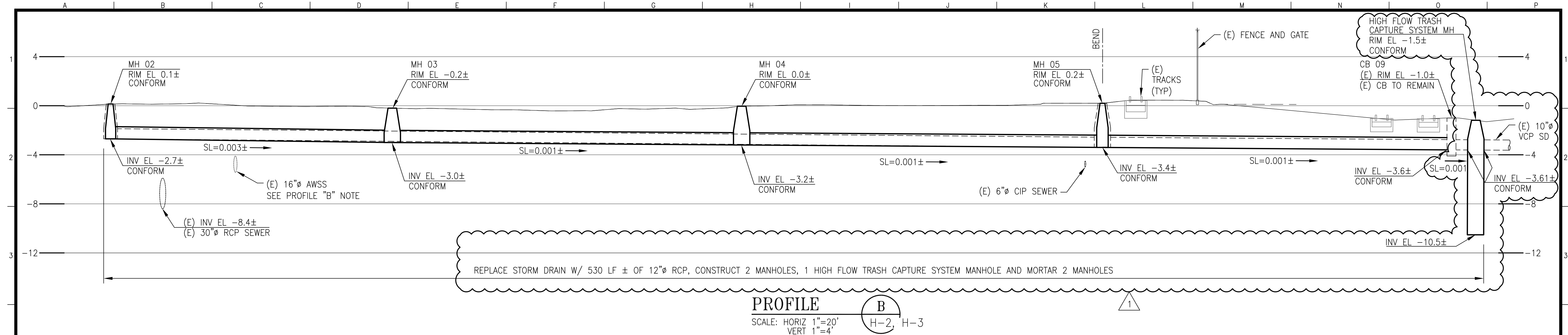
DocuSigned by:
Uday Prasad
05F46B77E6C40D
CHIEF HARBOR ENGINEER

SCALE:
AS NOTED
REV. NO.
1

AMADOR STREET
INFRASTRUCTURE IMPROVEMENTS

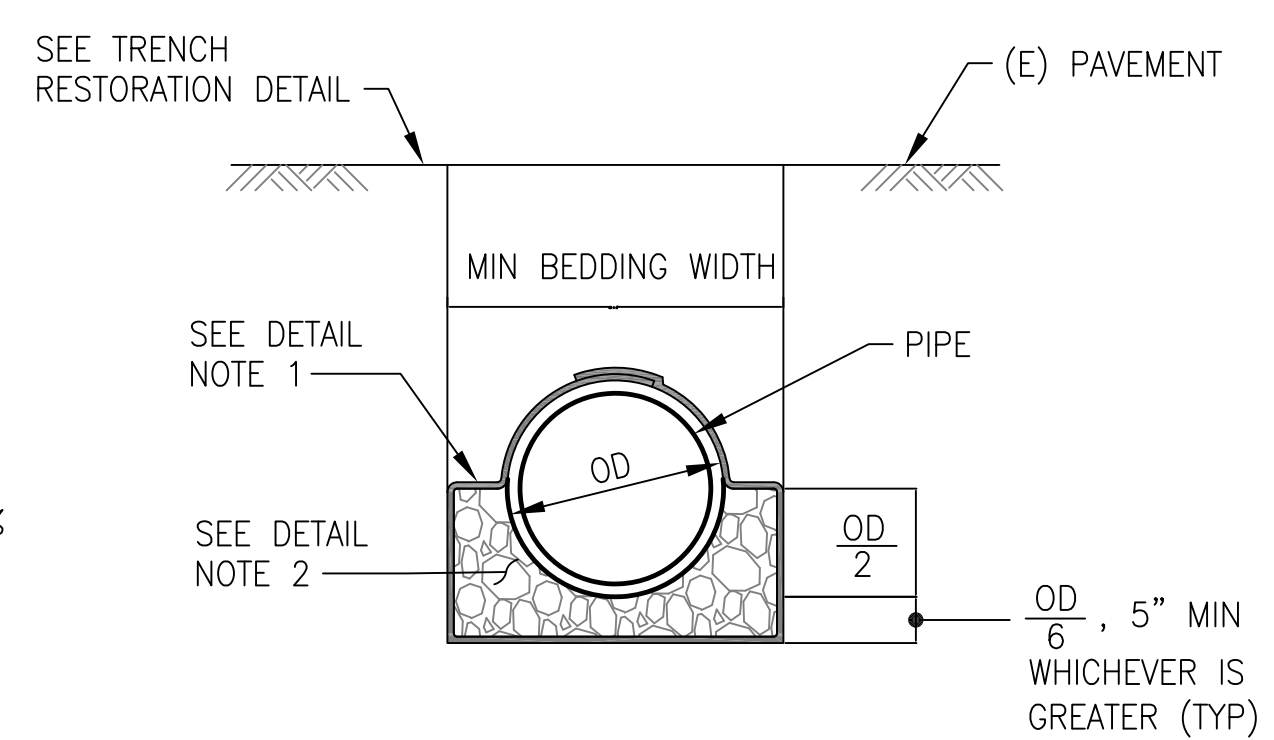
AMADOR STREET SEWER REPLACEMENT
STA 9+50 TO STA 15+50
PLAN

CONTRACT NO. 2852
PORT DRAWING NO. 19188-4043-H
SHEET NO. H-4
SHEET OF SHEETS 9 OF 72

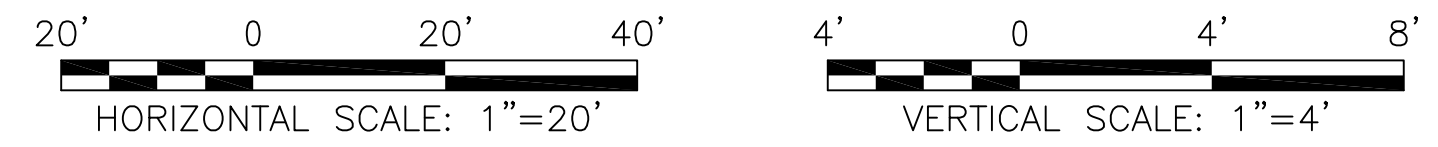
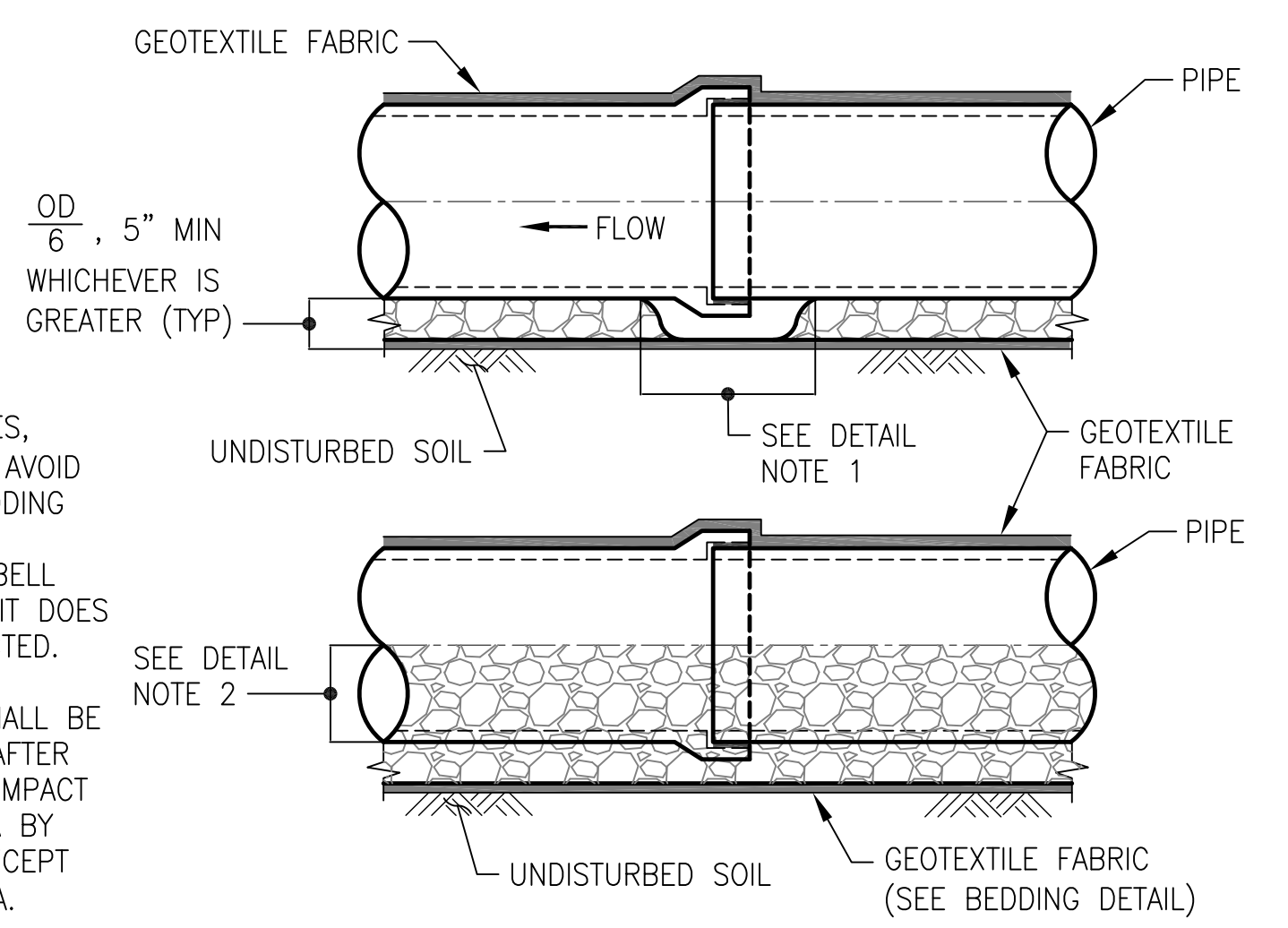


NOTE (PROFILE "B"):
LOCATION AND DEPTH OF (E) 16-INCH AWSS IS APPROXIMATE. CONTRACTOR SHALL USE CAUTION WHILE EXCAVATING IN THE VICINITY OF THE AWSS FACILITIES. HAND DIGGING AT THIS LOCATION MAYBE APPROPRIATE UNTIL THE ACTUAL DEPTH OF THE AWSS LINE IS CONFIRMED.

- DETAIL NOTES:**
- WRAP AASHTO M288, CLASS 2, NON-WOVEN GEOTEXTILE FABRIC AROUND CRUSHED ROCK BEDDING, 1-FOOT MIN OVERLAP.
 - WELL GRADED CRUSHED ROCK BEDDING WITH 100% PASSING THE 1" SIEVE, MIN 90% PASSING THE 3/4" SIEVE & WITH MAX 5% PASSING THE #4 SIEVE. THE FINES PASSING THE NO. 200 SHALL BE NON-PLASTIC.



- DETAIL NOTES:**
- PRIOR TO INSTALLING PIPES, PROVIDE "BELL HOLE" TO AVOID RESTING OF BELL ON BEDDING OR FOUNDATION. AFTER CONNECTING PIPES, FILL BELL HOLE WITH BEDDING BUT IT DOES NOT NEED TO BE COMPACTED.
 - BEDDING IN THIS AREA SHALL BE PLACED IN TWO LAYERS. AFTER 1ST LAYER IS PLACED, COMPACT BEDDING IN HAUNCH AREA BY SHOVEL SLICE METHOD EXCEPT AT THE "BELL HOLE" AREA.



SEE PLAN H-7 REV. 0 FOR ORIGINAL SIGNATURES

PUBLIC WORKS JOB ORDER NUMBER: 23701 FILE NO. 122,480

NO.	DATE	DESCRIPTION	BY	APP.
1	7/25/24	ADDENDUM #1	JF	CL

TABLE OF REVISIONS

REFERENCE INFORMATION & FILE NO. OF SURVEYS

SAN FRANCISCO PORT COMMISSION
PORT OF SAN FRANCISCO
DEPARTMENT OF ENGINEERING

DESIGNED: DATE: J.FLORES 07/2024
DRAWN: DATE: A.K./A.H. 07/2024
CHECKED: DATE: C.LINH 07/2024

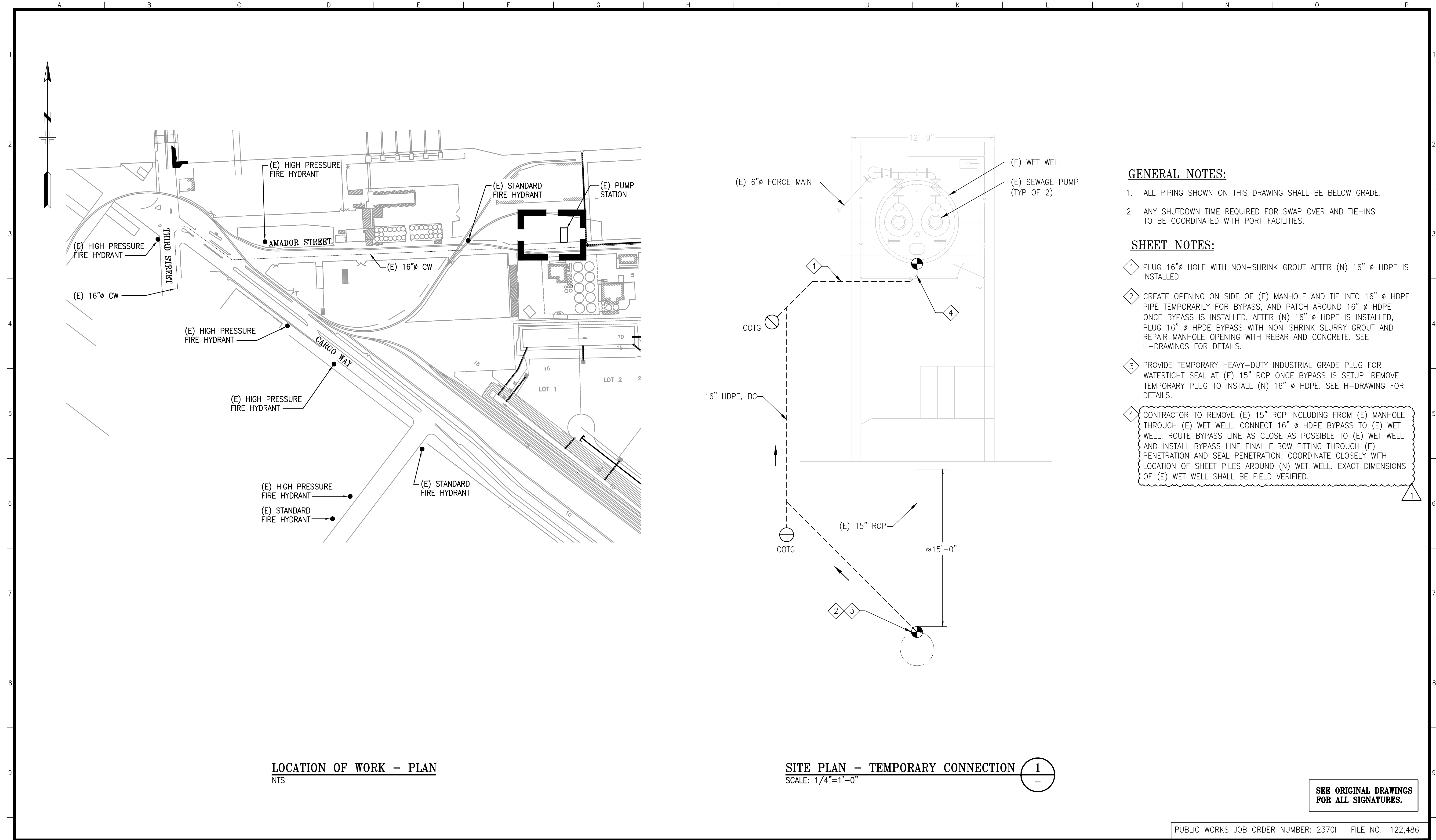
PUBLIC WORKS APPROVALS
L.WONG 07/26/2024
SECTION MANAGER
I.DHAPA 07/26/2024
DEPUTY BUREAU MANAGER
P.RIVERA 07/26/2024
BUREAU MANAGER

APPROVED BY
SAN FRANCISCO PORT COMMISSION
8/7/2024
Ulysses D. Prasad
CHIEF HARBOR ENGINEER

SCALE: AS NOTED
REV. NO. 1

AMADOR STREET
INFRASTRUCTURE IMPROVEMENTS
AMADOR STREET SEWER REPLACEMENT
PROFILES B - C

CONTRACT NO. 2852
PORT DRAWING NO. 19190.1-4043-H
SHEET NO. H-7
SHEET OF SHEETS 12 OF 72



GENERAL NOTES:

1. ALL PIPING SHOWN ON THIS DRAWING SHALL BE BELOW GRADE.
2. ANY SHUTDOWN TIME REQUIRED FOR SWAP OVER AND TIE-INS TO BE COORDINATED WITH PORT FACILITIES.

SHEET NOTES:

- 1 PLUG 16"Ø HOLE WITH NON-SHRINK GROUT AFTER (N) 16" Ø HDPE IS INSTALLED.
- 2 CREATE OPENING ON SIDE OF (E) MANHOLE AND TIE INTO 16" Ø HDPE PIPE TEMPORARILY FOR BYPASS, AND PATCH AROUND 16" Ø HDPE ONCE BYPASS IS INSTALLED. AFTER (N) 16" Ø HDPE IS INSTALLED, PLUG 16" Ø HDPE BYPASS WITH NON-SHRINK SLURRY GROUT AND REPAIR MANHOLE OPENING WITH REBAR AND CONCRETE. SEE H-DRAWINGS FOR DETAILS.
- 3 PROVIDE TEMPORARY HEAVY-DUTY INDUSTRIAL GRADE PLUG FOR WATERTIGHT SEAL AT (E) 15" RCP ONCE BYPASS IS SETUP. REMOVE TEMPORARY PLUG TO INSTALL (N) 16" Ø HDPE. SEE H-DRAWING FOR DETAILS.
- 4 CONTRACTOR TO REMOVE (E) 15" RCP INCLUDING FROM (E) MANHOLE THROUGH (E) WET WELL. CONNECT 16" Ø HDPE BYPASS TO (E) WET WELL. ROUTE BYPASS LINE AS CLOSE AS POSSIBLE TO (E) WET WELL AND INSTALL BYPASS LINE FINAL ELBOW FITTING THROUGH (E) PENETRATION AND SEAL PENETRATION. COORDINATE CLOSELY WITH LOCATION OF SHEET PILES AROUND (N) WET WELL. EXACT DIMENSIONS OF (E) WET WELL SHALL BE FIELD VERIFIED.

LOCATION OF WORK - PLAN
NTS

SITE PLAN - TEMPORARY CONNECTION 1
SCALE: 1/4"=1'-0"

SEE ORIGINAL DRAWINGS FOR ALL SIGNATURES.

PUBLIC WORKS JOB ORDER NUMBER: 23701 FILE NO. 122,486

NO.	DATE	DESCRIPTION	BY	APP.
Δ	08/01/24	ADDENDUM #1	JC	EB
TABLE OF REVISIONS				

REFERENCE INFORMATION & FILE NO. OF SURVEYS

SAN FRANCISCO PORT COMMISSION
PORT OF SAN FRANCISCO
DEPARTMENT OF ENGINEERING

DESIGNED: DATE:	KL/JC 12/2023
DRAWN: DATE:	CE 12/2023
CHECKED: DATE:	JN 12/2023

PUBLIC WORKS APPROVALS	
SECTION MANAGER DATE:	
DEPUTY BUREAU MANAGER DATE:	
BUREAU MANAGER DATE:	

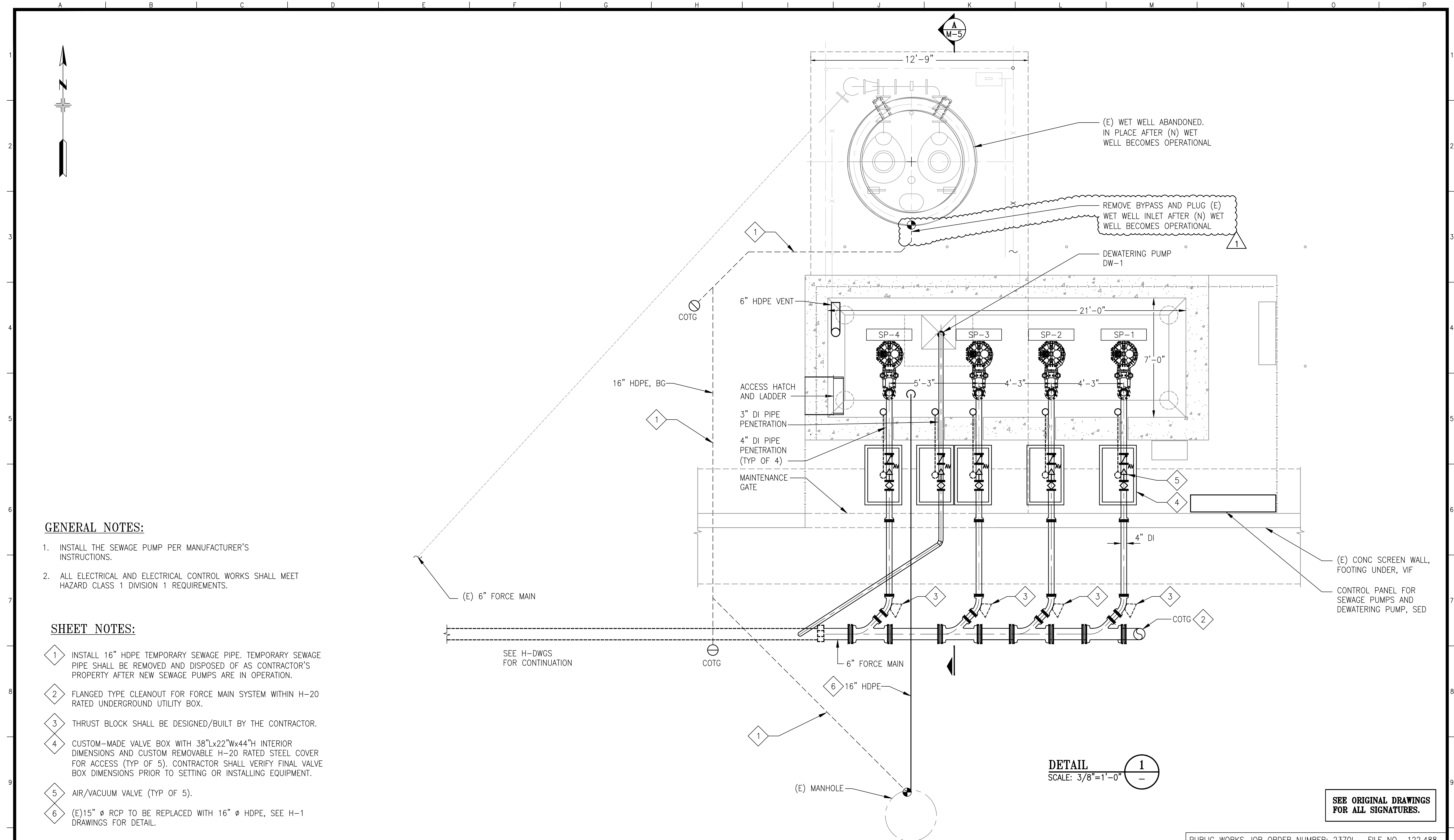
APPROVED BY	SAN FRANCISCO PORT COMMISSION
DATE:	8/7/2024
 CHIEF HARBOR ENGINEER	

SCALE:	AS NOTED
REV. NO.	0

AMADOR STREET
INFRASTRUCTURE IMPROVEMENTS

SITE PLAN - TEMPORARY CONNECTION

CONTRACT NO.	2852
PORT DRAWING NO.	19193-4043-M
SHEET NO.	M-2
SHEET OF SHEETS	17 OF 72



GENERAL NOTES:

1. INSTALL THE SEWAGE PUMP PER MANUFACTURER'S INSTRUCTIONS.
2. ALL ELECTRICAL AND ELECTRICAL CONTROL WORKS SHALL MEET HAZARD CLASS 1 DIVISION 1 REQUIREMENTS.

SHEET NOTES:

1. INSTALL 16" HDPE TEMPORARY SEWAGE PIPE. TEMPORARY SEWAGE PIPE SHALL BE REMOVED AND DISPOSED OF AS CONTRACTOR'S PROPERTY AFTER NEW SEWAGE PUMPS ARE IN OPERATION.
2. FLANGED TYPE CLEANOUT FOR FORCE MAIN SYSTEM WITHIN H-20 RATED UNDERGROUND UTILITY BOX.
3. THRUST BLOCK SHALL BE DESIGNED/BUILT BY THE CONTRACTOR.
4. CUSTOM-MADE VALVE BOX WITH 38"Lx22"Wx44"H INTERIOR DIMENSIONS AND CUSTOM REMOVABLE H-20 RATED STEEL COVER FOR ACCESS (TYP OF 5). CONTRACTOR SHALL VERIFY FINAL VALVE BOX DIMENSIONS PRIOR TO SETTING OR INSTALLING EQUIPMENT.
5. AIR/VACUUM VALVE (TYP OF 5).
6. (E)15" Ø RCP TO BE REPLACED WITH 16" Ø HDPE, SEE H-1 DRAWINGS FOR DETAIL.

DETAIL 1
SCALE: 3/8"=1'-0"

SEE ORIGINAL DRAWINGS FOR ALL SIGNATURES.

PUBLIC WORKS JOB ORDER NUMBER: 23701 FILE NO. 122,488

NO.	DATE	DESCRIPTION	BY	APP.
Δ	08/01/24	ADDENDUM #1	JC	EB
TABLE OF REVISIONS				

REFERENCE INFORMATION & FILE NO. OF SURVEYS



SAN FRANCISCO PORT COMMISSION
PORT OF SAN FRANCISCO
DEPARTMENT OF ENGINEERING



DESIGNED: DATE: KL/JC 12/2023
DRAWN: DATE: CE 12/2023
CHECKED: DATE: JN 12/2023

PUBLIC WORKS APPROVALS
SECTION MANAGER DATE:
DEPUTY BUREAU MANAGER DATE:
BUREAU MANAGER DATE:

APPROVED BY
SAN FRANCISCO PORT COMMISSION
8/7/2024
Uday Prasad
CHIEF HARBOR ENGINEER

SCALE:
AS NOTED
REV. NO.
0

AMADOR STREET
INFRASTRUCTURE IMPROVEMENTS
PUMP STATION FLOOR PLAN

CONTRACT NO. 2852
PORT DRAWING NO. 19195-4043-M
SHEET NO. M-4
SHEET OF SHEETS 19 OF 72