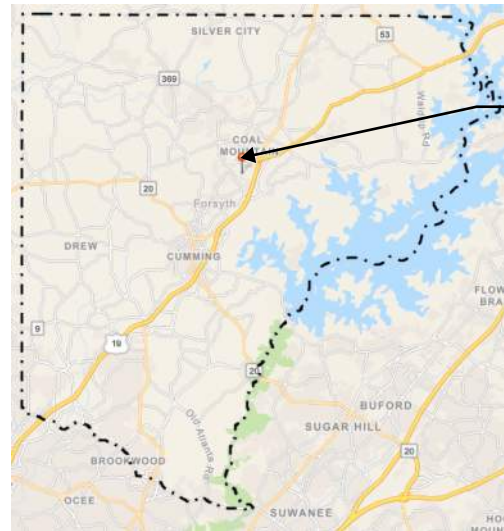


# FORSYTH COUNTY ANTIOCH WATER TREATMENT PLANT COATINGS REHAB PHASE 1



PROJECT LOCATION



PROJECT LOCATION



## DRAWING INDEX

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004-PK-004	BACKWASH RECOVERY BASIN (FACILITY 50)
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PREPARED FOR THE

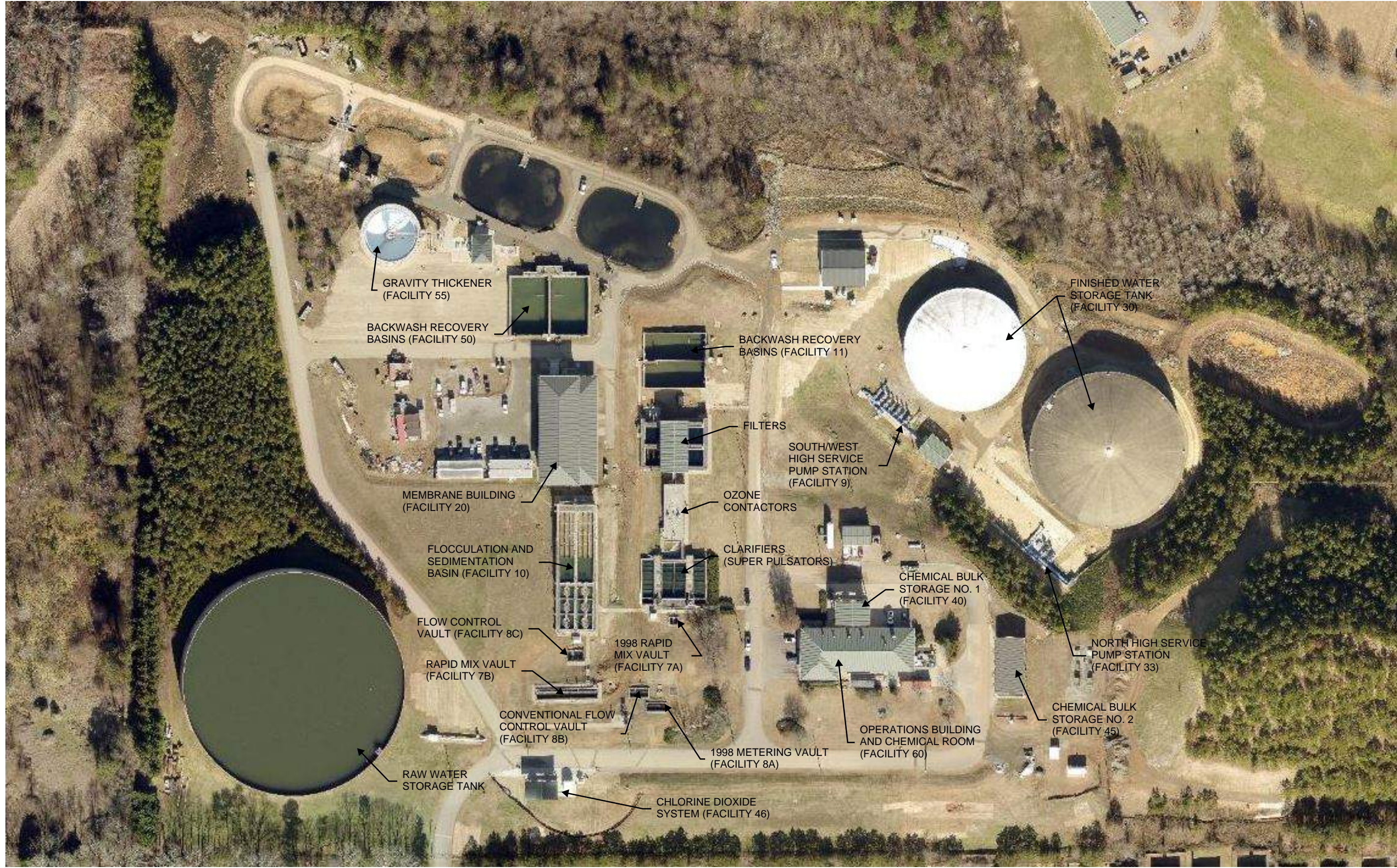
**FORSYTH COUNTY  
WATER AND SEWER DEPARTMENT**

JASON GODFREY, P.E.  
5400 LAUREL SPRINGS PKWY, SUITE 902  
SUWANEE, GA 30024  
(478) 474-4996



FEBRUARY 2023  
VOLUME 2 OF 2

**BID DOCUMENTS**



GRAVITY THICKENER  
(FACILITY 55)

BACKWASH RECOVERY  
BASINS (FACILITY 50)

MEMBRANE BUILDING  
(FACILITY 20)

FLOCCULATION AND  
SEDIMENTATION  
BASIN (FACILITY 10)

FLOW CONTROL  
VAULT (FACILITY 8C)

RAPID MIX VAULT  
(FACILITY 7B)

CONVENTIONAL FLOW  
CONTROL VAULT  
(FACILITY 8B)

RAW WATER  
STORAGE TANK

BACKWASH RECOVERY  
BASINS (FACILITY 11)

FILTERS

OZONE  
CONTACTORS

CLARIFIERS  
(SUPER PULSATORS)

1998 RAPID  
MIX VAULT  
(FACILITY 7A)

1998 METERING VAULT  
(FACILITY 8A)

CHLORINE DIOXIDE  
SYSTEM (FACILITY 46)

SOUTH/WEST  
HIGH SERVICE  
PUMP STATION  
(FACILITY 9)

CHEMICAL BULK  
STORAGE NO. 1  
(FACILITY 40)

OPERATIONS BUILDING  
AND CHEMICAL ROOM  
(FACILITY 60)

FINISHED WATER  
STORAGE TANK  
(FACILITY 30)

NORTH HIGH SERVICE  
PUMP STATION  
(FACILITY 33)

CHEMICAL BULK  
STORAGE NO. 2  
(FACILITY 45)

N  
WTP SITE PLAN  
NTS

DESIGNED BY:		R. MURPHY		DATE	
DRAWN BY:		R. MURPHY		REVISION	
CHECKED BY:		J. GODFREY		BY APVD	
NO.					

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SUWANEE, GA 30024  
478.474.4996

ANTIOCH WATER  
TREATMENT PLANT  
COATINGS REHAB  
PHASE 1

**ESG ENGINEERING**

GENERAL

**SITE PLAN**

BAR IS ONE INCH ON ORIGINAL DRAWING 0"=1"

SCALE AS NOTED

BID DOCUMENTS

PROJ

DATE FEBRUARY 2023

**001-G-001**

SHEET

**PAINT AND COATINGS SCHEDULE**

Facility/Drawing	Surface Preparation	# of Coats and Coating Materials	Thickness (MDFT)	Process Fluid	Color
Membrane Building Basket Strainer (Facility 20) Drawing 001-PK-002, 001-PK-004, 001-PK-005, 001-PK-006 (Detail 4)	High pressure water blast minimum 3,500 psi. Power tool or hand tool clean any visible rusty areas. Feather all edges. Prior to coating the substrate must be clean, dry, and free of all contaminants.	•Spot Coat (tight rust or bare pipe): Tnemec Series 135 or Equal •1st Coat: Tnemec Series 135 or Equal •2nd Coat: Tnemec Series 1095 or Equal	•Spot Coat (tight rust or bare pipe): Applied at 3-4 mils dry •1st Full Coat: Applied at 3-4 mils dry •2nd Full Coat: Applied at 2-3 mils dry	MF	Tnemec Light Blue 25BL, or Equal
Membrane Building Drain Gallery (Facility 20) Drawing 001-PK-003, 001-PK-004, 001-PK-006 (Detail 2&3)	High pressure water blast minimum 3,500 psi. Power tool clean any visible rusty areas to a SSPC-SP11 standard. Feather all edges. Prior to coating the substrate must be clean, dry, and free of all contaminants.	•Spot Coat (tight rust or bare pipe): Tnemec Series 135 or Equal •1st Coat: Tnemec Series N69F or Equal •2nd Coat: Tnemec Series 104 or Equal	•Spot Coat (tight rust or bare pipe): Applied at 3-4 mils dry •1st Full Coat: Applied at 3-4 mils dry •2nd Full Coat: Applied at 2-3 mils dry	MF/MD	MF: Tnemec Light Blue 25BL, or Equal MD: Tnemec Brown 42BR, or Equal
Membrane Building Permeate Gallery Couplings (Facility 20) Drawing 001-PK-004, 001-PK-006 (Detail 1)	High pressure water blast minimum 3,500 psi. Power tool or hand tool clean any visible rusty areas. Feather all edges. Prior to coating the substrate must be clean, dry, and free of all contaminants.	•Spot Coat (tight rust or bare pipe): Tnemec Series 135 or Equal •1st Coat: Tnemec Series 135 or Equal •2nd Coat: Tnemec Series 1095 or Equal	•Spot Coat (tight rust or bare pipe): Applied at 3-4 mils dry •1st Full Coat: Applied at 3-4 mils dry •2nd Full Coat: Applied at 2-3 mils dry	MP	Tnemec Light Blue 25BL, or Equal
1998 Rapid Mix Box (Facility 7A) Drawing 002-PK-001	Abrasive sweep blast to a SSPC-SP7 standard. Prior to coating the substrate must be clean, dry, and free of all contaminants.	•1st Full Coat: Tnemec Series 135 or Equal •2nd Full Coat: Tnemec Series N69F or Equal •3rd Full Coat: Tnemec Series 1095 or Equal	•1st Full Coat: Applied at 3-4 mils dry •2nd Full Coat: Applied at 2-4 mils dry •3rd Full Coat: Applied at 2-3 mils dry	RW	Tnemec Buff 66BR, or Equal
1998 Metering Vault (Facility 8A) Drawing 002-PK-002	Abrasive sweep blast to a SSPC-SP7 standard. Prior to coating the substrate must be clean, dry, and free of all contaminants.	•1st Full Coat: Tnemec Series 135 or Equal •2nd Full Coat: Tnemec Series N69F or Equal •3rd Full Coat: Tnemec Series 1095 or Equal	•1st Full Coat: Applied at 3-4 mils dry •2nd Full Coat: Applied at 2-4 mils dry •3rd Full Coat: Applied at 2-3 mils dry	RW	Tnemec Buff 66BR, or Equal
Conventional Flow Control Vault (Facility 8B) Drawing 002-PK-003	Abrasive sweep blast to a SSPC-SP7 standard. Prior to coating the substrate must be clean, dry, and free of all contaminants.	•1st Full Coat: Tnemec Series 135 or Equal •2nd Full Coat: Tnemec Series N69F or Equal •3rd Full Coat: Tnemec Series 1095 or Equal	•1st Full Coat: Applied at 3-4 mils dry •2nd Full Coat: Applied at 2-4 mils dry •3rd Full Coat: Applied at 2-3 mils dry	RW	Tnemec Buff 66BR, or Equal
Rapid Mix Vault (Facility 7B) Drawing 003-PK-001	High pressure water blast minimum 3,500 psi. Power tool or hand tool clean any visible rusty areas. Feather all edges. Prior to coating the substrate must be clean, dry, and free of all contaminants.	•Spot Coat (tight rust or bare pipe): Tnemec Series 135 or Equal •1st Coat: Tnemec Series 135 or Equal •2nd Coat: Tnemec Series 1095 or Equal	•Spot Coat (tight rust or bare pipe): Applied at 3-4 mils dry •1st Full Coat: Applied at 3-4 mils dry •2nd Full Coat: Applied at 2-3 mils dry	RW	Tnemec Buff 66BR, or Equal
Flow Control Vault (Facility 8C) Drawing 003-PK-002	Abrasive sweep blast to a SSPC-SP7 standard. Prior to coating the substrate must be clean, dry, and free of all contaminants.	•1st Full Coat: Tnemec Series 135 or Equal •2nd Full Coat: Tnemec Series N69F or Equal •3rd Full Coat: Tnemec Series 1095 or Equal	•1st Full Coat: Applied at 3-4 mils dry •2nd Full Coat: Applied at 2-4 mils dry •3rd Full Coat: Applied at 2-3 mils dry	RW	Tnemec Buff 66BR, or Equal
Sedimentation Basin (Facility 10) Drawing 003-PK-003	High pressure water blast minimum 3,500 psi. Power tool or hand tool clean any visible rusty areas. Feather all edges. Prior to coating the substrate must be clean, dry, and free of all contaminants.	•Spot Coat (tight rust or bare pipe): Tnemec Series 135 or Equal •1st Coat: Tnemec Series 135 or Equal •2nd Coat: Tnemec Series 1095 or Equal	•Spot Coat (tight rust or bare pipe): Applied at 3-4 mils dry •1st Full Coat: Applied at 3-4 mils dry •2nd Full Coat: Applied at 2-3 mils dry	RSD	Tnemec Brown 42BR, or Equal
Gooseneck Vent Drawing 004-PK-001	High pressure water blast minimum 3,500 psi. Power tool or hand tool clean any visible rusty areas. Feather all edges. Prior to coating the substrate must be clean, dry, and free of all contaminants.	•Spot Coat (tight rust or bare pipe): Tnemec Series 135 or Equal •1st Coat: Tnemec Series 135 or Equal •2nd Coat: Tnemec Series 1095 or Equal	•Spot Coat (tight rust or bare pipe): Applied at 3-4 mils dry •1st Full Coat: Applied at 3-4 mils dry •2nd Full Coat: Applied at 2-3 mils dry	VENT	Tnemec Brown 42BR, or Equal
Clarifiers (Super Pulsators) Drawing 004-PK-002	High pressure water blast minimum 3,500 psi. Power tool or hand tool clean any visible rusty areas. Feather all edges. Prior to coating the substrate must be clean, dry, and free of all contaminants.	•Spot Coat (tight rust or bare pipe): Tnemec Series 135 or Equal •1st Coat: Tnemec Series 135 or Equal •2nd Coat: Tnemec Series 1095 or Equal	•Spot Coat (tight rust or bare pipe): Applied at 3-4 mils dry •1st Full Coat: Applied at 3-4 mils dry •2nd Full Coat: Applied at 2-3 mils dry	Actuators	Tnemec Light Blue 25BL, or Equal
Filters Drawing 004-PK-003	High pressure water blast minimum 3,500 psi. Power tool or hand tool clean any visible rusty areas. Feather all edges. Prior to coating the substrate must be clean, dry, and free of all contaminants.	•Spot Coat (tight rust or bare pipe): Tnemec Series 135 or Equal •1st Coat: Tnemec Series 135 or Equal •2nd Coat: Tnemec Series 1095 or Equal	•Spot Coat (tight rust or bare pipe): Applied at 3-4 mils dry •1st Full Coat: Applied at 3-4 mils dry •2nd Full Coat: Applied at 2-3 mils dry	OZW/Actuators	OZW: Tnemec Light Blue 25BL, or Equal Actuators: Match Service - OZW: Tnemec Light Blue 25BL, or Equal Dr: Tnemec Brown 42BR, or Equal
Backwash Recovery Basin (Facility 50) Drawing 004-PK-004, 004-PK-005	High pressure water blast minimum 3,500 psi. Power tool or hand tool clean any visible rusty areas. Feather all edges. Prior to coating the substrate must be clean, dry, and free of all contaminants.	•Spot Coat (tight rust or bare pipe): Tnemec Series 135 or Equal •1st Coat: Tnemec Series 135 or Equal •2nd Coat: Tnemec Series 1095 or Equal	•Spot Coat (tight rust or bare pipe): Applied at 3-4 mils dry •1st Full Coat: Applied at 3-4 mils dry •2nd Full Coat: Applied at 2-3 mils dry	RCY	Tnemec Light Brown 51BR, or Equal

CHECKED BY:	JASON GODFREY
BY:	APVD
DRAWN BY:	RYAN MURPHY
REVISION	
DESIGNED BY:	RYAN MURPHY
DATE	
NO.	

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SUWANEE, GA 30024  
478.474.4996

ANTIOCH WATER  
TREATMENT PLANT  
COATINGS REHAB  
PHASE 1

**ESG ENGINEERING**

GENERAL

**PAINT SCHEDULE**

BAR IS ONE INCH ON ORIGINAL DRAWING 0"=1"

SCALE AS NOTED

BID DOCUMENTS

PROJ

DATE FEBRUARY 2023

**001-G-002**

SHEET

**PART 1 - GENERAL**  
**1.0 DEFINITIONS**

A. Surface Preparation Definitions (SSPC Specifications)

IDENTIFIER	PREPARATION PROCESS	SURFACE PREPARATION
SP 1	Solvent Cleaning	Remove visible oil, grease, soil, drawing and cutting compounds, and other soluble contaminants by cleaning with solvent
SP 2	Hand Tool Cleaning	Remove loose rust, loose mill scale, loose paint, and other loose detrimental foreign matter, using nonpower hand tools
SP 3	Power Tool Cleaning	Remove loose rust, loose mill scale, loose paint, and other loose detrimental foreign matter, using power-assisted hand tools
SP 5	White Metal Blast Cleaning	Remove visible oil, grease, dust, dirt, mill scale, rust, coatings, oxides, corrosion products, and other foreign matter by blast cleaning
SP 6	Commercial Blast Cleaning	Remove visible oil, grease, dust, dirt, mill scale, rust, coatings, oxides, corrosion products, and other foreign matter, except for random staining limited to no more than 33 percent of each area of surface which may consist of light shadows, slight streaks, or minor discolorations caused by stains of rust, stains of mill scale, or stains of previously applied coatings
SP 7	Brush-Off Blast Cleaning	Remove visible rust, oil, grease, soil, dust, loose mill scale, loose rust, and loose coatings. Tightly adherent mill scale, rust, and coatings may remain on surface
SP 10	Near White Blast Cleaning	Remove visible oil, grease, dust, dirt, mill scale, rust, coatings, oxides, corrosion products, and other foreign matter, except for random staining limited to no more than 5 percent of each unit area of surface which may consist of light shadows, slight streaks, or minor discolorations caused by stains of rust, stains of mill scale, or stains of previously applied coatings
SP 11	Power Tool Cleaning to Bare Metal	Remove visible oil, grease, dirt, mill scale, rust, paint, oxide, corrosion products, and other foreign matter using power assisted hand tools capable of producing suitable surface profile. Slight residues of rust and paint may be left in lower portion of pits if original surface is pitted

B. Product Definitions

PAINT OR COATING	DESCRIPTION
Bituminous Paint	Coal-tar pitch based coating
Coal Tar Epoxy	Amine, polyamide, or phenolic epoxy type 70% volume solids minimum, suitable for submerged service
Epoxy Primer (Ferrous Metal)	Anticorrosive, converted epoxy primer containing rust inhibitive pigments
Epoxy (High Build)	Polyamidoamine epoxy, minimum 69% volume solids with the ability to apply between 4 to 8 MDFT per coat.
Epoxy (Chemical Resistant)	Chemical resistant epoxy that is amine cured, suitable for air space and submersion in wastewater.
Epoxy (Water Based)	Polyamide epoxy emulsion, two components
Polyurethane Enamel	Aliphatic or acrylic based polyurethane with high gloss finish; two components

**1.1 QUALITY ASSURANCE**

A. Coatings applicator shall have a minimum of 5-years of experience applying the specified projects.

**1.2 SUBMITTALS**

A. The following submittals shall be provided for Engineer review:

1. For each product:
  - a. Paint system (as identified in the specifications)
  - b. Manufacturer's technical data sheets
  - c. Manufacturer's color charts
  - d. Minimum number of coats and coverage
  - e. Induction time
  - f. Pot life
  - g. Shelf life
  - h. Drying time
  - i. Curing time
  - j. Minimum recoat time
  - k. Maximum recoat time
  - l. Surface temperature requirements
  - m. Ambient temperature requirements

B. The following submittals shall be provided to Engineer for record:

1. Manufacturer's written instructions for coating system application
2. Membrane tank coatings:
  - a. Manufacturer's letter stating coating is appropriate for specified use and applicator is qualified to apply the coating
  - b. Manufacturer's approval of installation
3. Coating applicator's qualifications

**1.3 ENVIRONMENTAL REQUIREMENTS**

A. Coating products shall be stored in a climate controlled environment within the manufacturer's recommended temperature range.

B. Applicator shall follow manufacturer's recommendations for temperature and humidity conditions. If conditions are outside of the manufacturer's recommendations, the coating system shall not be applied.

C. Final abrasive blast cleaning shall not be performed when relative humidity is above 85% or when the surface temperature is below 5° F above the dew point of ambient air.

D. Exterior surfaces shall receive the top coat within 2-months of being primed.

**PART 2 – PRODUCTS**

**2.0 GENERAL**

A. Only compatible products from a single manufacturer shall be used in combination and shall deemed suitable by manufacturer for use in combination.

**2.1 MULTIPLE COMPONENT COATINGS**

- A. Follow manufacturer's instructions for mixing.
- B. Discard multiple component coatings that have been mixed beyond their pot life.
- C. Small quantity kits shall be provided for touch-up painting.

**2.2 SHOP FINISHES**

A. When manufacturer does not provide a shop coating that is suitable for the service condition, a tie-in coat shall be utilized and the equipment shall receive a specified field finish. Contractor shall coordinate the tie-in coat with the coating manufacturers and obtain Engineer's approval.

CHECKED BY: JASON GODFREY BY / APVD	DRAWN BY: RYAN MURPHY REVISION	DESIGNED BY: RYAN MURPHY DATE	NO.		
5400 LAUREL SPRINGS PKWY, SUITE 902 SUWANEE, GA 30024 478.474.4996					
<b>ESG ENGINEERING</b>			ANTIOCH WATER TREATMENT PLANT COATINGS REHAB PHASE 1		
GENERAL PROJECT SPECIFICATIONS SHEET 1					
BAR IS ONE INCH ON ORIGINAL DRAWING 0"=1"					
SCALE AS NOTED					
BID DOCUMENTS					
PROJ					
DATE FEBRUARY 2023					
<b>001-G-003</b>					
SHEET					

**PART 2 – PRODUCTS CONT.**  
**2.3 MANUFACTURERS**

- A. Manufacturers shall have a minimum of 5-years experience producing the specified and submitted products.
- B. The following manufacturers have products for most of the products specified herein:
  1. TNEMEC
  2. Carboline
  3. Or Engineer Approved Equal

- C. Warranty
  1. Manufacturer warranties shall commence when the equipment has successfully passed all specified testing and officially put into full service or substantial completion of the project, whichever is sooner.
  2. Manufacturer's warranty shall be the standard warranty period or for a period of 1-year, whichever is greater; unless specified differently in the individual specification section.

**PART 3 – EXECUTION**  
**3.0 INSPECTIONS**

- A. Contractor shall provide a minimum of 7-days notice before surface preparation and coatings work.
- B. Contractor shall arrange for Engineer's inspection following surface preparation and between each coat.
- C. All coatings work shall be performed with Engineer's inspector present, unless approval otherwise has been obtained from Engineer.
- D. Shop finished repair items shall be inspected by Engineer prior to starting repair.

**3.1 PROTECTION OF SURROUNDING ITEMS**

- A. Contractor shall remove or protect areas not to receive coating, such as hardware, light switch plates/outlet covers, lighting fixtures, and mechanical components (machined surfaces, bearings, shafts, etc.).
- B. Openings in motors shall be masked to prevent coatings materials from entering the motor.
- C. Protect surrounding areas from overspray.

**3.2 COATING COLORS**

- A. Piping: Exposed piping as shown in the Paint Schedule on sheet 001-G-002 in this drawing set.
- B. Other Areas: As approved by the Owner.

**3.3 FIELD QUALITY CONTROL**

- A. Coating thickness shall be measured in mils with a magnetic or electronic style dry film thickness gage in accordance with Society for Protective Coatings, PA 2.
  - a. Each coat shall be checked for correct mils
  - b. Measurement shall not be made until a minimum of 8-hours following application.
- B. Holiday detect all new coatings in accordance with NACE SP0188.
  - a. Coatings 20 mils and less shall be conducted with a low voltage wet sponge electrical holiday detector
  - b. Coatings greater than 20 mils (dry) shall be conducted with a high voltage spark tester
- C. Any found defects shall be repaired in accordance with manufacturer's written recommendations and as approved by Engineer.

**CONTRACTOR WARRANTY**

- A. Contractor shall warranty the project for a period of one year from the date of project Substantial Completion.
- B. The warranty assures the Work is free from all defects due to faulty products or workmanship and the Contractor shall promptly make corrections as needed to resolve such defects within the warranty period.
- C. Contractor's performance bond shall remain in effect through the warranty period and if Contractor fails to initiate repair within 14-days or fails to timely complete the warranty related items, Owner may choose to make repairs and charge Contractor for costs to do so.
- D. Contractor's warranty includes all labor, materials, tools, and equipment to make repairs.
- E. If two or more successive failures of the same type with a particular area of Work or equipment occur prior to the expiration of the one year warranty, the Work or equipment shall be completely rebuilt or replaced and a new one year warranty shall apply to said Work or equipment.
- F. Contractor shall not be obligated to repair or replace non-functioning or damaged Work when non-functioning or damaged Work is a result of normal wear and tear, lack of maintenance, caused by improper use, or damaged by the Owner.

**GENERAL NOTES**

- A. Where required, Contractor shall control the humidity in order to meet Manufacturer's requirements.
- B. The Contractor shall provide spare paint and leave on site for Owner, one gallon of each color.
- C. The coatings Contractor shall coordinate with the Owner and the Contractor of the Phase 3 Plant Expansion in order to avoid conflicts.
- D. Work Restrictions: Contractor shall coordinate with Engineer as required for order in which facilities are coated and should any piping need to be drained prior to coating.

DESIGNED BY:	RYAN MURPHY	CHECKED BY:	JASON GODFREY
	DATE		BY / APVD
DRAWN BY:	RYAN MURPHY	REVISION	

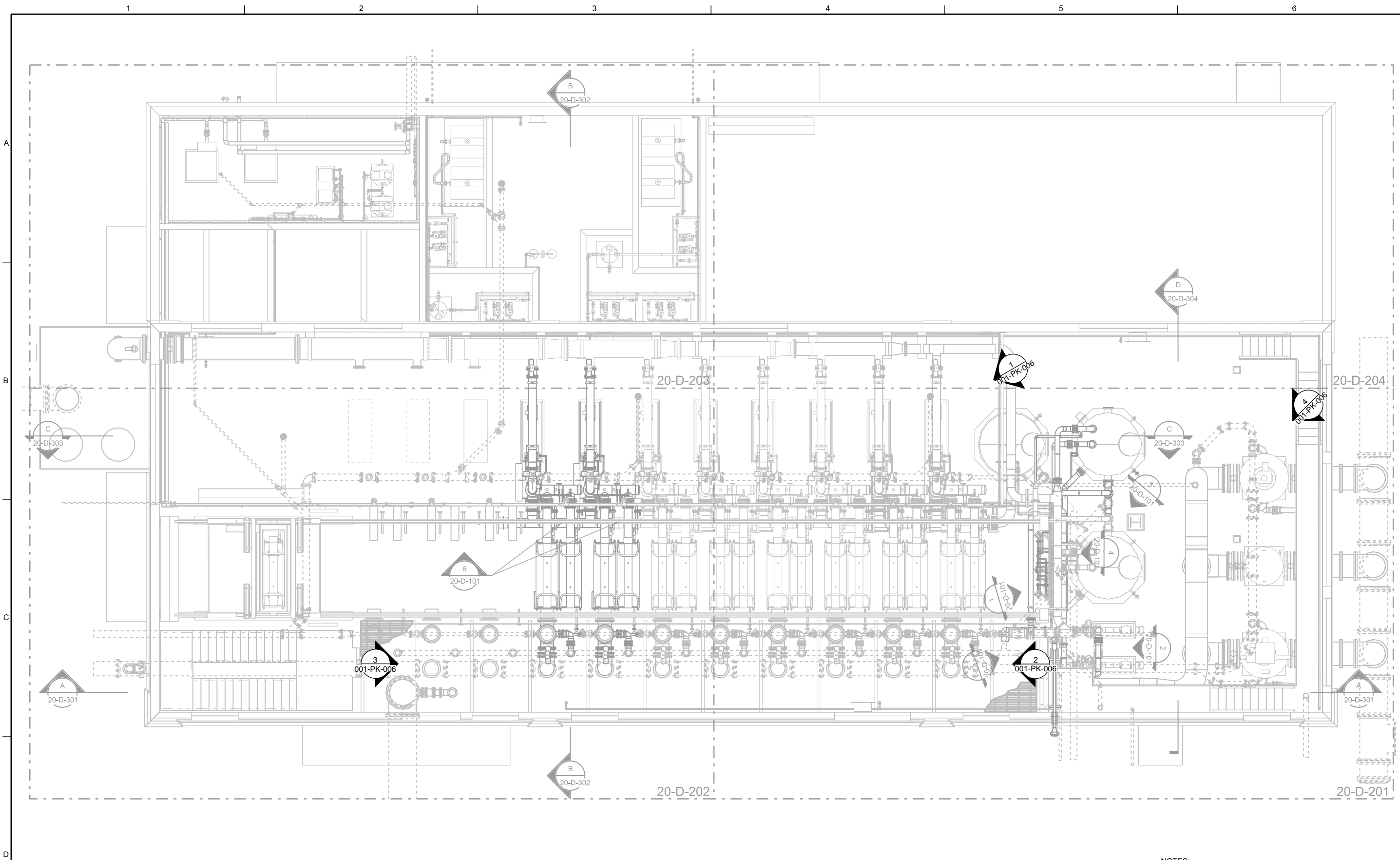
5400 LAUREL SPRINGS PKWY, SUITE 902  
 SUWANEE, GA 30024  
 478.474.4996

ANTIOCH WATER  
 TREATMENT PLANT  
 COATINGS REHAB  
 PHASE 1

**ESG ENGINEERING**

GENERAL  
 PROJECT  
 SPECIFICATIONS SHEET 2

BAR IS ONE INCH ON ORIGINAL DRAWING	
SCALE	AS NOTED
BID DOCUMENTS	
PROJ	
DATE	FEBRUARY 2023
001-G-004	
SHEET	




**OVERALL PLAN**  
 3/16"=1'-0"

- NOTES:**
- BOLD PIPES, FITTINGS, VALVES, AND OTHER APPURTENANCES REPRESENTS THE ITEMS THAT SHALL BE SURFACE PREPARED AND COATED AS SPECIFIED ON SHEETS 001-G-002, 001-G-003, AND 001-G-004.**
  - CONTRACTOR SHALL CONTROL THE HUMIDITY AS NEEDED TO MEET MANUFACTURER'S REQUIREMENTS.**
  - THE EXISTING FACILITY AND DRAWING CONTENT ARE REUSED FROM THE FORSYTH COUNTY WATER TREATMENT PLANT EXPANSION PHASE 2 DRAWINGS BY CH2MHILL DATED 2018.**

<b>ESG ENGINEERING</b> PROCESS MECHANICAL <b>MEMBRANE BUILDING</b> <b>(FACILITY 20)</b>	5400 LAUREL SPRINGS PKWY, SUITE 902 SUWANEE, GA 30024 478.474.4996		ANTIOCH WATER TREATMENT PLANT COATINGS REHAB PHASE 1
	BAR IS ONE INCH ON ORIGINAL DRAWING 0" = 1"		
SCALE AS NOTED		BID DOCUMENTS	
PROJ _____		DATE FEBRUARY 2023	
SHEET		<b>001-PK-001</b>	
DESIGNED BY: RYAN MURPHY	DRAWN BY: RYAN MURPHY	CHECKED BY: JASON GODFREY	BY APVD
NO. _____	DATE _____	REVISION _____	_____

1

2

3

4

5

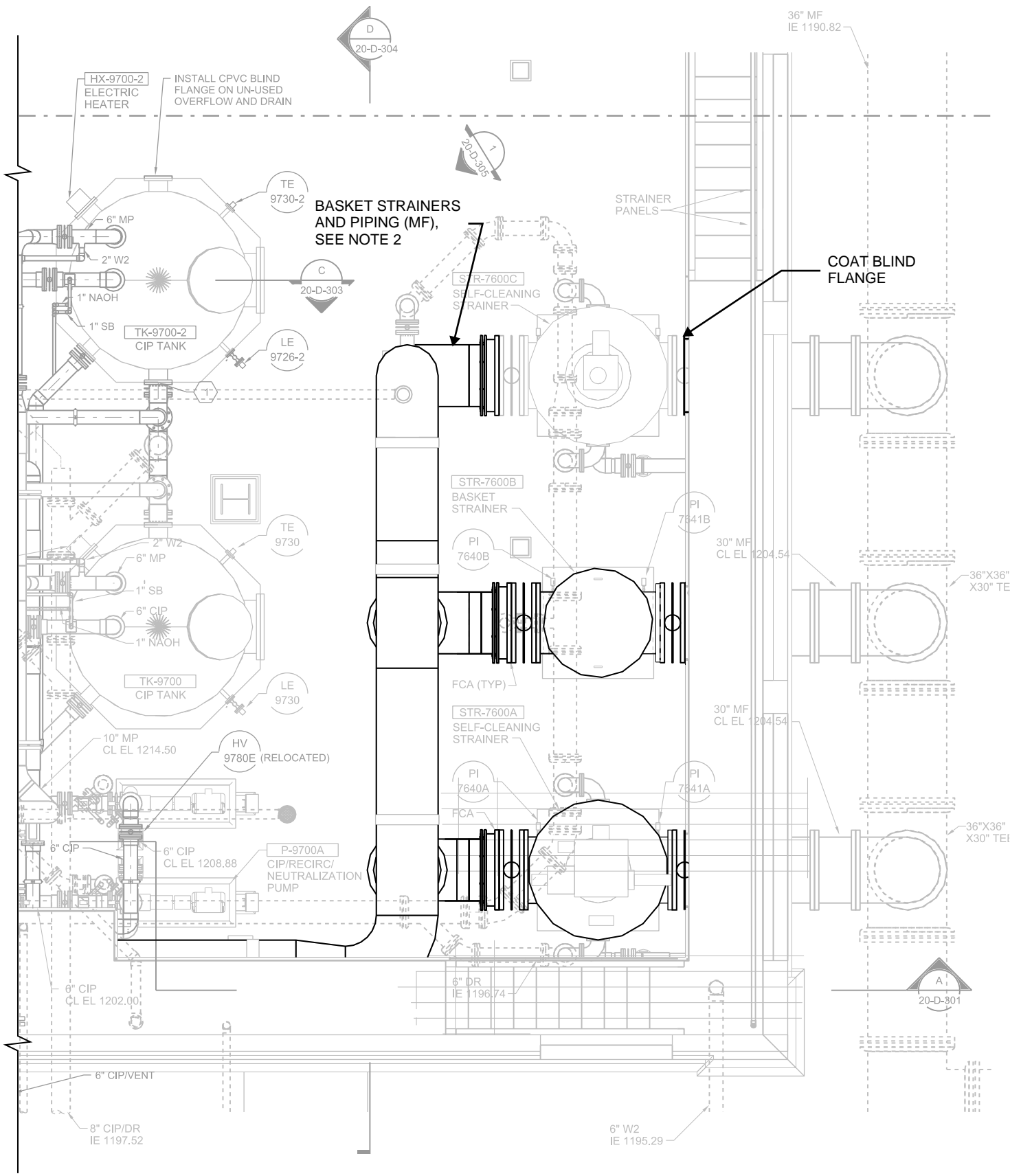
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A

B

C

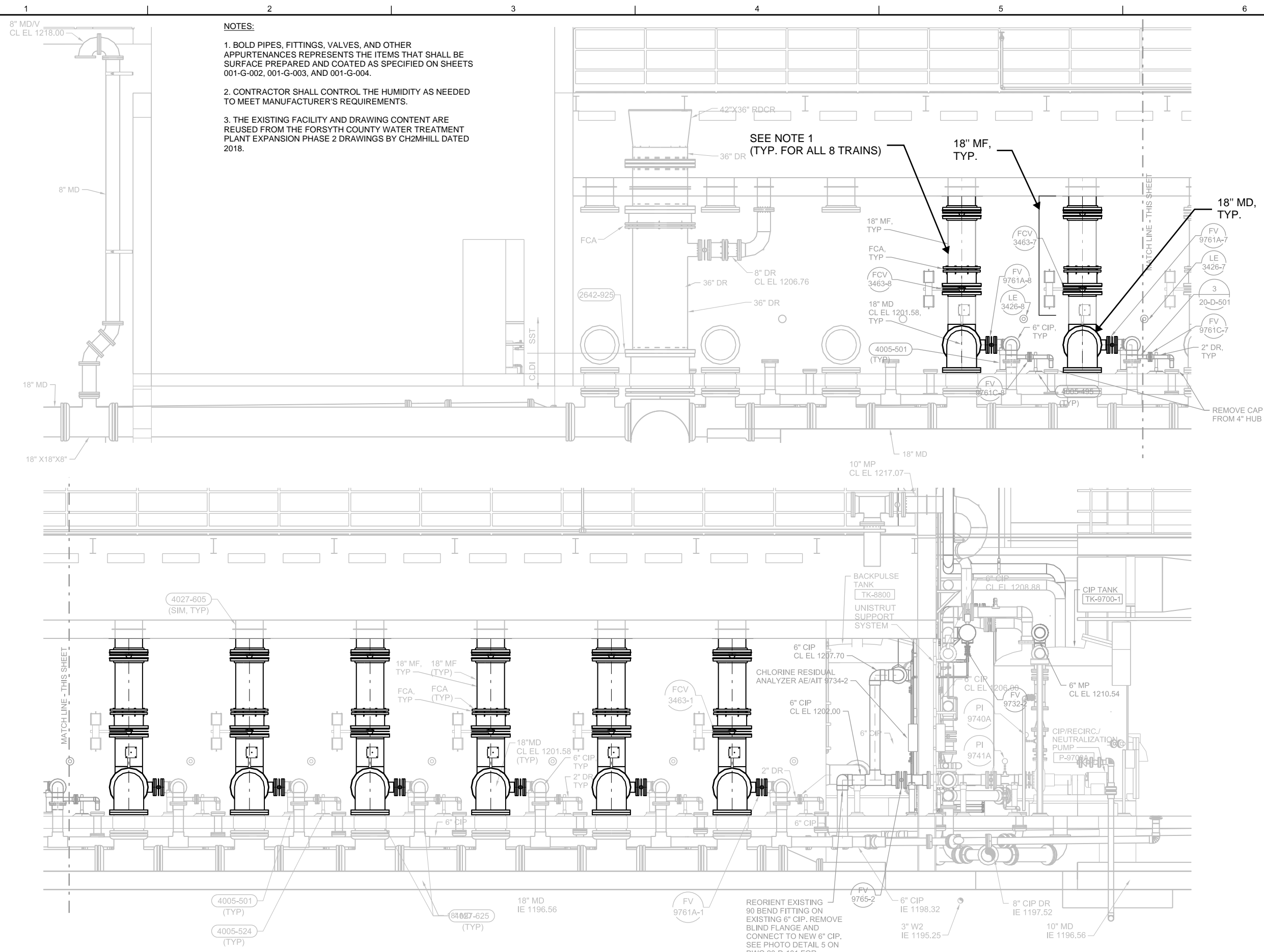
D



**ENLARGED PLAN**  
3/8"=1'-0"

- NOTES:**
1. BOLD PIPES, FITTINGS, VALVES, AND OTHER APPURTENANCES REPRESENTS THE ITEMS THAT SHALL BE SURFACE PREPARED AND COATED AS SPECIFIED ON SHEETS 001-G-002, 001-G-003, AND 001-G-004.
  2. CONTRACTOR SHALL CONTROL THE HUMIDITY AS NEEDED TO MEET MANUFACTURER'S REQUIREMENTS.
  3. THE EXISTING FACILITY AND DRAWING CONTENT ARE REUSED FROM THE FORSYTH COUNTY WATER TREATMENT PLANT EXPANSION PHASE 2 DRAWINGS BY CH2MHILL DATED 2018.

5400 LAUREL SPRINGS PKWY, SUITE 902 SUWANEE, GA 30024 478.474.4996		ANTIOCH WATER TREATMENT PLANT COATINGS REHAB PHASE 1	
<b>ESG ENGINEERING</b> PROCESS MECHANICAL <b>MEMBRANE BUILDING          (FACILITY 20)</b>		CHECKED BY: JASON GODFREY DRAWN BY: RYAN MURPHY DESIGNED BY: RYAN MURPHY NO. DATE REVISION BY APVD	
BAR IS ONE INCH ON ORIGINAL DRAWING 0"=1"			
SCALE AS NOTED		BID DOCUMENTS	
PROJ		DATE FEBRUARY 2023	
<b>001-PK-002</b>			
SHEET			



**NOTES:**

1. BOLD PIPES, FITTINGS, VALVES, AND OTHER APPURTENANCES REPRESENTS THE ITEMS THAT SHALL BE SURFACE PREPARED AND COATED AS SPECIFIED ON SHEETS 001-G-002, 001-G-003, AND 001-G-004.
2. CONTRACTOR SHALL CONTROL THE HUMIDITY AS NEEDED TO MEET MANUFACTURER'S REQUIREMENTS.
3. THE EXISTING FACILITY AND DRAWING CONTENT ARE REUSED FROM THE FORSYTH COUNTY WATER TREATMENT PLANT EXPANSION PHASE 2 DRAWINGS BY CH2MHILL DATED 2018.

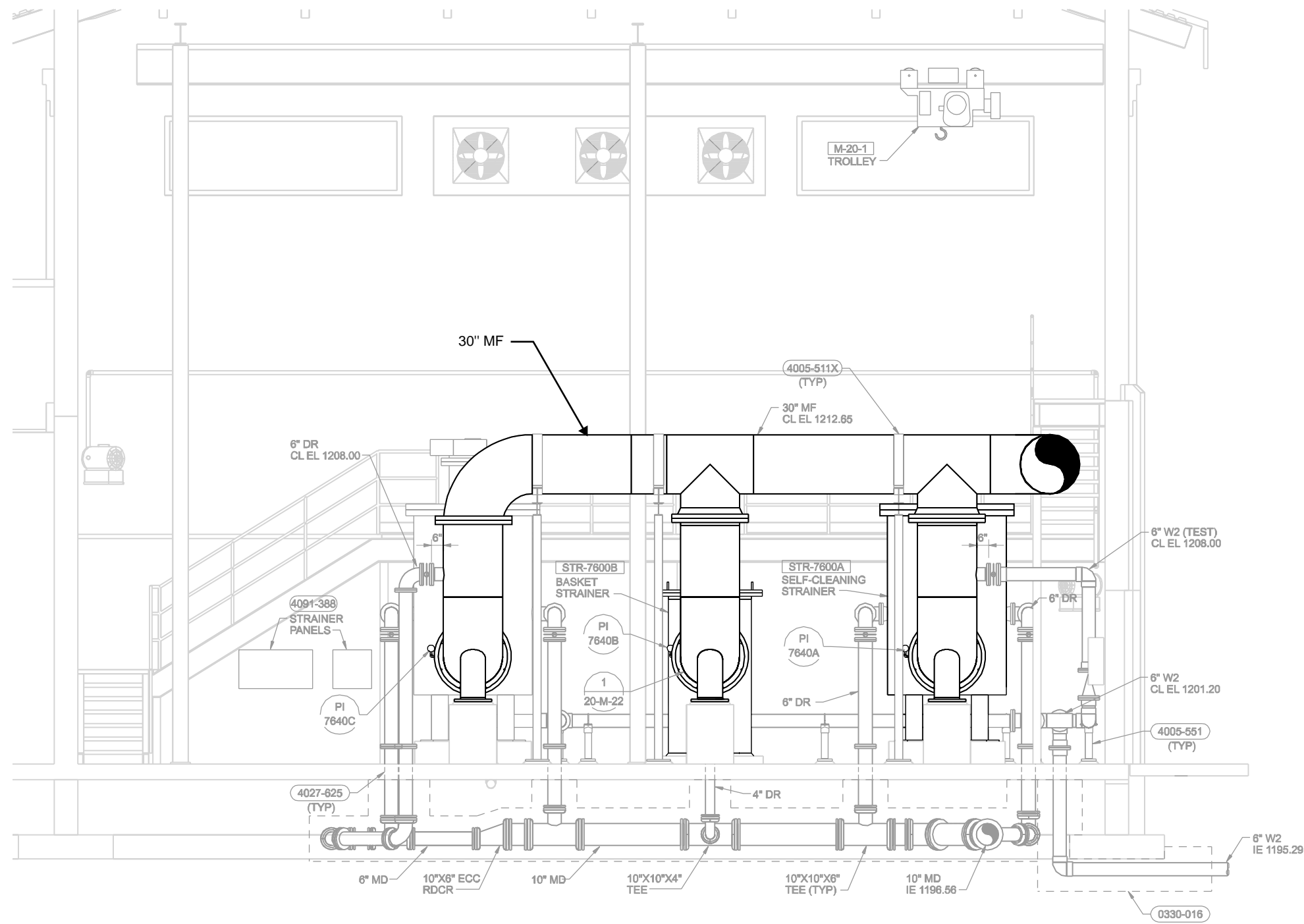
**A SECTION**  
1/4"=1'-0"

20-D-201  
20-D-202

DESIGNED BY:	RYAN MURPHY	CHECKED BY:	JASON GODFREY
DRAWN BY:	RYAN MURPHY	REVISION	BY
NO.		DATE	
5400 LAUREL SPRINGS PKWY, SUITE 902 SUWANEE, GA 30024 478.474.4996			
<b>ESG ENGINEERING</b> PROCESS MECHANICAL		ANTI-OX WATER TREATMENT PLANT COATINGS REHAB PHASE 1	
<b>MEMBRANE BUILDING          (FACILITY 20)</b>			
BAR IS ONE INCH ON ORIGINAL DRAWING @ 1"			
SCALE		AS NOTED	
<b>BID DOCUMENTS</b>			
PROJ _____			
DATE FEBRUARY 2023			
<b>001-PK-003</b>			
SHEET			







**A SECTION**  
3/8"=1'-0"

**NOTES:**

1. BOLD PIPES, FITTINGS, VALVES, AND OTHER APPURTENANCES REPRESENTS THE ITEMS THAT SHALL BE SURFACE PREPARED AND COATED AS SPECIFIED ON SHEETS 001-G-002, 001-G-003, AND 001-G-004.
2. CONTRACTOR SHALL CONTROL THE HUMIDITY AS NEEDED TO MEET MANUFACTURER'S REQUIREMENTS.
3. THE EXISTING FACILITY AND DRAWING CONTENT ARE REUSED FROM THE FORSYTH COUNTY WATER TREATMENT PLANT EXPANSION PHASE 1 DRAWINGS BY CH2MHILL DATED 2010.

<b>ESG ENGINEERING</b> PROCESS MECHANICAL <b>MEMBRANE BUILDING</b> <b>(FACILITY 20)</b>	5400 LAUREL SPRINGS PKWY, SUITE 902 SUWANEE, GA 30024 478.474.4996	ANTIOCH WATER TREATMENT PLANT COATINGS REHAB PHASE 1
	BAR IS ONE INCH ON ORIGINAL DRAWING 0"=1'	SCALE AS NOTED
PROJ	DATE	001-PK-005
SHEET	FEBRUARY 2023	SHEET

DESIGNED BY:	RYAN MURPHY	CHECKED BY:	JASON GODFREY
DRAWN BY:	RYAN MURPHY	REVISION	BY
DATE			APVD
NO.			



**1** MEMBRANE PERMEATE PUMP GALLERY  
001-PK-001 NTS



**2** MEMBRANE DRAIN PIPE GALLERY  
001-PK-001 NTS



**3** MEMBRANE DRAIN PIPE GALLERY  
001-PK-001 NTS



**4** MEMBRANE BASKET STRAINERS  
001-PK-001 NTS

**NOTES:**  
1. BOLD PIPES, FITTINGS, VALVES, AND OTHER APPURTENANCES REPRESENTS THE ITEMS THAT SHALL BE SURFACE PREPARED AND COATED AS SPECIFIED ON SHEETS 001-G-002, 001-G-003, AND 001-G-004.  
2. CONTRACTOR SHALL CONTROL THE HUMIDITY AS NEEDED TO MEET MANUFACTURER'S REQUIREMENTS.

DESIGNED BY:	RYAN MURPHY	DRAWN BY:	RYAN MURPHY	CHECKED BY:	JASON GODFREY
	DATE		REVISION		BY
NO.					

5400 LAUREL SPRINGS PKWY, SUITE 902  
SUWANEE, GA 30024  
478.474.4996

**ESG ENGINEERING**  
PROCESS MECHANICAL

ANTIOCH WATER  
TREATMENT PLANT  
COATINGS REHAB  
PHASE 1

**DETAILS**

BAR IS ONE INCH ON ORIGINAL DRAWING  
0" 1"

SCALE AS NOTED

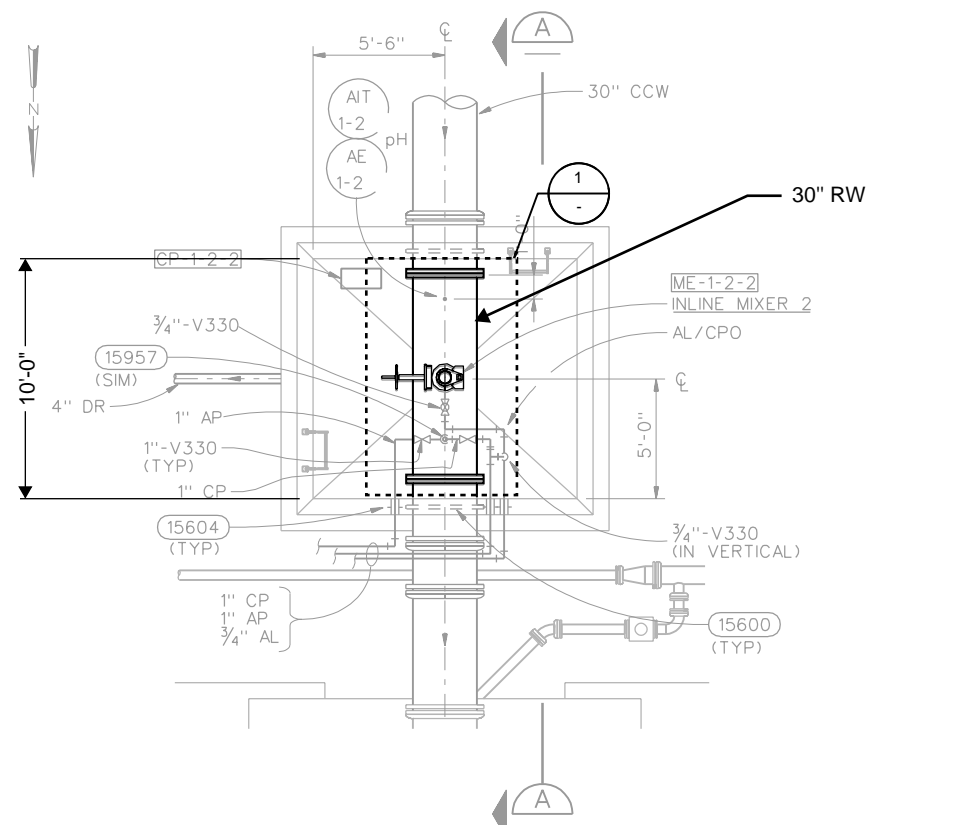
BID DOCUMENTS

PROJ

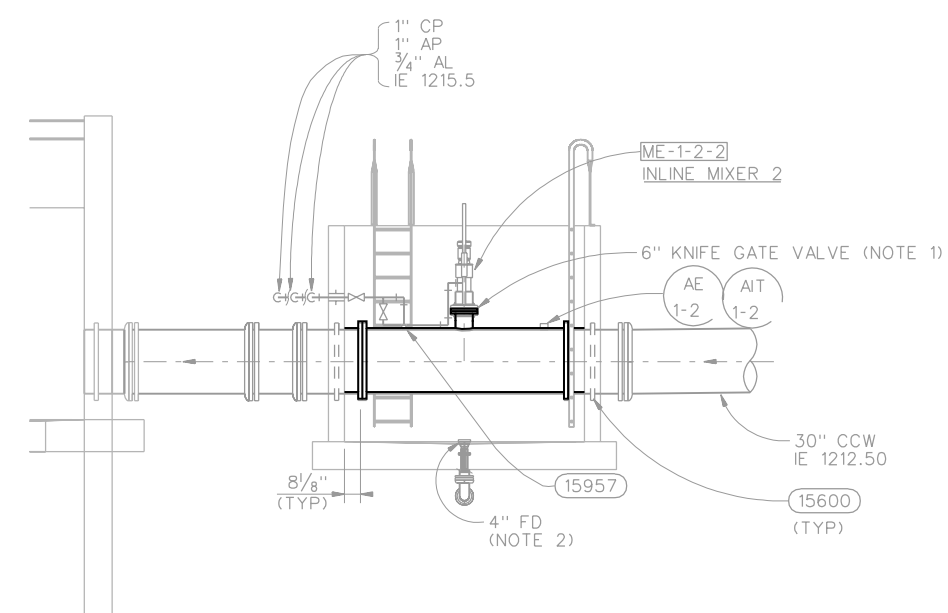
DATE FEBRUARY 2023

**001-PK-006**

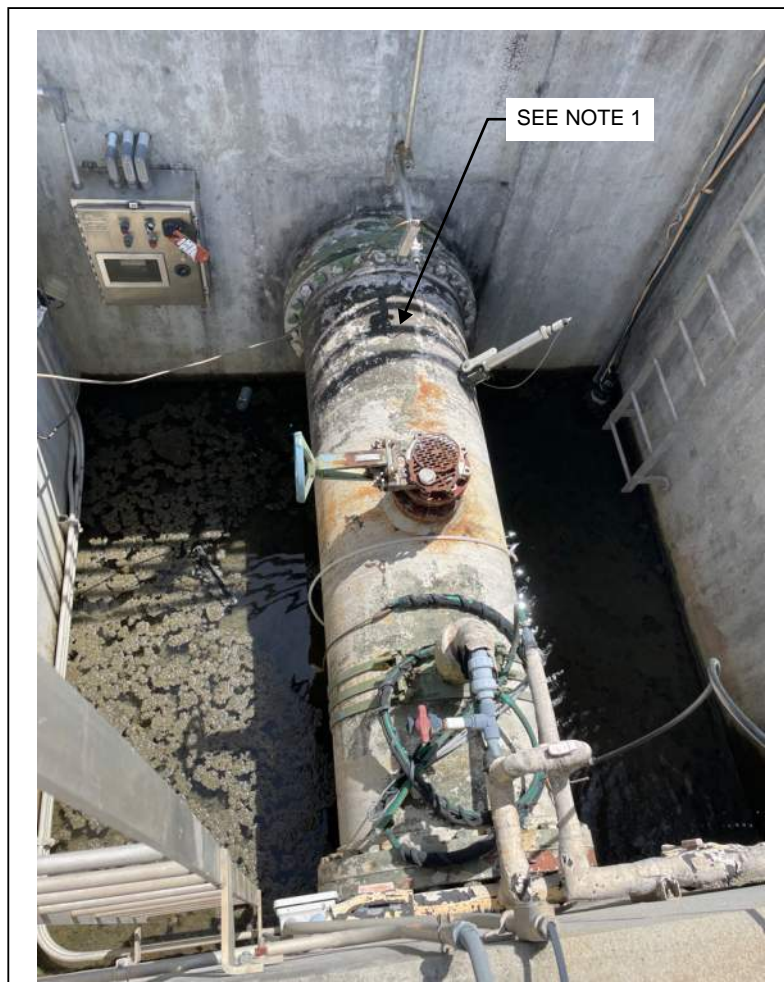
SHEET



PLAN  
1/4"=1'



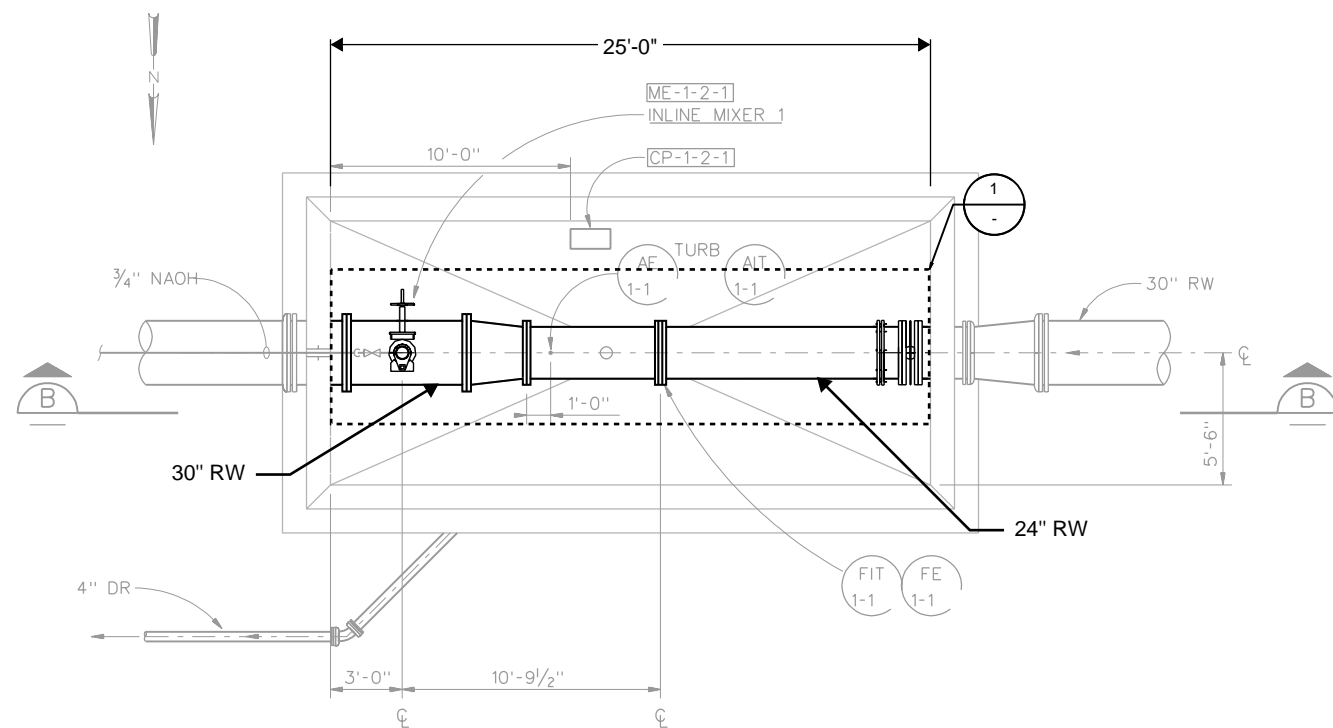
SECTION A-A  
1/4"=1'  
RAPID MIX BOX



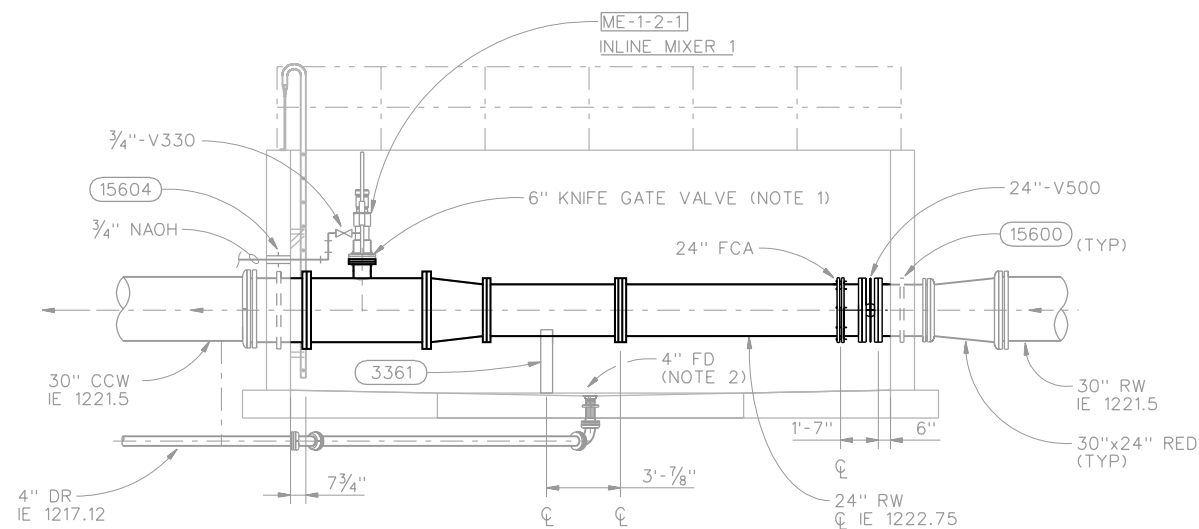
1  
-  
NTS  
1998 RAPID MIX VAULT

- NOTES:
- BOLD PIPES, FITTINGS, VALVES, AND OTHER APPURTENANCES REPRESENTS THE ITEMS THAT SHALL BE SURFACE PREPARED AND COATED AS SPECIFIED ON SHEETS 001-G-002, 001-G-003, AND 001-G-004.
  - THE EXISTING FACILITY AND DRAWING CONTENT ARE REUSED FROM THE FORSYTH COUNTY WATER TREATMENT PLANT DRAWINGS BY CH2MHILL DATED 1998.

CHECKED BY: JASON GODFREY		BY: APVD	
DRAWN BY: RYAN MURPHY		REVISION	
DESIGNED BY: RYAN MURPHY	DATE	NO.	
5400 LAUREL SPRINGS PKWY, SUITE 902 SUWANEE, GA 30024 478.474.4996		ANTIOCH WATER TREATMENT PLANT COATINGS REHAB PHASE 1	
ESG ENGINEERING		PROCESS MECHANICAL	
1998 RAPID MIX BOX (FACILITY 7A)			
BAR IS ONE INCH ON ORIGINAL DRAWING 0"=1'			
SCALE: AS NOTED		BID DOCUMENTS	
PROJ		DATE: FEBRUARY 2023	
002-PK-001		SHEET	



PLAN  
1/4"=1'



SECTION B  
1/4"=1'  
METER VAULT

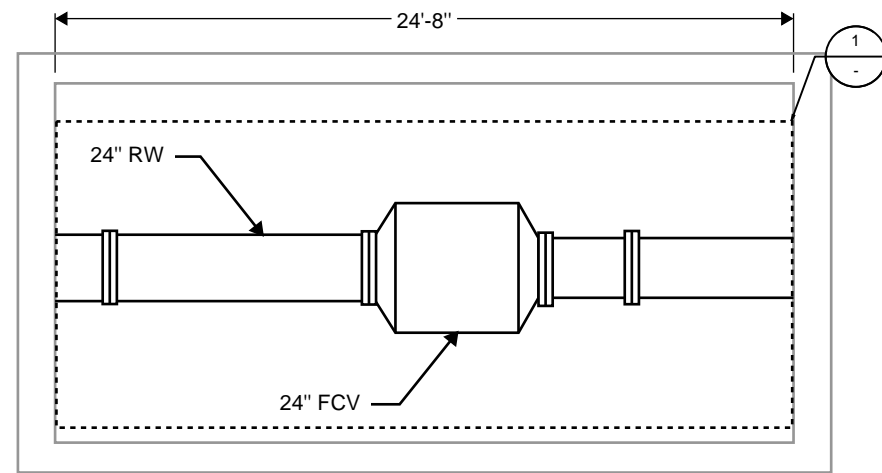


1  
-  
1998 METERING VAULT  
NTS

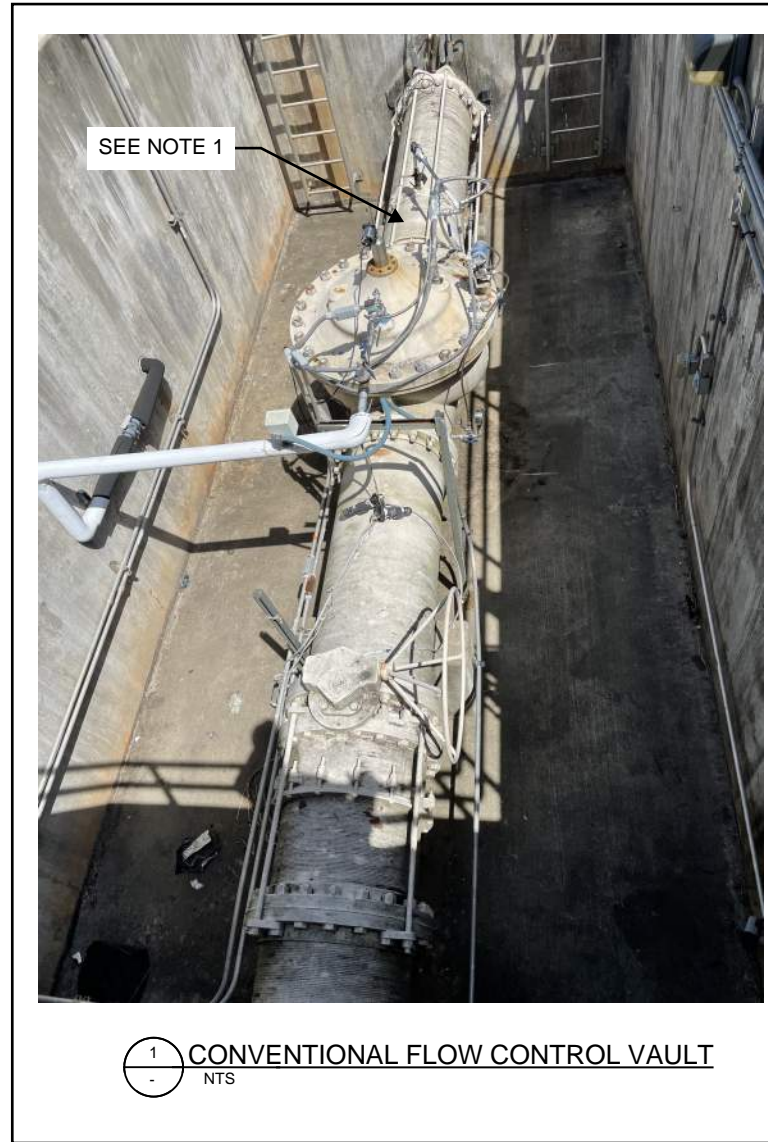
NOTES:

- BOLD PIPES, FITTINGS, VALVES, AND OTHER APPURTENANCES REPRESENTS THE ITEMS THAT SHALL BE SURFACE PREPARED AND COATED AS SPECIFIED ON SHEETS 001-G-002, 001-G-003, AND 001-G-004.
- THE EXISTING FACILITY AND DRAWING CONTENT ARE REUSED FROM THE FORSYTH COUNTY WATER TREATMENT PLANT DRAWINGS BY CH2MHILL DATED 1998.

CHECKED BY: JASON GODFREY		BY: APVD	
DRAWN BY: RYAN MURPHY		REVISION	
DESIGNED BY: RYAN MURPHY	DATE	NO.	
5400 LAUREL SPRINGS PKWY, SUITE 902 SUWANEE, GA 30024 478.474.4996		ANTIOCH WATER TREATMENT PLANT COATINGS REHAB PHASE 1	
ESG ENGINEERING		PROCESS MECHANICAL	
1998 METERING VAULT (FACILITY 8A)			
BAR IS ONE INCH ON ORIGINAL DRAWING			
SCALE		AS NOTED	
BID DOCUMENTS			
PROJ			
DATE FEBRUARY 2023			
002-PK-002			
SHEET			



**CONVENTIONAL FLOW CONTROL VAULT**  
NTS



**NOTES:**

1. BOLD PIPES, FITTINGS, VALVES, AND OTHER APPURTENANCES REPRESENTS THE ITEMS THAT SHALL BE SURFACE PREPARED AND COATED AS SPECIFIED ON SHEETS 001-G-002, 001-G-003, AND 001-G-004.

DESIGNED BY:	RYAN MURPHY	CHECKED BY:	JASON GODFREY
	DATE		BY / APVD
DRAWN BY:	RYAN MURPHY	REVISION	
	NO.		

5400 LAUREL SPRINGS PKWY, SUITE 902  
SUWANEE, GA 30024  
478.474.4996

ANTIOCH WATER  
TREATMENT PLANT  
COATINGS REHAB  
PHASE 1

**ESG ENGINEERING**

PROCESS MECHANICAL  
**CONVENTIONAL FLOW  
CONTROL VAULT  
(FACILITY 8B)**

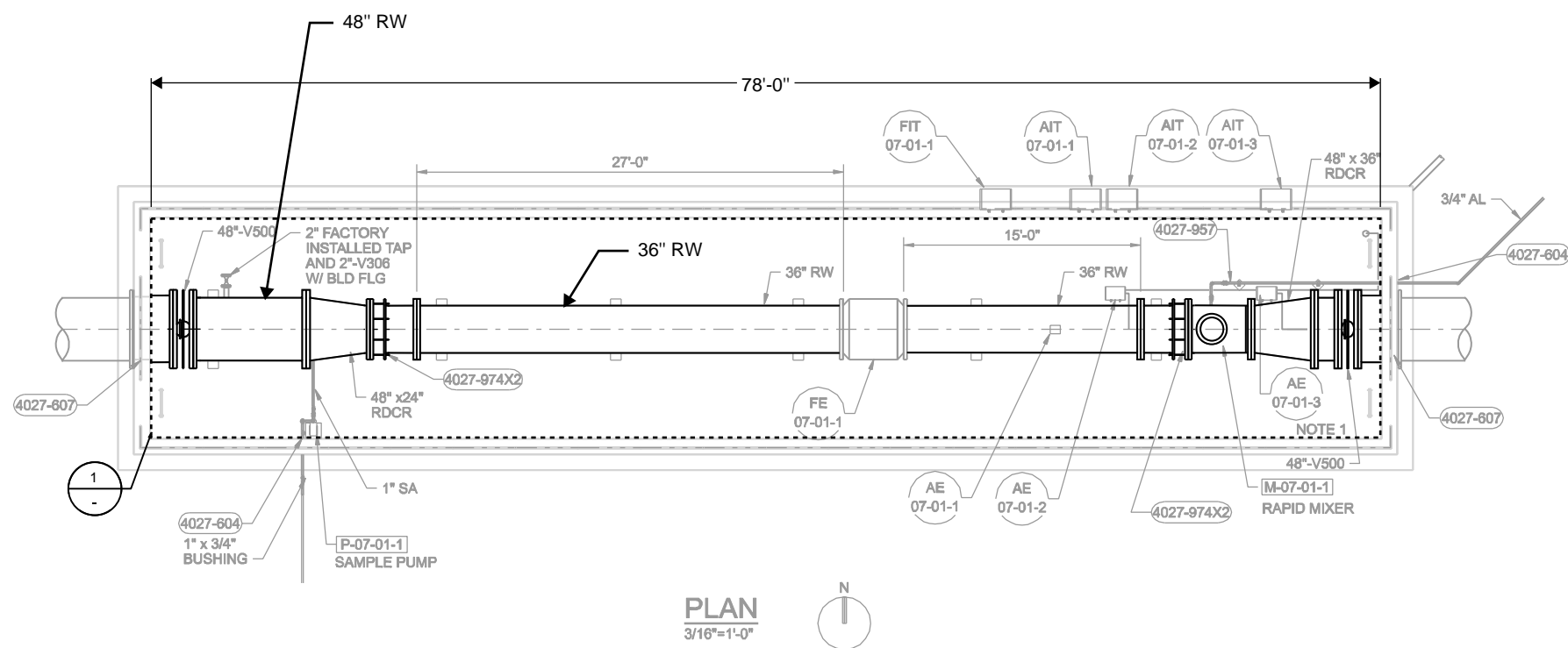
BAR IS ONE INCH ON ORIGINAL DRAWING	
SCALE	AS NOTED
BID DOCUMENTS	
PROJ	
DATE	FEBRUARY 2023
<b>002-PK-003</b>	
SHEET	

A

B

C

D



1 RAPID MIX VAULT  
NTS

**NOTES:**

1. BOLD PIPES, FITTINGS, VALVES, AND OTHER APPURTENANCES REPRESENTS THE ITEMS THAT SHALL BE SURFACE PREPARED AND COATED AS SPECIFIED ON SHEETS 001-G-002, 001-G-003, AND 001-G-004.
2. THE EXISTING FACILITY AND DRAWING CONTENT ARE REUSED FROM THE FORSYTH COUNTY WATER TREATMENT PLANT EXPANSION PHASE 1 DRAWINGS BY CH2MHILL DATED 2010.

CHECKED BY:	JASON GODFREY
BY:	APVD
DRAWN BY:	RYAN MURPHY
REVISION	
DESIGNED BY:	RYAN MURPHY
DATE	
NO.	

5400 LAUREL SPRINGS PKWY, SUITE 802  
SUWANEE, GA 30024  
478.474.4996

ANTIOCH WATER  
TREATMENT PLANT  
COATINGS REHAB  
PHASE 1

**ESG ENGINEERING**

PROCESS MECHANICAL

**RAPID MIX VAULT  
(FACILITY 7B)**

BAR IS ONE INCH ON ORIGINAL DRAWING  
0" = 1"

SCALE AS NOTED

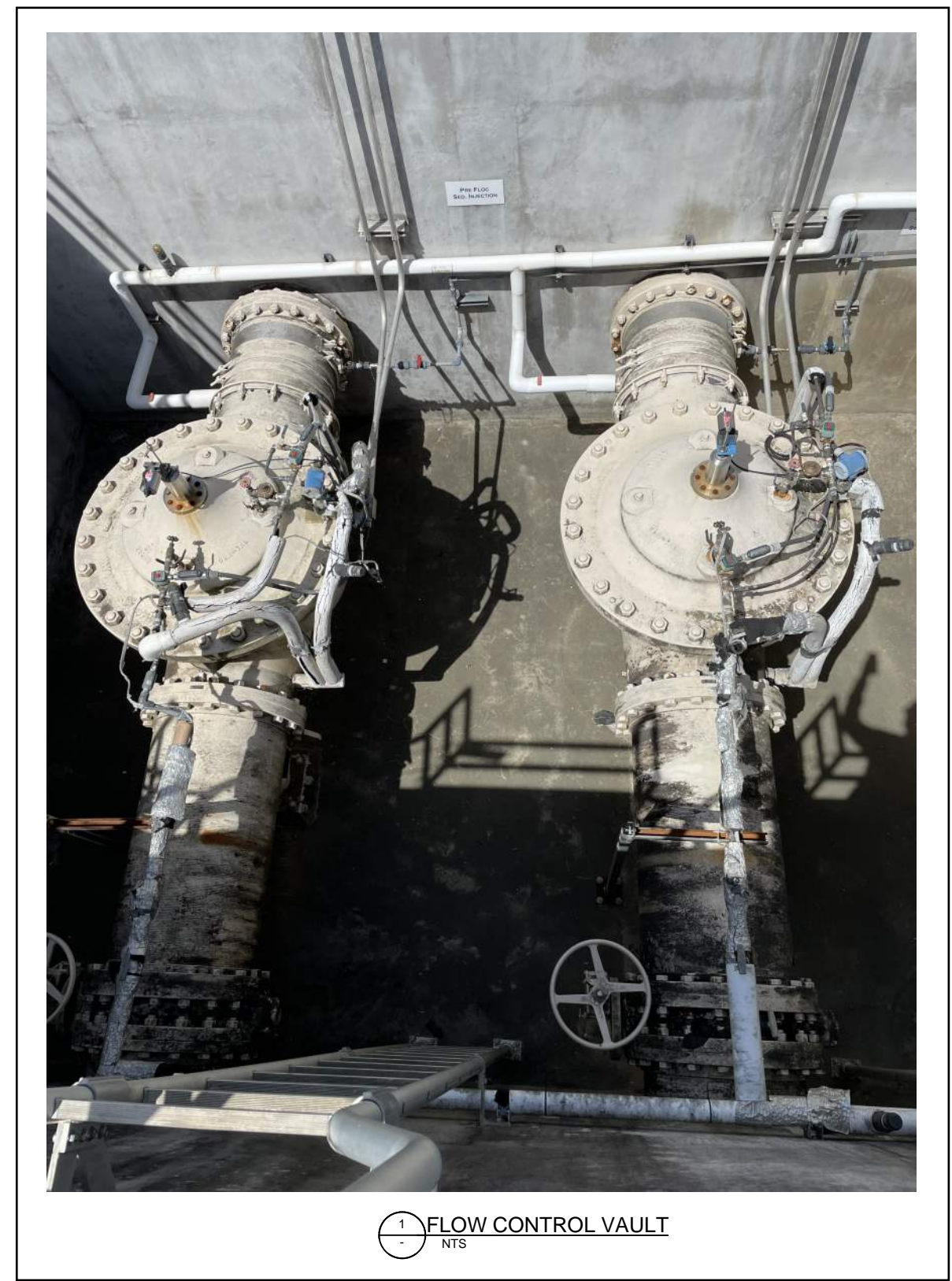
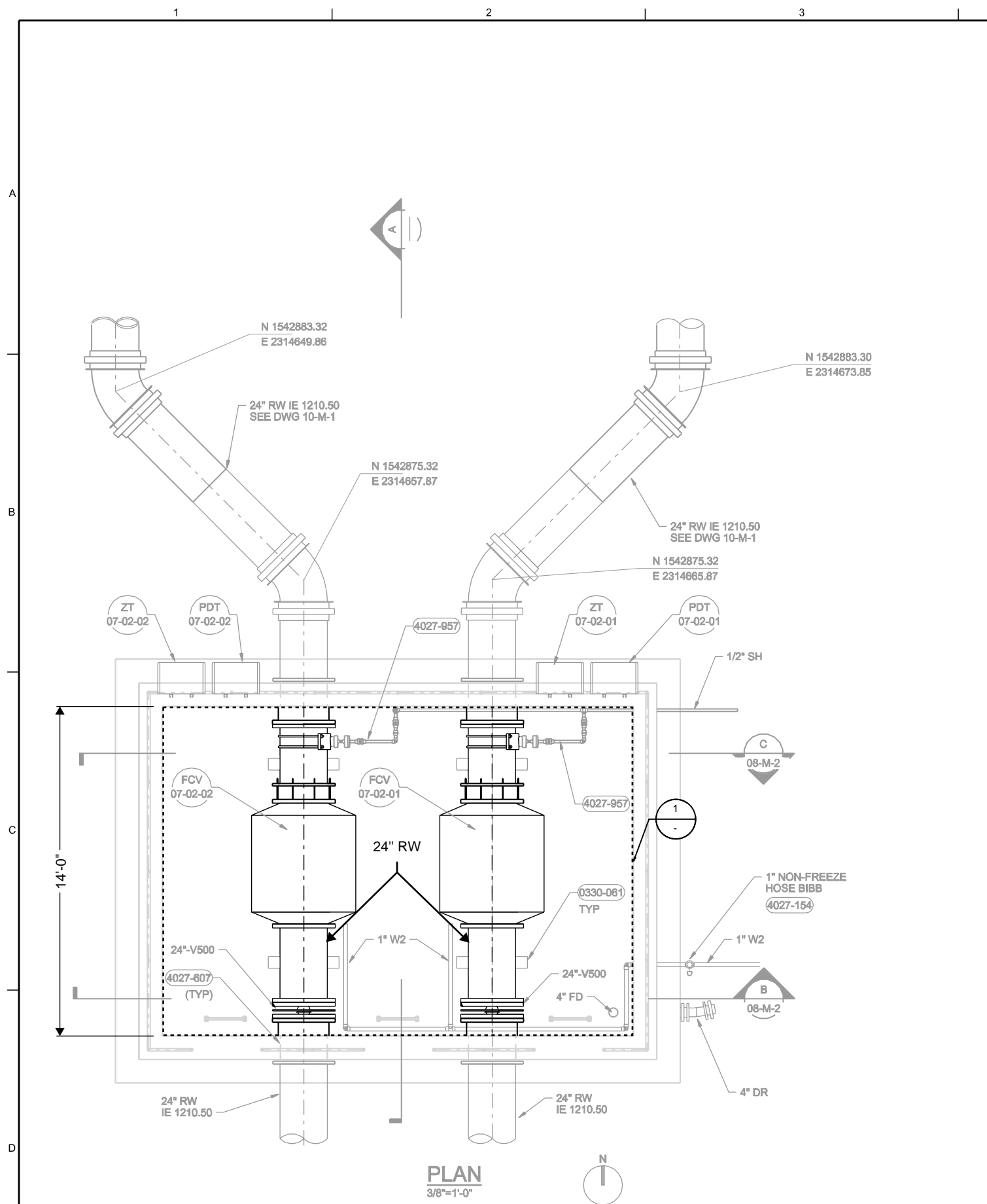
BID DOCUMENTS

PROJ

DATE FEBRUARY 2023

**003-PK-001**

SHEET



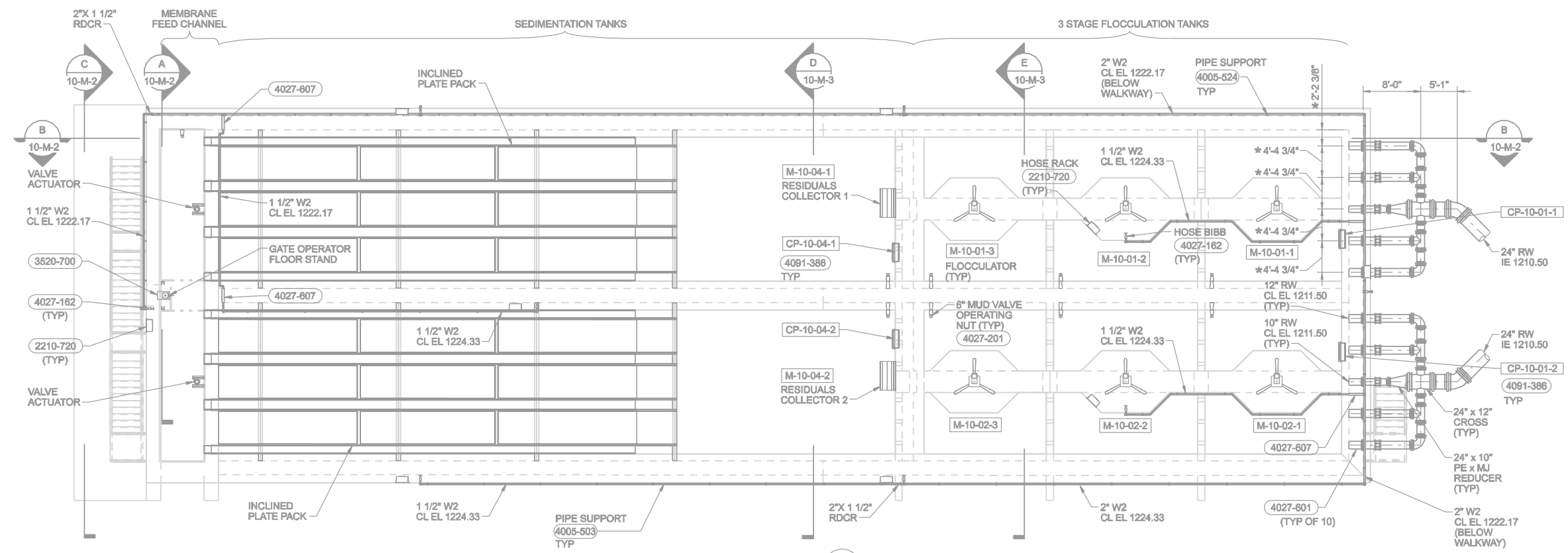
1  
-  
FLOW CONTROL VAULT  
NTS

**NOTES:**

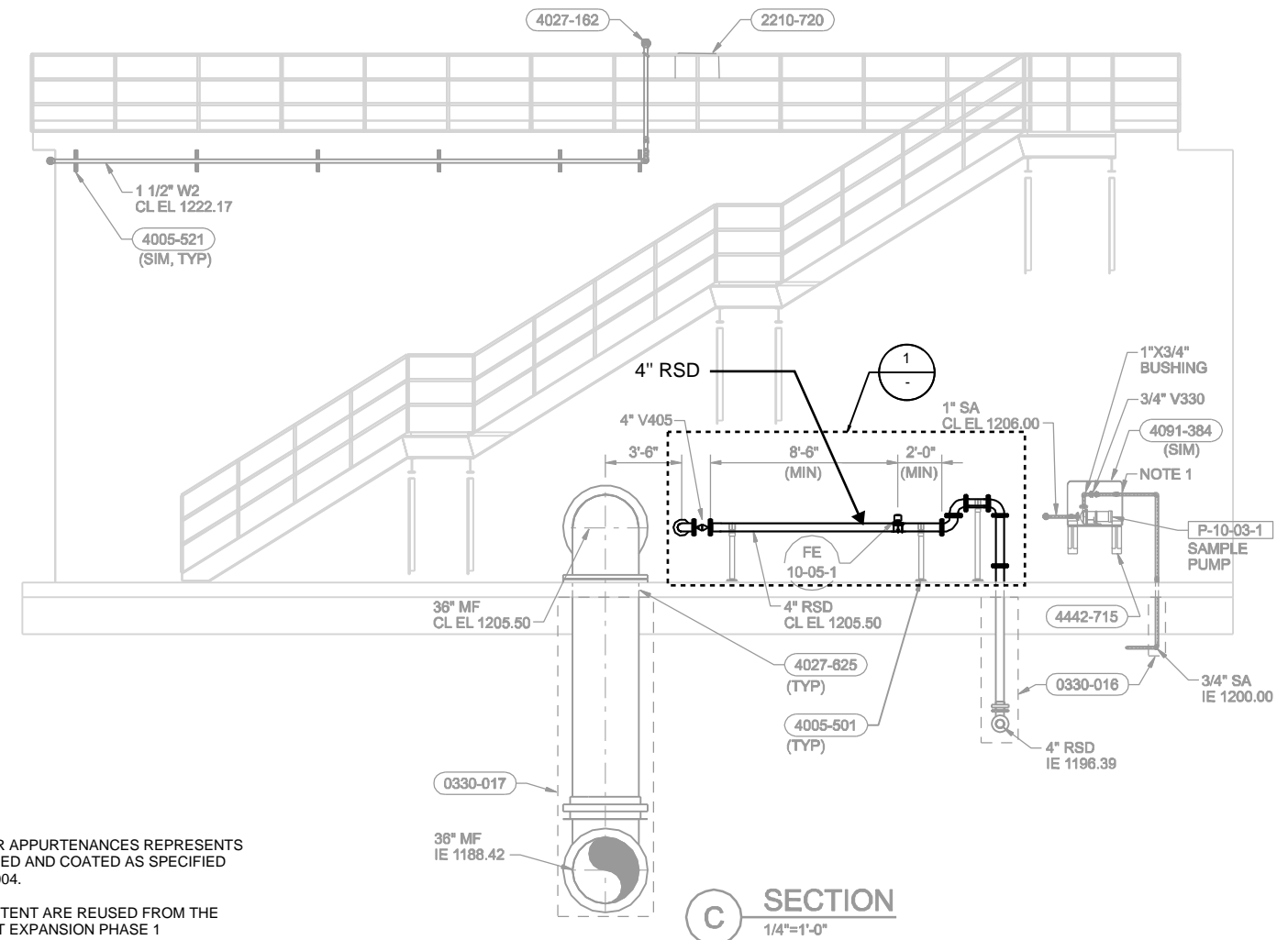
1. BOLD PIPES, FITTINGS, VALVES, AND OTHER APPURTENANCES REPRESENTS THE ITEMS THAT SHALL BE SURFACE PREPARED AND COATED AS SPECIFIED ON SHEETS 001-G-002, 001-G-003, AND 001-G-004.
2. THE EXISTING FACILITY AND DRAWING CONTENT ARE REUSED FROM THE FORSYTH COUNTY WATER TREATMENT PLANT EXPANSION PHASE 1 DRAWINGS BY CH2MHILL DATED 2010.

5400 LAUREL SPRINGS PKWY, SUITE 902 SUWANEE, GA 30024 478.474.4996		ANTIOCH WATER TREATMENT PLANT COATINGS REHAB PHASE 1	
<b>ESG ENGINEERING</b>		PROCESS MECHANICAL <b>FLOW CONTROL VAULT (FACILITY 8C)</b>	
BAR IS ONE INCH ON ORIGINAL DRAWING 0"=1'			
SCALE		AS NOTED	
BID DOCUMENTS			
PROJ		DATE	
003-PK-002		FEBRUARY 2023	
SHEET			
DESIGNED BY:	RYAN MURPHY	CHECKED BY:	JASON GODFREY
DRAWN BY:	RYAN MURPHY	BY:	APVD
NO.	DATE	REVISION	





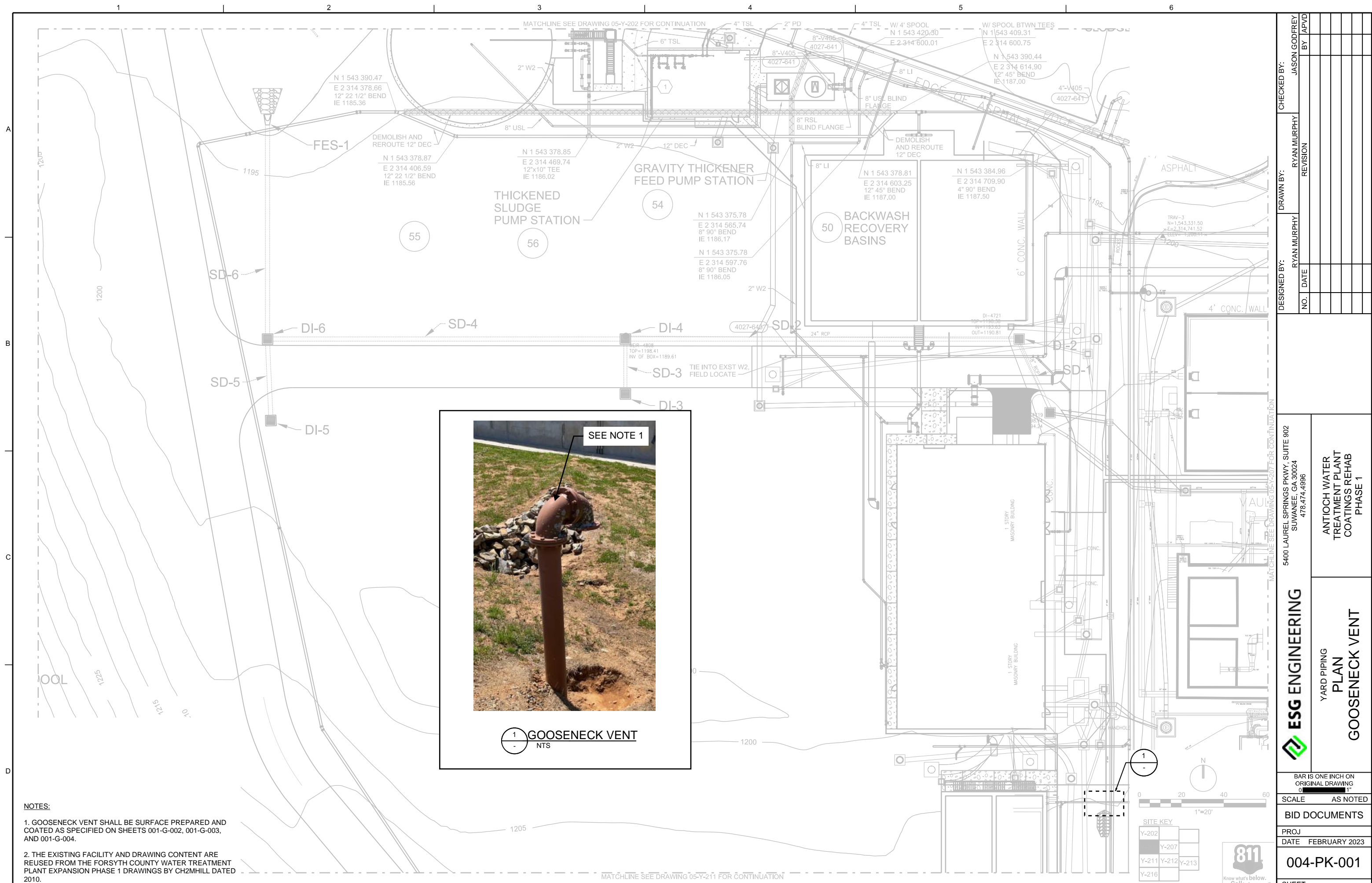
**UPPER PLAN**  
NTS



**1** SED. BASIN SLUDGE REMOVAL  
NTS

- NOTES:**
1. BOLD PIPES, FITTINGS, VALVES, AND OTHER APPURTENANCES REPRESENTS THE ITEMS THAT SHALL BE SURFACE PREPARED AND COATED AS SPECIFIED ON SHEETS 001-G-002, 001-G-003, AND 001-G-004.
  2. THE EXISTING FACILITY AND DRAWING CONTENT ARE REUSED FROM THE FORSYTH COUNTY WATER TREATMENT PLANT EXPANSION PHASE 1 DRAWINGS BY CH2MHILL DATED 2010.

CHECKED BY:	JASON GODFREY	BY	APVD
	RYAN MURPHY		REVISION
DESIGNED BY:	RYAN MURPHY	DATE	
NO.			
5400 LAUREL SPRINGS PKWY, SUITE 902 SUWANEE, GA 30024 478.474.4996			
ESG ENGINEERING		ANTIOCH WATER TREATMENT PLANT COATINGS REHAB PHASE 1	
PROCESS MECHANICAL		FLOCCULATION/SEDIMENTATION BASINS (FACILITY 10)	
BAR IS ONE INCH ON ORIGINAL DRAWING			
SCALE		AS NOTED	
BID DOCUMENTS			
PROJ			
DATE FEBRUARY 2023			
003-PK-003			
SHEET			



**NOTES:**

- GOOSENECK VENT SHALL BE SURFACE PREPARED AND COATED AS SPECIFIED ON SHEETS 001-G-002, 001-G-003, AND 001-G-004.
- THE EXISTING FACILITY AND DRAWING CONTENT ARE REUSED FROM THE FORSYTH COUNTY WATER TREATMENT PLANT EXPANSION PHASE 1 DRAWINGS BY CH2MHILL DATED 2010.



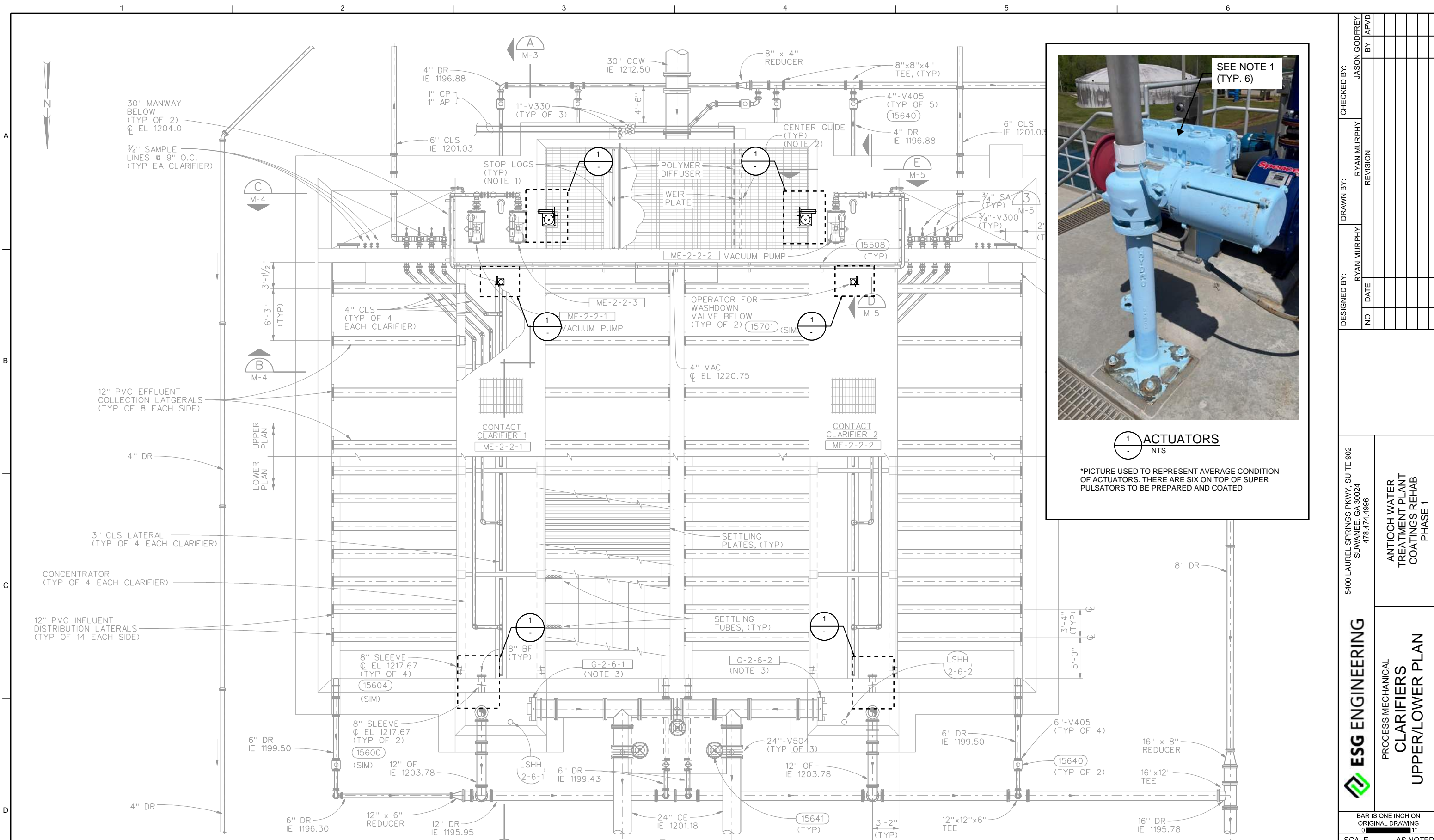
0 20 40 60  
1"=20'

**SITE KEY**

Y-202	
Y-207	
Y-211	Y-212
Y-216	Y-213

811  
Know what's below.  
Call before you dig.

<b>ESG ENGINEERING</b> 5400 LAUREL SPRINGS PKWY, SUITE 902 SUWANEE, GA 30024 478.474.4996	YARD PIPING <b>PLAN</b> GOOSENECK VENT	ANTIOCH WATER TREATMENT PLANT COATINGS REHAB PHASE 1	CHECKED BY: JASON GODFREY BY: APVD
	BAR IS ONE INCH ON ORIGINAL DRAWING 0" = 1"	SCALE AS NOTED	BID DOCUMENTS
PROJ:	DATE: FEBRUARY 2023	004-PK-001	DRAWN BY: RYAN MURPHY REVISION:
SHEET	NO.	DATE	NO.



SEE NOTE 1 (TYP. 6)

- NOTES:**
- BOLD PIPES, FITTINGS, VALVES, AND OTHER APPURTENANCES REPRESENTS THE ITEMS THAT SHALL BE SURFACE PREPARED AND COATED AS SPECIFIED ON SHEETS 001-G-002, 001-G-003, AND 001-G-004.**
  - THE EXISTING FACILITY AND DRAWING CONTENT ARE REUSED FROM THE FORSYTH COUNTY WATER TREATMENT PLANT DRAWINGS BY CH2MHILL DATED 1998.

CHECKED BY:	JASON GODFREY
BY:	APVD
DRAWN BY:	RYAN MURPHY
REVISION	
DESIGNED BY:	RYAN MURPHY
DATE	
NO.	

5400 LAUREL SPRINGS PKWY, SUITE 902  
SUWANEE, GA 30024  
478.474.4996

ANTIOCH WATER  
TREATMENT PLANT  
COATINGS REHAB  
PHASE 1

**ESG ENGINEERING**

PROCESS MECHANICAL  
**CLARIFIERS**  
**UPPER/LOWER PLAN**

BAR IS ONE INCH ON ORIGINAL DRAWING	1"
SCALE	AS NOTED
<b>BID DOCUMENTS</b>	
PROJ	
DATE	FEBRUARY 2023
<b>004-PK-002</b>	
SHEET	



SEE NOTE 1  
(TYP. 4 LOCATIONS)

**1** FILTER VALVE ACTUATORS  
NTS

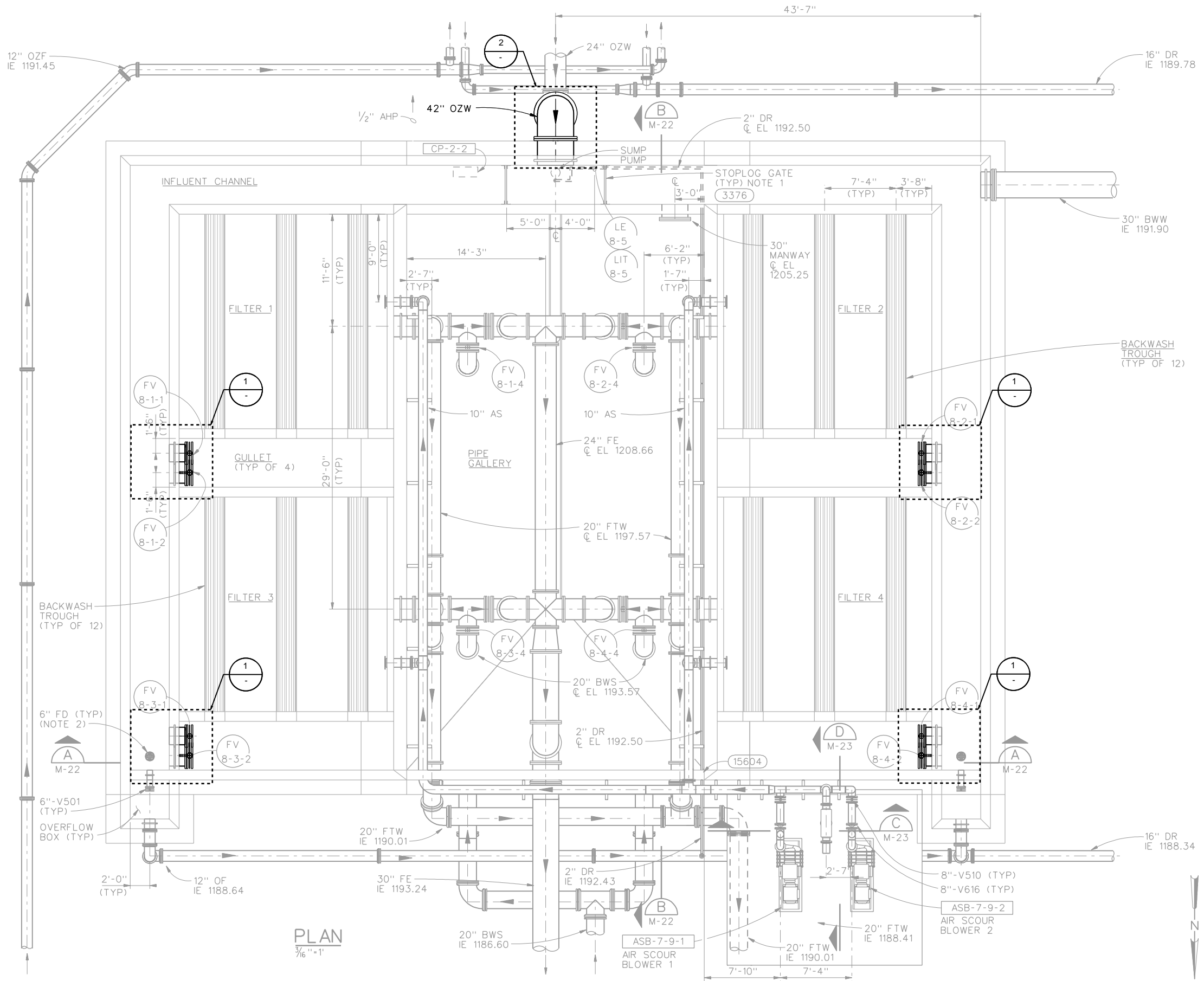


SEE NOTE 1

**2** FILTER INFLUENT PIPE  
NTS

NOTES:

1. BOLD PIPES, FITTINGS, VALVES, AND OTHER APPURTENANCES REPRESENTS THE ITEMS THAT SHALL BE SURFACE PREPARED AND COATED AS SPECIFIED ON SHEETS 001-G-002, 001-G-003, AND 001-G-004.
2. THE EXISTING FACILITY AND DRAWING CONTENT ARE REUSED FROM THE FORSYTH COUNTY WATER TREATMENT PLANT DRAWINGS BY CH2MHILL DATED 1998.



PLAN  
3/8" = 1'

CHECKED BY:	JASON GODFREY
BY:	APVD
DRAWN BY:	RYAN MURPHY
REVISION	
DESIGNED BY:	RYAN MURPHY
DATE	
NO.	

5400 LAUREL SPRINGS PKWY, SUITE 902  
SUWANEE, GA 30024  
478.474.4996

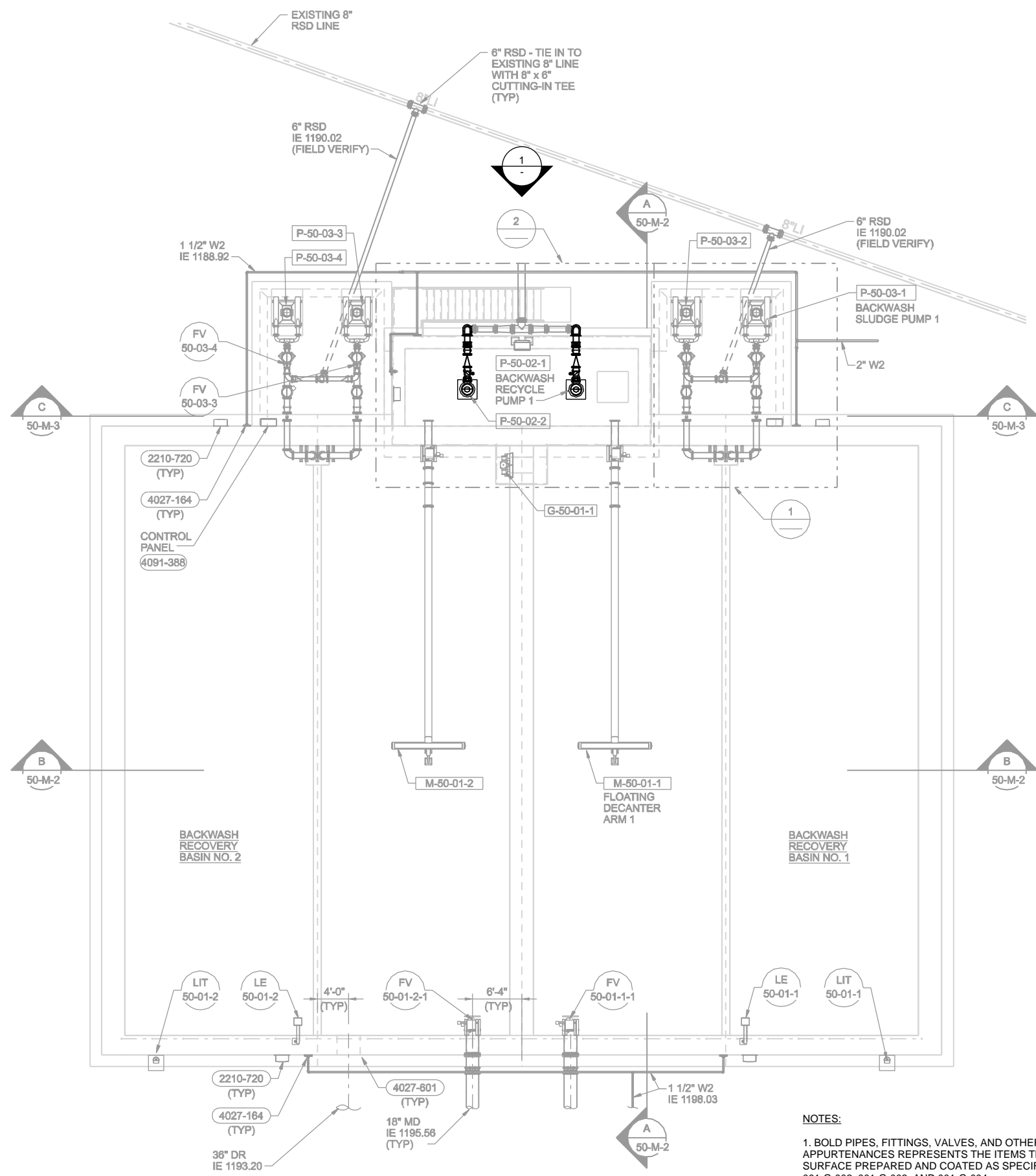
ANTIOCH WATER  
TREATMENT PLANT  
COATINGS REHAB  
PHASE 1

**ESG ENGINEERING**

PROCESS MECHANICAL

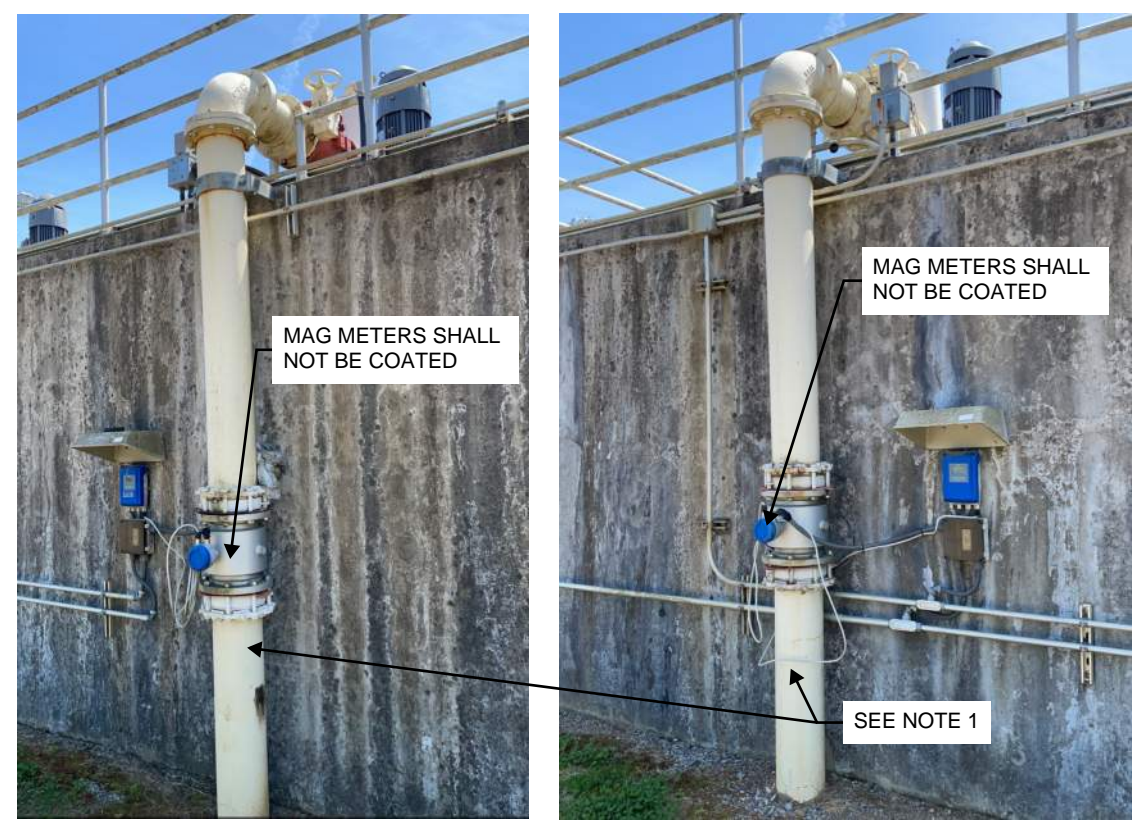
**FILTERS PLAN**

BAR IS ONE INCH ON ORIGINAL DRAWING	0" = 1"
SCALE	AS NOTED
BID DOCUMENTS	
PROJ	
DATE	FEBRUARY 2023
<b>004-PK-003</b>	
SHEET	



**PLAN**  
1/8"=1'-0"

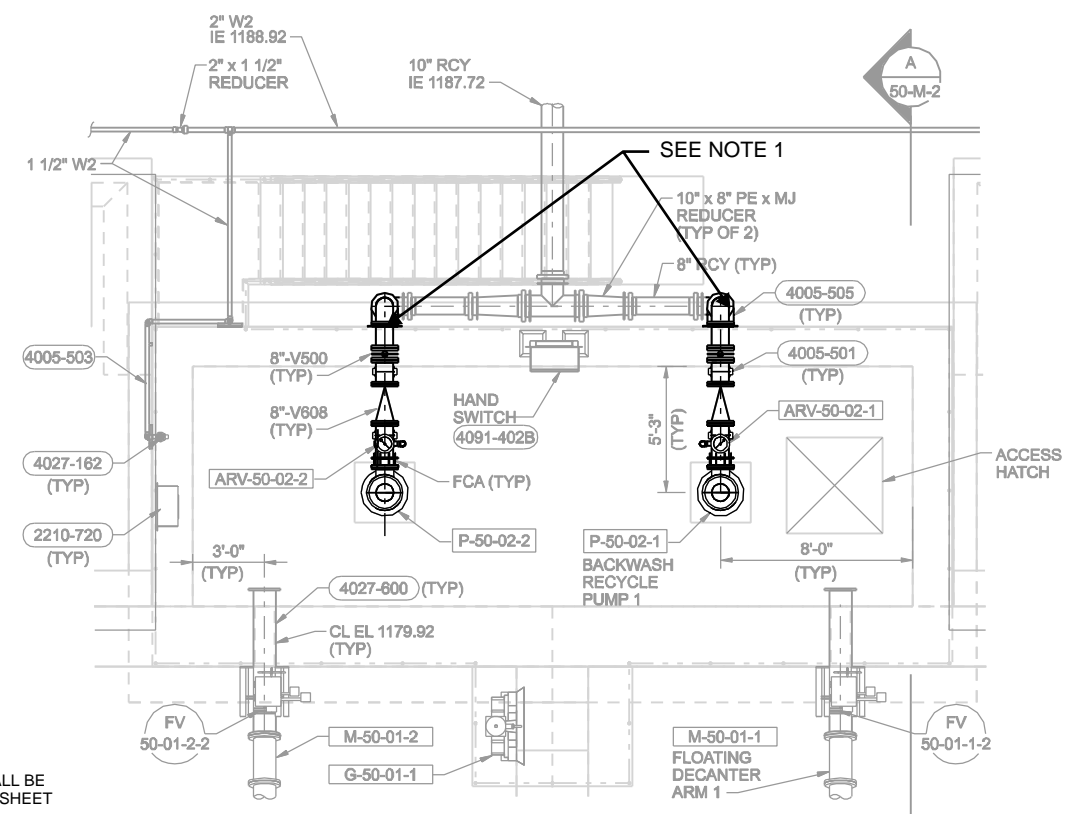
**NOTES:**  
 1. BOLD PIPES, FITTINGS, VALVES, AND OTHER APPURTENANCES REPRESENTS THE ITEMS THAT SHALL BE SURFACE PREPARED AND COATED AS SPECIFIED ON SHEET 001-G-002, 001-G-003, AND 001-G-004.  
 2. THE EXISTING FACILITY AND DRAWING CONTENT ARE REUSED FROM THE FORSYTH COUNTY WATER TREATMENT PLANT EXPANSION PHASE 1 DRAWINGS BY CH2MHILL DATED 2010.



**EAST**

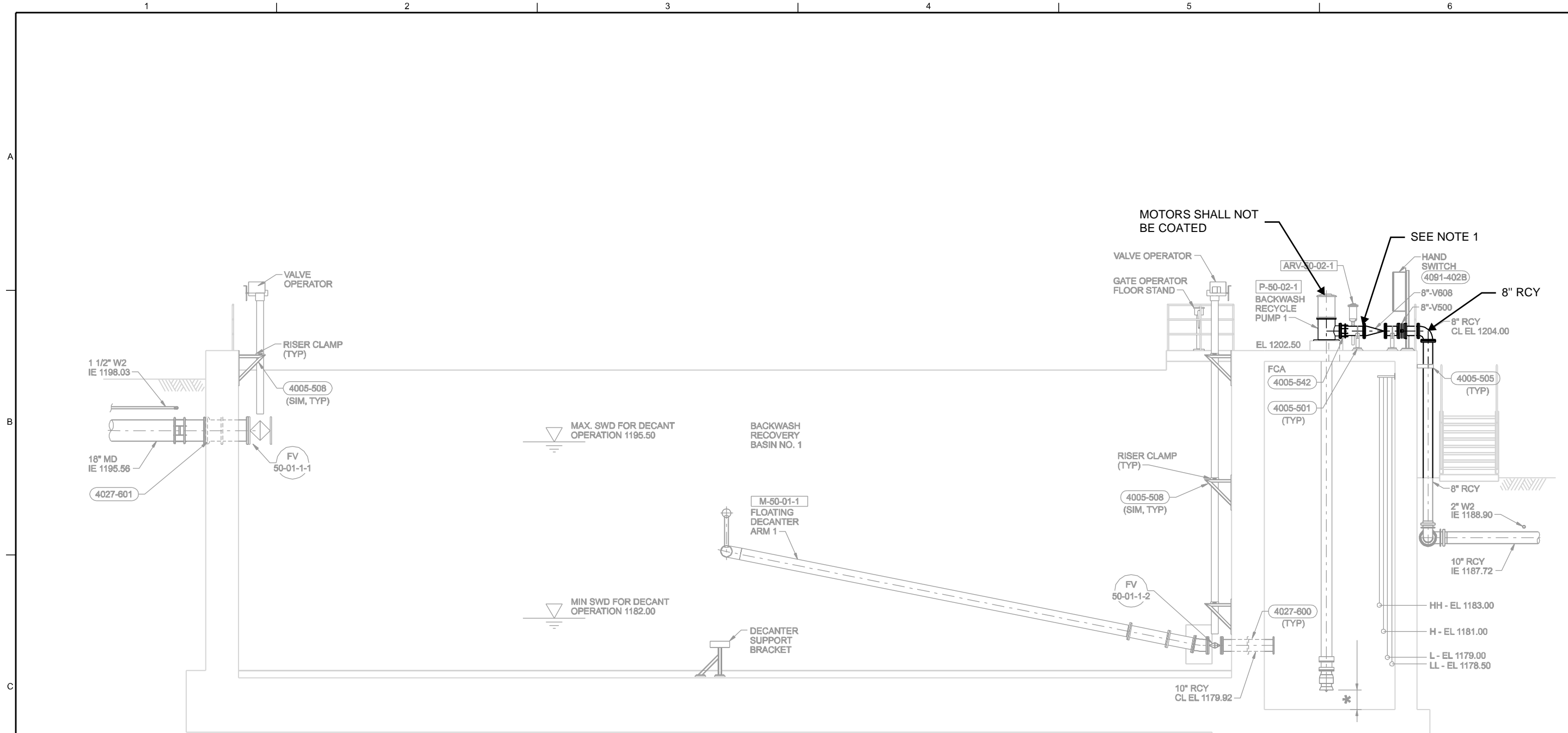
**WEST**

**1** BACKWASH RECYCLE PIPING  
NTS



**2** ENLARGED PLAN  
1/4"=1'-0"

CHECKED BY: JASON GODFREY		BY: JAPVD	
DRAWN BY: RYAN MURPHY		REVISION	
DESIGNED BY: RYAN MURPHY	DATE	NO.	
5400 LAUREL SPRINGS PKWY, SUITE 902 SUWANEE, GA 30024 478.474.4996			
ESG ENGINEERING		ANTIOCH WATER TREATMENT PLANT COATINGS REHAB PHASE 1	
PROCESS MECHANICAL		BACKWASH RECOVERY BASIN (FACILITY 50)	
BAR IS ONE INCH ON ORIGINAL DRAWING 1"			
SCALE	AS NOTED		
BID DOCUMENTS			
PROJ			
DATE	FEBRUARY 2023		
004-PK-004			
SHEET			



**A SECTION**  
1/4"=1'-0"

NOTE: \* PER MANUFACTURER'S RECOMMENDATIONS

- NOTES:**
1. BOLD PIPES, FITTINGS, VALVES, AND OTHER APPURTENANCES REPRESENTS THE ITEMS THAT SHALL BE SURFACE PREPARED AND COATED AS SPECIFIED ON SHEET 001-G-002, 001-G-003, AND 001-G-004.
  2. THE EXISTING FACILITY AND DRAWING CONTENT ARE REUSED FROM THE FORSYTH COUNTY WATER TREATMENT PLANT EXPANSION PHASE 1 DRAWINGS BY CH2MHILL DATED 2010.

CHECKED BY:	JASON GODFREY
BY:	APVD
DRAWN BY:	RYAN MURPHY
REVISION:	
DESIGNED BY:	RYAN MURPHY
DATE:	
NO.:	

5400 LAUREL SPRINGS PKWY, SUITE 902  
SUWANEE, GA 30024  
478.474.4996

ANTIOCH WATER  
TREATMENT PLANT  
COATINGS REHAB  
PHASE 1

**ESG ENGINEERING**  
PROCESS MECHANICAL

**BACKWASH RECOVERY  
BASIN (FACILITY 50)**

BAR IS ONE INCH ON ORIGINAL DRAWING	0" = 1"
SCALE	AS NOTED
BID DOCUMENTS	
PROJ	
DATE	FEBRUARY 2023
<b>004-PK-005</b>	
SHEET	