



ADDENDUM NO. 1
TO THE CONTRACT DOCUMENTS

Date: May 25, 2015
Project No.: 497074

for the construction of

CROSTOWN WATER TREATMENT PLANT IMPROVEMENTS BID #960-B
FAYETTE COUNTY WATER SYSTEM
FAYETTE COUNTY, GEORGIA

To All Planholders and/or Prospective Bidders:

The following changes, additions, and/or deletions are hereby made a part of the Contract Documents for the construction of Crosstown Water Treatment Plant Improvements Bid #960-B dated May 2015 as fully and completely as if the same were fully set forth therein:

A. PART 1—PROCUREMENT REQUIREMENTS

1. **Section 00 11 56.01A, Bidders Qualification Contractors Prequalification Form**

DELETE in its entirety and REPLACE with the attached.

B. PART 2—CONTRACTING REQUIREMENTS

1. **Section 00 73 00, Supplementary Conditions**

Page 3, Article SC-5.02.B DELETE in its entirety and REPLACE with the following:

“SC-5.02.B. Surety and insurance companies from which the bonds and insurance for this Project are purchased shall have an A.M. Best Credit Rating of A- or higher, with a Financial Size Category of VIII or higher, in addition to other requirements specified herein.”

C. **PART 3—SPECIFICATIONS**

1. **Section 40 27 01, Process Piping Specialties**

Page 7, ADD the following new paragraphs:

“2.09 ENVIRONMENTAL ENCLOSURES

A. Backflow Preventers 4 inches to 10 Inches:

1. Description:

- a. Enclosure shall be factory-assembled unit providing heat and accessibility to the system backflow preventers. Unit shall meet the requirements of NFPA and ASSE for testing of the backflow preventer. Design to protect to minus 30 degrees F. Unit shall be suitable for concrete pad mounting.
- b. Adjustable thermostat shall control electric heaters. Set thermostat to maintain 40 degrees F.
- c. Reinforced 18-gauge aluminum construction, factory applied unicellular nonwicking insulation, minimum R-value of 8, hinged and lockable access doors. Designed for exterior installation.
- d. Verify unit length, width, and height with manufacturer based on actual backflow preventer provided.
- e. Strobe alarm for power loss and low temperature.

2. Heating Capacity:

- a. 6 Inches and 8 Inches: One 90-W heater, 120 volt, single-phase.

3. Manufacturers and Products:

- a. Hot Box; Series HB, Model HB2.
- b. Watts.”

2. **Section 40 27 02, Process Valves and Operators**

Page 1, paragraph 1.01.A, after the last sentence ADD the following:

“Contractor shall provide butterfly valves of same manufacturer throughout.”

3. **Section 40 99 91, Filter Control System**

Supplement 1, Industrial Control Systems, Inc. proposal dated January 6, 2015, DELETE in its entirety and REPLACE with revised attached.

D. **PART 4—DRAWINGS**

1. Drawing C-03

Grid location 4A, ADD two Guard Post – Exterior Detail 3471-810 in front of chemical vault (N.I.C.) that is located near existing gate.

Grid location 5B, ADD Exterior Cleanout Detail 3305-740 at bend on relocated sanitary sewer drain line.

2. Drawing 10-M-01

Grid location 1D, ADD “(SEE DETAILS)” after “BACKFLOW PREVENTER”

Grid location 4D, ADD heat tracing around the compressor tank.

3. Drawing 10-E-01 grid location 4B, ADD power to hotbox per revised attached.

4. Drawing 20-M-03 grid location 5A, ADD detail callout 4027-640 after “4” POST INDICATING VALVE”

5. Drawing 30-D-02 grid location 3C, DELETE callout “REMOVE AND TRANSFER...4FILTERS).” and REPLACE with “REMOVE AND STORE WITH OWNER TURBIDIMETER 1720E FOR LATER REINSTALLATION (TYP 4 FILTERS), REMOVE BLUE TURBITROL PANELS (TYP 4 FILTERS).”

6. Drawing 30-M-01, DELETE in its entirety and REPLACE with revised attached.

7. Drawing 30-M-02, DELETE in its entirety and REPLACE with revised attached.

8. Drawing 30-M-03, DELETE in its entirety and REPLACE with revised attached.

9. Drawing 30-M-04, DELETE in its entirety and REPLACE with revised attached.

10. Drawing 30-M-05, DELETE in its entirety and REPLACE with revised attached.

11. Drawing 30-M-06, DELETE in its entirety and REPLACE with revised attached.
12. Drawing 30-E-01 grid location 3D, ADD "No. 1" after "ELECTRICAL ROOM"
13. Drawing 30-E-04 grid location 2B, ADD "No. 2" after "ELECTRICAL ROOM"
14. Drawing SD-01 REPLACE Detail 3215-260 with revised attached.
15. Drawing SD-01
ADD Guard Post – Exterior Detail 3471-810 attached.
ADD Exterior Cleanout Detail 3305-740 attached.
16. Drawing SD-02, REPLACE Detail 0330-056 with revised attached.
17. Drawing SD-05, REPLACE Detail 4027-640 with revised attached.
18. Drawing SD-06, ADD Details 0552-001 and RPZ BACKFLOW PREVENTER ENCLOSURE DETAIL attached.

All Bidders shall acknowledge receipt and acceptance of this Addendum No. 1 in the Bid Form or by submitting the Addendum with the bid package. Bid Forms submitted without acknowledgment or without this Addendum will be considered in nonconformance.

CH2M HILL

Project Manager

Michael E. Diaz, P.E., M.S.

Appended hereto and part of Addendum No. 1:

Section 00 11 56.01A, Bidders Qualification Contractors Prequalification Form, attached.

Section 40 99 91, Supplement 1, Industrial Control Systems, Inc., attached.

Drawing 10-E-01 grid location 4B, ADD power to hotbox per revised attached.

Drawing 30-M-01, DELETE in its entirety and REPLACE with revised attached.

Drawing 30-M-02, DELETE in its entirety and REPLACE with revised attached.

Drawing 30-M-03, DELETE in its entirety and REPLACE with revised attached.

Drawing 30-M-04, DELETE in its entirety and REPLACE with revised attached.

Drawing 30-M-05, DELETE in its entirety and REPLACE with revised attached.

Drawing 30-M-06, DELETE in its entirety and REPLACE with revised attached.

Drawing SD-01 REPLACE Detail 3215-260 with revised attached.

Drawing SD-01

ADD Guard Post – Exterior Detail 3471-810 attached.

ADD Exterior Cleanout Detail 3305-740 attached.

Drawing SD-02, REPLACE Detail 0330-056 with revised attached.
Drawing SD-05, REPLACE Detail 4027-640 with revised attached.
Drawing SD-06, ADD Details 0552-001 and RPZ BACKFLOW PREVENTER
ENCLOSURE DETAIL attached.

END OF ADDENDUM

The Owner requires prospective Bidders interested in bidding on the Work to provide a completed Bidder's Qualification Form with their Bid. If form is not received with Bid and in accordance with Instructions to Bidders, Bid will be considered nonconforming and nonresponsive.

The information submitted in this form will be regarded as confidential.

BIDDER'S QUALIFICATION FORM

Submitted By: _____
 (Bidder) _____
 A Corporation
 A Partnership
 An Individual
 (Circle One)

Principal Office

Physical Address: _____

Mailing Address (If different): _____

Authorized Representative (Print or Type): _____

Authorized Representative (Signature): _____

Title: _____

Email Address: _____

Telephone Number: _____

Fax Number: _____

Cellular Number: _____

If **Corporation**, provide the following:

Date of Incorporation: _____

State of Incorporation: _____

Chief Executive Officer's Name: _____

President's Name: _____

Vice President's Name(s): _____

Secretary's Name: _____

Treasurer's Name: _____

If a **Partnership**, provide the following:

Date of organization: _____

Is partnership general or limited? _____

Name and address of each partner: _____

If an **Individual**, provide the following:

Name and business address: _____

Bidder's Surety:

Firm Name: _____

Address: _____

Telephone Number: _____

Contact Person: _____

Bidder's Bank and Local Contact:

Firm Name: _____

Address: _____

Telephone Number: _____

Contact Person: _____

Bidder's General Information:

License Number: _____

Years in business under license number: _____

If nonresident, proof of authority to do business in the State. Attach with form submission.

Primary type of work your company performs: _____

Number of people permanently employed: _____

Bonding Capacity: \$ _____

Dollar volume presently under Contract: _____

Is this organization an equal employment opportunity employer? _____

Does this organization have a written drug and alcohol policy? _____

What type of scheduling techniques does this organization use, and for how long have you been using them? _____

Does this organization have a written Quality Assurance/Quality Control Program? _____

Bidder's Business References

1. Architect/Engineer:

Firm Name: _____

Address: _____

Telephone Number: _____

Contact Person: _____

Firm Name: _____

Address: _____

Telephone Number: _____

Contact Person: _____

2. Owner:

Company Name: _____

Address: _____

Telephone Number: _____

Contact Person: _____

Company Name: _____

Address: _____

Telephone Number: _____

Contact Person: _____

Bidder's Safety Questionnaire

1. Provide your company's Experience Modification Rate (EMR) for the 3 most recent years.

Year _____	Rate _____
Year _____	Rate _____
Year _____	Rate _____

2. Provide your company's Lost Time Incident (LTIR) for the 3 most recent years.

Year _____	Rate _____
Year _____	Rate _____
Year _____	Rate _____

3. The responsibility of maintaining your company's safety records/accident summaries, is assigned to:

	No	Yes	Annually	Monthly	Weekly
Safety Department					
Personnel					
Q.C. Office					
Insurance Group					
Other					

4. How often are field projects (OSHA 200) and accident reports/summaries sent to:

	Annually	Monthly	Weekly
Company President			
Safety Director			

5. Accident records/summaries totaled by:

	No	Yes		Annually	Monthly	Weekly
Entire Company						
Project						
Supervisor						
Foreman						

6. Accident cost totaled by:

	No	Yes	Annually	Monthly	Weekly
Entire Company					
Project					
Supervisor					
Foreman					

7. Does your company have an ongoing training program for:

	Yes	No
a. HAZ-COM		
b. Electrical Safety		
c. Fire Protection		
d. Emergency Aid Procedures		
e. Emergency Procedures		
f. New Worker Orientation		
g. Proper Use of Personal Protection Equipment		
h. Rigging and Crane Safety		
i. Trenching Safety		

8. Does your company have a written safety program (Yes/No): _____.

9. Do all your company and field projects conduct:

	No	Yes	Annually	Bi-Weekly	Monthly
a. Safety Inspections					
b. Safety Meetings					

	No	Yes	Annually	Bi-Weekly	Monthly
c. Supervisor Meetings					
d. Adhoc Investigations					

10. Using your last year's (OSHA 200) log fill in the following:

- a. Number of lost workday cases _____.
- b. Number of restricted workday cases _____.
- c. Number of cases requiring medical treatment _____.
- d. Number of fatalities _____.

Bidder's Experience Questionnaire

- How many years' experience in the proposed type and size of construction work has your organization had: _____
- List the most recent projects (within last 8 years) your organization has had in construction work similar in type and size to the work proposed herein:

Contract Amount	Type of Work	Date Completed	Owner Name, Address, Telephone, and Contact Person

- What other projects have your organization completed that may be of interest?

Contract Amount	Type of Work	Date Completed	Owner Name, Address, Telephone, and Contact Person

4. Have you ever failed to complete any work awarded to you? _____. If so, list below and state why? _____

5. Have you ever been removed from a project? _____. If so, list below and state why? _____

6. What is the construction experience of the principal individuals of your organization?

Individual's Name	Present Position or Office	Years of Construction Experience	Magnitude & Type of Work	In What Capacity

7. List the major items of equipment that this organization owns or leases (designate which) which will be available for use on the proposed project:

8. List below the contracts that you, your company, or corporation were party, during the previous 10 years, were involved in litigation of any type:

9. Are there any judgements, claims, arbitration proceedings, or lawsuits pending, outstanding, or threatened to which this organization, or an officer or partner in this organization has been a party? _____

If yes, describe: _____

10. Has company ever been disbarred from Bidding? _____. If so, list below and state why? _____

11. Has the company ever been denied a bid, performance, or payment bond? _____. If so, list below and state why? _____

12. Has company ever been disbarred from Bidding? _____. If so, list below and state why?

13. Has the company ever been involved in bankruptcy proceedings? _____. If so, list below
and state why? _____

14. Will you, upon request, fill out a detailed financial statement and furnish any other
information that may be required by the Owner? _____

The undersigned hereby declares that the foregoing statements are true.

Dated at _____ this ____ day of _____ 2015.

By _____

Title _____

Date _____

AFFIDAVIT FOR INDIVIDUAL

STATE OF _____ }
 _____ } ss.
 COUNTY OF _____ }

I, _____,
 being duly sworn, depose and say that the foregoing financial statement, taken from my
 books, is a true and accurate statement of my financial condition as of the date thereof, and
 that the answers to the interrogatories contained therein are true; that the statements and
 answers to the interrogatories of the equipment questionnaire are correct and true as of the
 date of this affidavit; and that the statements and answers to the interrogatories of the
 foregoing experience questionnaire are correct and true as of the date of this affidavit.

 (Applicant must also sign here)

Subscribed and sworn to before me this _____ day of _____, 20____.

My commission expires: _____

 _____Notary Public

AFFIDAVIT FOR COPARTNERSHIP

STATE OF _____ }
 _____ } ss.
 COUNTY OF _____ }

I, _____,
 being duly sworn, depose and say that I am a member of the firm of _____

_____ taken from the books of said firm, is a true and accurate statement of the financial condition of said firm as of the date thereof, and that the answers to the interrogatories contained therein are true; that the statements and answers to the interrogatories of the equipment questionnaire are correct and true as of the date of this affidavit; and that the statements and answers to the interrogatories of the foregoing experience questionnaire are correct and true as of the date of this affidavit.

 (Member of firm must also sign here)

Subscribed and sworn to before me this _____ day of _____, 20____.

My commission expires: _____

 _____ Notary Public

AFFIDAVIT FOR CORPORATION

STATE OF _____ }
 _____ } ss.
 COUNTY OF _____ }

I, _____,
 being duly sworn, depose and say that I am _____,
 of the _____,
 the corporation described herein and which executed the foregoing statement; that I am
 familiar with the books of the said corporation showing its financial condition; that the
 foregoing financial statement, taken from the books of said corporation, is a true and accurate
 statement of the financial condition of said corporation as of the date thereof, and that the
 answers to the interrogatories of the equipment questionnaire are correct and true as of the
 date of this affidavit; and that the statements and answers to the interrogatories of the
 foregoing experience questionnaire are correct and true as of the date of this affidavit.

 (Officer must also sign here)

Subscribed and sworn to before me this ____ day of ____, 20____.

My commission expires: _____

 Notary Public

END OF SECTION

Industrial Control Systems, Inc.

20 West Williamsburg Road • Sandston, VA 23150
(804) 737-1700 • FAX (804) 737-7133
www.ics-scada.com

Fayette County Water System
245 McDonough Road
Fayetteville, GA 30214

January 6, 2015
Revised: May 19, 2015

Attention: Lee Pope

Re: Fayette County Water System
Crosstown Water Treatment Plant
**Filter Magic Pneumatic Control System
Proposal (Revised)**

Dear Lee:

We are pleased to offer our proposal for a "Filter Magic (FM) Pneumatic Control System" for the above-referenced project, based on our discussions, your direction and tour of the existing water plant. The control system includes four (4) dual filter control systems for a total of 13.5 MGD and eight (8) filters.

Our Proposal Includes:

Lump Sum \$ _____

- Submittals & Drawings
- Engineering
- Meetings
- Programming
- Filter Magic Filter Control System
- *Filter Magic SCADA Computer System (Described Below)*
- Panels
 - 4 - Dual Filter Magic Control Consoles – NEMA 12 with UPSs
 - 1 - Filter Magic Master Control Panel - NEMA 12 with UPS
 - 4 - Dual Filter Magic AS-I Panel – NEMA 4X
- AS-I Network System including Cable & Termination
- Instrumentation
 - 8 - Filter Ultrasonic Level Transmitters
 - 8 - Filter LOH Transmitters
 - 8 - Filter Effluent ROF Transmitters
 - 8 - Filter Effluent ROF 12" Venturis
- Spare Parts Allowance - \$7,600.00
- FAT Test
- Installation Supervision
- Calibration
- Start-up
- Training (1 Week)
- *Five (5) Year Comprehensive Filter Magic Warranty including annual inspection, tuning and training of the filter control system.*

- Butterfly Valves, Pneumatic AS-I Actuators & Air Compressor
 - 8 – 12" Influent Valves
 - Val-Matic Class 150B AWWA Butterfly Valves
 - K-Tork Pneumatic Actuators
 - FM AS-Interface
 - Open-Close Operation
 - 8 – 12" Effluent ROF Valves
 - Val-Matic Class 150B AWWA Butterfly Valves
 - K-Tork Pneumatic Actuators
 - FM AS-Interface
 - Modulation Operation
 - 8 – 20" Backwash Supply Valves
 - Val-Matic Class 150B AWWA Butterfly Valves
 - K-Tork Pneumatic Actuators
 - FM AS-Interface
 - Open-Close Operation
 - 8 – 24" Backwash Drain Valves
 - Val-Matic Class 150B AWWA Butterfly Valves
 - K-Tork Pneumatic Actuators
 - FM AS-Interface
 - Open-Close Operation
 - 8 – 8" Air Scour Valves
 - Val-Matic Class 150B AWWA Butterfly Valves
 - K-Tork Pneumatic Actuators
 - FM AS-Interface
 - Open-Close Operation
 - 8 – 8" Rewash / Filter-to-Waste Valves
 - Val-Matic Class 150B AWWA Butterfly Valves
 - K-Tork Pneumatic Actuators
 - FM AS-Interface
 - Open-Close Operation
 - 1 – Kaeser Duplex Air Compressor System
 - Duplex 7.5 HP
 - 80 Gallon Receiver Tank

Filter Magic SCADA Computer System includes:

To the best of our knowledge, the existing SCADA computer located in the control room is primarily used to monitor the remote distribution sites and not used for plant SCADA functions. It is an older version XP computer with an older version of Wonderware HMI software on it with limited access and capability.

As a result, we are including in our filter control system proposal a new computer with software on it that will provide current and future benefits for operations.

- SCADA Computer
 - Windows 7 Professional 64 Bit Operating System
 - HP Z230 Mini-Tower Computer Workstation, I7-4790 3.6 GHz, 16 GB RAM, 1 TB HDD, DVD-RW, Intel HD 4600 Graphics, Wireless N PCIe Card
 - HP ProDisplay P221 21.5" LED Backlit Monitor
 - Uninterruptable Power Supply
- SCADA Software
 - GE Intellution iFIX Plus SCADA Software Version 5.8, licensed, unlimited and Runtime Only with Global Care
 - GE Intellution iHistorian – 100 I/O tags
 - Allen Bradley SLC 5/05E PLC Driver
 - XL Reporter
 - GE Intellution iFIX Plus SCADA Software upgradable to a fully redundant SCADA system
- Ethernet Switch
 - 5-Port 10/100/1000 Switch
- Full set of HMI screens to monitor, control, trend, alarm and report on all aspects of the filter control system.
 - Automatic, semi-automatic and manual control
 - Fully automatic backwash queue
- Historical data collection thru iHistorian software on a 1 TB hard drive for turbidity, flow, LOH and level for each filter for a minimum of seven (7) years.
- Trends
 - Historical and real-time trends for each filter showing turbidity, flow, LOH and level
 - One client specified trend
- Reports
 - Daily 15-minute Effluent Turbidity Report for all filters
 - Monthly Flow Summary report for all filters
 - Backwash Summary Report for each backwash event
 - One client specified report
- Two (2) days of Training
- The Filter Magic SCADA Computer System and software has sufficient capacity and performance capability to be expanded and integrated to include a complete plant SCADA system in the future.
 - The GE Intellution iFIX Plus SCADA Software accommodates unlimited inputs and outputs (I/O).
 - The GE Intellution iHistorian software accommodates 100 I/O tags 32 of which are being used for the filter control system. The iHistorian software can easily be upgraded from 100 I/O tags to 500 tags at any time in the future.

Our Proposal Does Not Include:

- Power for computer system
- Ethernet connectivity between computer system and filter control system
- Printer for SCADA computer
- 8 - Filter Effluent Turbidity Transmitters
- Backwash ROF 20" Valve w/ Modulating Electric Actuator & Positioner
- Backwash ROF 20" Venturi & Transmitter
- Instrumentation, flow meters, valves, actuators and control systems not listed above
- Installation of valves, actuators, air compressor, etc.
- Installation of filter consoles or panels
- Providing or installing an air supply system from air compressor to valves
- Providing or installing conduit and wire
- Installing instrumentation and related sample and drain lines
- Termination of power, instrumentation & discrete signals
- Termination of Filter Magic Master Control Panel

Option Adders:

- ✚ Filter Magic Remote Access System that provides a client with the capability to remotely monitor the filter control system and the entire plant SCADA system from anywhere on the plant property through WiFi or cellular communication technology or remotely anywhere through cellular communication technology.

Lump Sum \$ 9,900.00

Filter Magic Remote Access System includes:

- Two (2) Remote Access Tablets
 - Apple iPad Mini 3 with iOS 8, 64 GB memory, built-in WI-FI and Cellular Communications, 2-year AppleCare+ protection plan, Verizon iPad nano-SIMM card, Hard Case
 - Engraving
 - Line 1 Property of Fayette County Water System, Georgia
 - Line 2 Phone Number
- Remote Access SCADA Software
 - GE Intellution iClient WebSpace Remote Access Software located on Filter Magic SCADA computer, licensed for two (2) remote access devices
 - Additional remote access licenses are available at a reasonable cost.
 - Remote access software will work on any digital device with iOS, Android and browser-based operating systems

Filter Magic Filter System Remote Access System does not include:

- Plant-wide WiFi communication technology
- Cellular communication technology

Revised: May 19, 2015

Mark W. Romers
President

PANEL: DP-9B				LOCATION: SODIUM PERMANGANATE BUILDING								
SERVICE VOLTAGE: 480V				PHASE: 3		WIRE: 3						
TOTAL LOAD KVA: 7.6				BUS SIZE: 125A		MAIN SIZE: 100A		TYPE: MCB				
REMARKS: NOTES 2, 3				NEUTRAL: NONE		MOUNTING: SURFACE, NEMA 3R						
LOAD IN KVA			CIRCUIT DESCRIPTION	BKR A/P	CKT NO.	CKT NO.	BKR A/P	CIRCUIT DESCRIPTION	LOAD IN KVA			
A	B	C							A	B	C	
2.2			TRANSFORMER T-9B (PANEL LP-9B)	45/3	1	2	30/3	CP-PAC	0.4			
	2.1				3	4					0.4	
		2.0			5	6						0.4
			SPARE	20/3	7	8	20/3	SPARE				
					9	10						
					11	12						
			SPARE	20/3	13	14	20/3	SPARE				
					15	16						
					17	18						
			SPACE	3P	19	20	3P	SPACE				
					21	22						
					23	24						
			SPACE	3P	25	26	3P	SPACE				
					27	28						
					29	30						
			SPACE	3P	31	32	3P	SPACE				
					33	34						
					35	36						
			SPACE	3P	37	38	3P	SPACE				
					39	40						
					41	42						
2.2	2.1	2.0	TOTAL						0.4	0.4	0.4	

PANEL: LP

SERVICE VOLTAGE: 208/120V

TOTAL LOAD KVA: 6.4

REMARKS: * PROVIDE EGFI RATED BREAKERS;

NOTES 2, 3

LOCATION: SODIUM PERMANGANATE BUILDING

PHASE: 3

BUS SIZE: 125

NEUTRAL: FULL

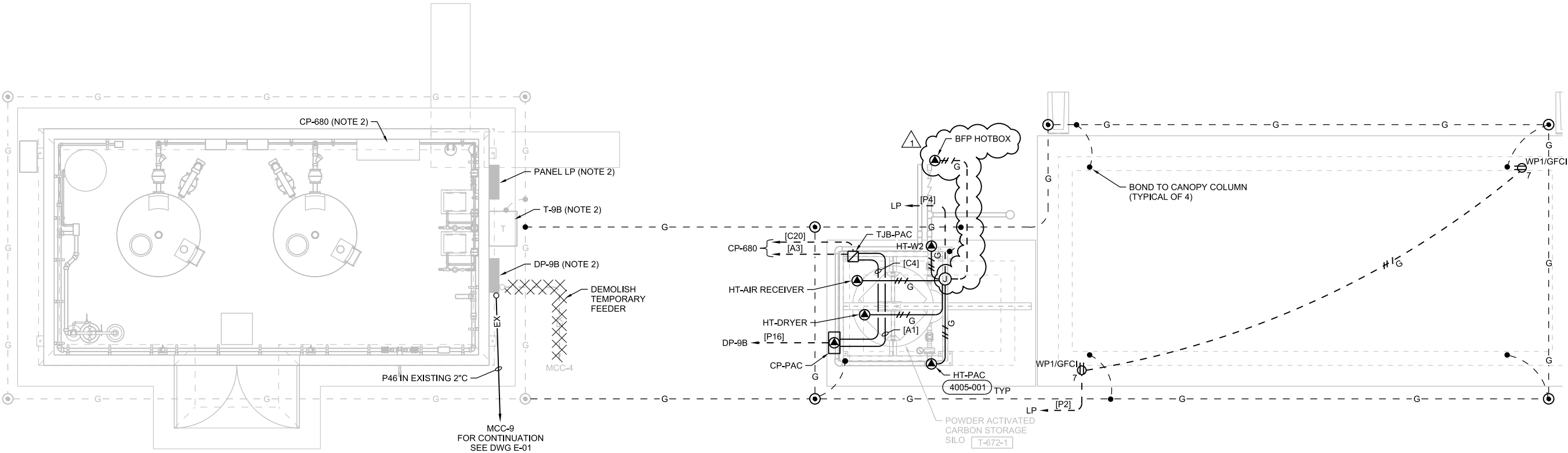
WIRE: 4

MAIN SIZE: 100

MOUNTING: SURFACE, NEMA 3R

TYPE: MCB

LOAD IN KVA			CIRCUIT DESCRIPTION	BKR A/P	CKT NO.	CKT NO.	BKR A/P	CIRCUIT DESCRIPTION	LOAD IN KVA		
A	B	C							A	B	C
			SPACE	3P	1	2	20/1	RECEPTACLES	0.7		
					3	4	20/1	EXTERIOR LIGHT		0.2	
					5	6	20/1	INTERIOR LIGHTS			0.4
0.4			RECEPT-PAC	20/1	7	8	20/1	SPARE			
	0.5		SPARE	20/1	9	10	20/1	SPARE			
			SPARE	20/1	11	12	20/1	CHEMICAL PUMP P-682-1			0.4
			SPARE	20/1	13	14	20/1	SPARE			
	0.2		HEAT TRACE	20/1*	15	16	20/1	CP-680		1.0	
		0.2	HEAT TRACE	20/1*	17	18	20/1	EX FAN			0.5
0.9			RECEPT-SAMPLE PUMP	20/1	19	20	20/1	LIT-682-1, LI-682-2	0.2		
	0.3		HT-PAC, -W2, -DRYER	20/1*	21	22	1P	SPACE			
		0.5	HT-AIR-RECEIVER	20/1*	23	24	1P	SPACE			
			SPACE	1P	25	26	1P	SPACE			
			SPACE	1P	27	28	1P	SPACE			
			SPACE	1P	29	30	1P	SPACE			
1.3	1.0	0.7	TOTAL						0.9	1.2	1.3



SODIUM PERMANGANATE - PLAN
3/8"=1'-0"

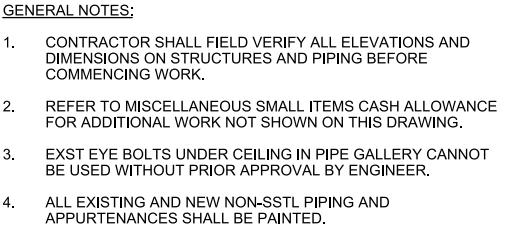
POWDERED ACTIVATED CARBON SYSTEM - PLAN
3/8"=1'-0"

- NOTES:
- ALL EXPOSED CONDUIT, FITTINGS, AND ASSOCIATED MATERIALS SHALL BE RGS. ALL ELECTRICAL EQUIPMENT AND DEVICES SHALL HAVE A MINIMUM RATING OF NEMA 4X. ALL ELECTRICAL BOXES AND ENCLOSURES SHALL BE STAINLESS STEEL. ALL SUPPORTING MATERIALS AND HARDWARE SHALL BE STAINLESS STEEL.
 - TRANSFORMER T-9B, CP-680, AND PANELS LP AND DP-9B ARE FUTURE EQUIPMENT TO BE INSTALLED BY OTHERS.
 - BOLD ITEMS IN THE PANELBOARD SCHEDULES ARE NEW CIRCUIT BREAKERS AND / OR LOADS ADDED UNDER THIS CONTRACT.
 - ACTIVATED CARBON IS GENERALLY CONSIDERED TO BE COMBUSTIBLE DUST AND SO THE PAC STORAGE AND HANDLING AREA DESERVE CONSIDERATION AS CLASS II LOCATIONS AS DESCRIBED IN NFPA 70, ARTICLE 500. ALTHOUGH IT IS PROBABLE THAT COMBUSTIBLE DUST WILL BE PRESENT IN THESE LOCATIONS, IT IS DETERMINED THAT THESE LOCATIONS SHALL BE UNCLASSIFIED PER THE FOLLOWING JUSTIFICATION:
 - * DUST WILL NOT REMAIN SUSPENDED IN THE AIR IN SUFFICIENT QUANTITIES TO BE AN IGNITABLE MIXTURE.
 - * DUST LAYERS WILL NOT ACCUMULATE ON EQUIPMENT AND THEREFORE WILL NOT INTERFERE WITH THE SAFE DISSIPATION OF HEAT.

CH2MHILL®
ELECTRICAL

**POWDERED ACTIVATED CARBON
FEED SYSTEM PLAN**

AS NOTED	
VERIFY SCALE	
BAR IS ONE INCH ON ORIGINAL DRAWING.	
DATE	MAY 2015
PROJ	497074
DWG	10-E-01
SHEET	29 of 73




CH2MHILL®

PROCESS MECHANICAL

**FILTERS 1 TO 4 PIPE GALLERY
UPPER LEVEL**

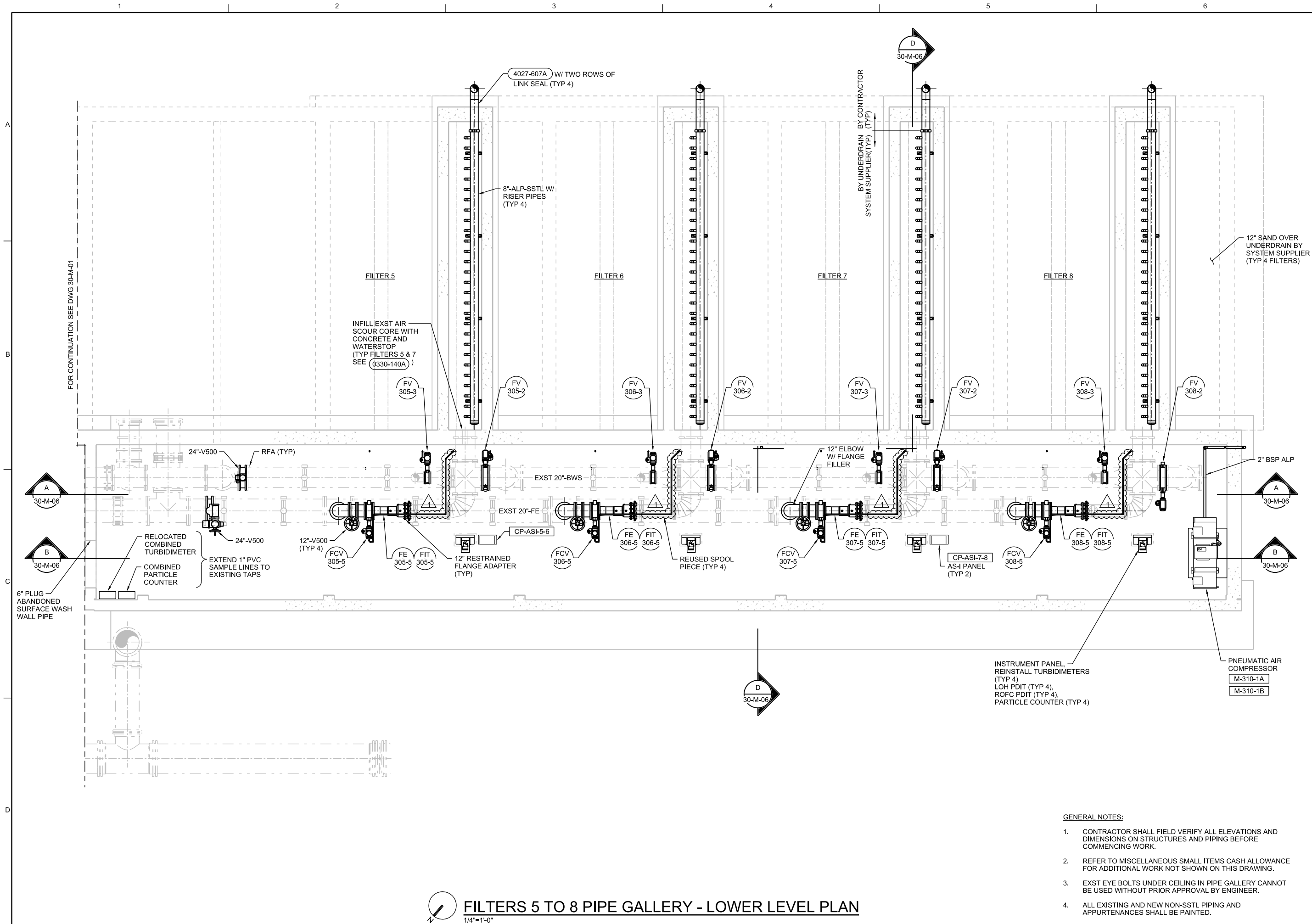
CROSSTOWN WTP IMPROVEMENTS
FAYETTE COUNTY WATER SYSTEM
FAYETTE COUNTY, GEORGIA

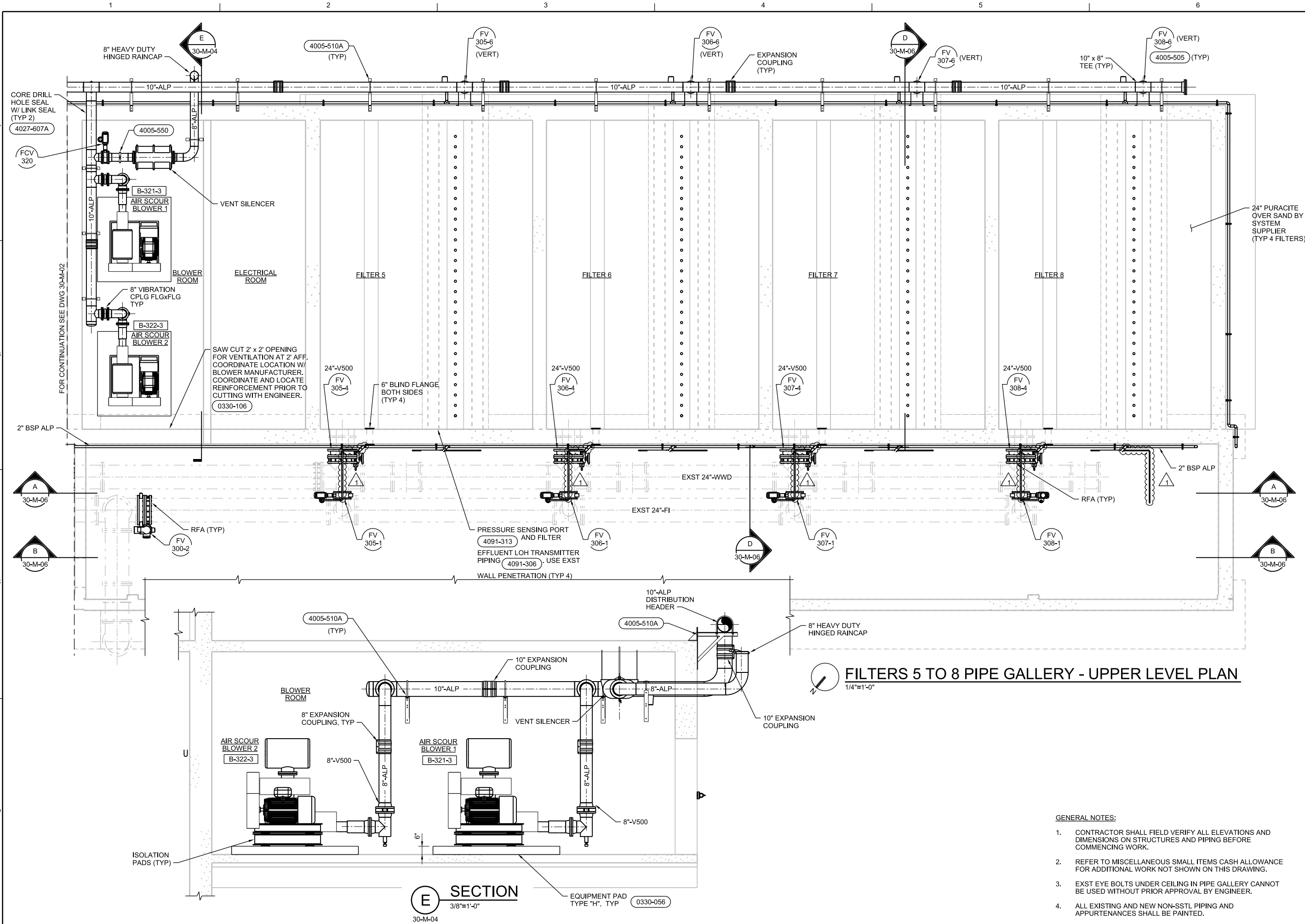
AS NOTED	
VERIFY SCALE	
BAR IS ONE INCH ON ORIGINAL DRAWING. 0  1"	
DATE	MAY 2015
PROJ	497074
DWG	30-M-02
SHEET	46 of 73

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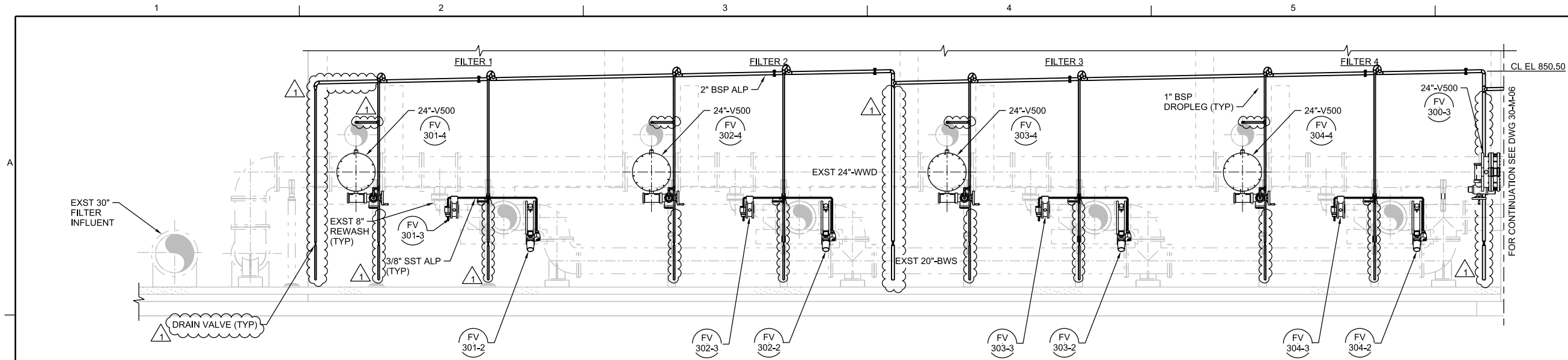
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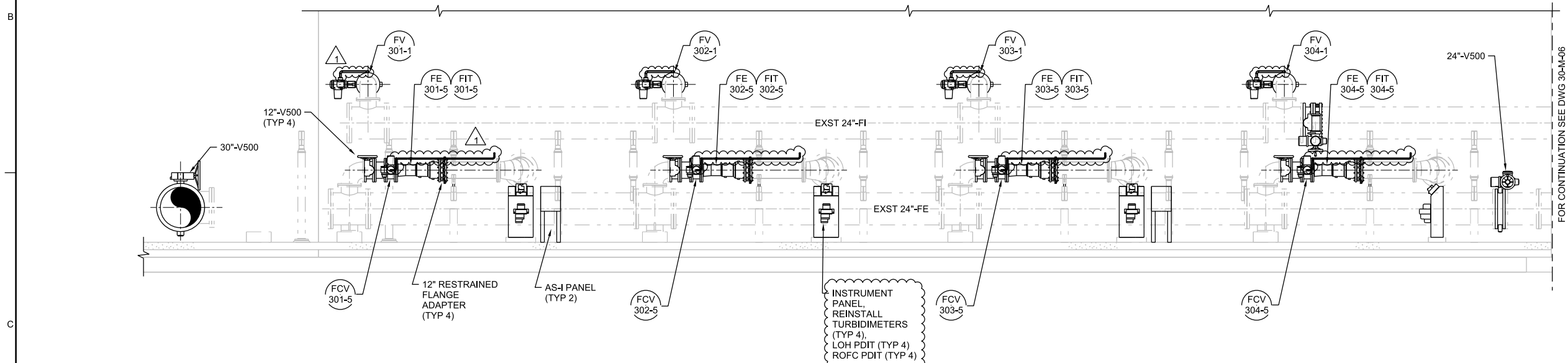


- GENERAL NOTES:
- CONTRACTOR SHALL FIELD VERIFY ALL ELEVATIONS AND DIMENSIONS ON STRUCTURES AND PIPING BEFORE COMMENCING WORK.
 - REFER TO MISCELLANEOUS SMALL ITEMS CASH ALLOWANCE FOR ADDITIONAL WORK NOT SHOWN ON THIS DRAWING.
 - EXST EYE BOLTS UNDER CEILING IN PIPE GALLERY CANNOT BE USED WITHOUT PRIOR APPROVAL BY ENGINEER.
 - ALL EXISTING AND NEW NON-SSTL PIPING AND APPURTENANCES SHALL BE PAINTED.

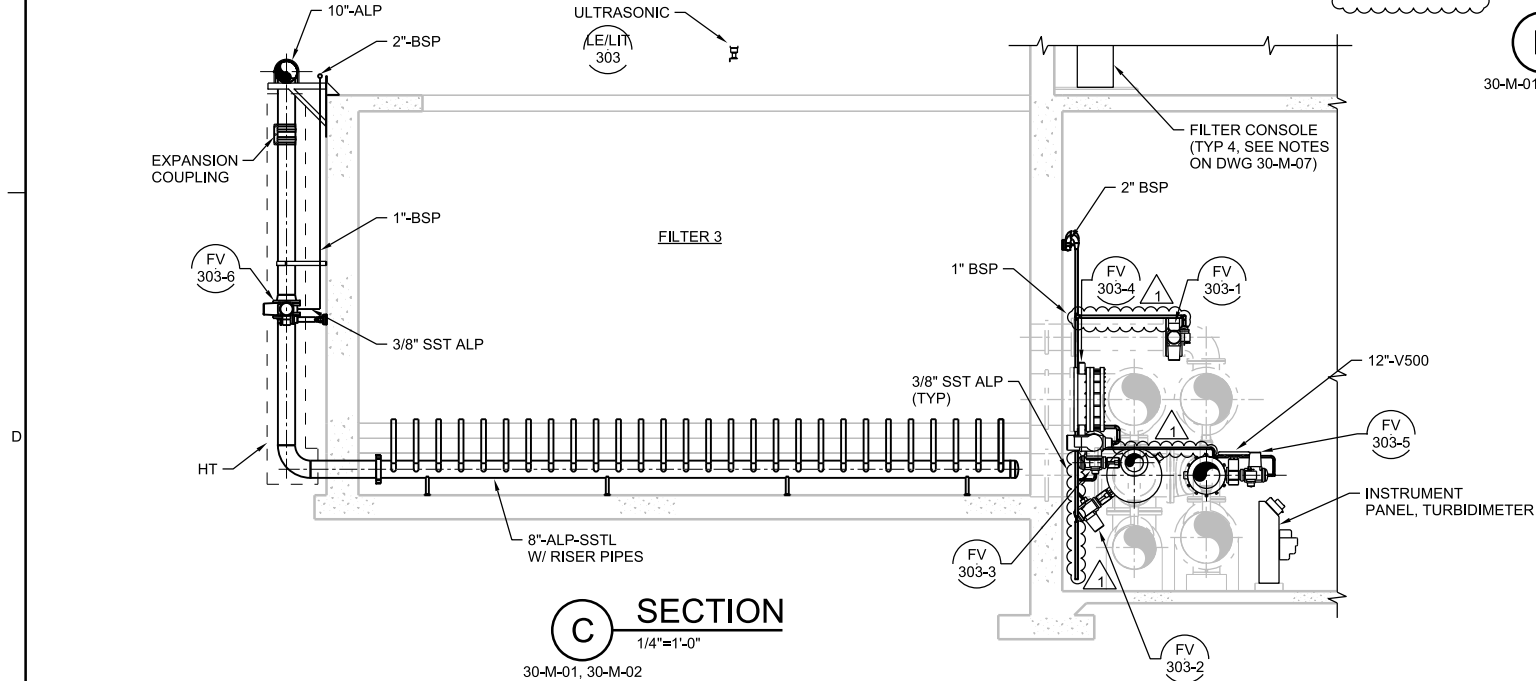
CH2MHILL®		PROCESS MECHANICAL		CROSSTOWN WTP IMPROVEMENTS FAYETTE COUNTY WATER SYSTEM FAYETTE COUNTY, GEORGIA		M DIAZ	
6600 Peachtree Dunwoody Road 400 Embassy Row, Suite 600 Atlanta, GA 30328 Phone: 770-604-9055		NO. DATE		REVISION		APVD	
1 05/2015		ADD AIR PIPING		CHK		E MINCHEW	
DR		L JESTER		DR		M DIAZ	
DATE		MAY 2015		PROJ		497074	
DWG		30-M-04		SHEET		48 of 73	
AS NOTED		VERIFY SCALE		BAR IS ONE INCH ON ORIGINAL DRAWING, 1" = 1'		DATE	
DATE		MAY 2015		PROJ		497074	
DWG		30-M-04		SHEET		48 of 73	



A SECTION (INSIDE)
1/4"=1'-0"
30-M-01, 30-M-02



B SECTION (OUTSIDE)
1/4"=1'-0"
30-M-01, 30-M-02



C SECTION
1/4"=1'-0"
30-M-01, 30-M-02

GENERAL NOTES:

- CONTRACTOR SHALL FIELD VERIFY ALL ELEVATIONS AND DIMENSIONS ON STRUCTURES AND PIPING BEFORE COMMENCING WORK.
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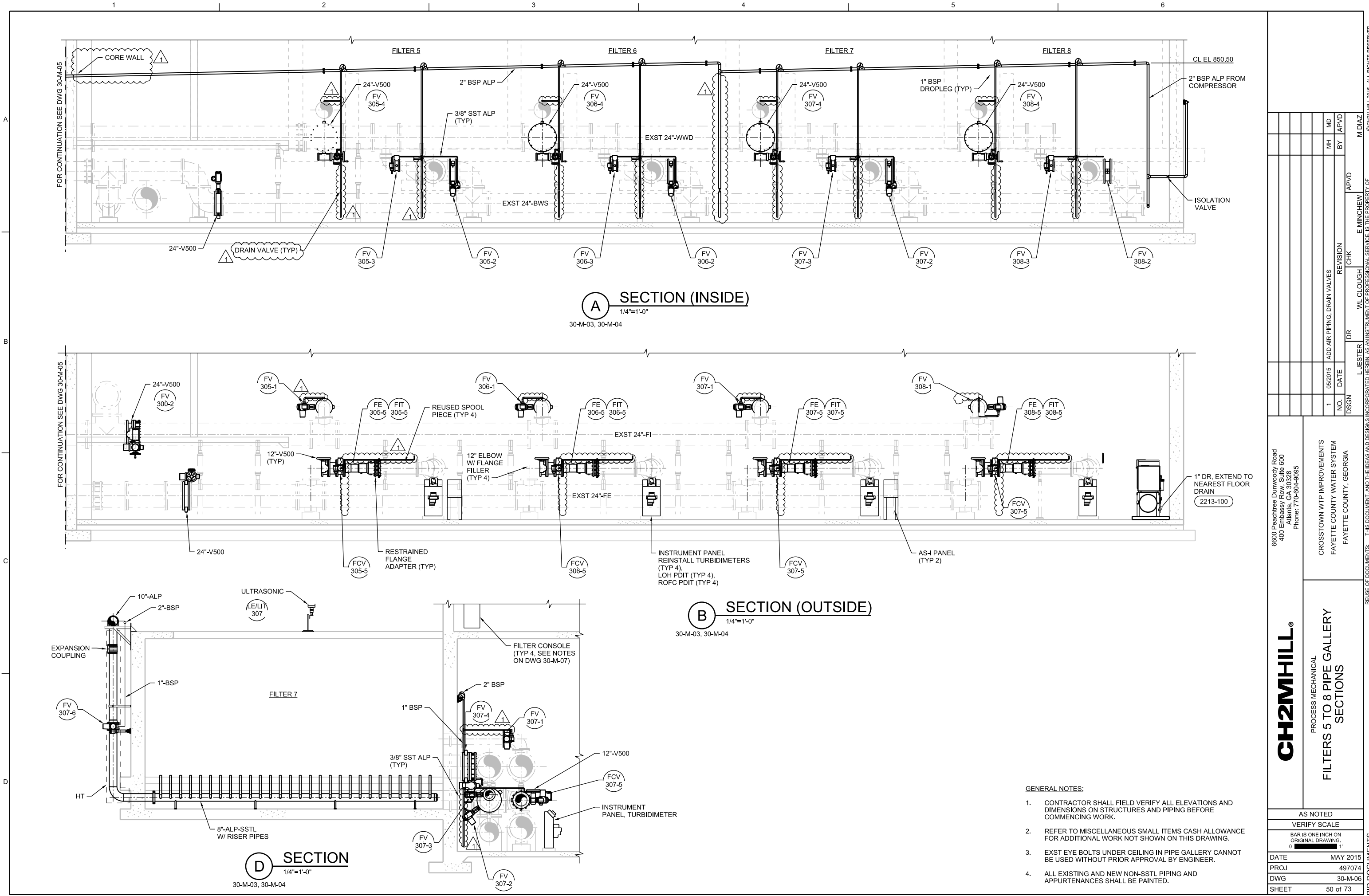
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400 Embassy Row, Suite 600
Atlanta, GA 30328
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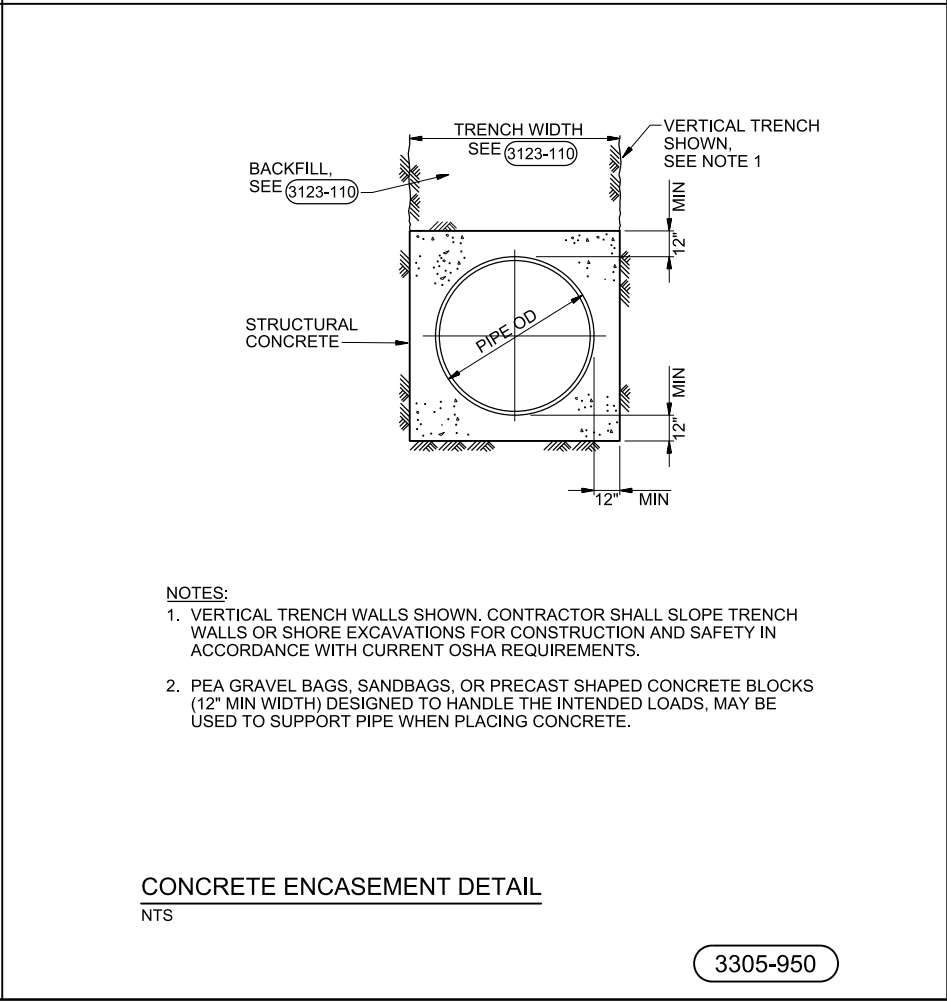
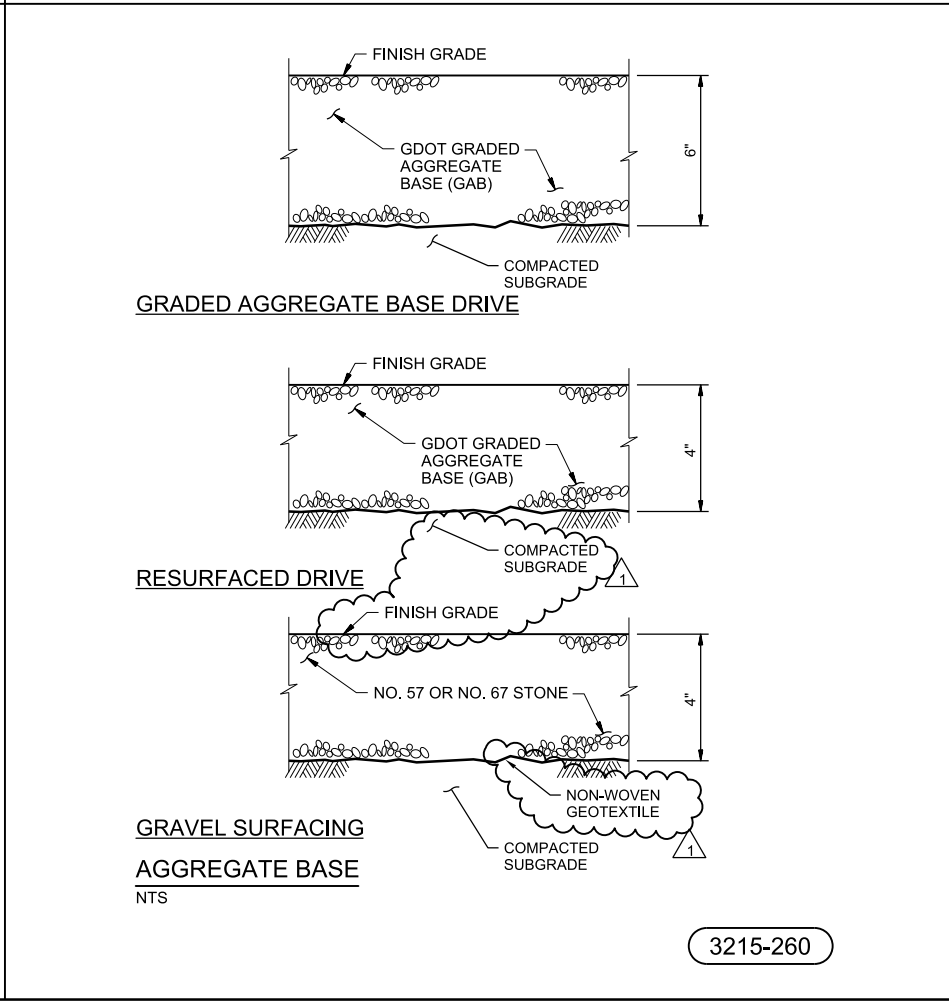
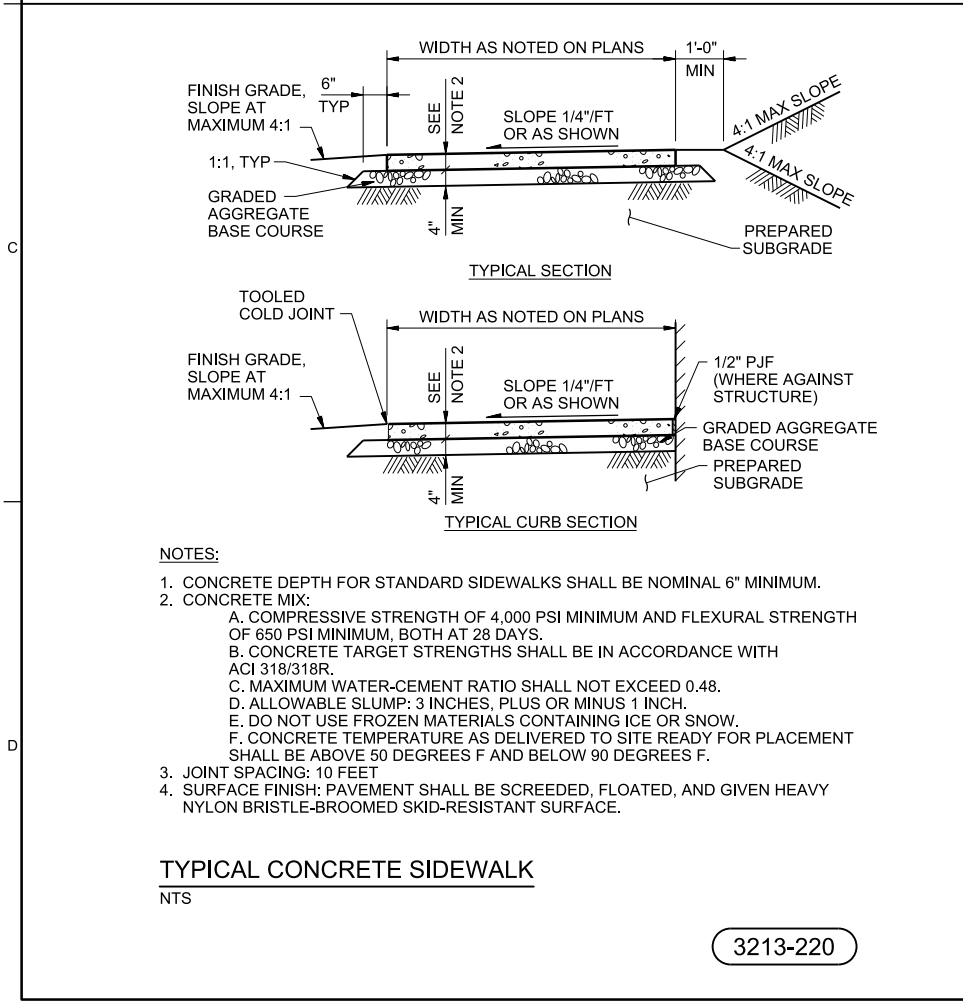
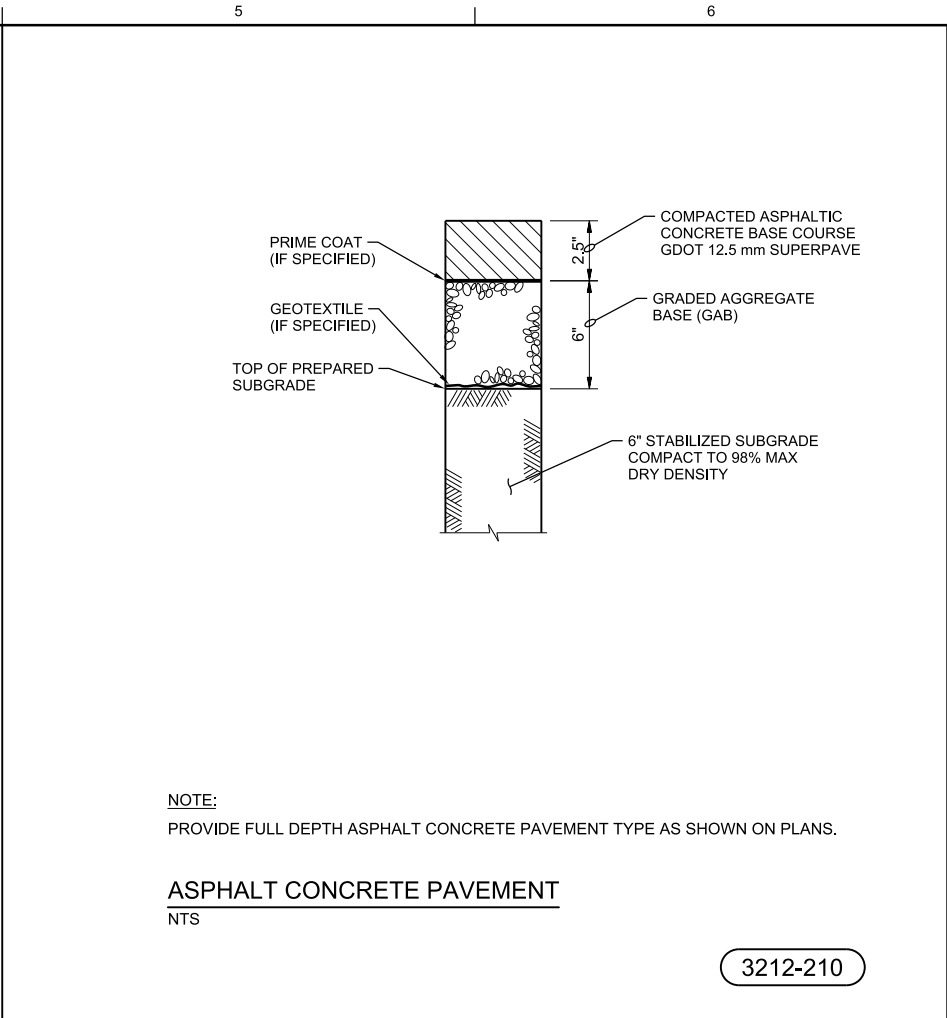
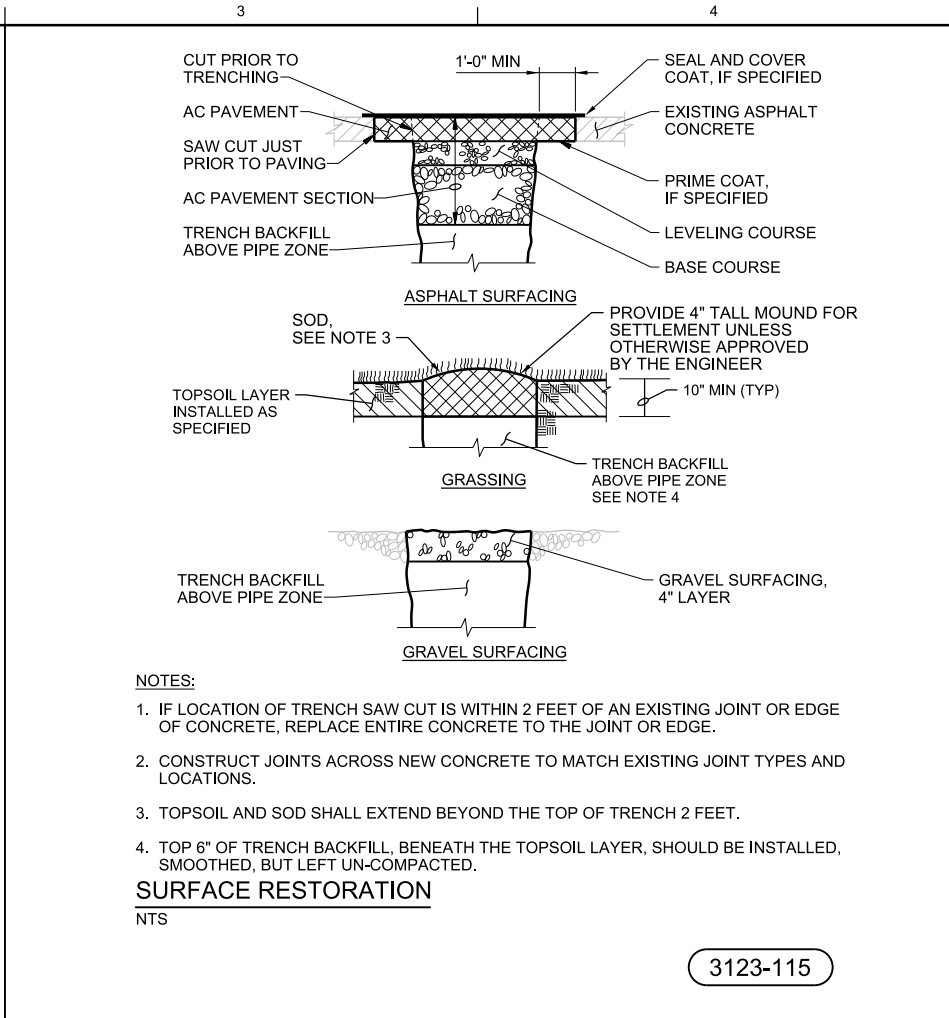
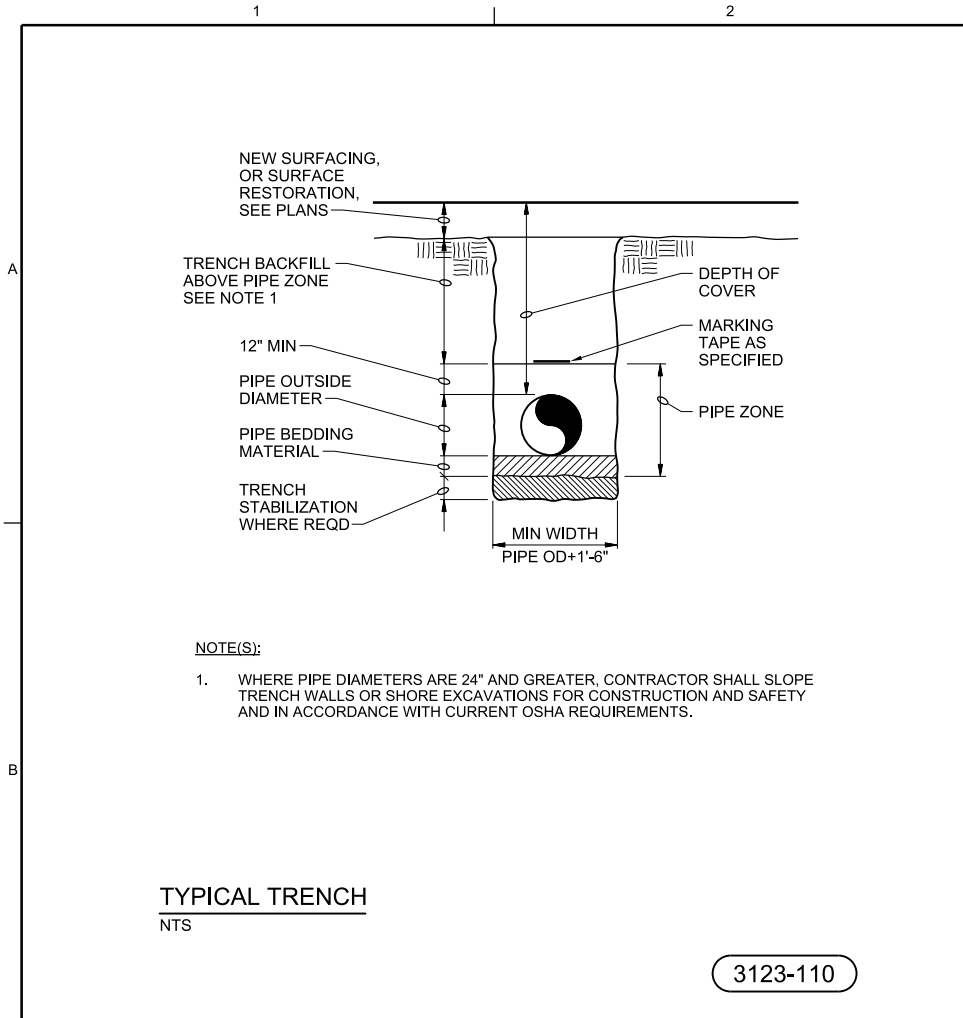
CH2MHILL®
PROCESS MECHANICAL
FILTERS 1 TO 4 PIPE GALLERY
SECTIONS

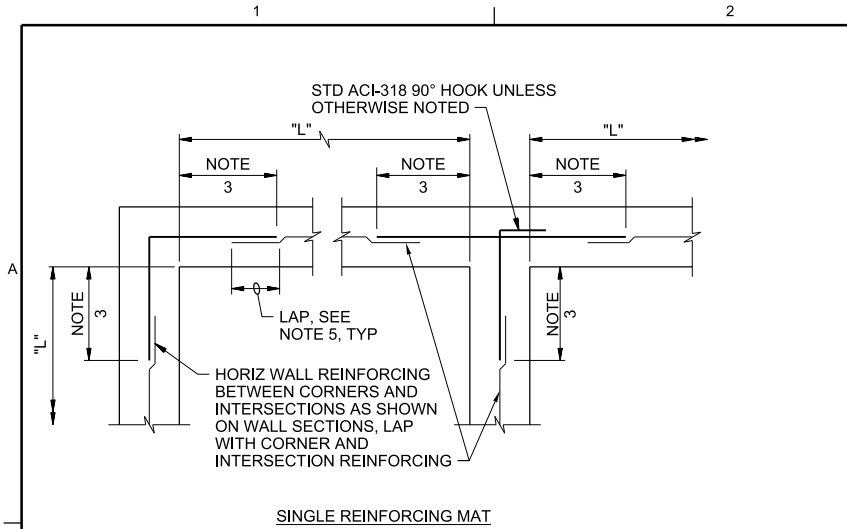
CROSSTOWN WTP IMPROVEMENTS
FAYETTE COUNTY WATER SYSTEM
FAYETTE COUNTY, GEORGIA

AS NOTED
VERIFY SCALE
BAR IS ONE INCH ON
ORIGINAL DRAWING, 1"=1'
DATE MAY 2015
PROJ 497074
DWG 30-M-05
SHEET 49 of 73

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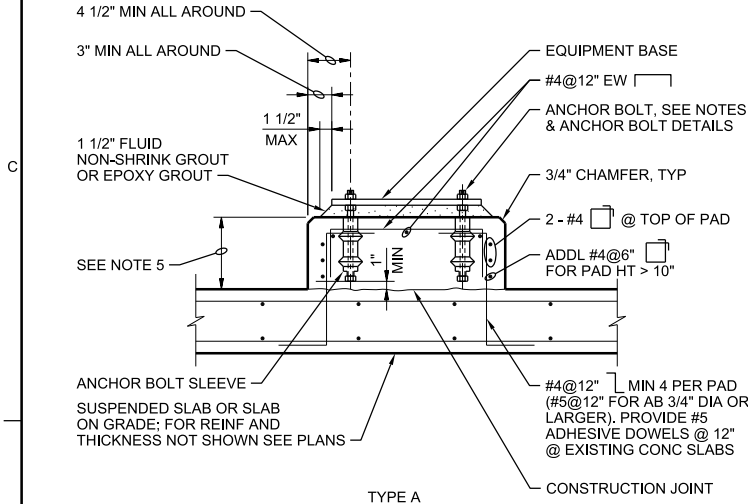




- NOTES:**
1. TYPICAL HORIZONTAL WALL CORNER AND INTERSECTION REINFORCING LAYOUT IS SHOWN TO AVOID CONGESTION AND PERMIT PROPER PLACEMENT. FOR SIZE AND SPACING SEE PLANS. ALL HORIZONTAL REINFORCING AT CORNERS AND INTERSECTIONS SHALL BE FABRICATED AND INSTALLED WITH SPLICES LOCATED WHERE SHOWN REGARDLESS OF BAR SIZE AND SPACING.
 2. WHERE THE CORNER OR INTERSECTION REINFORCING SIZE AND SPACING IS NOT SHOWN, NOTED OR TABULATED ON THE PLANS, THE SIZE AND SPACING SHALL BE THE SAME AS THE WALL HORIZONTAL REINFORCING SHOWN ON THE WALL SECTIONS OR AS NOTED FOR THE REINFORCING BETWEEN THE CORNERS OR INTERSECTIONS.
 3. EXCEPT WHERE OTHERWISE SHOWN ON THE DRAWINGS, THE LENGTH INDICATED AS "NOTE 3" SHALL BE THE LESSER OF L/4, 10 FEET, OR 1.0 TIMES THE HEIGHT OF THE WALL, EXCEPT THAT IN NO CASE SHALL IT BE LESS THAN 2 FEET.
 4. L = LENGTH OF WALL PARALLEL TO THE BAR LENGTH IN QUESTION.

TYPICAL WALL CORNER AND INTERSECTION REINFORCING
NTS

0330-003

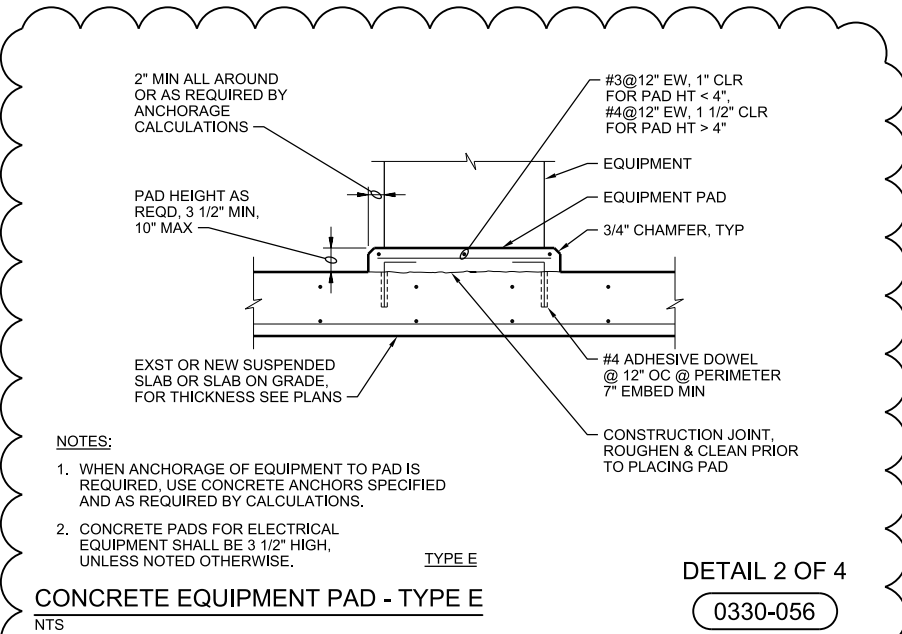


GENERAL NOTE:
FOR ADDITIONAL NOTES SEE DETAIL 3 OF 3.

CONCRETE EQUIPMENT PAD - TYPE A
NTS

DETAIL 1 OF 4

0330-056

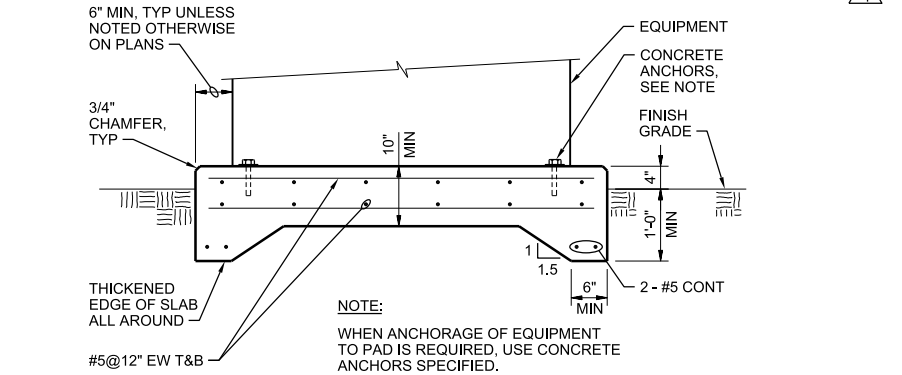


- NOTES:**
1. WHEN ANCHORAGE OF EQUIPMENT TO PAD IS REQUIRED, USE CONCRETE ANCHORS SPECIFIED AND AS REQUIRED BY CALCULATIONS.
 2. CONCRETE PADS FOR ELECTRICAL EQUIPMENT SHALL BE 3 1/2" HIGH, UNLESS NOTED OTHERWISE.

CONCRETE EQUIPMENT PAD - TYPE E
NTS

DETAIL 2 OF 4

0330-056



- NOTE:**
WHEN ANCHORAGE OF EQUIPMENT TO PAD IS REQUIRED, USE CONCRETE ANCHORS SPECIFIED.

CONCRETE EQUIPMENT PAD - TYPE H
NTS

DETAIL 3 OF 4

0330-056

- NOTES:**
1. PAD SIZE SHALL BE MINIMUM INDICATED OR AS SHOWN ON THE PLANS OR AS INDICATED BY THE MANUFACTURER AND APPROVED BY THE ENGINEER.
 2. THE SIZE, NUMBER, TYPE, LOCATION, AND THREAD PROJECTION OF THE ANCHOR BOLTS SHALL BE DETERMINED BY THE EQUIPMENT MANUFACTURER AND AS APPROVED BY THE ENGINEER. ANCHOR BOLTS SHALL BE HELD IN POSITION WITH A TEMPLATE OR OTHER ACCEPTABLE MEANS, MATCHING THE BASE PLATE, WHILE PAD IS BEING PLACED.
 3. EQUIPMENT BASES SHALL BE INSTALLED LEVEL UNLESS INDICATED OTHERWISE.
 4. WEDGES, SHIMS, OR LEVELING NUTS SHALL BE USED TO SUPPORT THE BASE WHILE THE GROUT IS PLACED. WEDGES OR SHIMS SHALL BE REMOVED AFTER GROUT IS SET AND PACK VOID WITH GROUT.
 5. HEIGHT OF PADS SHALL BE MINIMUM REQUIRED FOR ANCHOR BOLT CLEARANCE TO KEEP ANCHOR BOLT ABOVE SUPPORTING SLAB (SEE TABLE BELOW). WHERE EQUIPMENT OR PIPING ELEVATION REQUIRE A PAD HEIGHT LESS THAN THE MINIMUM SHOWN, PROVIDE RECESS IN SUPPORTING SLAB AT EACH ANCHOR AS APPROVED BY ENGINEER.
 6. AT CONTRACTOR'S OPTION, CONCRETE ANCHORS MAY BE USED IN LIEU OF CAST-IN-PLACE ANCHOR BOLTS FOR EQUIPMENT ANCHOR BOLTS LESS THAN 3/4" DIAMETER WHEN APPROVED BY THE EQUIPMENT MANUFACTURER AND APPROVED BY THE ENGINEER. ANCHORS SHALL BE INSTALLED WITH 4" MINIMUM EDGE DISTANCE IN EACH DIRECTION.

AB DIA (IN.)	1/2	5/8	3/4	7/8	1	1 1/4	1 3/8	1 1/2	1 3/4	2
MIN PAD HT (IN.)	7	8 1/2	10	11	12 1/2	15	16 1/2	18	21	24

CONCRETE EQUIPMENT PAD - NOTES
NTS

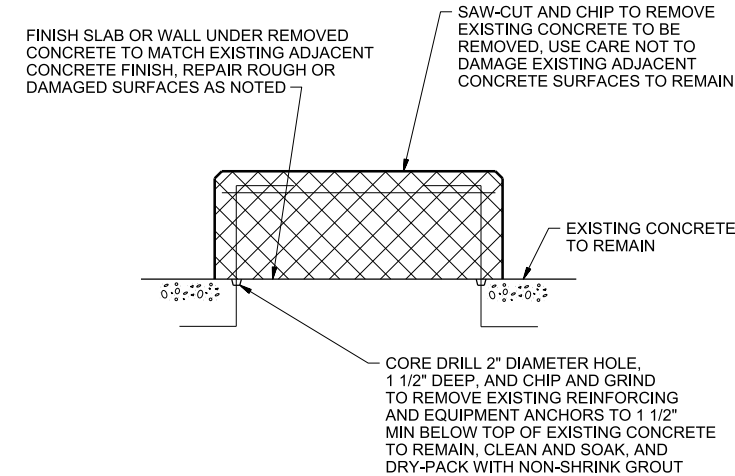
DETAIL 4 OF 4

0330-056

SURFACE TREATMENT OF NEW OPENINGS IN EXISTING CONCRETE
NTS

- NOTES:**
1. SUPPORT ADJACENT ELEVATED SLABS AND CUT SLAB SECTION UNTIL CUTTING OPERATION IS COMPLETE.
 2. CORE DRILL CORNERS TO DIAMETER REQUIRED TO PREVENT OVER CUTTING OF REBAR AND CONCRETE BEYOND OPENING.
 3. COAT MINIMUM 2" DIAMETER OVER AND AROUND CUT REBAR WITH SYSTEM 1A PER SPECIFICATION SECTION 09 90 00. THE ENTIRE CUT SURFACE MAY BE COATED.

CONCRETE DEMOLITION
NTS



- NOTES:**
1. REMOVE CONCRETE OUT TO SOUND CONCRETE.
 2. IF CHIPPING INTO THE SURFACE OF THE EXISTING SLAB OR WALL TO REMAIN IS REQUIRED, MAKE EDGES PERPENDICULAR TO THE SURFACE. DO NOT FEATHER EDGES.
 3. FILL DEFECTIVE AREA WITH NON-SHRINK GROUT OR AN APPROVED PREPACKAGED PATCHING MATERIAL TO MATCH APPEARANCE OF ADJACENT CONCRETE SURFACES.
 4. USE APPROVED BONDING AGENT ON SURFACES TO BE PATCHED PRIOR TO PLACING NON-SHRINK GROUT.
 5. DEMONSTRATE METHODS FOR REPAIR USING ACTUAL MATERIALS, METHODS, AND CURING PROCEDURES REQUIRED BY MATERIAL MANUFACTURERS. CONSULT WITH BONDING AGENT MANUFACTURER AND NON-SHRINK GROUT MANUFACTURER ON TECHNIQUES.

0330-143

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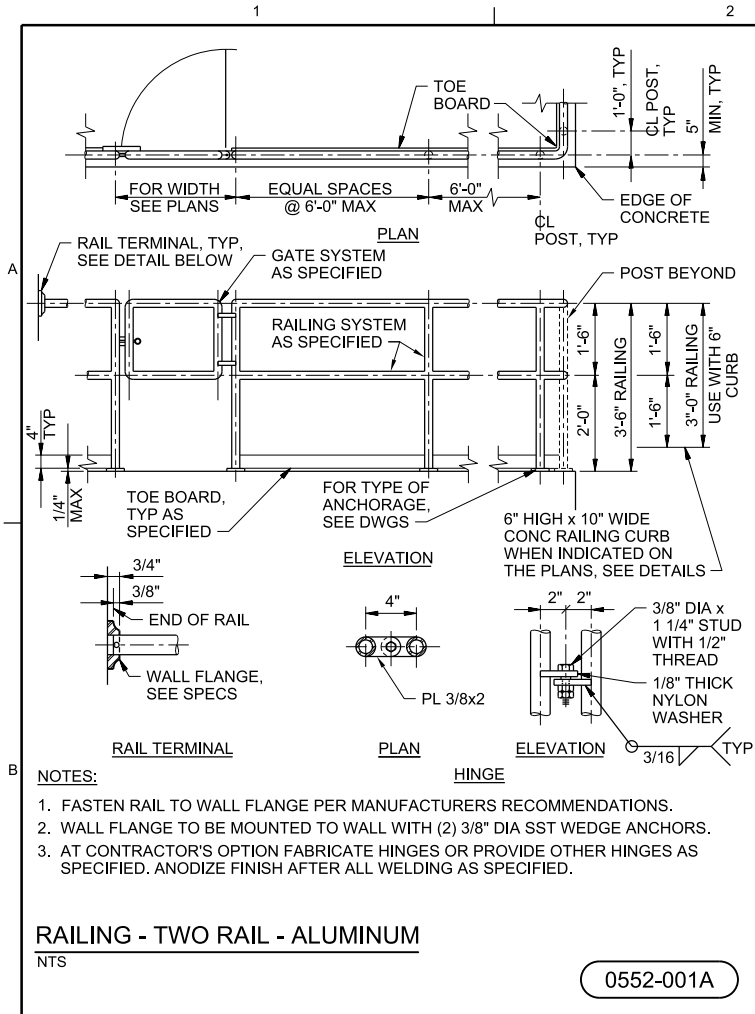
STRUCTURAL
STANDARD DETAILS

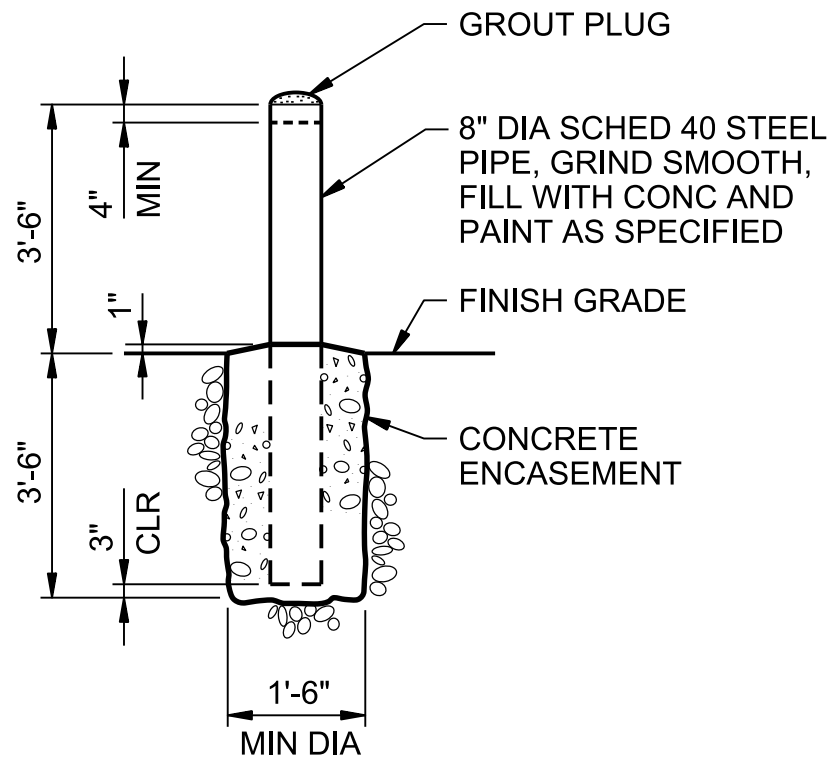
CROSSTOWN WTP IMPROVEMENTS
FAYETTE COUNTY WATER SYSTEM
FAYETTE COUNTY, GEORGIA

AS NOTED	
VERIFY SCALE	
BAR IS ONE INCH ON ORIGINAL DRAWING, 1"	
DATE	MAY 2015
PROJ	497074
DWG	SD-02
SHEET	63 of 73

BID DOCUMENTS

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**NOTE:**

FOR INTERIOR GUARD POST, SEE (0559-026) .

GUARD POST - EXTERIOR**NTS**

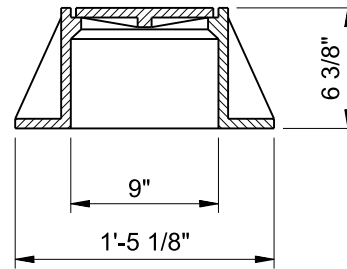
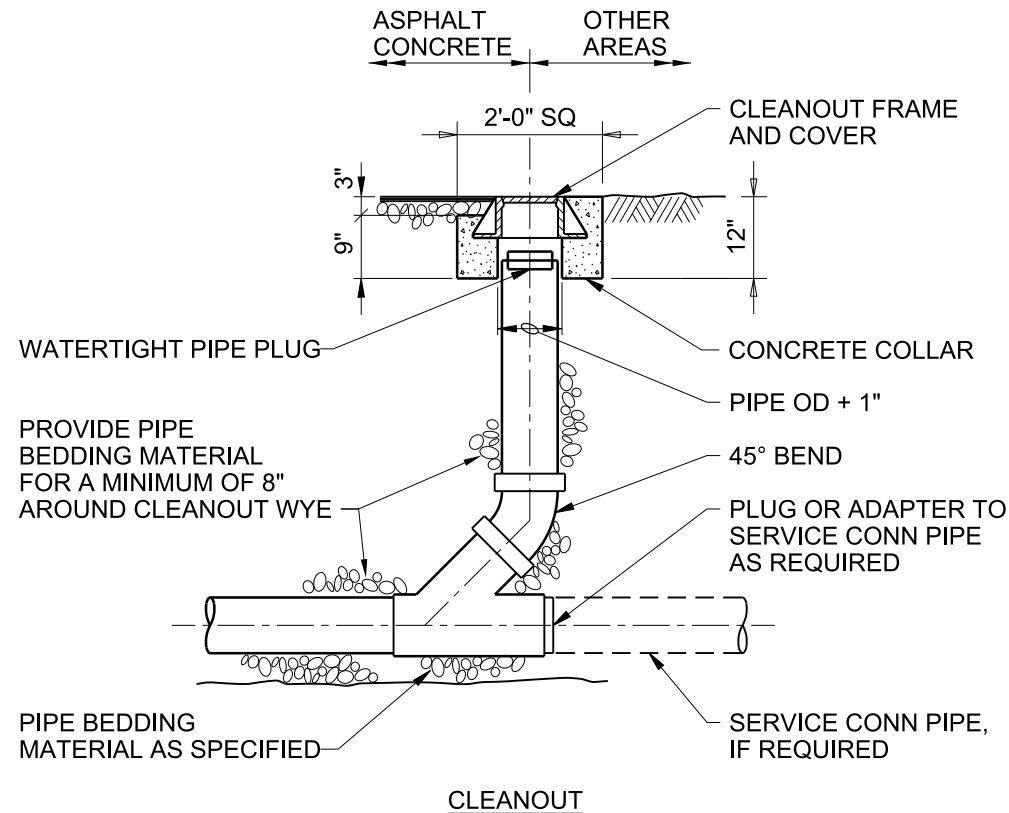
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NOTE TO DESIGNER:

X

3471-810

DATE 19-MAY-03
TDC WAGNER
TDR WAGNER
LCT MCCALL

CLEANOUT FRAME AND COVERCLEANOUTEXTERIOR CLEANOUT

NTS

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NOTE TO DESIGNER:

X

3305-740

DATE 27-MAY-03
 TDC WAGNER
 TDR WAGNER
 LCT MCCALL

