

**CITY OF BALTIMORE
DEPARTMENT OF PUBLIC WORKS
BUREAU OF WATER AND WASTEWATER**

ADDENDUM NO. 2

DATE: 11/1/2024

FOR

DRAWINGS, SPECIFICATIONS, PROPOSAL, CONTRACT AND BONDS

FOR

**SANITARY CONTRACT NO. 994
CLARIFIER AND GRAVITY SLUDGE THICKNERS REHABILITATION AT THE
PATAPSCO WASTEWATER TREATMENT PLANT**

FOR THE MAYOR AND CITY COUNCIL OF BALTIMORE

TO THE BIDDERS: THIS ADDENDUM IS HEREBY MADE A PART OF THE CONTRACT DOCUMENTS ON WHICH THE CONTRACT WILL BE BASED, AND IS ISSUED TO MODIFY, EXPLAIN AND/OR CORRECT THE ORIGINAL DRAWINGS AND SPECIFICATIONS.

PLEASE ACKNOWLEDGE THIS ADDENDUM ON THE BID OR PROPOSAL PAGE WHERE INDICATED.

APPROVED:

Azzam Ahmad for
TIMOTHY WOLFE, P.E., BCEE
CHIEF
OFFICE OF ENGINEERING AND CONSTRUCTION

Khalil Zaid

KHALIL ZAIED
DIRECTOR
DEPARTMENT OF PUBLIC WORKS

I – REVISIONS TO THE CONTRACT BOOK

VOLUME I OF III

SPECIFICATION 00 20 00

Pages 00 20 00-2 to 00 20 00-25

Delete SC-1 MINIMUM WAGE RATES – CITY OF BALTIMORE FROM PAGES 00200-2 TO 002000-25 in its entirety.

The project requirements, including prevailing wages, shall be in compliance with the REQUIREMENTS AND CONTRACT PROVISIONS FOR THE TREATMENT WORKS PROJECTS FINANCED THROUGH THE MARYLAND WATER QUALITY REVOLVING LOAN FUND AND THE MARYLAND DRINKING WATER REVOLVING LOAN FUND DEPARTMENT OF THE ENVIROMENT STATE OF MARYLAND as included and an Attachment in Addendum No.2.

SPECIFICATION 01 29 00

Page 01 29 00-18

Delete section 01 29 00 1.04.HH.1 in its entirety and replace with “This work shall consist of furnishing all labor, materials, tools, equipment, and incidentals as necessary to successfully accomplish the design as shown on the Contract Drawings and indicated in the Specifications associated with Clarifier and Gravity Sludge Thickeners Rehabilitation at the Patapsco Wastewater Treatment Plant power supply and distribution systems.

VOLUME II OF III

SPECIFICATION 22 42 16.16

Page 22 42 16.16-1 to 22 42 16.16-6

Add Specification 22 42 16.16 – Commercial Sinks, as included in Attachment 1

SPECIFICATION 31 20 00

Page 31 20 00-1 to 31 20 00-18

Replace this section in its entirety with the Specification 31 20 00 R1 – Earth Moving as included in Attachment 1.

VOLUME III OF III

SPECIFICATION 40 05 13

Page 40 05 13-4

Add 1.04.E “E. Contractor shall be responsible for field verifying existing connections, including flange class, and proving adaptors if needed.”

Page 40 05 13-5

Replace the table in its entirety with the table below.

Piping System	Abbreviation	Pipe Size - Material	Joints	Notes
Process Drain (1)	DRAIN	Less than 4-inches - Schedule 80 PVC	Solvent Cement Socket Type Joints	Reference Specification Section 40 05 13.30 for Requirements
		4-inches and Larger - Ductile Iron	Flanged	Reference Specification Section 40 05 13.10 for Requirements
High Pressure Effluent Water	HPEW	All sizes – Schedule 80 PVC	Solvent Cement Socket Type Joints	Reference Specification Section 40 05 13.30 for Requirements
Flushing Water	FW	All sizes – Schedule 80 PVC	Solvent Cement Socket Type Joints	Reference Specification Section 40 05 13.30 for Requirements
Scum	SCUM	All sizes - Glass-Lined Ductile Iron	Flanged	Reference Specification Section 40 05 13.10 for Requirements
Sludge Piping (2) (3)	SLG	All sizes - Ductile Iron	Flanged	Reference Specification Section 40 05 13.10 for Requirements
Seal Water	SW	All sizes - 304L Stainless Steel, Schedule 40	Shop Welded; Field Joints Mechanical Couplings	Reference Specification Section 40 05 13.20 for Requirements
Sump Pump (4)	SUMP	Less than 4-inches - Schedule 80 PVC	Solvent Cement Socket Type Joints	Reference Specification Section 40 05 13.30 for Requirements
		4-inches and larger - Ductile Iron	Flanged	Reference Specification Section 40 05 13.10 for Requirements

- (1) ALL DUCTILE IRON PROCESS DRAIN PIPING SHALL RECEIVE PROTECTO 401 COATING.
(2) INCLUDES GST INFLUENT, WAS, RAS, AND UNDERFLOW PIPING.
(3) PUMP SYSTEM PIPING SHALL HAVE PROTECTO 401 INTERIOR COATING.
(4) DIRECT CONNECTION TO INDIVIDUAL SUMP PUMPS SHALL BE FLEXIBLE HOSE.

Page 40 05 13-14

Replace the table in Paragraph 3.08.E in its entirety with the table below.

PIPING SYSTEM	ABBREVIATION	MINIMUM PRESSURE
PROCESS DRAIN	DRAIN	50 PSI
HIGH PRESSURE EFFLUENT WATER	HPEW	60 PSI
FLUSHING WATER	FW	60 PSI
SEAL WATER	SW	50 PSI
SUMP PUMP	SUMP	20 PSI
SCUM	SCUM	20 PSI
SLUDGE	SLG	40 PSI

SPECIFICATION 40 05 23.30

Page 40 05 23.30-6

Delete 2.02.G in its entirety and replace with, “Coatings and Lining: All valves shall be glass lined.”

SPECIFICATION 43 21 13.06

Page 43 21 13.06-13,14

Delete 2.09 in its entirety.

SPECIFICATION 43 23 57

Page 43 23 57-13

Delete 2.02.R.a in its entirety and replace with “Basis of Design: The basis of design is the Trillium SFE5-L (Horizontal). All design changes from the use of an “or equal” manufacturer are the sole responsibility of the Contractor.”

SPECIFICATION 43 26 10

Page 43 26 10-12

Add “2.06.D The walkway access bridge shall span the full length of the clarifier. Half-span bridges are not acceptable.”

SPECIFICATION 43 26 20

Page 43 26 20-14

Delete line “Existing grout can be reused if the conditions allows, contingent on the Engineer’s approval.”

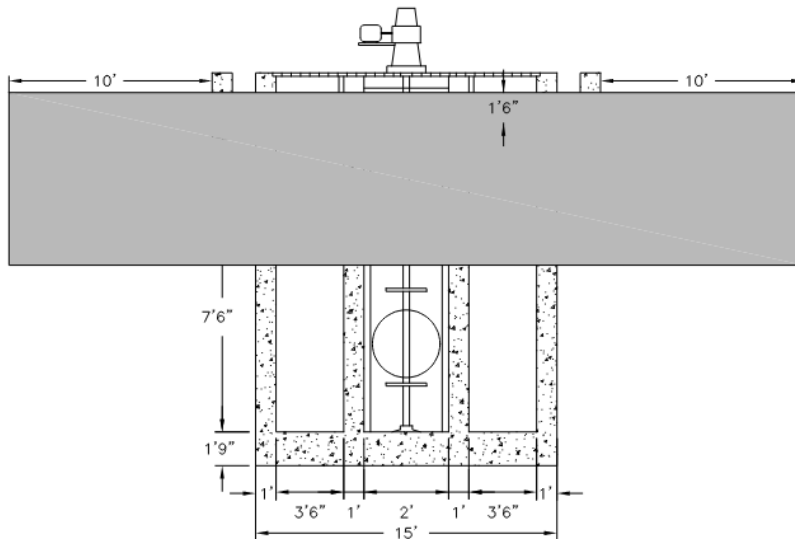
APPENDIX B

Delete APPENDIX B – MARYLAND WATER QUALITY RREVOLVING FUND and MARYLAND DRINKING WATER REVOLVING LOAN FUND REQUIREMENTS and **replace** with MARYLAND WATER QUALITY RREVOLVING FUND and MARYLAND DRINKING WATER REVOLVING LOAN FUND REQUIREMENTS included in Attachment 1.

II – REVISIONS TO THE CONTRACT DRAWINGS

DRAWING G-000-15 (SHEET 15 of 210)

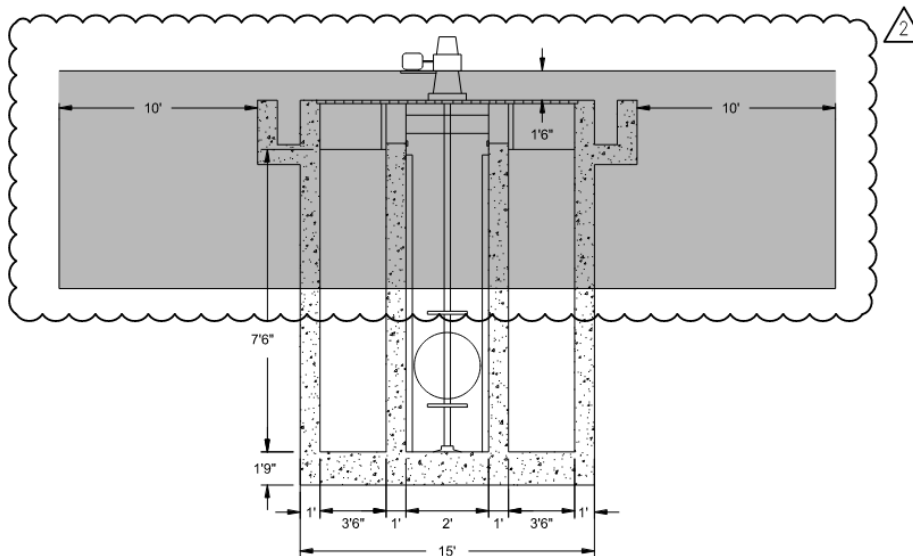
Delete the following section



SECTION 1 DISTRIBUTION CHAMBER

SCALE: NOT TO SCALE

And **replace** with the following section.



SECTION 1 DISTRIBUTION CHAMBER

SCALE: NOT TO SCALE

DRAWING C-000-01 (SHEET 17 OF 210)

Delete drawing C-000-01 in its entirety and **replace** with drawing C-000-01 R1 as provided in Attachment 2.

DRAWING C-100-01 (SHEET 18 OF 210)

Delete drawing C-100-01 in its entirety and **replace** with drawing C-100-01 R1 as provided in Attachment 2.

DRAWING C-100-02 (SHEET 19 OF 210)

Delete drawing C-100-02 in its entirety and **replace** with drawing C-100-02 R1 as provided in Attachment 2.

DRAWING C-100-03 R1 (SHEET 19A OF 210)

Add drawing C-100-03 R1 as provided in Attachment 2.

DRAWING C-100-03 (SHEET 20 OF 210)

Delete drawing C-100-03 in its entirety and **replace** with drawing C-100-04 R1 as provided in Attachment 2.

DRAWING C-100-04 (SHEET 21 OF 210)

Delete drawing C-100-04 in its entirety and **replace** with drawing C-100-05 R1 as provided in Attachment 2.

DRAWING C-100-05 (SHEET 22 OF 210)

Delete drawing C-100-05 in its entirety and **replace** with drawing C-100-06 R1 as provided in Attachment 2.

DRAWING C-100-07 R1 (SHEET 22A OF 210)

Add drawing C-100-07 R1 as provided in Attachment 2.

DRAWING C-200-01 (SHEET 23 OF 210)

Delete drawing C-200-01 in its entirety and **replace** with drawing C-200-01 R1 as provided in Attachment 2.

DRAWING C-200-02 R1 (SHEET 23A OF 210)

Add drawing C-200-02 R1 as provided in Attachment 2.

DRAWING C-200-02 (SHEET 24 OF 210)

Delete drawing C-200-02 in its entirety and **replace** with drawing C-200-03 R1 as provided in Attachment 2.

DRAWING C-200-03 (SHEET 25 OF 210)

Delete drawing C-200-03 in its entirety and **replace** with drawing C-200-04 R1 as provided in Attachment 2.

DRAWING C-200-05 R1 (SHEET 25A OF 210)

Add drawing C-200-05 R1 as provided in Attachment 2.

DRAWING C-200-04 (SHEET 26 OF 210)

Delete drawing C-200-04 in its entirety and **replace** with drawing C-200-06 R1 as provided in Attachment 2.

DRAWING C-200-05 (SHEET 27 OF 210)

Renumber to C-200-07 R1.

DRAWING C-200-06 (SHEET 28 OF 210)

Renumber to C-200-08 R1.

DRAWING C-200-07 (SHEET 29 OF 210)

Delete drawing C-200-07 in its entirety and **replace** with drawing C-200-09 R1 as provided in Attachment 2.

DRAWING C-200-08 (SHEET 30 OF 210)

Delete drawing C-200-08 in its entirety and **replace** with drawing C-200-10 as provided in Attachment 2.

DRAWING C-200-09 (SHEET 31 OF 210)

Delete drawing C-200-09 in its entirety and **replace** with drawing C-200-11 as provided in Attachment 2.

DRAWING C-300-01 (SHEET 33 OF 210)

Delete drawing C-300-01 in its entirety and **replace** with drawing C-300-01 R1 as provided in Attachment 2.

DRAWING C-300-02 R1 (SHEET 33A OF 210)

Add drawing C-300-02 R1 as provided in Attachment 2.

DRAWING C-300-02 (SHEET 34 OF 210)

Delete drawing C-300-02 in its entirety and **replace** with drawing C-300-03 R1 as provided in Attachment 2.

DRAWING C-300-04 R1 (SHEET 34A OF 210)

Add drawing C-300-04 R1 as provided in Attachment 2.

DRAWING C-300-03 (SHEET 35 OF 210)

Renumber to C-300-05 R1.

DRAWING C-300-04 (SHEET 36 OF 210)

Delete drawing C-300-02 in its entirety and **replace** with drawing C-300-06 as provided in Attachment 2.

DRAWING C-300-05 (SHEET 37 OF 210)

Delete drawing C-300-05 in its entirety and **replace** with drawing C-300-07 as provided in Attachment 2.

DRAWING CAEXH-1 (SHEET 38 OF 210)

Delete drawing CAEXH-1 in its entirety and **replace** with drawing CAEXH-1 R1 as provided in Attachment 2.

DRAWING SWM-1A (SHEET 38A OF 210)

Add drawing SWM-1A as provided in Attachment 2.

DRAWING SWM-1B (SHEET 38B OF 210)

Add drawing SWM-1B as provided in Attachment 2.

DRAWING SWM-2A (SHEET 38C OF 210)

Add drawing SWM-2A as provided in Attachment 2.

DRAWING SWM-2B (SHEET 38D OF 210)

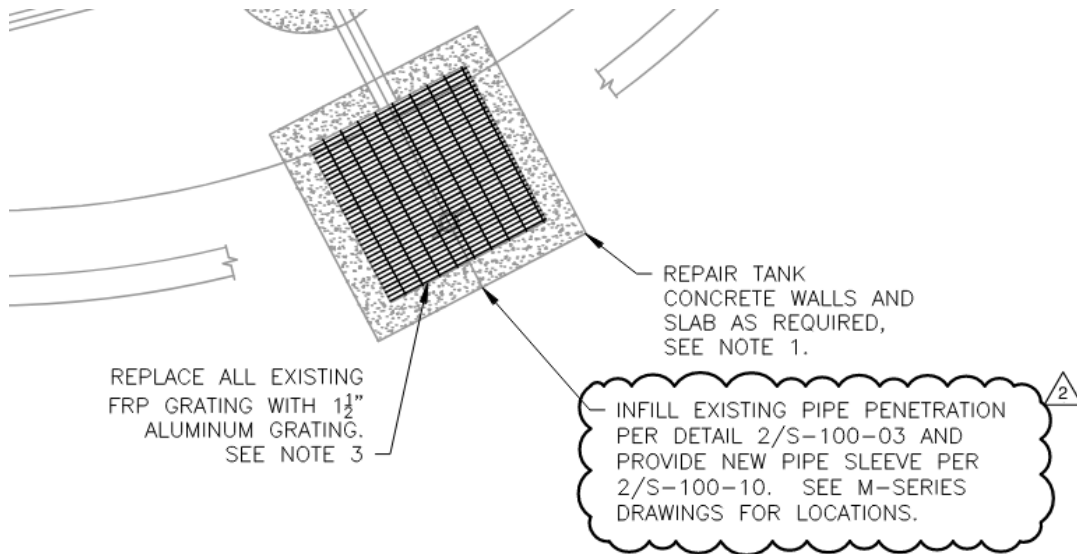
Add drawing SWM-2B as provided in Attachment 2.

DRAWING S-000-03 (SHEET 45 OF 210)

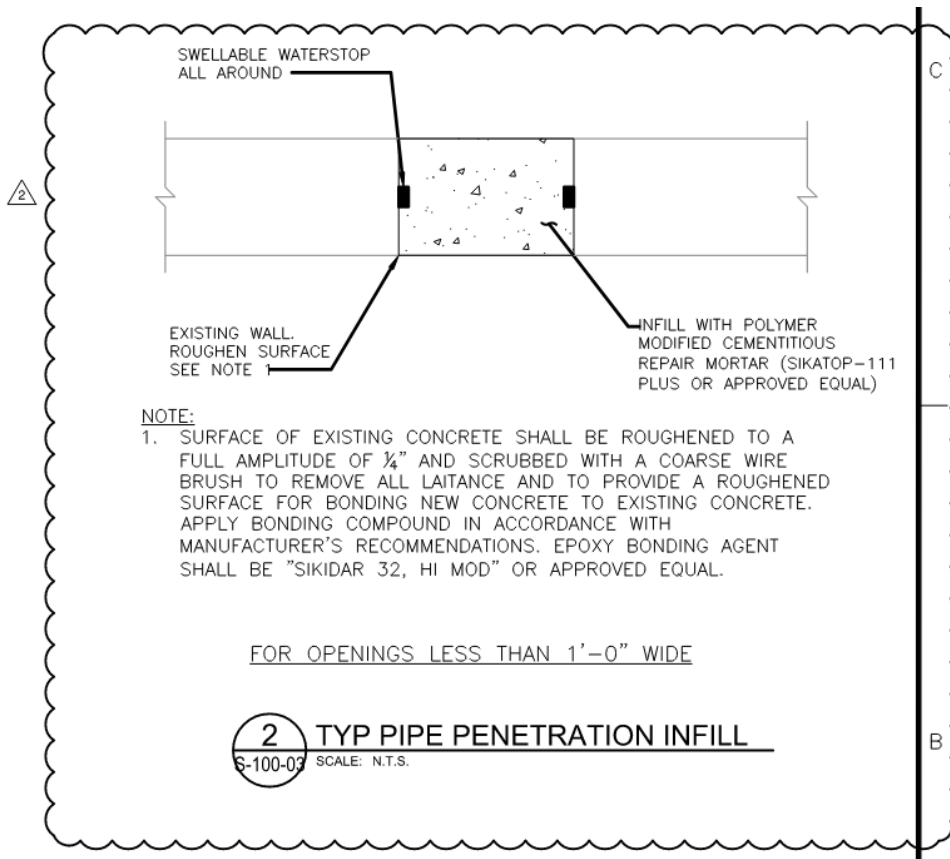
Delete drawing S-000-03 in its entirety and **replace** with drawing S-000-03 R1 as provided in Attachment 2.

DRAWING S-100-03 (SHEET 48 OF 210)

Add the following note.



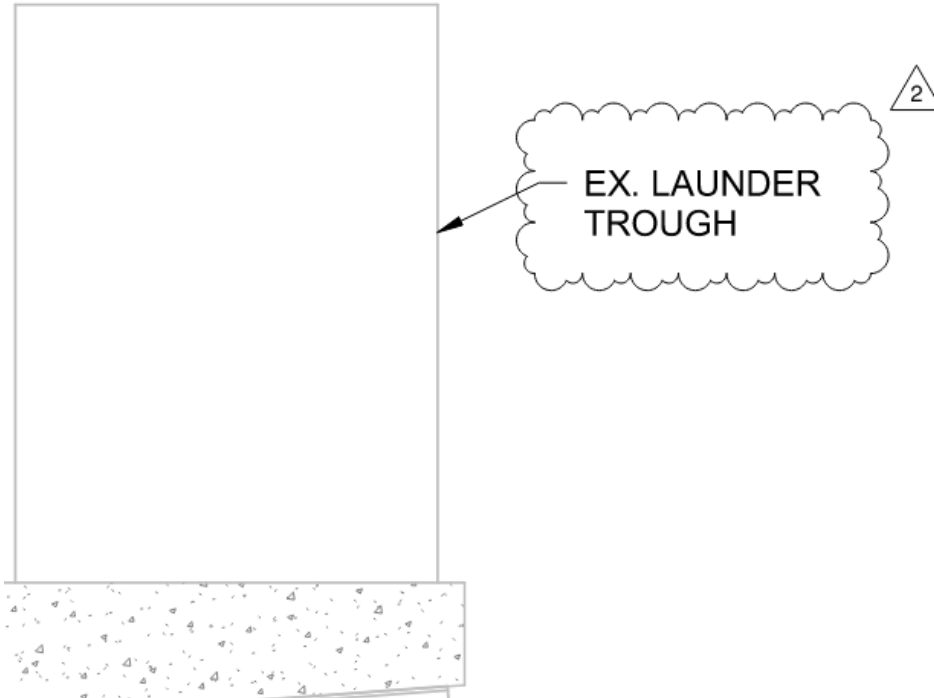
Add the following detail.



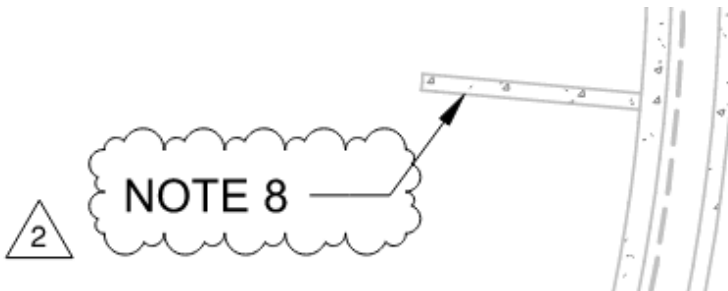
DRAWING S-100-05 (SHEET 50 OF 210)

Delete note 13.

Delete the note 8 callout on Section 1 and **replace** with the below callout.



Modify notes 8 and 9 as shown below.

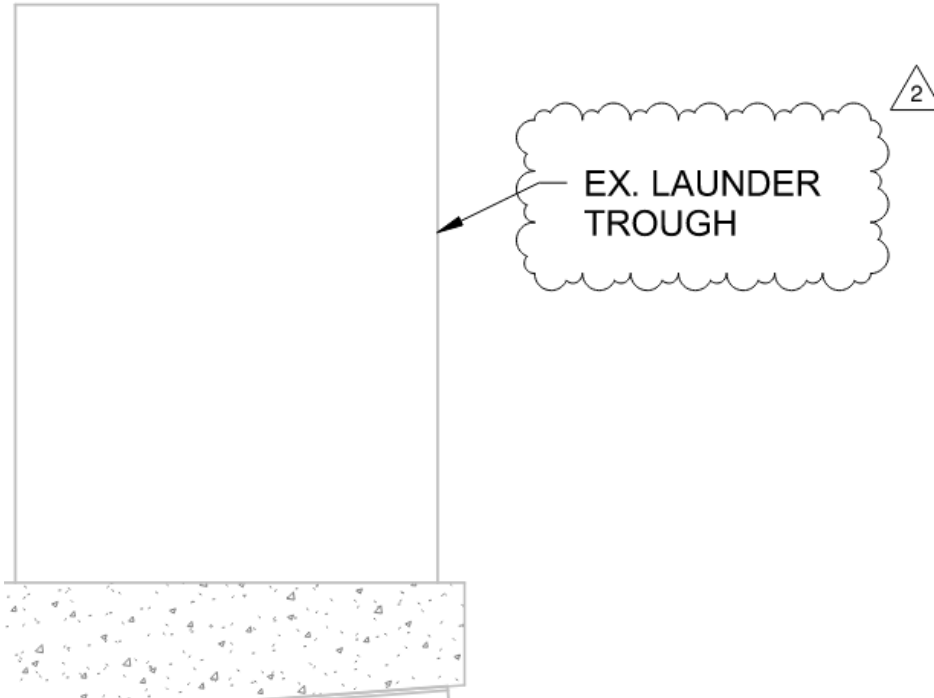


- △ 2
8. LAUNDRER COVERS NOT SHOWN FOR CLARITY.
 9. ALL RAILINGS ALONG SECONDARY CLARIFIER AND SUPPORT STRUCTURES / TANKS SHALL BE REPLACED IN THEIR ENTIRETY. REFER TO DETAIL 1/S-100-10 FOR ADDITIONAL INFORMATION AND REQUIREMENTS. EXISTING RAILING POST CORE HOLES AND ANCHOR BOLT HOLES SHALL BE PATCHED / REPAIRED AS REQUIRED PER DETAIL 1/S-100-08 SIMILAR.

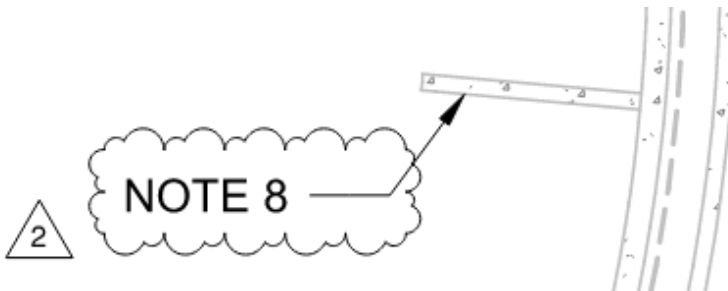
DRAWING S-100-06 (SHEET 51 OF 210)

Delete note 13.

Delete the note 8 callout on Section 1 and **replace** with the below callout.



Modify notes 8 and 9 as shown below.



- △
8. LAUNDRER COVERS NOT SHOWN FOR CLARITY.
 9. ALL RAILINGS ALONG SECONDARY CLARIFIER AND SUPPORT STRUCTURES / TANKS SHALL BE REPLACED IN THEIR ENTIRETY. REFER TO DETAIL 1/S-100-10 FOR ADDITIONAL INFORMATION AND REQUIREMENTS. EXISTING RAILING POST CORE HOLES AND ANCHOR BOLT HOLES SHALL BE PATCHED / REPAIRED AS REQUIRED PER DETAIL 1/S-100-08 SIMILAR.

DRAWING S-100-07 (SHEET 52 OF 210)

Modify Distribution Chamber Plan Note 4 and Distribution Box Plan Note 4 as shown below.

DISTRIBUTION CHAMBER PLAN NOTES:

1. EXISTING FOUNDATION AND FRAMING CONDITIONS INDICATED ON PLAN WERE OBTAINED FROM EXISTING SC 582 DRAWINGS AND DOES NOT REFLECT THE RESULT OF FIELD SURVEY OR AS-BUILT CONDITIONS. CONTRACTOR SHALL CONFIRM EXISTING CONDITIONS INDICATED PRIOR TO CONSTRUCTION AND CONTACT ENGINEER IF DISCREPANCIES ARE ENCOUNTERED.
2. THE CONTRACTOR SHALL PERFORM A COMPLETE FIELD SURVEY TO DETERMINE FULL EXTENT OF DETERIORATED CONCRETE CONDITIONS OF ALL WALLS, SLABS AND BEAMS. ALL DETERIORATED CONCRETE SHALL BE REPAIRED PER DETAILS AND CONCRETE REPAIR NOTES ON DRAWINGS S-100-08 , S-100-09 AND CONTRACT SPECIFICATIONS.
3. THOROUGHLY CLEAN AND APPLY TNE MEC HIGH PERFORMANCE EPOXOLINE SERIES COATING SYSTEM OR APPROVED EQUAL TO ALL EXPOSED CONCRETE SURFACES. REFER TO SPECIFICATIONS SECTION 09 96 00 FOR ADDITIONAL COATING INFORMATION AND REQUIREMENTS.
4. ALL RAILINGS ALONG DISTRIBUTION CHAMBER & SUPPORT STRUCTURES SHALL BE REPLACED IN THEIR ENTIRETY. REFER TO DETAIL 1/ S-100-10 FOR ADDITIONAL INFORMATION AND REQUIREMENTS. EXISTING RAILING POST CORE HOLES AND ANCHOR BOLT HOLES SHALL BE PATCHED / REPAIRED AS REQUIRED PER DETAIL 1/ S-100-08 SIMILAR.

DISTRIBUTION BOX PLAN NOTES:

1. EXISTING FOUNDATION AND FRAMING CONDITIONS INDICATED ON PLAN WERE OBTAINED FROM EXISTING SC 690 DRAWINGS AND DOES NOT REFLECT THE RESULT OF FIELD SURVEY OR AS-BUILT CONDITIONS. CONTRACTOR SHALL CONFIRM EXISTING CONDITIONS INDICATED PRIOR TO CONSTRUCTION AND CONTACT ENGINEER IF DISCREPANCIES ARE ENCOUNTERED.
2. THE CONTRACTOR SHALL PERFORM A COMPLETE FIELD SURVEY TO DETERMINE FULL EXTENT OF DETERIORATED CONCRETE CONDITIONS OF ALL WALLS, SLABS AND BEAMS. ALL DETERIORATED CONCRETE SHALL BE REPAIRED PER DETAILS AND CONCRETE REPAIR NOTES ON DRAWINGS S-100-08 , S-100-09 AND CONTRACT SPECIFICATIONS.
3. THOROUGHLY CLEAN AND APPLY TNE MEC HIGH PERFORMANCE EPOXOLINE SERIES COATING SYSTEM OR APPROVED EQUAL TO ALL EXPOSED CONCRETE SURFACES. REFER TO SPECIFICATIONS SECTION 09 96 00 FOR ADDITIONAL COATING INFORMATION AND REQUIREMENTS.
4. ALL RAILINGS ALONG DISTRIBUTION BOX SHALL BE REPLACED IN THEIR ENTIRETY. REFER TO DETAIL 1/ S-100-10 FOR ADDITIONAL INFORMATION AND REQUIREMENTS. EXISTING RAILING POST CORE HOLES AND ANCHOR BOLT HOLES SHALL BE PATCHED / REPAIRED AS REQUIRED PER DETAIL 1/ S-100-08 SIMILAR.

DRAWING M-100-04 (SHEET 59 OF 210)

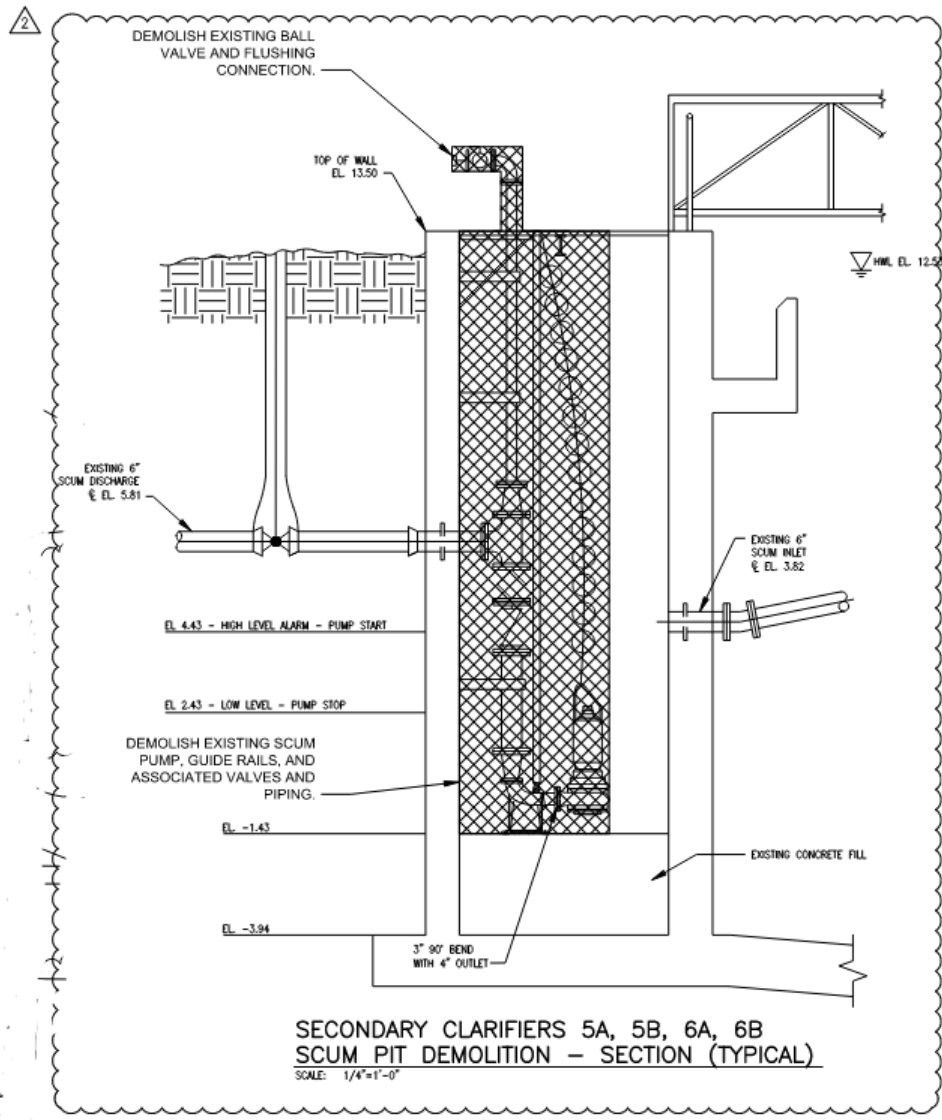
Keynote 9: **Delete** “plug wall, scum pump, and associated piping” and **replace** with “scum pump and all associated valves and piping” as shown below.

SHEET KEYNOTES:

9 DEMOLISH EXISTING PLUG WALL, SCUM PUMP, AND ASSOCIATED PIPING. SCUM PUMP AND ALL ASSOCIATED VALVES AND PIPING.

DRAWING M-100-07 (SHEET 62 OF 210)

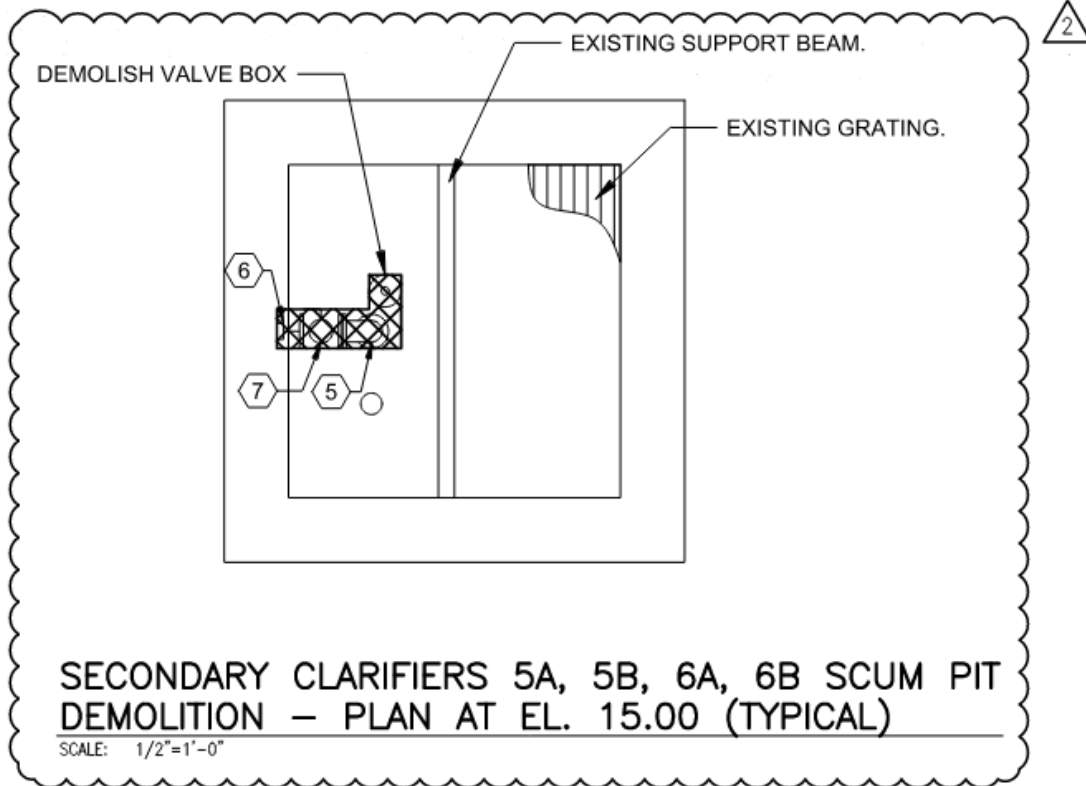
Add the following section.



Delete Keynote 7.

DRAWING M-100-08 (SHEET 63 OF 210)

Add the following detail and keynotes.

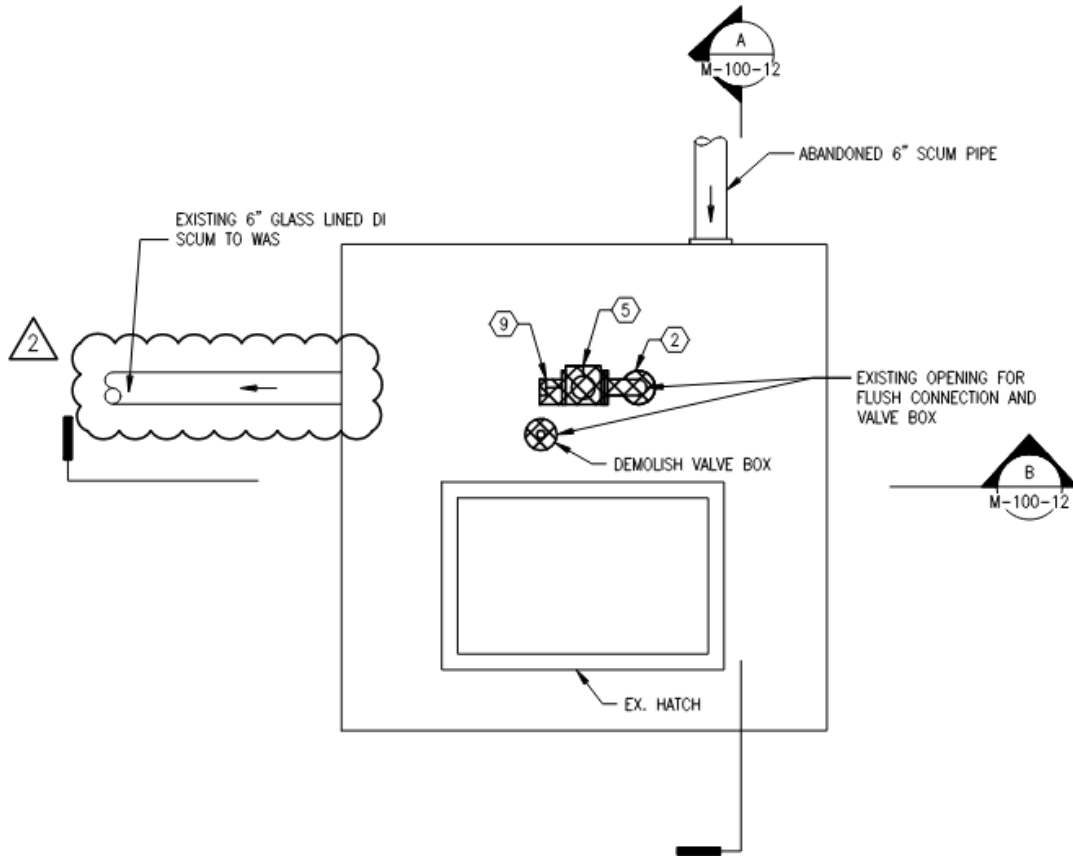


2

- 5 DEMOLISH EXISTING 3" GLASS LINED DI 90° BEND
- 6 DEMOLISH EXISTING 3" QUICK CONNECT FLUSHING CONNECTION
- 7 DEMOLISH EXISTING 3" BALL VALVE

DRAWING M-100-12 (SHEET 67 OF 210)

Delete the demolition hatching on the Secondary Clarifier No. 3 Scum Pit Demolition – Plan at EL. 15.00 – Glass lined DI Scum to WAS as shown below.



**SECONDARY CLARIFIER NO.3 SCUM PIT
DEMOLITION – PLAN AT EL. 15.00**

SCALE: 1/2"=1'-0"

DRAWING M-100-15 (SHEET 70 OF 210)

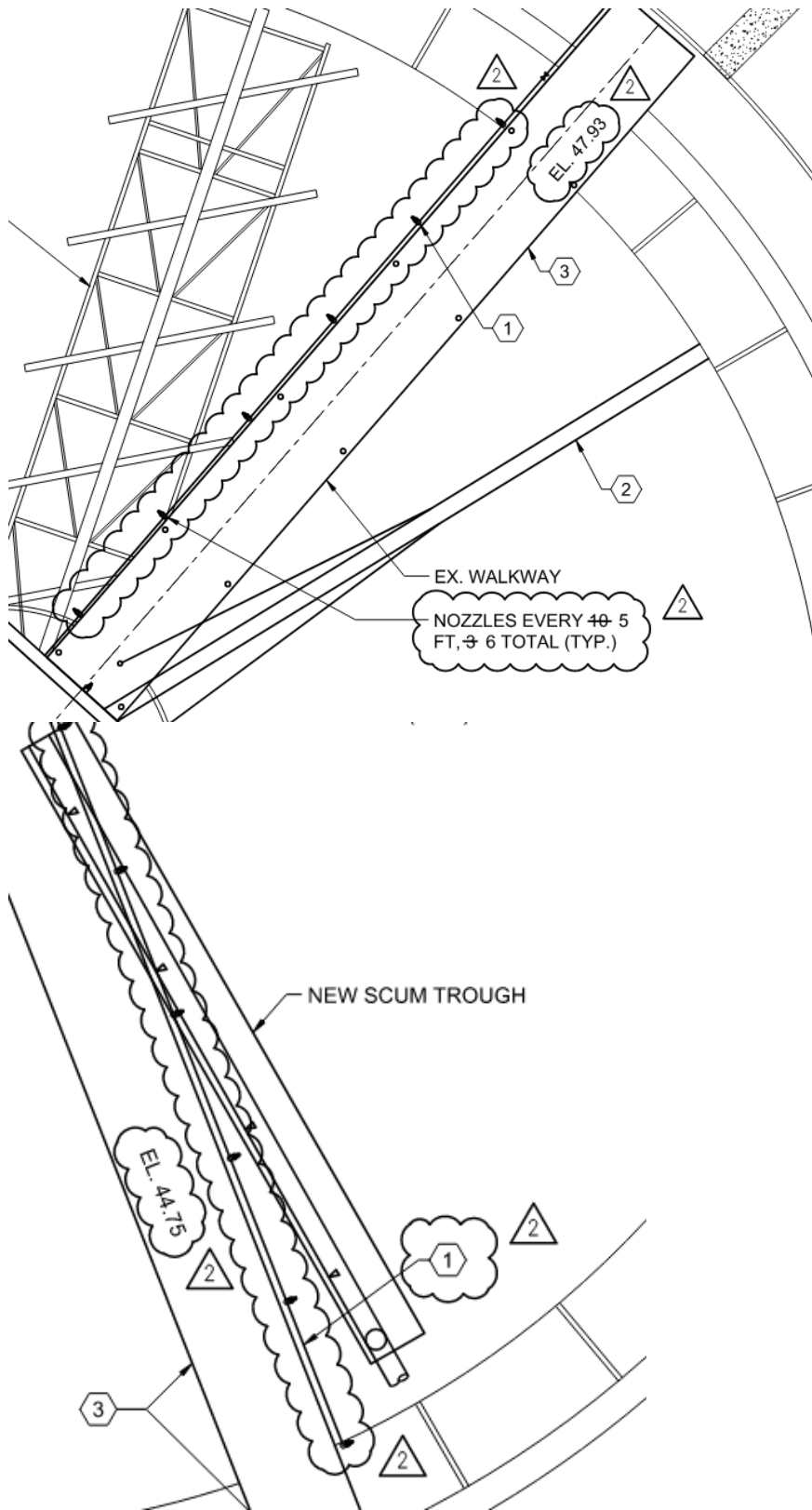
Delete drawing M-100-15 in its entirety and **replace** with drawing M-100-15 R1 as provided in Attachment 2.

DRAWING M-100-17 (SHEET 72 OF 210)

Delete drawing M-100-17 in its entirety and **replace** with drawing M-100-17 R1 as provided in Attachment 2.

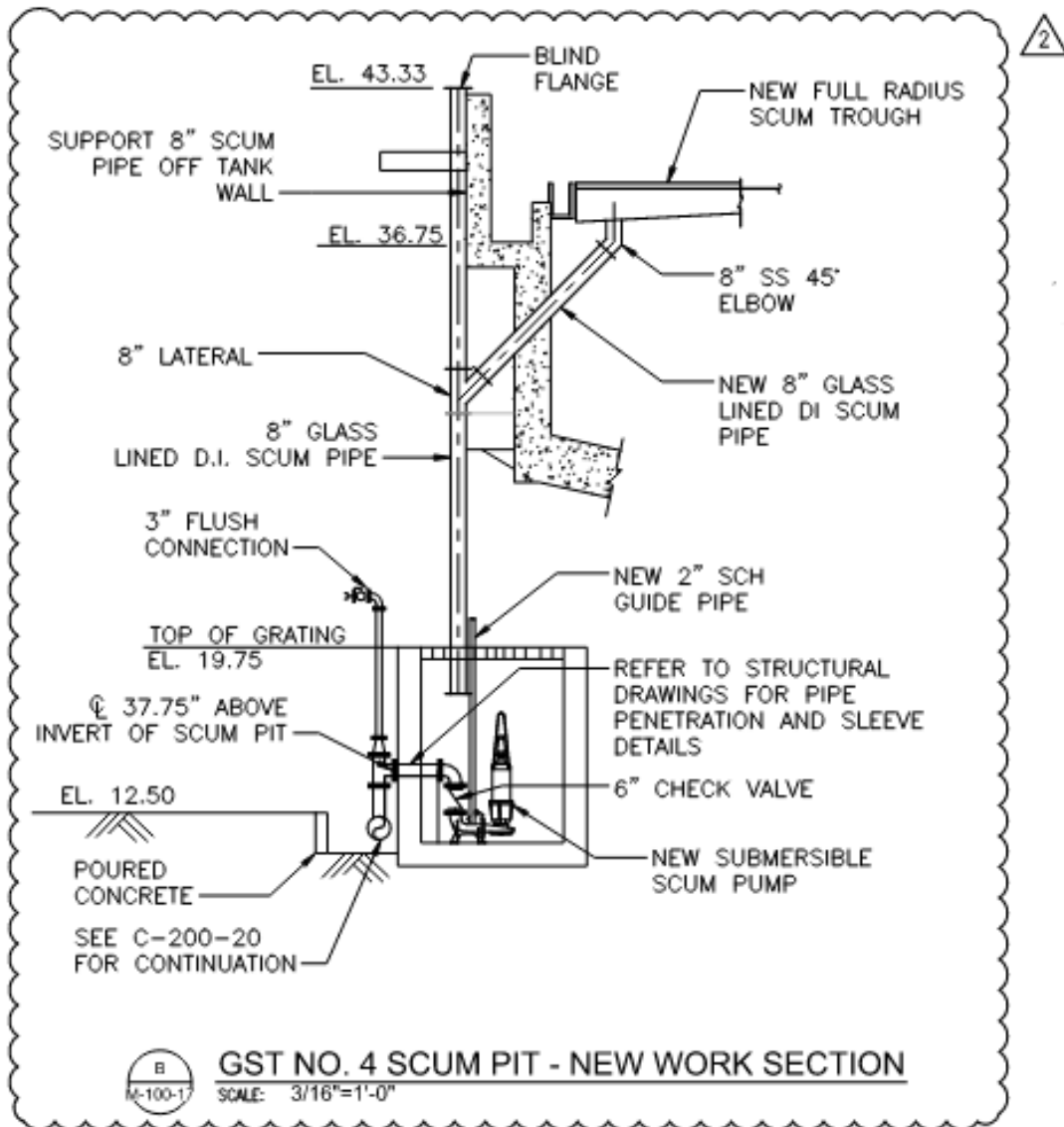
DRAWING M-100-18 (SHEET 73 OF 210)

Modify the flushing water pipe, nozzles, and walkway elevations as shown below.



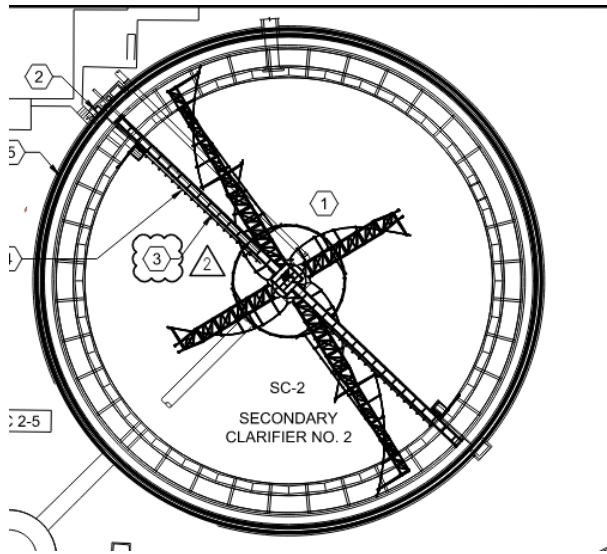
DRAWING M-100-19 (SHEET 74 OF 210)

Add the following section.

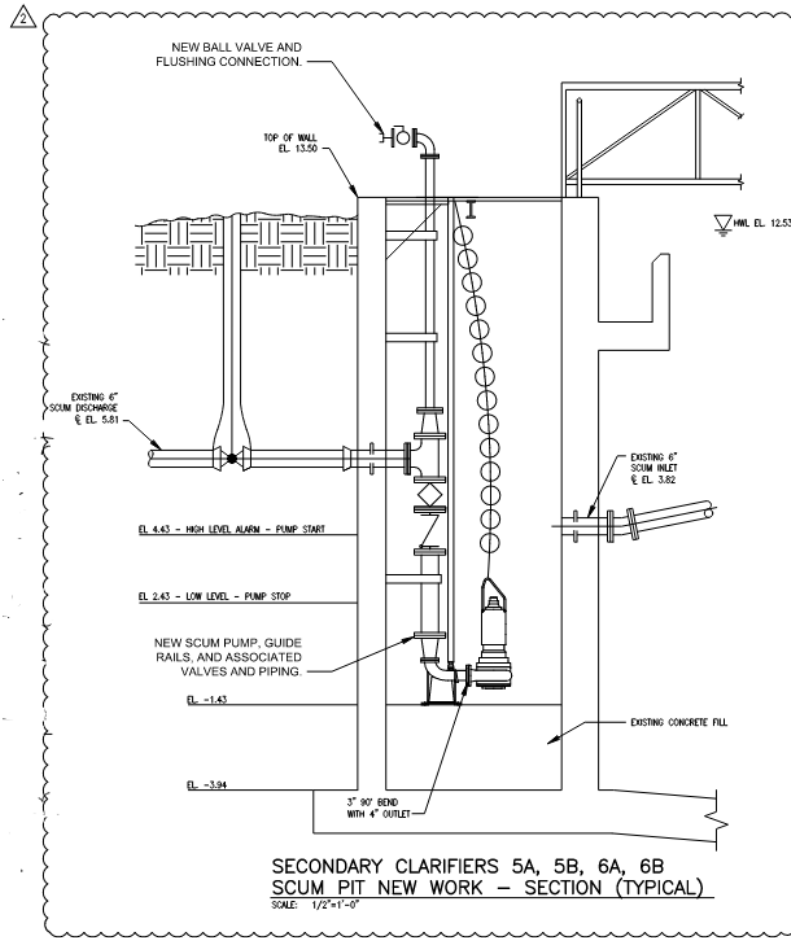


DRAWING M-100-21 (SHEET 76 OF 210)

Add Keynote 3 at Secondary Clarifier No. 2 as shown below.



Add the following section.



DRAWING M-100-24 (SHEET 79 OF 210)

Delete drawing M-100-24 in its entirety and **replace** with drawing M-100-24 R1 as provided in Attachment 2.

DRAWING M-100-25 (SHEET 80 OF 210)

Delete drawing M-100-25 in its entirety and **replace** with drawing M-100-25 R1 as provided in Attachment 2.

DRAWING M-100-26 (SHEET 81 OF 210)

Keynote 5: **delete** “DETAIL SHEET M-900-01” and **replace** with “STRUCTURAL DETAILS” as shown below.



DRAWING M-100-27 (SHEET 82 OF 210)

Keynote 6: **delete** “DETAIL SHEET M-900-01” and **replace** with “STRUCTURAL DETAILS” as shown below.



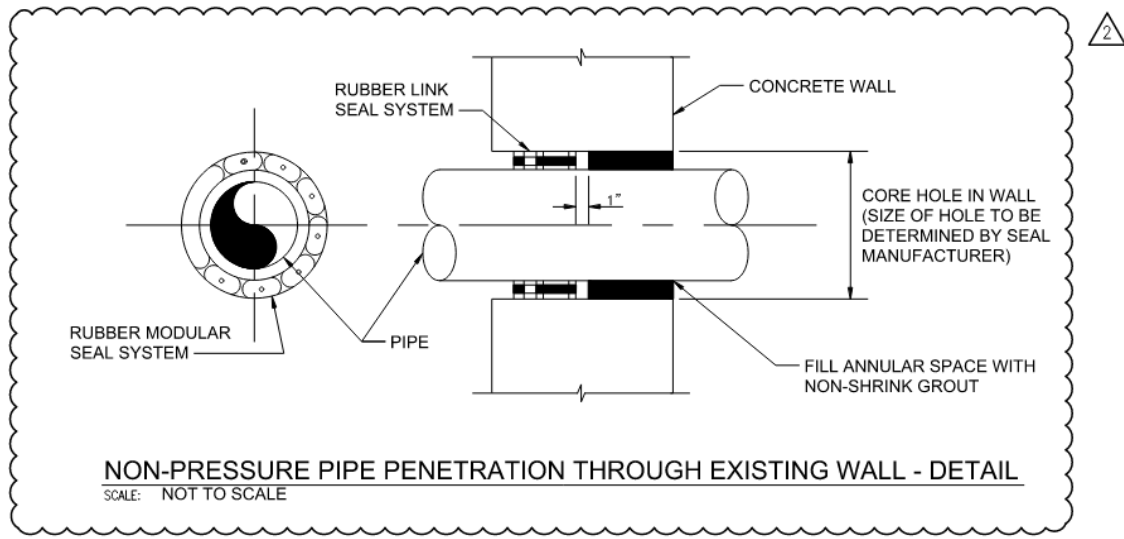
DRAWING M-100-28 (SHEET 83 OF 210)

Keynote 6: **delete** “DETAIL SHEET M-900-01” and **replace** with “STRUCTURAL DETAILS” as shown below.



DRAWING M-100-32 (SHEET 87 OF 210)

Add the following detail.



III – QUESTIONS FROM BIDDERS – RESPONSE IN BOLD

1. In the provided Contract Documents, Sheet 45, Dwg S-000-003-Existing Conditions Photos is blank with no information provided. Please provide via addendum correct Drawing S-000-003 with all applicable photos.

Response: See reissued drawing S-000-03 (Addendum 2).

2. Sheet 49 states to “Remove and replace topping slab, see notes 3, 4 and 5.” at GST #4. Sheet 47 for GST #1 and #2 only states “Topping slab, see notes 3, 4, and 5.” It is our interpretation that GST #1 and #2 do not have an existing topping slab which will require demolition. If this is not correct, please notify us via addendum and provide revised drawings indicating topping slab removal.

Response: Bid as specified.

3. Sheets 52 and 64 contain different naming conventions for the Clarifier Distribution Chambers/Boxes. It is our interpretation that the work depicted on these Drawings are for the same structures and that there are only three (3) Clarifier Distribution Chambers/Boxes. If this is not correct, please notify us via addendum and provide revised drawings.

Response: The naming convention on S-100-07 is correct. The "Distribution Chamber" distributes flow to SC-1,2,3 & 4, "Distribution Box 5" distributes flow to SC-5A & 5B, and "Distribution Box 6" distributes flow to SC-6A & 6B. Interpretation is correct that there are three (3) total secondary clarifier distribution structures. The structures depicted on S-100-07, M-100-09, and M-100-23 are the same.

4. It is our interpretation that the slide gates indicated to be demolished by Keynote 4 on Sheet 56 are surface mounted and do not have embedded frames to be removed. If this is not correct, please notify us via addendum and provide revised drawings indicating existing frame types.

Response: Bid as specified.

5. Keynote 5 on Sheet 56 states to remove Scum Pumps (plural). It is our interpretation that each Scum Pit only contains one (1) Scum Pump requiring removal. If this is not correct, please notify us via addendum and provide revised drawings indicating correct Scum Pump quantities.

Response: Each scum pit contains one scum pump. More than one scum pump is being removed under this contract. Contractor to bid as specified.

6. On Sheet 56 it is our interpretation that the demolition of existing 2" Polymer and Chlorine Lines do not extend beyond the hatched areas shown in the plan view and that the remaining pipe is to be capped and abandoned in place. If this is not correct, please notify us via addendum and provide revised drawings indicating full extents of piping demolition.

Response: The 2" polymer and chlorine lines shall be removed to the extent necessary to perform any and all work described in the Contract Documents. Remaining piping shall be capped and abandoned in place.

7. Keynote 9 on Sheet 59 references a "plug wall" to be demolished. It is our interpretation that Keynote 9 should read "Plug Valve". If this is not correct, please notify us via addendum.

Response: Interpretation is correct, refer to revised Keynote 9 on drawing M-100-04 (Addendum 2)

8. Keynotes 6 and 7 on Sheet 62 are identical. It is our interpretation that Keynote 7 was included in error and can be deleted. If this is not correct, please notify us via addendum and provide revised drawings indicating corrected keynotes.

Response: Interpretation is correct, refer to revision on drawing M-100-07 (Addendum 2).

9. Keynote 2 on Sheet 62 indicates to demo existing scum pump, valves, and pipes for all eight (8) Clarifiers. This work is shown in detail for Clarifiers 1 through 4 on Sheets 65-68. No details were provided for the scum related demolition for Clarifiers 5A, 5B, 6A, and 6B. It is our interpretation that the setup of pumps, valves, & piping at Clarifiers 5A, 5B, 6A, & 6B is similar to what is shown for Clarifiers 1-4. If this is not correct, please notify us via addendum and provide revised drawings indicating the applicable Scum related demolition work.

Response: Refer to additional demo details on drawings M-100-07 and M-100-08 (Addendum 2).

10. The Plan at El. 15 on Sheet 67 indicates for the 6" Scum to WAS to be demolished outside the Scum Pit, but this pipe is shown to remain on all other Plan and Section views. It is our interpretation that no Scum Piping outside of the Scum Pit will require demolition. If this is not correct, please notify us via addendum and provide revised drawings indicating correct demolition extents.

Response: Piping outside of scum pits is not to be demolished. Refer to revision on drawing M-100-12 (Addendum 2).

11. Keynote 5 on Sheet 81 and Keynote 6 on Sheets 82, 83, & 84 reference Sheet M-900-01 for a wall penetration detail, however, drawing M-900-01 was not include in the Contract Drawings. Please provide via addendum applicable wall penetration detail.

Response: Refer to structural drawings for wall penetration detail. Refer to revised drawing reference on drawings M-100-26, M-100-27, and M-100-28 (Addendum 2).

12. Specification Section 01 29 00-1.04HH.1 references the Cromwell Water Pumping Station. It is our interpretation that this is intended to state the Clarifier and Gravity Sludge Thickeners Rehabilitation Project.

Response: This interpretation is correct.

13. Plan Note 9 on Sheets 50 & 51 states that handrail at all eight (8) Secondary Clarifiers shall be replaced in their entirety and to reference Detail 1/S-100-10. This detail shows core drilling a hole for each new post at 4'-0" on center, but also includes a surface mount detail. Specification 05 52 10-3.04-A states that "Anchorage of posts to concrete shall be surface mount type." It is our interpretation that all handrail posts shall be surface mounted per the specifications. If this is not correct, please notify us via addendum and provide revised details and specifications.

Response: All handrails shall be surface mounted. Refer to revised drawings S-100-05, S-100-06, and S-100-07 (Addendum 2).

14. HPEW is missing from the Piping Schedule on 40 05 13-2.01. HPEW is referenced as S/80 PVC on drawings such as M-100-14. It is our interpretation that all HPEW is to be Schedule 80 PVC and should follow Specification 40 05 13.30. Please notify us via addendum if this is not correct and provide a revised Piping Schedule.

Response: Interpretation is correct. Refer to revised pipe tables on pages 40 05 13-5 and 40 05 13-14 (Addendum 2).

15. The 3" HPEW on Drawing M-100-17 is shown as having flanged fittings. It is our interpretation that these flanges were shown in error and this line is to have solvent welded fittings per Section 40 05 13.30. If this is not correct, please notify us via addendum and provide revised specifications.

Response: Interpretation is correct. Refer to reissued drawing M-100-17 (Addendum 2).

16. Drawing M-100-21 references Keynote 3 regarding flushing water for each Secondary Clarifier, except for SC #2. It is our interpretation that flushing water is not required on Secondary Clarifier #2. If this is not correct, please notify us via addendum and provide revised drawings.

Response: Flushing water is required at SC 2. Refer to revision on drawing M-100-21 (Addendum 2).

17. Keynote 5 on Drawing M-100-15 denotes a New Utility Sink, Pipe, and Drain, but no specifications or details have been provided for this utility sink. Please provide via addendum applicable sink specifications.

Response: See new specification 22 42 16.16 – Commercial Sinks (Addendum 2).

18. Drawing M-100-17 indicates for new FW piping to be run outside of the Pump Room and underneath the GST #4 slab, but no slab demolition or replacement to install this pipe is shown. It is our interpretation that this pipe is to be installed buried, outside the footprint of the GST, and that insulation and heating tracing indicated via Keynote #8 is only required for exposed above grade piping. If this is not correct, please notify us via addendum and provide revised drawings indicating GST slab demolition and replacement.

Response: Elevations on drawing M-100-17 were incorrect. New pipe is to be installed inside the building, above grade, as well as outside of the building at the scum pit and the GST 4 walkways. Existing buried pipe is to remain. Refer to reissued drawing M-100-17 and revisions on M-100-18 (Addendum 2).

19. Drawing M-100-17, 6" Glass Lined Scum Pump Discharge line denotes to see sheet C-200-20 for continuation. It is our interpretation that the continuation drawing should be C-200-01. Please notify us via addendum if this is not correct.

Response: Interpretation is correct. Drawing reference has been revised (Addendum 2).

20. Drawings C-200-07 and C-200-08 both state to see M-100-20 for continuation of the 6" GST Scum Pipe at the Existing Pump and Blower Building, but Drawing M-100-20 is a plan view of SCs #1-4. Drawing M-100-24 for the Scum Treatment Facility references to See M-100-21 for the continuation of the 6" Scum at elevation 13, but M-100-21 is a Plan View of the new Secondary Clarifiers. Drawing M-100-25 for the Pump and Blower Building, does not contain any reference to where the 6" Scum comes from prior to this drawing. Please provide via addendum revised drawings clarifying the route the 6" Scum piping takes from where it leaves the GST to the discharge location at the Pump and Blower Building.

Response: Refer to reissued drawings M-100-24 and M-100-25 (Addendum 2).

21. Keynote #7 on Drawing M-100-04 states to provide 1-1/2" HPEW, but these lines are also denoted as 2" on the drawing. It is our interpretation that the HPEW pipe is to be 1-1/2". If this is not correct, please notify us via addendum and provide revised drawings.

Response: The piping changes size from 1 1/2" to 2" based on existing as built. The new HPEW lines will be replaced in kind to the existing piping, Contractor to field verify where the pipe changes sizes.

22. Drawing M-100-15 indicates a breakpoint in the Sump Pump Discharge lines, but does not show where these lines continue or where they should be connected to. Please provide via addendum revised drawings indicating routing of new SPD piping.

Response: See reissued drawing M-100-15 (Addendum 2).

23. The Actuator Schedule in Specification Section 40 92 36-2.01 denotes GST-SL-1 through 8 as being in an Unclassified area. Drawing G-000-08 denotes that the Gravity Thickener Distribution Chamber as being a Class 1 Div. 2 Area. It is our interpretation that these

Actuators are to be Unclassified per the Specifications. If this is not correct, please notify us via addendum, and provide a revised Actuator Schedule.

Response: Interpretation is correct. The classified area at the GST Distribution Box extends only 18" above the grating at the top of the box. The slide gate actuators should be elevated higher than the classified area extends. Refer to revised detail on drawing G-000-15 (Addendum 2).

24. Drawing M-100-32 indicates that GST-SL-9 and 10 are to be Pipe Flange mounted, but it is unclear if this existing connection is a true pipe flange or a thimble. Please provide via addendum record drawings of existing sluice gates to enable accurate connection configuration.

Response: Bid as specified.

25. Specification Section 40 05 13.20-3.04A states that "following completion of pipe system installation, all stainless steel pipe systems shall be pickled and passivated in accordance with the requirements of ASTM A380". The only SST pipe system on the project is the Seal Water Systems, and this field pickling and passivation requirement will far exceed the cost of the of the piping system itself. It is our interpretation that all stainless steel pipe and fittings are to be pickled and passivated at the mill, spot treatments applied at any weld locations, and that no field pickling and passivation will be required. If this is not correct, please notify us via addendum.

Response: If any field welding is required or performed, then the stainless steel pipe systems shall be pickled and passivated in the field as described in specification 40 05 13.20.

26. City of Baltimore Specification 33 11 13-2.1C.1.c States that "All Ductile Iron Pipe shall be Class 54" . Project Specific Specification 40 05 13.10-2.01M.1, Denotes all flanged pipe shall be minimum thickness Class 53. It is our interpretation that all Flange Ductile Iron pipe is to be Class 53, if this is not correct, please notify us via addendum.

Response: All flange ductile iron pipe is to be class 54.

27. City of Baltimore Specification 33 11 13-2.1C.2.b states that Flange Bolts, Nuts and washers are to be Carbon Steel A307 Grade B while Project Specification 40 05 13.10-2.01N.1 states that all hardware shall be 304 Stainless Steel and Exterior Exposed are to be 316 Stainless Steel. It is our interpretation that all flange hardware is to be Carbon Steel. If this is not correct, please notify us via addendum.

Response: All hardware shall be stainless steel.

28. Drawing M-100-17 appears to show that a new 3-way Plug Valve is to be installed on the exterior of GST Tank #4 Scum Pit. Specification 40 05 22.30 Plug Valve does not include a 3-way Plug Valve. Please provide a specification for a 3 way plug valve via addendum.

Response: Plug valve is 2-way, not 3-way. Refer to reissued drawing M-100-17 (Addendum 2).

29. Various plug valves are denoted on the drawings as being “glass lined”, but Specification Section 40 05 23.30-2.02G states that “all valves shall include fusion bonded epoxy interior and exterior.” It is our interpretation that all plug valves are to be fusion bonded epoxy lined per the specifications and that all references to glass lined plug valves can be deleted. If this is not correct, please notify us via addendum and provide revised plug valve lining specifications.

Response: Plug valves to be glass lined to match piping.

30. Various check valves are denoted on the drawings as being “glass lined”, but Specification Section 40 05 23.33 does not provide any information relating to glass lining of check valves. It is our interpretation that all check valves are to be provided with MFGs’ standard epoxy coating and that all references to glass lining can be deleted. If this is not correct, please notify us via addendum and provide revised check valve lining specifications.

Response: Check valves to be glass lined to match piping. Bid as specified.

31. Section Drawing M-100-22, Detail A, denotes that a 6” Check Valve and Plug Valve are to be installed in the new Scum Pit Discharge line for Tanks 5A, 5B, 6A, and 6B. However, there is not enough space to install these valves as the piping is depicted in Section A. It is our interpretation that the Scum Discharge piping for Secondary Clarifiers 5A – 6B is to be similar to the layout and details of Secondary Clarifier No. 1 as shown on Drawing M-100-29. If this is not correct, please notify us via addendum and provide revised drawing indicating correct scum piping and valve installation.

Response: Drawing has been revised. Refer to additional detail on Drawing M-100-21 (Addendum 2).

32. Specification Section 43 21 13.06-2.09 states that a flow meter is to be provided with the Flushing Water Pumps. Contract Drawings M-100-31 and I-300-04 do not show a flow meter being installed on the Flushing Water Pump skid or anywhere on the flushing water line. Additionally, Specification Section 25 60 01-3.06 does not indicate there is a flow meter signal required for the flushing water pumps. It is our interpretation that a flow meter is not required to be provided with the Flushing Water Pumps. If this is not correct, please notify us via addendum.

Response: This interpretation is correct.

33. Specification Section 43 23 57-2.01.T.3 states that each Progressive Cavity Sludge Pump shall be provided with one (1) control panel and that panel is to include a VFD. Contract Drawings I-300-05 and I-300-10 show a separate sludge pump control panel (GST-P-SLG-CP) and a VFD (GST-P-SLG1-VFD), typical for all 6 sludge pumps, with the control panel being located by the pump and the VFD located in the GST Control Room. Contract Drawings E-100-04 and E-100-08 show the Sludge Pumps 1-4 having a separate local control panel at the pump and a VFD panel located in the GST Control/Electrical

Room 101. Contract Drawing E-100-10 shows the Sludge Pumps 5 & 6 having a combined VFD/Local Control Panel located at the pump in the GST 4 Pump Room. It is our interpretation that GST Sludge Pumps 1-4 are to have a separate VFD and Local Control Panel and the GST Sludge Pumps 1-6 are to be provided with a combined local control station/VFD.

Response: Contractor's interpretations are correct. GST Sludge Pumps 1-4 are to have a separate VFD and Local Control Panel and the GST Sludge Pumps 5-6 are to be provided with a combined local control station/VFD.

34. Also, it is our interpretation that all these panels are to be provided in the NEMA 4X, 316 SST enclosure. If this is not correct, please advise via addendum.

Response: Concur.

35. Detail 3 on C-200-05 (Utility Trench – Paved Areas) indicates for flowfill backfill per “MSHA Section 314”. This appears to be a reference to “MDOT Section 314”. Relating to this, Specification Section 31 20 00-3.12.D states for pipe to be completely encased with a minimum of 4” of concrete, but neither mix design nor concrete strength requirements can be found for this encasement. It is our interpretation that non-reinforced low-strength flowable fill is to be utilized for this encasement. If this is not correct, please notify us via addendum and provide applicable encasement specifications.

Response: Please refer to MDOT SHA section 314 for flowable backfill requirements. See revised specification 31 20 00 (Addendum 2).

36. Station 2+53 of Profile B on Drawing C-200-01 references a Utility crossing labeled “X-23”. On C-200-01 this utility is identified a ductbank with the overall dimensions of 20” x 13”. Drawing C-200-08 (Profile View) identifies this same utility as a duct bank with the overall dimensions of 45” x 20”. It is our interpretation that this ductbank is assumed to be 20”x13”. If this is not correct, please notify us via addendum and provide correct size of ductbank.

Response: Per record drawings this utility crossing is a 20” x 13” ductbank. Please refer to Note 10 on G-000-04 and Demolition Note 18 on C-000-01.

37. Station 0+48 of Profile B, Drawing C-200-01 references a Utility crossing labeled “X-10”. On C-200-01 this utility is identified as a 6” SD. Drawing C-200-08 (Profile View) identifies this same utility as an 8” SD. It is our interpretation that this pipe is a 6” SD. If this is not correct, please notify us via addendum and provide correct size of pipe.

Response: Per record drawings this utility crossing in a 6” storm drain pipe. Please refer to Note 10 on G-000-04 and Demolition Note 18 on C-000-01.

38. Specification Section 43 26 20-2.06D states that a second walkway at the GSTs is to be provided to access the scum trough flush water assembly, but only GST #4 is shown to have any access installed to the scum trough. It is our interpretation that GST #1 and 2 will not require any additional access walkway or platform to be installed to the scum

trough. If this is not correct, please notify us via addendum and provide revised drawings indicating access requirements.

Response: Interpretation is correct. Only GST 4 will have a second walkway.

39. The existing walkways for Clarifiers 5A-6B are 3'-6" wide but the new walkways are specified as 3'-0" wide. The existing walkways for Clarifiers 1-4 are 4'-0" wide but the new walkways are specified as 3'-0" wide. Please confirm width of walkways.

Response: Walkways to be 36". Bid as specified.

40. The pump model here should be "SFE5-L" which permits retaining the 15HP motor sizing and matches the pumps there. The "-D" will require 20HP. We want to provide the "-L" model here for consistency. The difference is in the impeller solids passage – the "-L" is more efficient with a 3.5" solids passage and the "-D" is less efficient with a 4" solids passage. No solids passage is specified, and the existing pumps have a 3.5" solids passage.

Response: SFE5-L is an acceptable pump model. Refer to revised Specification 43 23 57 (Addendum 2).

41. Drawing M-100-19 shows the GST 4 scum pump as a straight through discharge design. These are supplied with discharge elbows (90 degree bends), there is no straight through design with a guide rail available. The final piping will have to be vertically from the discharge elbow to another 90 bend to exit the scum pit.

Response: Drawings have been revised to show new penetration and submersible pump on guide rails with discharge elbow. Refer to reissued drawing M-100-17 and revisions on M-100-19 and S-100-03 (Addendum 2).

42. Drawings S-100-05 and S-100-06 both include Note 8 on the inboard launders, which implies that they are being replaced by the clarifier manufacturer. There is no mention of the launders being replaced in the specs. We did discuss at one point replacing them and WesTech did include them as an option in their budget proposals for replacement. If they are to be replaced, specifications will need to be provided to at least confirm materials, thickness, etc.

Response: Launders are not being replaced. Refer to revised drawings S-100-05 and S-100-06 (Addendum 2).

43. The specs require that "All current carrying equipment, devices and terminations associated with the equipment scope of supply shall be listed and labeled for 75°C". What are they referring to for the 75°C? Is this the ambient temp required? Note, our UL certification only allows for an ambient up to 65°C. If they are referring to insulation class temp, these are class F or 155°C. Please clarify.

Response: Bid as specified. The 75°C specified in the Specification 22 14 29.16 is correct, which is not the ambient temp required. Pump motor shall be hermetically

sealed, submersible type. Motors shall be NEMA Design B. The insulation shall be Class F minimum.

44. Please confirm the design points for GST-P-SUMP-5,6 .

Bid as specified.

45. Specification section 43 26 20, paragraph 3.01. C., indicates that the “existing grout can be reused if the condition allows, contingent on the Engineer’s approval”. Currently, the existing condition of the grout has not been defined in the contract documents and is unseen and unknown. How is the Contractor to bid this item since the appropriate bid item 309 is a Lump Sum Cost. Can a unit cost item for considered for the grout topping slab?

Response: That line has been removed from the specification. Assume the grout must be applied in the manner described in 3.01.C and paid for as described in Division 01. Bid as specified.

46. What are the elevations of inlets and outlets for the GST distribution chamber, in order to confirm appropriate impeller elevations?

Response: Refer to additional detail on drawing M-100-15 (Addendum 2).

47. Please confirm GST-P-SLG for GST #4 be labeled as #5 and #6

Response: Confirmed.

ATTACHMENT 1 OF ADDENDUM NO. 2

REPLACEMENT OF AND ADDITION TO THE SPECIFICATION
SECTIONS IN CONTRACT BOOK

LIST OF REPLACEMENT/NEW SPECIFICATIONS

ITEM NO.	SECTION NO.	TITLE
1	22 42 16.16	Commercial Sinks
2	31 20 00 R1	Earth Moving
3	Appendix B	Maryland Water Quality Revolving Fund and Maryland Drinking Water Revolving Loan Fund Requirements

SECTION 22 42 16.16

COMMERCIAL SINKS

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.02 SUMMARY

- A. Section Includes:
 - 1. Utility Sinks.
 - 2. Laminar-flow, faucet-spout outlets.
 - 3. Supply fittings.
 - 4. Waste fittings.

1.03 ACTION SUBMITTALS

- A. Product Data: For each type of product.
 - 1. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes for sinks.

1.04 INFORMATIONAL SUBMITTALS

- A. Coordination Drawings: Drawings showing plan for how the sink is to be mounted, submitted for engineer approval.

1.05 CLOSEOUT SUBMITTALS

- A. Maintenance Data: For sinks to include in maintenance manuals.

1.06 MAINTENANCE MATERIAL SUBMITTALS

- A. Furnish extra materials that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.

PART 2 - PRODUCTS**2.01 UTILITY SINKS**

A. Utility Sinks: Stainless steel.

1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
 - a. Advance Tabco.
 - b. Elkay Manufacturing Co.
 - c. Just Manufacturing.
2. Fixture:
 - a. Standard: ASME A112.19.3/CSA B45.4.
 - b. Type: Ledge back.
 - c. Number of Compartments: One.
 - d. Overall Maximum Dimensions: 2'9" x 2'0"
 - e. Metal Thickness: 0.050 inch (1.3 mm).
 - 1) Drain: Grid with NPS 1-1/2 tailpiece and twist drain
 - 2) Drain Location: Near back of compartment
3. Faucet(s):
 - a. Number Required: One.
 - b. Mounting: On ledge.
4. Supply Fittings:
 - a. Standard: ASME A112.18.1/CSA B125.1.
 - b. Supplies: Chrome-plated brass compression stop with inlet connection matching water-supply piping type and size.
 - 1) Operation: Wheel handle.
 - 2) Risers: NPS 1/2, ASME A112.18.6, braided or corrugated stainless-steel flexible hose.

5. Waste Fittings:
 - a. Standard: ASME A112.18.2/CSA B125.2.
 - b. Trap(s):
 - 1) Size: NPS 1-1/2
 - 2) Material: Chrome-plated, two-piece, cast-brass trap and ground-joint swivel elbow with 0.032-inch- (0.83-mm-) thick brass tube to wall; and chrome-plated brass or steel wall flange.

2.02 SINK FAUCETS

- A. NSF Standard: Comply with NSF/ANSI 61 Annex G, "Drinking Water System Components - Health Effects," for faucet-spout materials that will be in contact with potable water.
- B. Sink Faucets: Manual type, two-lever-handle with mixing valve.
 1. Commercial, Solid-Brass Faucets.
 2. General-Duty, Solid-Brass Faucets.
 3. Copper- or Brass-Underbody Faucets.
 4. Standard: ASME A112.18.1/CSA B125.1.
 5. General: Include hot- and cold-water indicators; coordinate faucet inlets with supplies and fixture hole punchings; coordinate outlet with spout and sink receptor.
 6. Body Type: Single hole.
 7. Body Material: Commercial, Copper or brass underbody.
 8. Finish: Polished chrome plate.
 9. Maximum Flow Rate: 2.2 gpm.
 10. Mounting Type: Back/wall, exposed.
 11. Spout Type: Swing, round tubular.
 12. Vacuum Breaker: Required for hose outlet only.
 13. Spout Outlet: Laminar flow.

2.03 SUPPLY FITTINGS

- A. NSF Standard: Comply with NSF/ANSI 61 Annex G, "Drinking Water System Components - Health Effects," for supply-fitting materials that will be in contact with potable water.
- B. Standard: ASME A112.18.1/CSA B125.1.
- C. Supply Piping: Chrome-plated brass pipe or chrome-plated copper tube matching water-supply piping size. Include chrome-plated brass or stainless-steel wall flange.
- D. Supply Stops: Chrome-plated brass, one-quarter-turn, ball-type or compression valve with inlet connection matching supply piping.
- E. Operation: Wheel handle.
- F. Risers:
 - 1. NPS 1/2.
 - 2. Chrome-plated, rigid-copper pipe.

2.04 WASTE FITTINGS

- A. Standard: ASME A112.18.2/CSA B125.2.
- B. Drain: Grid type with NPS 1-1/2 offset and straight tailpiece.
- C. Trap:
 - 1. Size: NPS 1-1/2.
 - 2. Material: Chrome-plated, two-piece, cast-brass trap and swivel elbow with 0.032-inch-thick brass tube to wall; and chrome-plated brass or steel wall flange.
 - 3. Material: Stainless-steel, two-piece trap and swivel elbow with 0.012-inch thick stainless-steel tube to wall; and stainless-steel wall flange.

2.05 GROUT

- A. Standard: ASTM C 1107/C 1107M, Grade B, post-hardening and volume-adjusting, dry, hydraulic-cement grout.
- B. Characteristics: Nonshrink; recommended for interior and exterior applications.
- C. Design Mix: 5000-psi, 28-day compressive strength.
- D. Packaging: Premixed and factory packaged.

PART 3 - EXECUTION

3.01 EXAMINATION

- A. Examine roughing-in of water supply and sanitary drainage and vent piping systems to verify actual locations of piping connections before sink installation.
- B. Examine walls, floors, and counters as applicable for suitable conditions where sinks will be installed.
- C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.02 INSTALLATION

- A. Install sinks level and plumb according to roughing-in.
- B. Install supports, affixed to building substrate, for wall-hung sinks.
- C. Install accessible wall-mounted sinks at handicapped/elderly mounting height according to ICC/ANSI A117.1.
- D. Set floor-mounted sinks in leveling bed of cement grout.
- E. Install water-supply piping with stop on each supply to each sink faucet.
 - 1. Exception: Use ball or gate valves if supply stops are not specified with sink.
 - 2. Install stops in locations where they can be easily reached for operation.
- F. Install wall flanges or escutcheons at piping wall penetrations in exposed, finished locations. Use deep-pattern escutcheons if required to conceal protruding fittings.
- G. Seal joints between sinks and counters, floors, and walls using sanitary-type, one-part, mildew-resistant silicone sealant. Match sealant color to fixture color. Comply with sealant requirements specified in Section 07 92 00 – Joint Sealants.
- H. Install protective shielding pipe covers and enclosures on exposed supplies and waste piping of accessible sinks.
- I. Install vent and drainage service as indicated on contract documents and required per manufacturer's written instructions.

3.03 CONNECTIONS

- A. Connect sinks with water supplies, stops, and risers, and with traps, soil, waste, and vent piping as needed. Use size fittings required to match fixtures.

3.04 ADJUSTING

- A. Operate and adjust sinks and controls. Replace damaged and malfunctioning sinks, fittings, and controls.
- B. Adjust water pressure at faucets to produce proper flow.

3.05 CLEANING AND PROTECTION

- A. After completing installation of sinks, inspect and repair damaged finishes.
- B. Clean sinks, faucets, and other fittings with manufacturers' recommended cleaning methods and materials.
- C. Provide protective covering for installed sinks and fittings.
- D. Do not allow use of sinks for temporary facilities unless approved in writing by Owner.

END OF SECTION

SECTION 31 20 00 R1

EARTH MOVING

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.
- B. All work shall be in accordance with Baltimore City Specifications and Details, latest Edition.

1.02 SUMMARY

- A. This Section includes the following:
 - 1. Preparing subgrades for slabs-on-grade walks, pavements, turf and grasses and plants.
 - 2. Excavating and backfilling for buildings and structures.
 - 3. Subbase course for concrete walks and pavements.
 - 4. Subbase course and base course for asphalt paving.
 - 5. Subsurface drainage backfill for walls and trenches.
 - 6. Excavating and backfilling for utility trenches.
 - 7. Excavating and backfilling trenches for utilities and pits for buried utility structures.
- B. Related Sections include the following:
 - 1. Division 01 Section "Unit Prices" for unit-price authorized additional excavation provisions.
 - 2. Division 01 Sections "Submittal Procedures" for recording pre-excavation and earthwork progress.
 - 3. Division 01 Section "Temporary Facilities and Controls" for temporary controls, utilities, and support facilities.
 - 4. Division 03 Section "Cast-in-Place Concrete."
 - 5. Divisions 21, 22, 23, 26, 27 and 28 Sections for installing underground mechanical and electrical utilities and buried mechanical and electrical structures.
 - 6. Section 31 10 00 "Site Clearing" for temporary erosion and sedimentation control measures, site stripping, grubbing, stripping topsoil, and removal of above- and below-grade improvements and utilities.

31 20 00-1

7. Section 31 23 19 "Dewatering" for lowering and disposing of ground water during construction.
8. Section 31 50 00 "Excavation Support and Protection" for shoring, bracing, and sheet piling of excavations.
9. Division 32 Section "Turf and Grasses" for finish grading, including preparing and placing topsoil and planting soil for lawns.

1.03 UNIT PRICES

- A. Work of this section is affected by unit prices for earth moving specified in Division 01 Section "Unit Prices." Unit prices are applied only to areas beyond volumes as outlined in Part B of this section.
- B. Rock Measurement: Weight of rock actually removed, measured in original position, but not to exceed the following. Unit prices for rock excavation, measured in "tons" include replacement with approved materials.
 1. **24 inches** outside of concrete forms other than at footings.
 2. **12 inches** outside of concrete forms at footings.
 3. **6 inches** outside of minimum required dimensions of concrete cast against grade.
 4. Outside dimensions of concrete walls indicated to be cast against rock without forms or exterior waterproofing treatments.
 5. **6 inches** beneath bottom of concrete slabs-on-grade.
 6. **9 inches** beneath pipe in trenches, and the greater of **24 inches** wider than pipe or **42 inches** wide.
 7. **24 inches** beneath recharge bed for Stormwater Management Facilities.
 8. Outermost dimensions as required to provide geogrid reinforcement for segmental block retaining walls
 9. **6 inches** beneath bottom of pavement base material.
 10. **8 inches** beneath finished grades outside of secured areas.
 11. **12 inches** beneath finished grades inside of secured areas.

1.04 DEFINITIONS

- A. Backfill: Soil material used to fill an excavation.
 1. Initial Backfill: Backfill placed beside and over pipe in a trench, including haunches to support sides of pipe.
 2. Final Backfill: Backfill placed over initial backfill to fill a trench.
- B. Base Course: Course placed between the subbase course and hot-mix asphalt paving.
- C. Bedding Course: Course placed over the excavated subgrade in a trench before laying pipe.

- D. Borrow Soil: Satisfactory soil (Select Borrow) imported from off-site, or manufactured onsite and approved by the Geotechnical Engineer, for use as fill or backfill.
- E. Excavation: Removal of material encountered above subgrade elevations.

Authorized Additional 32 31 19-3

- 1. Engineer, shall be without additional compensation.
- F. Fill: Soil materials approved by the Geotechnical Engineer to be used to raise existing grades.
- G. Recycled Material: Recycled Material shall contain a minimum of 90% post-consumer material.
- H. Rock: Rock material in beds, ledges, unstratified masses, conglomerate deposits, and boulders of rock material that exceed **1 cu. yd.** for bulk excavation or **3/4 cu. yd.** for footing, trench, and pit excavation that cannot be removed by rock excavating equipment equivalent to the following in size and performance ratings, without systematic drilling, ram hammering, ripping, or blasting, when permitted:
 - 1. Excavation of Trenches, and Pits: Late-model, track-mounted hydraulic excavator; equipped with a **42-inch-wide**, maximum, short-tip-radius rock bucket; rated at not less than **138-hp** flywheel power with bucket-curling force of not less than **28,090 lbf** and stick-crowd force of not less than **18,650 lbf**; measured according to SAE J-1179.
 - 2. Bulk Excavation: Late-model, track-mounted loader; rated at not less than **210-hp** flywheel power and developing a minimum of **48,510-lbf** breakout force with a general-purpose bare bucket; measured according to SAE J-732.
- I. Structures: Buildings, footings, retaining walls, slabs, curbs, mechanical and electrical appurtenances, or other man-made stationary features constructed above or below the ground surface.
- J. Subbase Course: Course placed between the subgrade and base course for hot-mix asphalt pavement, or course placed between the subgrade and a cement concrete pavement or a cement concrete or hot-mix asphalt walk.
- K. Subgrade: Surface or elevation remaining after completing excavation, or top surface of a fill or backfill immediately below subbase, drainage fill, or topsoil materials.
- L. Topsoil: Natural or cultivated surface-soil layer containing organic matter and sand, silt and clay particles; friable and black or a darker shade of brown, gray, or red than underlying subsoil; reasonably free of subsoil, clay lumps, gravel, and other objects more than **1 inch** in diameter in secure areas and **2 inches** in diameter in unsecure; and free of subsoil and weeds, roots, toxic materials, or other non-soil materials. Topsoil composition

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and characteristics shall be in accordance with MSHA Standard Specifications for Construction and Materials Section 920.

- M. Utilities: On-site underground pipes, conduits, ducts, and cables, as well as underground services within buildings.

1.05 SUBMITTALS

- A. Product Data: For the following:
 - 1. Detectable warning tape.
 - 2. Geotextile fabric.
 - 3. Recycled Materials.
 - 4. Requirements for local material source.
- B. Qualification Data: For qualified testing agency.
- C. Material Test Reports: From a qualified testing agency indicating and interpreting test results for compliance of the following with requirements indicated:
 - 1. Classification according to ASTM D 2487 of each borrow soil material proposed for fill and backfill.
 - 2. Laboratory compaction curve according to ASTM D 1557 for each on-site and borrow soil material proposed for fill and backfill.
- D. Topsoil Analysis: Furnish soil analysis by a qualified soil-testing laboratory stating percentages of organic matter; gradation of sand, silt, and clay content; cation exchange capacity; sodium absorption ratio; deleterious material; pH; and mineral and plant-nutrient content of the topsoil.
 - 1. Laboratory analysis of composition and characteristics of topsoil for each source, whether onsite or offsite borrow, shall be in accordance with MSHA Standard Specifications for Construction and Materials Section 920. A qualified soils scientist, approved by the owner, shall furnish a nutrient management plan for soils amendments. Topsoil shall be amended as specified by the nutrient management plan. Costs of all testing, the nutrient management plan, and amendments shall be included in the base bid, with no additional compensation by the owner.
 - 2. Report suitability of tested topsoil for turf growth including testing laboratory recommended quantities of nitrogen, phosphorus, and potash nutrients and soil amendments to be added to produce satisfactory topsoil.
- E. Pre-excavation Photographs or Videotape: Show existing conditions of adjoining construction and site improvements, including finish surfaces that might be misconstrued as damage caused by earthwork operations. Submit before earthwork begins.
- F. LEED Submittals.

1. Product data for Credit MR 4: For products having recycled content, documentation indicating percentages by weight of pre-consumer and post-consumer recycled content. Include statement indicating cost of each product with recycled content..
2. Product data for Credit MR 5: For products having regional material content, documentation indicating location of manufacture and location of extraction, recovery or harvest of primary raw materials. Include statement indicating cost of each product with regional material content.

1.06 QUALITY ASSURANCE

- A. Geotechnical Testing Agency Qualifications: An independent testing agency qualified according to ASTM E 329 to conduct soil materials and rock-definition testing, as documented according to ASTM D 3740 and ASTM E 548.
- B. Contractor shall follow all OSHA requirements and all local, State and Federal regulations for soil excavation, rock removal, and rock blasting.
- C. Pre-excavation Conference: Conduct conference at Project site to comply with requirements in Division 1 General Requirements.

1.07 PROJECT CONDITIONS

- A. Existing Utilities: Do not interrupt utilities serving facilities occupied by Owner or others unless permitted in writing by Engineer and then only after arranging to provide temporary utility services according to requirements indicated.
 1. Notify Owner and Architect not less than 72 hours in advance of proposed utility interruptions.
 2. Do not proceed with utility interruptions without Owner's written permission.
 3. Contact utility-locator service for area where Project is located before excavating.
 4. Verify existing utility services for area where Project is located before excavation.
- B. Demolish and completely remove from site existing underground utilities indicated to be removed. Coordinate with utility companies to shut off services if lines are active.
- C. Traffic: Minimize interference with adjoining roads, streets, walks, and other adjacent occupied or used facilities during earth moving operations.
 1. Do not close or obstruct streets, walks, or other adjacent occupied or used facilities without permission from Owner.
 2. Provide alternate routes around closed or obstructed traffic ways if required by Owner.
- D. Utility Locator Service: Notify utility locator service for area where Project is located before beginning earth moving operations.

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- E. Do not commence earth moving operations until temporary erosion- and sedimentation-control measures, specified in Division 31 Section "Site Clearing," are in place.
- F. Do not commence earth moving operations until plant-protection measures specified in the Maryland Department of Environment approved Erosion and Sedimentation Control Plans are in place.
- G. The following practices are prohibited within protection zones:
 - 1. Storage of construction materials, debris, or excavated material.
 - 2. Parking vehicles or equipment.
 - 3. Foot traffic.
 - 4. Erection of sheds or structures.
 - 5. Impoundment of water.
 - 6. Excavation or other digging unless otherwise indicated.
 - 7. Attachment of signs to or wrapping materials around trees or plants unless otherwise indicated.
- H. Do not direct vehicle or equipment exhaust towards protection zones.
- I. Prohibit heat sources, flames, ignition sources, and smoking within or near protection zones.

PART 2 - PRODUCTS

2.01 SOIL MATERIALS

- A. Refer to Sections 916 and 920 of MSHA Standard Specifications for Construction and Materials.
- B. General: Provide select borrow soil materials for replacement of all excavated unsuitable material removed from the pipe trench. All excavated material removed from the trench excavations shall be hauled and disposed off-site. Provide test results or certifications that borrow material meets the requirements for the specified material.
- C. Recycled Content of Backfill: Recycled concrete (RC-6) for temporary roads, subbase, pipe bedding, and fill material, except under the building slab. Recycled aggregates shall contain a minimum of 90% post-consumer aggregate content.
- D. Regional Materials: Provide aggregate and sand products manufactured and of primary raw materials extracted or recovered within 500 mile radius of Project Site.

- E. Satisfactory Soils: Select Borrow as Per Section 916.01.01 of the MSHA Standard Specifications for Construction and Materials. The geotechnical Engineer shall approve satisfactory soil materials.
- F. Subbase Material: Naturally or artificially graded mixture of natural or crushed gravel, crushed stone, and natural or crushed sand; ASTM D 2940; with at least 90 percent passing a **1-1/2-inch** sieve and not more than 12 percent passing a **No. 200** sieve per Section 901 of the MSHA Standard Specifications for Construction and Materials .
- G. Base Course: Naturally or artificially graded mixture of natural or crushed gravel, crushed stone, and natural or crushed sand; ASTM D 2940; with at least 95 percent gravel passing a **1-1/2-inch** sieve and not more than 8 percent passing a **No. 200** sieve per Section 901 of the MSHA Standard Specifications for Construction and Materials.
- H. Engineered Fill: Soils classified as CL, CM, SC, SM, GC or GM per ASTM D-2487, free organic matter (less than 3 percent by weight) and debris, and containing no particles greater than 4 inches in their largest dimension. In addition, soils classified as CL or ML should have a liquid limit and plastic index less than 40 and 20, respectively and a maximum dry density greater than 105 pcf. However, materials used as backfill behind below-grade walls or retaining walls should have classifications of SM, or more granular, in accordance with ASTM D 2487.
- I. Bedding Course: Narrowly graded mixture of washed crushed stone, or crushed or uncrushed gravel; ASTM D 448; coarse-aggregate grading Size 67; with 100 percent passing a 1-inch sieve and 0 to 5 percent passing a No. 4 sieve.
- J. Topsoil: Loam, without stones or debris larger than 1 inch in diameter in secure areas and 2 inches in diameter in unsecure areas, without roots, vegetation, and without harmful materials or other debris which may be harmful to plant life. The topsoil shall contain a minimum of 2% of organic matter by weight when tested in accordance with AASHTO T 194. Other components shall be in accordance with MSHA Section 920 with the following percentages by weight:

Silt	10 – 60 %
Clay	5 – 30 %
Sand	20 – 75 %
pH	6.2 – 7.0
Soluble Salts	500 ppm maximum

1. Off-Site Topsoil: Topsoil furnished by the Contractor shall meet the requirements specified above, as tested by the Contractor per Section 1.5.C of this specification and approved by the Geotechnical Engineer.
- K. Filter Material: Narrowly graded mixture of natural or crushed gravel, or crushed stone and natural sand; ASTM D 448; coarse-aggregate grading Size 67; with 100 percent passing a **1-inch** sieve and 0 to 5 percent passing a **No. 4** sieve.
- L. Sand: ASTM C 33; fine aggregate, natural, or manufactured sand.
- M. Impervious Fill: Clayey gravel and sand mixture capable of compacting to a dense state.
- N. Structural Fill: All fills placed directly below or within the zone of influence of any bearing foundation or structural slab. Structural fill material shall consist of soils meeting Unified Soil Classification System (USCS) of SC or greater (i.e. SC through GW) with a Liquid Limit no greater than 30 and a maximum Plasticity Index of 10. All soil materials that fall within the USCS type ML, CL, CL-ML, OL, MH, CH, OH, PT, as well as material containing organic matter, ashes, cinders, refuse, frozen or other unsuitable materials are prohibited for use as Structural Fill.

2.02 GEOTEXTILES

- A. Subsurface Drainage Geotextile: Woven; manufactured for subsurface drainage applications, made from fibers consisting of long chain synthetic polymers, composed of a minimum 95 percent by weight of polyolefins or polyesters; with 15 percent minimum elongation; complying with Maryland State Highway Administration type ST per SHA Standard Specifications for Construction and Materials.

2.03 CONTROLLED LOW-STRENGTH MATERIAL

- A. Controlled Low-Strength Material: Self-compacting, low-density, flowable concrete material produced from the following:
1. Portland Cement: ASTM C 150, Type I Type II or Type III.
 2. Fly Ash: ASTM C 618, Class C or F.
 3. Normal-Weight Aggregate: ASTM C 33, **3/8-inch** nominal maximum aggregate size.
 4. Foaming Agent: ASTM C 869.
 5. Water: ASTM C 94.
 6. Air-Entraining Admixture: ASTM C 260.

2.04 ACCESSORIES

- A. Detectable Warning Tape: Acid- and alkali-resistant polyethylene film warning tape manufactured for marking and identifying underground utilities, **6 inches** wide and **4 mils**

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thick, continuously inscribed with a description of the utility, with a metallic core encased in a protective jacket for corrosion protection, detectable by metal detector when tape is buried up to 30 inches. Color shall be as follows.

1. Red: Electric.
2. Yellow: Gas, oil, steam and dangerous materials.
3. Orange: Telephone and other communications.
4. Blue: Water systems.
5. Green: Sewer systems.
6. Purple: Storm Drain Systems.

PART 3 - EXECUTION

3.01 PREPARATION

- A. Protect structures, utilities, sidewalks, pavements, and other facilities from damage caused by settlement, lateral movement, undermining, washout, and other hazards created by earthwork operations.
- B. Prepare subgrade for earthwork operations including removal of vegetation, topsoil, debris, obstructions, and deleterious materials from ground surface as specified in Division 31 Section "Site Clearing."
- C. Protect and maintain erosion and sedimentation controls, which are specified in Division 31 Section "Site Clearing," during earthwork operations.
- D. Provide protective insulating materials to protect subgrades and foundation soils against freezing temperatures or frost.
- E. Provide soil moisture control for sub grade material, imported or excavated borrow material, backfill, bedding, and top soil; in accordance with the recommendations of the geotechnical engineer. Costs of all soil moisture control will be solely the onus of the contractor with no additional compensation by the owner.

3.02 DEWATERING

- A. Prevent surface water and ground water from entering excavations, from ponding on prepared subgrades, and from flooding Project site and surrounding area.
- B. Protect subgrades from softening, undermining, washout, and damage by rain or water accumulation.
 1. Reroute surface water runoff away from excavated areas. Do not allow water to accumulate in excavations. Do not use excavated trenches as temporary drainage ditches.

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2. Install a dewatering system to keep subgrades dry and convey ground water away from excavations. Maintain until dewatering is no longer required.

3.03 EXPLOSIVES

- A. Explosives: Are not to be used on this project.

3.04 EXCAVATION, GENERAL

- A. All excavations and trenching shall be accomplished in strict accordance with applicable OSHA regulations.
- B. Do not excavate within twelve (12) inches of any building wall, column, pier, etc. Where excavation is required next to an existing structure or utility pole, excavate up to twenty-four (24) inches and allow the balance of soil to “fall away”. Take care to not damage the existing structure or utility pole.
- C. Contaminated Soils Excavation: Soils classified as being contaminated in accordance with the Environmental Investigation Report shall be utilized as fill material in accordance with the recommendations of the Environmental Investigation report. Excess contaminated material shall be hauled off and disposed of to a safe and legal facility authorized to receive the contaminated material. Removal, handling, and disposal of contaminated material shall be without additional compensation.
 1. Notify the Geotechnical Engineer when excavations commence to test for the presence of contaminants.
Provide over excavation of material to be exposed to the surface in the finished condition to a depth in accordance with the Environmental Investigation Report. Backfill over excavation with suitable material to finished grade in accordance with the Environmental Inspection Report.
- D. Unclassified Excavation: Excavate to subgrade elevations regardless of the character of surface and subsurface conditions encountered. Unclassified excavated materials may include rock, trash, debris, soil materials, and obstructions. No changes in the Contract Sum or the Contract Time will be authorized for rock excavation or removal of trash, debris, soil materials, or obstructions.
 1. If excavated materials intended for fill and backfill include unsatisfactory soil materials and rock, replace with satisfactory soil materials.
 2. Remove rock to lines and grades indicated to permit installation of permanent construction without exceeding the following dimensions:
 - a. **24 inches** outside of concrete forms other than at footings.
 - b. **12 inches** outside of concrete forms at footings.

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- c. **6 inches** outside of minimum required dimensions of concrete cast against grade.
- d. Outside dimensions of concrete walls indicated to be cast against rock without forms or exterior waterproofing treatments.
- e. **6 inches** beneath bottom of concrete slabs-on-grade.
- f. **9 inches** beneath pipe in trenches, and the greater of **24 inches** wider than pipe or **42 inches** wide.
- g. **24 inches** beneath recharge bed for Stormwater Management Facilities.
- h. Outermost dimensions as required to provide geogrid reinforcement for segmental block retaining walls
- i. **6 inches** beneath bottom of pavement base material.
- j. **8 inches** beneath finished grades outside of secured areas.
- k. **12 inches** beneath finished grades inside of secured areas.

3.05 EXCAVATION FOR STRUCTURES

- A. Excavate to the indicated elevations and dimensions within a tolerance of plus or minus **1 inch**. If applicable, extend excavations a sufficient distance from structures for placing and removing concrete formwork, for installing services and other construction, and for inspections.
 - 1. Excavations for Footings and Foundations: Do not disturb bottom of excavation. Excavate by hand to final grade just before placing concrete reinforcement. Trim bottoms to required lines and grades to leave solid base to receive other work.
 - 2. Excavation for Underground Basins and Electrical Utility Structures: Excavate to elevations and dimensions indicated within a tolerance of plus or minus **1 inch**. Do not disturb bottom of excavations intended as bearing surfaces.
- B. Excavations at Edges of Tree- and Plant-Protection Zones:
 - 1. Excavate by hand to indicated lines, cross sections, elevations, and subgrades. Use narrow-tine spading forks to comb soil and expose roots. Do not break, tear, or chop exposed roots. Do not use mechanical equipment that rips, tears, or pulls roots.
 - 2. Cut and protect roots according to the written recommendations of the Landscape Architect.

3.06 EXCAVATION FOR WALKS AND PAVEMENTS

- A. Excavate surfaces under walks and pavements to indicated lines, cross sections, elevations, and subgrades.

3.07 EXCAVATION FOR UTILITY TRENCHES

- A. Excavate trenches to indicated gradients, lines, depths, and elevations.
 - 1. Beyond building perimeter, excavate trenches to allow installation of top of pipe below frost line.
- B. Excavate trenches to uniform widths to provide the following clearance on each side of pipe or conduit. Excavate trench walls vertically from trench bottom to **12 inches** higher than top of pipe or conduit, unless otherwise indicated.
 - 1. Clearance: As indicated.
- C. Trench Bottoms: Excavate and shape trench bottoms to provide uniform bearing and support of pipes. Shape subgrade to provide continuous support for bells, joints and barrels of pipes, unless otherwise indicated.
 - 1. For pipes less than **6 inches in nominal diameter, hand-excavate trench bottoms and support pipe on an undisturbed subgrade.**
 - 2. **For pipes 6 inches or larger in nominal diameter, shape bottom of trench to support bottom 90 degrees of pipe circumference. Fill depressions with tamped sand backfill.**
 - 3. **Excavate trenches 9 inches deeper** than elevation required in rock or other unyielding bearing material to allow for bedding course.
- D. Trenches in Tree- and Plant-Protection Zones:
 - 1. Hand-excavate to indicated lines, cross sections, elevations, and subgrades. Use narrow-tine spading forks to comb soil and expose roots. Do not break, tear, or chop exposed roots. Do not use mechanical equipment that rips, tears, or pulls roots.
 - 2. Do not cut main lateral roots or taproots; cut only smaller roots that interfere with installation of utilities.
 - 3. Cut and protect roots according to the written recommendations of the Landscape Architect.

3.08 SUBGRADE INSPECTION

- A. Notify Geotechnical Engineer when excavations have reached required subgrade.
- B. If Geotechnical Engineer determines that unsatisfactory soil is present, continue excavation and replace with compacted backfill or fill material as directed.
- C. Proof-roll subgrade below the building slabs and pavements with a pneumatic-tired and loaded 10-wheel, tandem-axle dump truck weighing not less than **15 tons** to identify soft pockets and areas of excess yielding. Do not proof-roll wet or saturated subgrades.
 - 1. Completely proof-roll subgrade in one direction, repeating proof-rolling in direction perpendicular to first direction. Limit vehicle speed to **3 mph**.

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2. Excavate soft spots, unsatisfactory soils, and areas of excessive pumping or rutting, as determined by the Geotechnical Engineer, and replace with compacted backfill or fill as directed.
- D. Authorized additional excavation and replacement material will be paid for according to Contract provisions for Unit Price Items.
- E. Reconstruct subgrades damaged by freezing temperatures, frost, rain, accumulated water, or construction activities, as directed by Engineer, without additional compensation.

3.09 UNAUTHORIZED EXCAVATION

- A. Fill unauthorized excavation under foundations by extending bottom elevation of concrete foundation to excavation bottom, without altering top elevation. Lean concrete fill, with 28-day compressive strength of **2500 psi**, may be used when approved by the Engineer.
1. Fill unauthorized excavations under other construction or utility pipe as directed by the Engineer.

3.10 STORAGE OF SOIL MATERIALS

- A. Stockpile borrow soil materials and excavated satisfactory soil materials without intermixing. Place, grade, and shape stockpiles to drain surface water. Cover to prevent windblown dust.
1. Stockpile soil materials away from edge of excavations. Do not store within drip line of remaining trees.

3.11 BACKFILL

- A. Place and compact backfill in excavations promptly, but not before completing the following:
1. Construction below finish grade including, where applicable, subdrainage, dampproofing, waterproofing, and perimeter insulation.
 2. Surveying locations of underground utilities for Record Documents.
 3. Testing and inspecting underground utilities.
 4. Removing concrete formwork.
 5. Removing trash and debris.
 6. Removing temporary shoring and bracing, and sheeting.
 7. Installing permanent or temporary horizontal bracing on horizontally supported walls.
- B. Place backfill on subgrades free of mud, frost, snow, or ice.

3.12 UTILITY TRENCH BACKFILL

- A. Place backfill on subgrades free of mud, frost, snow, or ice.
- B. Place and compact bedding course on trench bottoms and where indicated. Shape bedding course to provide continuous support for bells, joints, and barrels of pipes and for joints, fittings, and bodies of conduits.
- C. Backfill trenches excavated under structure and within **18 inches** of bottom of structure with satisfactory soil; fill with concrete to elevation of bottom of footings. Concrete is specified in Section 03 30 00 "Cast-in-Place Concrete."
- D. Trenches under Roadways: Trenches under roadways shall be backfilled in accordance with MDSHA Section 314 - Flowable backfill as seen below:

Flowable backfill consists of a mixture of fly ash, cement, and water. Certification by the manufacturer is required.

Cement	902.03
Fly Ash	902.06.04
Water	921.01

- 1. Fillers. When required, fillers shall be natural aggregates with a maximum size of 3/4 in. and may include sands. Bottom ash shall not be used as filler.
- 2. Components. Toxic and deleterious components shall not be used in the backfill mixture. The mixture shall have a 28-day, unconfined compressive strength of at least 100 psi based on the manufacturer's certification. Certification shall include the actual test data for each mixture to be used.
- 3. Analysis. Chemical analysis of the fly ash used in the mixture shall conform to U.S. EPA EP Toxicity Standards. Whenever the coal source is changed or replenished, and when fly ash from a different source is used, conduct an analysis of the fly ash from each stockpile. Submit the results of the analysis to the Engineer for approval prior to using the mixture.

- E. After installing compacted pipe bedding material, place and compact initial backfill of satisfactory soil, free of particles larger than **1 inch** in any dimension, to a height of **12 inches** over the utility pipe or conduit.
 - 1. Carefully compact initial bedding material under pipe haunches and compact evenly up on both sides and along the full length of utility piping or conduit to

avoid damage or displacement of piping or conduit. Coordinate backfilling with utilities testing.

- F. Controlled Low-Strength Material: Place initial backfill of controlled low-strength material to a height of **12 inches** over the pipe or conduit. Coordinate backfilling with utilities testing.
- G. Backfill voids with satisfactory soil while installing and removing shoring and bracing.
- H. Place and compact final backfill of satisfactory soil to final subgrade elevation.
- I. Install detectable warning tape directly above utilities, **12 inches** below finished grade, except **6 inches** below subgrade under pavements and slabs.

3.13 SOIL FILL

- A. Plow, scarify, bench, or break up sloped surfaces steeper than 1 vertical to 4 horizontal so fill material will bond with existing material.
- B. Place and compact fill material in layers to required elevations as follows:
 - 1. Under grass and planted areas, use satisfactory soil material.
 - 2. Under walks and pavements, use satisfactory soil material.
 - 3. Under steps and ramps, use engineered fill.
 - 4. Under building slabs, use engineered fill.
 - 5. Under footings and foundations, use engineered fill.
- C. Place soil fill on subgrades free of mud, frost, snow, or ice.

3.14 SOIL MOISTURE CONTROL

- A. Uniformly moisten or aerate subgrade and each subsequent fill or backfill soil layer before compaction to within 2 percent of optimum moisture content.
 - 1. Do not place backfill or fill soil material on surfaces that are muddy, frozen, or contain frost or ice.
 - 2. Remove and replace, or scarify and air dry otherwise satisfactory soil material that exceeds optimum moisture content by 2 percent and is too wet to compact to specified dry unit weight.
 - 3. Soil moisture control shall be the responsibility of the contractor and is to be done with no additional cost to the owner.

3.15 COMPACTION OF SOIL BACKFILLS AND FILLS

- A. Place backfill and fill soil materials in layers not more than **8 inches** in loose depth for material compacted by heavy compaction equipment, and not more than **4 inches** in loose depth for material compacted by hand-operated tampers.
- B. Compaction requirements shall be determined by the site's geotechnical engineer for specific soils used for fill placement.
- C. Place backfill and fill soil materials evenly on all sides of structures to required elevations, and uniformly along the full length of each structure.
- D. Compact soil materials to not less than the following percentages of maximum dry unit weight according to ASTM D 698, or the geotechnical engineers recommendations, whichever is more stringent:
 - 1. Under structures and pavements, scarify and recompact top **12 inches** of existing subgrade and each layer of backfill or fill soil material at 95 percent.
 - 2. Under walkways, scarify and recompact top **6 inches** below subgrade and compact each layer of backfill or fill soil material at 95 percent.
 - 3. Under lawn or unpaved areas, scarify and recompact top **6 inches** below subgrade and compact each layer of backfill or fill soil material at 92 percent. Under structures, building slabs, steps, and pavements, scarify and recompact top **12 inches** of existing subgrade and each layer of backfill or fill soil material at 95 percent.
 - 4. Under walkways, scarify and recompact top **6 inches** below subgrade and compact each layer of backfill or fill soil material at 92 percent.
 - 5. Under turf or unpaved areas, scarify and recompact top **6 inches** below subgrade and compact each layer of backfill or fill soil material at 92 percent.
 - 6. For utility trenches, compact each layer of initial and final backfill soil material at 95 percent.

3.16 GRADING

- A. General: Uniformly grade areas to a smooth surface, free of irregular surface changes. Comply with compaction requirements and grade to cross sections, lines, and elevations indicated.
 - 1. Provide a smooth transition between adjacent existing grades and new grades.
 - 2. Cut out soft spots, fill low spots, and trim high spots to comply with required surface tolerances.
 - 3. Grassed or vegetated permanent site slopes shall not exceed 3:1.
- B. Site Grading: Slope grades to direct water away from buildings and to prevent ponding. Finish subgrades to required elevations within the following tolerances:
 - 1. Lawn or Unpaved Areas: Plus or minus **1 inch**.

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2. Walks: Plus or minus **1/4 inch**. ADA routes to remain in compliance.
3. Pavements: Plus or minus **1/4 inch**.
4. Grading inside Building Lines: Finish subgrade to a tolerance of **1/2 inch** when tested with a **10-foot** straightedge.

3.17 SUBBASE AND BASE COURSES

- A. Place subbase and base course on subgrades free of mud, frost, snow, or ice.
- B. On prepared subgrade, place subbase and base course under pavements and walks as follows:
 1. Install separation geotextile fabric on prepared subgrade according to manufacturer's written instructions, overlapping sides and ends.
 2. Place base course material over subbase course under hot-mix asphalt pavement.
 3. Shape subbase and base course to required crown elevations and cross-slope grades.
 4. Place subbase and base course **6 inches** or less in compacted thickness in a single layer.
 5. Place subbase and base course that exceeds **6 inches** in compacted thickness in layers of equal thickness, with no compacted layer more than **6 inches** thick or less than **3 inches** thick.
 6. Compact subbase and base course at optimum moisture content to required grades, lines, cross sections, and thickness to not less than 95 percent of maximum dry unit weight according to ASTM D 698.

3.18 FIELD QUALITY CONTROL

- A. Testing Agency: The Contractor shall engage a qualified independent geotechnical engineering testing agency to perform field quality-control testing.
- B. Allow testing agency to inspect and test subgrades and each fill or backfill layer. Proceed with subsequent earthwork only after test results for previously completed work comply with requirements.
- C. Footing Subgrade: At footing subgrades, at least one test of each soil stratum will be performed to verify design bearing capacities. Subsequent verification and approval of other footing subgrades may be based on a visual comparison of subgrade with tested subgrade when approved by Geotechnical Engineer.
- D. Testing agency will test compaction of soils in place according to ASTM D 1556, ASTM D 2167, ASTM D 2922, and ASTM D 2937, as applicable. Tests will be performed at the following locations and frequencies:

1. Paved and Building Slab Areas: At subgrade and at each compacted fill and backfill layer, at least one test for every **2000 sq. ft.** or less of paved area or building slab, but in no case fewer than three tests.
 2. Foundation Wall and Retaining Wall Backfill: At each compacted backfill layer, at least one test for every **100 feet** or less of wall length, but no fewer than two tests.
 3. Trench Backfill: At each compacted initial and final backfill layer, at least one test for every **150 feet** or less of trench length, but no fewer than two tests.
- E. When testing agency reports that subgrades, fills, or backfills have not achieved degree of compaction specified, scarify and moisten or aerate, or remove and replace soil to depth required; recompact and retest until specified compaction is obtained.

3.19 PROTECTION

- A. Protecting Graded Areas: Protect newly graded areas from traffic, freezing, and erosion. Keep free of trash and debris.
- B. Repair and reestablish grades to the specified tolerances where completed or partially completed surfaces become eroded, rutted, settled, or where they lose compaction due to subsequent construction operations or weather conditions.
 1. Scarify or remove and replace soil material to depth as directed by Engineer; reshape and recompact.
- C. Where settling occurs before Project warranty period elapses, remove finished surfacing, backfill with additional soil material, compact, and reconstruct surfacing.
 1. Restore appearance, quality, and condition of finished surfacing to match adjacent work, and eliminate evidence of restoration to greatest extent possible.

3.20 DISPOSAL OF SURPLUS AND WASTE MATERIALS

- A. Remove surplus satisfactory soil and waste materials, including unsatisfactory soil, trash, and debris, and legally dispose of them off Owner's property.

END OF SECTION

**REQUIREMENTS AND CONTRACT PROVISIONS FOR THE TREATMENT WORKS PROJECTS
FINANCED THROUGH THE MARYLAND WATER QUALITY REVOLVING LOAN FUND
AND THE MARYLAND DRINKING WATER REVOLVING LOAN FUND**

DEPARTMENT OF THE ENVIRONMENT

STATE OF MARYLAND

The project or segment thereof to be constructed in accordance with these contract documents is subject to the following requirements. In the event of conflict with other requirements of the contract documents, the following requirements control unless the requirement is a minimum requirement. Nothing in this document shall be construed to prohibit the owner from requiring additional assurances, guarantees, indemnities, or other contractual requirements from any other party to this agreement.

- I. **ASSURANCES FOR COMPLIANCE WITH THE FOLLOWING FEDERAL AND STATE LAWS AND REGULATIONS:**
 1. **NON-DISCRIMINATION IN EMPLOYMENT**
 2. **DEBARMENT**
 3. **ANTI-KICKBACK**
 4. **CONTRACT WORK HOURS AND SAFETY STANDARDS.**
 5. **COMPLIANCE WITH CFR 40 247– 254 (RCRA - SECTION 6002)**
 6. **COMPLIANCE WITH PREVAILING FEDERAL WAGE RATES UNDER THE DAVIS-BACON AND RELATED ACTS IN ACCORDANCE TO SECTION VI OF THIS DOCUMENT**
 7. **MARYLAND ANTIDegradation IMPLEMENTATION PROCEDURES**
 8. **COMPLIANCE WITH BUILD AMERICA, BUY AMERICA (BABA) ACT**
 9. **PROHIBITION ON CERTAIN TELECOMMUNICATION AND VIDEO SURVEILLANCE SERVICES OR EQUIPMENT (2 CFR 200.216)**
- II. **DISADVANTAGED BUSINESS ENTERPRISE PARTICIPATION**
 - **GUIDANCE DOCUMENTS AND FORMS**
(Performance of the good faith steps are required, regardless of goal achievement. All information is to be submitted to the owner, prior to the owner's award of the contract, UNLESS OTHERWISE DIRECTED BY THE OWNER).
- III. **PRESIDENTIAL DOCUMENTS**
 - **ATTACHMENT II**
EXECUTIVE ORDER 13202 of February 17, 2001
EXECUTIVE ORDER 13208 of April 8, 2001
- IV. **SEVERABILITY**
- V. **PROJECT SIGNS**
- VI. **FEDERAL WAGE RATE REQUIREMENTS UNDER THE DAVIS-BACON AND RELATED ACTS**

I. ASSURANCES

The contractor is required to comply with the Federal laws and regulations in regard to non-discrimination in employment, debarment, anti-kickback, contract work hours and safety standards, and prevailing Federal wage rates under the Davis-Bacon and related acts as delineated below.

1. Non-discrimination in Employment:

The contractor is required to comply with Executive Order 11246 of September 24, 1965 entitled “Equal Employment Opportunity” as amended by Executive Order 11375 of October 13, 1967.

The contract for the work under this proposal will obligate the prime contractor and its subcontractors not to discriminate in employment practices.

The contractor shall not maintain or provide for his/her employees the facilities, which are segregated on a basis of race, creed, color, or national origin, whether such facilities are segregated by directive or on a de facto basis.

The contractor must, if requested, submit a compliance report concerning their employment practices and policies in order to maintain his/her eligibility to receive the award of the contract.

The contractor must be prepared to comply in all respects with the Contract Provisions regarding non-discrimination, as stipulated under the Labor Standards.

2. Debarment:

Under Executive Order 12549, an individual or organization debarred from participation in Federal assistance or benefit programs may not receive any assistance award under a Federal program, or a sub-agreement thereunder for \$25,000 or more.

Therefore, the bidder as an individual or as an organization, presently debarred, suspended, proposed for debarment, will be declared ineligible to participate in bidding the proposed contract as a prospective recipient of financial assistance from the Maryland Department of the Environment.

The contractor shall not enter into any sub-contract with any individual, firm or organization debarred from Government contracts pursuant to Executive Order 11246.

3. Anti-kickback:

The contractor and/or its sub-contractors shall comply with the Copeland “Anti-Kickback” Act (18 U.S.C. 874). Any evident illicit kickback practice in any shapes or forms will cause termination of the contract.

4. Contract Work Hours and Safety Standards:

The contractor and/or its sub-contractors shall comply with Sections 103 and 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 327-330).

5. Compliance with 40 CFR: 247– 254 (RCRA - Section 6002):

The contractor shall comply with the guidelines contained in 40 CFR 247– 254 (Section 6002 of the Resource Conservation and Recovery Act).

State and local recipients and sub-recipients of grants, loans, cooperative agreements or other instruments funded by appropriated Federal funds shall give preference in procurement programs to the purchase of recycled products pursuant to the EPA guidelines.

6. Compliance with Prevailing Federal Wage Rates under the Davis-Bacon and Related Acts in accordance to Section VI of this document.

All laborers and mechanics employed by contractors and sub-contractors on projects funded directly by or assisted in whole or in part by and through the Federal Government programs including the State Revolving Loan fund shall be paid wages at rates not less than those prevailing on projects of a character similar in the locality as determined by the Secretary of Labor in accordance with subchapter IV of chapter 31 of title 40, United States Code. With respect to the labor standards

specified in this section, the Secretary of Labor shall have the authority and functions set forth in Reorganization Plan Numbered 14 of 1950 (64 Stat. 1267; 5 U.S.C.App.) and section 3145 of title 40, United States Code. Most recent Federal prevailing wages can be obtained from: <https://sam.gov/content/wage-determinations>

The prevailing wage determination category that should be used for this project is Heavy Construction (including water and sewer). This determination is based on the Federal Department of Labor Wage and Hour Division classification.

7. Maryland Antidegradation Implementation Procedures:

The Clean Water Act requires three components to water quality standards that set goals for and protect each States' waters. The three components are: (1) designated uses that set goals for each water body (e.g., recreational use), (2) criteria that set the minimum conditions to support the use (e.g., bacterial concentrations below certain concentrations) and (3) an antidegradation policy that maintains high quality waters so they are not allowed to degrade to meet only the minimum standards. The designated uses and criteria set the minimum standards for Tier I.

Maryland's antidegradation policy has been promulgated in three regulations: COMAR 26.08.02.04 sets out the policy itself, COMAR 26.08.02.04-1, provides for identification and implementation of Tier II (high quality waters) of the antidegradation policy, and COMAR 26.08.02.04-2 that describes Tier III (Outstanding National Resource Waters or ONRW), the highest quality waters. No Tier III waters have been designated at this time. Any capital funding project occurring within Tier II catchment areas, which are areas that drain to Maryland's high quality designated Tier II stream segments, must undergo Antidegradation Review.

To determine if your project is located within Tier II catchment area, please contact Ms. Angel Valdez of MDE Environmental Standards and Assessment Program, at (410) 537-3606, or at angel.valdez@maryland.gov.

Please be aware that projects subject to an Antidegradation or Tier II review must adequately address comments that arise during the review before funding can be granted.

How Tier II Stream Segments are Designated

- Currently high quality stream segments are designated for the characteristic of biology using Maryland Biological Stream Survey (or comparable) data
- Streams are recorded in Table O (COMAR 26.08.02.04-1) and the pending list of streams awaiting promulgation or corrections is maintained on the MDE website.

The Basic Antidegradation Review Process

Many of the projects funded by the Water Infrastructure Financing Administration (WIFA) at MDE result in a net improvement to water quality. As a result, the antidegradation review process for WIFA generally involves making sure that any land disturbance activities associated with the project includes additional controls. Any other antidegradation reviews specific to project discharges (e.g. end-of-pipe) will be addressed separately through the permitting process.

To help expedite the review process the following list of practices has been provided. These practices include "accelerated stabilization, redundant controls, increased riparian buffers, passive or active chemical treatment, or a reduction in the size of the grading unit" as stated in the 2011 Maryland Standards and Specifications for Soil Erosion and Sediment Control to address Tier II issues. All practices implemented should be evident in plans. When using the list below to aide in planning keep in mind that application and site specifics will ultimately determine each recommendation's applicability. Also realize that this list is not exhaustive and additional practices may be identified as specific plans become available.

- Initial Considerations: including limiting vegetative disturbances, phasing and/or sequencing, accelerated stabilization, minimum weekly inspections, and timing of in-stream work to low flow periods or clear weather forecasts

- **Expanded Riparian Buffers (for new structures/expansions only):** from 100 to 230 feet, depending upon slope and soil composition, on all intermittent and perennial streams within project footprint to help further address direct hydrologic impacts to surface waters. See Table 1 for more details.

Table 1

Adjusted Average Optimal Buffer Width Key for HQ Waters (minimum width 100 feet)				
Slopes (%)				
Hydrologic Soil Group	0-5%	5-15%	15-25%	>25%
Ab	100	130	160	190
C	120	150	180	210
D	140	170	200	230

- **Streamside Management Zones (buffer areas for utility projects):** where disturbance and work cannot be avoided, utilize minimally disturbing & selective vegetative clearing methods, restorative planting (not seeding) for major near-stream clearings totaling 1 acre or more, no mulch placement within the streamside management zones, if possible allow small shrub growth
- **Enhanced Buffer Management:** including sheetflow of discharge beyond the minimum 100 foot vegetative buffer or implementing redundant mechanisms in dewatering exercises such as devices in manifold, use of chemical filtration aides, combining two practices such as filter bags with vegetated buffers and silt fencing. Also incorporation of super silt fencing or an equivalent practice when working near streams.
- **Enhanced Temporary Access Waterways Crossings:** including utilizing horizontal directional drilling/jack and bore for all major stream crossings or sensitive crossings, including a frac-out plan; preferential use of partial diversions (where possible); and utilization of temporary access bridges over fords.
- **Special Concern- pH and Water Quality:** For all activities related to in-stream grout placement, either in bags or as fill:
 1. To prevent impacts to in-stream pH, such operations should occur “in-the-dry”.
 2. An emergency treatment plan should be in place to address accidental material releases.
 3. Cure time allotted should reflect chemically stable grout material and should also represent the most conservative time in the expected cure range.
 4. The water quality standard numeric criteria for pH must be met in the ‘first flush’ before diversion is removed.
- **Stormwater Management:** follow the current guidelines within the Maryland Stormwater Design Manual (2009 Revised), including ESD to the MEP or other non-structural practices

8. COMPLIANCE WITH BUILD AMERICA, BUY AMERICA (BABA) ACT

None of the funds made available by a State water pollution control revolving fund as authorized by title VI of the Federal Water Pollution Control Act (33 U.S.C. 1381 et seq.) or made available by a drinking water treatment revolving loan fund as authorized by section 1452 of the Safe Drinking Water Act (42 U.S.C. 300j-12) shall be used for a project for the construction, alteration, maintenance, or repair of a public drinking water system or water quality unless all of the *iron, steel, manufactured products, and construction materials* used in the project are produced in the United States (Build America, Buy America (BABA) Act, P.L. 117-58, Secs 70911 - 70917).

The Act requires the following Buy America preference:

- (1) All iron and steel used in the project are produced in the United States. This means all manufacturing processes, from the initial melting stage through the application of coatings, occurred in the United States.
- (2) All manufactured products used in the project are produced in the United States. This means the manufactured product was manufactured in the United States, and the cost of the components of the manufactured product that are mined, produced, or manufactured in the United States is greater than 55 percent of the total cost of all components of the manufactured product, unless another standard for determining the minimum amount of domestic content of the manufactured product has been established under applicable law or regulation.
- (3) All construction materials are manufactured in the United States. This means that all manufacturing processes for the construction material occurred in the United States. The “construction materials” include an article, material, or supply other than an item of primarily iron or steel; a manufactured product; cement and cementitious materials; aggregates such as stone, sand, or gravel; or aggregate binding agents or additives that is or consists primarily of:
 - non-ferrous metals;
 - plastic and polymer-based products (including polyvinylchloride, composite building materials, and polymers used in fiber optic cables);
 - glass (including optic glass);
 - lumber; or
 - drywall.

To provide clarity to item, product, and material manufacturers and processors, we note that items that consist of two or more of the listed materials that have been combined together through a manufacturing process, and items that include at least one of the listed materials combined with a material that is not listed through a manufacturing process, should be treated as manufactured products, rather than as construction materials. For example, a plastic framed sliding window should be treated as a manufactured product while plate glass should be treated as a construction material.

Certification Process:

The final manufacturer that delivers the iron, steel, manufactured products, or construction materials to worksite, vendor, or contractor, may provide a certification asserting that all manufacturing processes occurred in the US. The certification should include the name of the manufacturer, the location of the manufacturing facility where the product or process took place (not its headquarters), a description of the product or item being delivered, and a signature by a responsible party.

Additional documentation such as Step Certification may be needed if the certification is lacking important information. A Step Certification is a process under which each handler (supplier, fabricator, manufacturer, processor, etc) of the iron, steel, manufactured products, and construction materials certifies that their step in the process was domestically performed. Each time a step in the manufacturing process takes place, the manufacturer delivers its work along with a certification of its origin.

Waiver:

A request for waiver may be submitted to MDE. Pursuant to Section 70914(c) of the BABA Act, a waiver may be considered under one of the following categories:

1. Applying the domestic content procurement preference would be inconsistent with the public interest (a “public interest waiver”);
2. Types of iron, steel, manufactured products, or construction materials are not produced in the United States in sufficient and reasonably available quantities or of a satisfactory quality (a “nonavailability waiver”); or

3. Inclusion of iron, steel, manufactured products, or construction materials produced in the United States will increase the cost of the overall project by more than 25 percent (an “unreasonable cost waiver”).

MDE may agree with the waiver request and submit it to the Administrator of the Environmental Protection Agency for final approval. Alternatively, MDE may, in its sole discretion, reject the waiver request and elect not to fund the project.

De Minimis Nationwide Waiver:

A De Minimis Nationwide Waiver was issued by EPA, on October 21, 2022, waiving Build America, Buy America requirements for products used in and incorporated into a project that cumulatively comprise no more than five percent of the total project cost.

To be covered under this waiver, the grant/loan recipient must, in consultation with the contractor, take the following actions:

1. Retain relevant documentation (i.e. invoices) as to those items being covered under this waiver in their project files.
 2. Summarize in reports to MDE the types and/or categories of items to which this waiver is applied, including the cost of each category/type. The report must also include the total cost of items covered by the waiver (including installation cost), the total project cost, and the percentage of covered items calculated by cost.
 3. Upon the receipt of the report, MDE, within 30 calendar day of receipt, will accept and file the report, request additional information, or advise the grant/loan recipient that the items cannot be covered under this waiver and a project specific waiver is needed.
 4. If no comments are received by MDE within 30 calendar days, the grant/loan recipient would not need to take any further action, unless more items need to be covered, at which time cumulative summary would need to be submitted to MDE.
9. Borrower agrees to comply with 2 CFR 200.216, which requires that EPA recipients and subrecipients, including borrowers under EPA funded revolving loan fund programs, are prohibited from obligating or expending loan or grant funds to procure or obtain; extend or renew a contract to procure or obtain; or enter into a contract (or extend or renew a contract) to procure or obtain equipment, services, or systems that use covered telecommunications equipment or services as a substantial or essential component of any system, or as critical technology as part of any system. As described in Public Law 115-232, section 889, covered telecommunications equipment is telecommunications equipment produced by Huawei Technologies Company or ZTE Corporation (or any subsidiary or affiliate of such entities).

Within seven (7) days of the bid opening, the apparent low bidder shall sign the form of “Assurances for Compliance with Federal Laws and Regulations” pertaining to non-discrimination in employment, debarment, anti-kickback, contract work hours and safety, compliance with prevailing Federal wage rates under the Davis-Bacon and related acts, and Maryland Antidegradation Implementation Procedures, and use of American iron and steel. The form is appended herewith in Section I.

**ASSURANCES FOR COMPLIANCE WITH FEDERAL LAWS AND REGULATIONS
FOR WATER QUALITY-TREATMENT WORKS AND DRINKING WATER PROJECT**

Project Name: _____ **Contract No. (if applicable):** _____

The contractor is required to comply with the following Federal laws and regulations:

1. Non-discrimination in Employment in accordance with Executive Order 11246 of September 24, 1965 entitled “Equal Employment Opportunity” as amended by Executive Order 11375 of October 13, 1967.
2. Debarment in accordance with the Executive Order 12549 and Executive Order 11246.
3. Anti-kickback in accordance with the Copeland “Anti-Kickback” Act (18 U.S.C. 874).
4. Contract Work Hours and Safety Standards in accordance with Sections 103 and 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 327-330).
5. Compliance with Guidelines Contained in 40 CFR 247-254 (RCRA - Section 6002).
6. The prevailing Federal wage rates as determined by the U.S. Department of Labor under the Davis-Bacon and related acts. The prevailing wage determination category that should be used for this project is Heavy Construction (including water and sewer). Available at: <https://sam.gov/content/wage-determinations>

General Decision Number: _____ **Date:** _____

7. Maryland Antidegradation Implementation Procedures as promulgated in three regulations: COMAR 26.08.02.04 sets out the policy itself, COMAR 26.08.02.04-1, provides for identification and implementation of Tier II (high quality waters) of the antidegradation policy, and COMAR 26.08.02.04-2 that describes Tier III (Outstanding National Resource Waters or ONRW), the highest quality waters. No Tier III waters have been designated at this time.
8. Use of the iron, steel, manufactured products, and construction materials produced in the United States (Build America, Buy America (BABA) Act, P.L. 117-58, Secs 70911 - 70917).
9. 2 CFR 200.216, which requires that EPA recipients and subrecipients, including borrowers under EPA funded revolving loan fund programs, are prohibited from obligating or expending loan or grant funds to procure or obtain; extend or renew a contract to procure or obtain; or enter into a contract (or extend or renew a contract) to procure or obtain equipment, services, or systems that use covered telecommunications equipment or services as a substantial or essential component of any system, or as critical technology as part of any system. As described in Public Law 115-232, section 889, covered telecommunications equipment is telecommunications equipment produced by Huawei Technologies Company or ZTE Corporation (or any subsidiary or affiliate of such entities).

I do solemnly declare and affirm that I am obligated to comply with the above Federal laws and regulations. It is understood that non-compliance with any one of the above Federal laws and regulations will be sufficient reason to cause termination of the contract.

Contractor

Signed by: _____
Authorized Officer

Date

Name (Print)

Title (Print)

II. Maryland Department of the Environment
Maryland Water Quality & Drinking Water Revolving Loan Fund Programs
Disadvantaged Business Enterprise Program (DBE)
Guidance for Prime (Construction & A/E) Contractors

The Maryland Water Quality and Drinking Water Revolving Loan Fund Programs (RLF) receive federal funds from the U.S. Environmental Protection Agency (EPA). The funds are used to provide low interest rate loans to finance water quality and drinking water capital projects. As a condition of federal grant awards, EPA regulations require that loan recipients and sub-recipients (i.e., prime contractors and subcontractors) make a good-faith effort to award a fair share of work to DBEs who are small business enterprises (SBE's), minority business enterprises (MBE's) and women's business enterprises (WBE's). A/E service consultants who receive loan funds are also considered as prime contractors and must comply with DBE requirements. Additionally, EPA's DBE rule requires loan recipients and sub-recipients to adhere to the terms and conditions in Appendix A attached hereto.

To ensure compliance with EPA DBE requirements, the MWQFA has developed guidance for both Loan Recipients and Prime Contractors (sub-recipients) to undertake certain good faith efforts to provide opportunities for DBE firms to participate in contracts. EPA regulations require evidence of the demonstration of the six good faith efforts in trying to achieve the DBE participation goals. MDE's negotiated DBE participation goals with EPA have been approved as of February 6, 2019. The goals below are not a quota and apply to DBE participation only.

<i>Procurement Category</i>	<i>MBE Goal (%)</i>	<i>WBE Goal (%)</i>
Construction	22	16
Equipment	23	11
Services	25	18
Supplies	23	11

Good Faith Efforts: The following good faith efforts apply to the procurement categories involving EPA financial assistance funds (See Appendix B: EPA Good Faith Efforts):

- Step 1:** Ensure DBEs are made aware of contracting opportunities to the fullest extent practicable through outreach and recruitment activities by placing qualified DBEs on solicitation lists whenever they are potential sources.
- Step 2:** Establishing delivery schedules, where the requirement permits to encourage participation by DBEs. The prime contractor should allow a 30-day minimum advertising period for bidding.
- Step 3:** Dividing total requirements, when economically feasible, into small tasks or quantities, to permit maximum participation of DBEs.
- Step 4:** Encourage contracting with a consortium of DBEs, when a contract is too large for one of these firms to handle individually.
- Step 5:** Using the services and assistance of the Maryland Department of Transportation (MDOT), the United States Small Business Administration (SBA) and the Minority Business Development Agency (MBDA) of the U.S. Department of Commerce (See Appendix C).
- Step 6:** Require each sub-contractor, if subcontracts are to be let, to take the steps 1- 5.

Please submit all information to:

DBE Coordinator, MWIFA

1800 Washington Blvd., Baltimore MD 21230

Phone: 410-537-3146, FAX: 410-537-3968

<https://mde.maryland.gov/programs/water/WQFA/Pages/mwbe.aspx>

Disadvantaged Business Enterprise Program (DBE)

Guidance for Prime (Construction & A/E) Contractors

Demonstration of the Six Good Faith Efforts. See **Appendices A & B** for additional bidding instructions and contract administrative provisions.

A: Prime contractors are required to undertake good faith efforts. Steps 1 & 5 can be attained by developing a bidders list of qualified DBE firms that can bid as sub-contractors. The prime contractors should advertise in minority, local and regional newspapers and obtain a bidders list from the loan recipient to supplement their list. The bidders list used during sub-contractor solicitation must be available throughout the project's construction period.

In developing bidders list of qualified DBE firms for participation as sub-contractors in construction, equipment, services, and supplies, the prime contractors should contact and gather information from different resources (See **Appendix C**) such as:

- Loan Recipient
- U.S. Small Business Administration (US-SBA)
- Minority Business Development Agency (MBDA) of the US Department of Commerce
- Maryland Department of Transportation (MDOT)

The DBE bidders lists may be classified with Standard Industrial Classification (SIC) or NAICS codes, should be updated periodically, and should be made available to sub-contractors to solicit additional sub-contractors, if necessary. **The prime contractor is required to keep the bidders list throughout the project's construction period.**

B: Prime contractors are also required to undertake good faith efforts. Steps 2, 3, & 4, can be utilized during the project planning, design and/or pre-bidding phase, to assure that qualified DBE firms have procurement opportunities in construction, equipment, services, and supplies.

To provide procurement opportunities to DBE firms, the Prime Contractor should undertake the following:

- Conduct pre-bid meetings to inform potential bidders/contractors about DBE requirements and provide guidance in undertaking the required good faith efforts.
- Use the bidders list developed in Item A (above) to solicit DBE firms as sub contractors.
- Invite DBE firms, where appropriate, to meetings, conferences, etc., to inform them of procurement opportunities and develop, where possible, reasonable contract and delivery schedules that encourage and facilitate participation by DBEs.
- Determine if a project can be broken down into smaller components/contracts to allow opportunity for DBE firms to bid as sub-contractors.
- For projects broken down into smaller components (e.g., painting, roofing, excavation, pipe laying, etc.) ensure that the delivery schedules are reasonable.
- Encourage DBE firms, where appropriate, to apply as a consortium, or as part of a consortium of DBEs, when a contract is too large for one of these firms to handle individually.

MARYLAND DEPARTMENT OF THE ENVIRONMENT

1800 Washington Boulevard, Suite 515 Baltimore MD 21230-1718

410-537-3119, 1-800-633-6101 https://mde.maryland.gov/programs/water/WQFA/Pages/mission_statement.aspx

Disadvantaged Business Enterprise (DBE) Good Faith Efforts Checklist

To be Completed by Loan Recipient

Project Name:

[Empty text box for Project Name]

Procurement Category: Check box for all M/WBE procurement categories being reported under the above referenced project.

Construction [] Equipment [] Services [] Supplies []

For each procurement action, please answer the following questions

A: Develop Bidders List of DBE firms

- A1 Did you develop a Bidders List of DBE firms? Yes [] No []
A2 Did you advertise via eMMA, minority, local/regional papers or Dodge Report? Yes [] No []
A3 Did you send invitation for bids to DBE trade associations? Yes [] No []
A4 Did you contact US-SBA/MBDA/MDOT? Yes [] No []
A5 Did you provide Prime Contractors with Bidders List Yes [] No []
A6 Did you provide MDE with Bidders List? Yes [] No []

B: Smaller work components and delivery schedules

- B1 Did DBE firms have opportunities to bid as prime contractors? Yes [] No []
B2 Did you break down the project, where economically feasible, into smaller components?
o For DBE firms to bid as prime contractor Yes [] No []
o For DBE firms to bid as sub-contractors Yes [] No []
B3 Do project components have reasonable delivery schedules? Yes [] No []
B4 Did you allow a reasonable time for DBEs to bid (e.g., min. of 30 days)? Yes [] No []
B5 Did you encourage DBEs to bid as a consortium due to project size? Yes [] No []

C: Require prime contractor to Undertake Good Faith Efforts

- C1 Did you include the "MDE Insert" in the bidding documents? Yes [] No []
C2 Did you require the prime contractors to apply the good faith efforts? Yes [] No []
C3 Is DBE a "responsiveness" criteria in bid documents? Yes [] No []

D: Solicitation Summary of DBE firms (Use Attachment 1 for each prime contract)

- D1 Did you use the Bidders List to solicit prime contractors? Yes [] No []
D2 Did DBE firms bid as prime contractors? Yes [] No []
D3 Did you select any DBE firms as prime contractor? Yes [] No []
D4 Is the prime contractor using any subcontractors? Yes [] No []

Loan recipient must also complete Attachment 1 and have prime contractor list each DBE subcontractor on WIFA 6100 Form. In addition, WIFA 6100 Form must be submitted with bid proposal after completion by prime contractor.

Supporting Documentation

In support of the actions taken in items A, B, C and D (above), all borrowers and prime contractors must attach this checklist along with supporting documentation for "Yes" answers and an explanation for "No" answers. Examples of supporting documentation include: (i) Bidders List of DBE firms; (ii) list of sub-contract work elements possible under the prime contract; (iii) proof of contact with DBE firms as potential prime contractors (copies of invitations for bids/RFP, contact letters, faxes and telephone call sheets, etc.; (iv) copies of all procurement advertisements; and (v) list of all prime contractors that submitted bids/RFP.

Loan Recipient's Name and Title

Loan Recipient Official's Signature/ Date

Contact Phone #

Attachment 1

**MARYLAND DEPARTMENT OF THE ENVIRONMENT
SOLICITATION OF FIRMS
Loan Recipient must complete one form for each prime (construction & A/E) contract**

Project Name:

Total Contract Amount (Prime Construction Contractor): \$

Please answer the following questions for each prime contract

Procurement Category: Check only one procurement category for each prime contract being reported under the above referenced project. **Construction** **Equipment** **Services** **Supplies**

Summary of Prime Contractors Solicited

- 1 Number of firms solicited (attach list/documentation): _____
- 2 Number of firms that responded (attach documentation): _____
- 3 Number of DBE firms that responded (attach documentation): _____

Details of Selected Firm

4 Name of Firm:

5 Address:

6 Contact Person (Name and Phone):

7 Total amount of Contract \$

8 Is the firm a Minority Business Enterprise? (MBE) Yes No

9 Is the firm a Women Business Enterprise? (WBE) Yes No

10 If the response to question 8 or 9 is **Yes**, please complete the following:

- M/WBE Certification Number: _____
- Certification Date: _____
- Expiration Date (if applicable): _____
- Certifying Agency: _____

Please submit all information to:
DBE Coordinator, MWIFA
1800 Washington Blvd., Baltimore MD 21230
Phone: 410-537-3146, FAX: 410-537-3968

MARYLAND DEPARTMENT OF THE ENVIRONMENT

1800 Washington Boulevard Suite 515 Baltimore MD 21230-1718

410 537 3119 1-800-633-6101

<https://mde.maryland.gov/programs/water/WQFA/Pages/mwbe.aspx>

**Disadvantaged Business Enterprise (DBE) Good Faith Efforts Checklist
To be completed by Prime (Construction & A/E) Contractor**

Project Name:

Procurement Category: Check box for all M/WBE procurement categories being reported under the above referenced project. **Construction** **Equipment** **Services** **Supplies**

For each procurement action, please answer the following questions

A: Develop Bidders List of DBE firms

- A1 Did you develop a Bidders List of DBE firms? Yes No
- A2 Did you advertise via eMMA, minority, local/regional papers or Dodge Report? Yes No
- A3 Did you send invitation for bids to DBE trade associations? Yes No
- A4 Did you contact US-SBA/MBDA/MDOT? Yes No
- A5 Did you receive Bidders List from Loan Recipient? Yes No
- A6 Did you provide MDE with Bidders List? Yes No

B: Smaller work components and delivery schedules

- B1 Did DBE firms have opportunities to bid as subcontractors? Yes No
- B2 Did you break down the project, where economically feasible, into smaller components for DBE firms to bid as subcontractors? Yes No
- B3 Do project components have reasonable delivery schedules? Yes No
- B4 Did you allow a reasonable time for DBEs to bid? Yes No
- B5 Did you encourage DBEs to bid as a consortium due to project size? Yes No

C: Solicitation Summary of DBE firms (Prime Contractor must fill WIFA 6100 Form)

- C1 Did you use the Bidders List to solicit subcontractors? Yes No
- C2 Did DBE firms bid as subcontractors (provide list, work type, & price)? Yes No
- C3 Did you select any DBE firms as subcontractor? Yes No
- C4 Is the subcontractor using any additional subcontractors? Yes No

Prime contractor must provide to loan recipient: (1) list of ALL subcontractors (DBE and non-DBE) with type of work and estimated dollar amounts; (2) completed WIFA 6100 Form.

Supporting Documentation

In support of the actions taken in items A, B, and C, (above), all prime contractors must attach this checklist along with supporting documentation for “Yes” answers and an explanation for “No” answers. Examples of supporting documentation include: (i) Bidders List of DBE firms; (ii) list of sub-contract work elements possible under the prime contract; (iii) proof of contact with DBE firms as potential sub contractors (copies of invitations for bids/RFP, contact letters, faxes and telephone call sheets, etc.; (iv) copies of all procurement advertisements; and, (v) list of all sub contractors that submitted bids/RFP.

Prime Contractor’s Name and Title

Prime Contractor Official’s Signature/ Date

Contact Phone # _____

**Maryland Department of the Environment -- Water Infrastructure Financing Administration
Disadvantaged Business Enterprise (DBE) Program
DBE Subcontractor Utilization Form
(MDE WIFA 6100 Form)**

This form is intended to capture the prime contractor’s actual and/or anticipated use of identified certified DBE¹ subcontractors² and the estimated dollar amount of each subcontract. An EPA Financial Assistance Agreement Recipient must require its prime contractors to complete this form and include it in the bid or proposal package. Prime contractors should also maintain a copy of this form on file.

PRIME CONTRACTOR NAME	PROJECT NAME
CONTACT NAME	CONTACT PHONE
ADDRESS	

Please list all DBE subcontractors you plan to utilize on this project. Use additional sheets as necessary.

SUBCONTRACTOR NAME	COMPANY ADDRESS	EST. DOLLAR AMOUNT TO BE SUBCONTRACTED	CURRENTLY DBE CERTIFIED? YES/NO

I certify under penalty of perjury that the forgoing statements are true and correct. Signing this form does not signify a commitment to utilize the subcontractors above. I am aware that in the event of the replacement of a subcontractor, I will adhere to the replacement requirements set forth in 40 CFR Part 33 Section 33.302(c).

PRIME CONTRACTOR SIGNATURE	TITLE
PRINT FULL NAME	DATE

¹ A DBE is a Disadvantaged, Minority or Woman Business Enterprise that has been certified by any entity from which EPA accepts certifications as described in 40 CFR 33.204-33.205.

² Subcontractor is defined as a company, firm, joint venture or individual who enters into an agreement with a contractor to provide services pursuant to an EPA award of financial assistance.

APPENDIX A: EPA DISADVANTAGED BUSINESS ENTERPRISE PROGRAM

EPA's Disadvantaged Business Enterprise Program rule applies to contract procurement actions funded in part by EPA assistance agreements awarded after May 27, 2008. The rule is found at Federal regulation Title 40, Part 33. Specific responsibilities are highlighted below.

Loan Recipient Responsibilities:

- Include MDE's DBE guidance in each contract with a primary contractor, *MDE, October 2008*.
- Employ the six Good Faith Efforts during prime contractor procurement (§ 33.301).
- Require prime contractor to comply with the following prime contractor requirements of Title 40 Part 33:
 - a) To employ the six Good Faith Efforts steps in paragraphs (a) through (e) of § 33.301 if the prime contractor awards subcontracts (§ 33.301(f)).
 - b) To pay its subcontractor for satisfactory performance no more than 30 days from the prime contractor's receipt of payment from the recipient (§ 33.302(a)).
 - c) To notify recipient in writing by its prime contractor prior to any termination of a DBE subcontractor for convenience by the prime contractor (§ 33.302(b)).
 - d) To employ the six good faith efforts described in § 33.301 if soliciting a replacement subcontractor after a DBE subcontractor fails to complete work under the subcontract for any reason. (§ 33.302(c)).
 - e) To employ the six good faith efforts described in § 33.301 even if the prime contractor has achieved its fair share objectives under subpart D of Part 33. (§33.302(d)).
 - f) Provide grant recipient DBE participation achievements with bid proposal
- Maintain records documenting its compliance with the requirements of Title 40 Part 33, including BIDDERS LIST and documentation of its, and its prime contractors', good faith efforts (§ 33.501(a)).

Prime Contractor Responsibilities:

- Employ the six Good Faith Efforts steps in paragraphs (a) through (e) of § 33.301 if the prime contractor awards subcontracts (§ 33.301(f)).
- Pay subcontractors for satisfactory performance no more than 30 days from the prime contractor's receipt of payment from the recipient (§ 33.302(a)).
- Notify the recipient in writing prior to prime contractor termination of a DBE subcontractor for convenience (§ 33.302(b)).
- Employ the six good faith efforts described in § 33.301 if soliciting a replacement subcontractor after a DBE subcontractor fails to complete work under the subcontract for any reason. (§ 33.302(c)).

- Employ the six good faith efforts described in § 33.301 even if the prime contractor has achieved its fair share objectives under subpart D of Part 33. (§33.302(d)).
- Provide loan recipient DBE participation achievements with bid proposal: (1) list of ALL subcontractors (DBE and non-DBE) with type of work and estimated dollar amounts; (2) completed WIFA 6100 Form.
- Maintain records documenting its compliance with the requirements of Title 40 Part 33, including BIDDERS LIST documentation of its, and its prime contractors', good faith efforts (§ 33.501(a)).

APPENDIX B: TITLE 40 PART 33 SUBPART C—GOOD FAITH EFFORTS

§ 33.102 When do the requirements of this part apply?

The requirements of this part apply to procurement under EPA financial assistance agreements performed entirely within the United States, whether by a loan recipient or its prime contractor, for construction, equipment, services, and supplies.

§ 33.106 What assurances must EPA financial assistance recipients obtain from their contractors?

The recipient must ensure that each procurement contract it awards contains the term and condition specified in Appendix A to this part concerning compliance with the requirements of this part.

§ 33.206 Is there a list of certified MBEs and WBEs?

EPA OSDBU will maintain a list of certified MBEs and WBEs on EPA OSDBU's Home Page on the Internet. Any interested person may also obtain a copy of the list from EPA OSDBU. The Maryland Department of Transportation will also have a bidders list.

§ 33.301 What does this subpart require?

A recipient, including one exempted from applying the fair share objective requirements by § 33.411, is required to make the following good faith efforts whenever procuring construction, equipment, services and supplies under an EPA financial assistance agreement, even if it has achieved its fair share objectives under subpart D of this part:

- (a) Ensure DBEs are made aware of contracting opportunities fully practicable through outreach and recruitment activities. For Indian Tribal, State and Local and Government recipients, this will include placing DBEs on solicitation lists and soliciting them whenever they are potential sources.
- (b) Make information on forthcoming opportunities available to DBEs, arrange periods for contracts, and establish delivery schedules, where the requirements permit, in a way that encourages and facilitates participation by DBEs in the competitive process. This includes, whenever possible, posting solicitations for bids or proposals for a minimum of 30 calendar days before the bid or proposal closing date.
- (c) Consider in the contracting process whether firms competing for large contracts could subcontract with DBEs. For Indian Tribal, State and local Government recipients, this will include dividing total requirements when economically feasible into smaller tasks or quantities to permit maximum participation by DBEs in the competitive process.
- (d) Encourage contracting with a consortium of DBEs when a contract is too large for one of these firms to handle individually.
- (e) Use the services and assistance of the SBA and the Minority Business Development Agency of the Department of Commerce.
- (f) If the prime contractor awards subcontracts, require the prime contractor to take the steps in paragraphs (a) through (e) of this section.

§ 33.302 Are there any additional contract administration requirements?

- (a) Loan recipient must require its prime contractor to pay its subcontractor for satisfactory performance no more than 30 days from the prime contractor's receipt of payment from the recipient.
- (b) Its prime contractor must notify loan recipient in writing prior to any termination of a DBE subcontractor for convenience by the prime contractor.
- (c) If a DBE subcontractor fails to complete work under the subcontract for any reason, the recipient must require the prime contractor to employ the six good faith efforts described in § 33.301 if soliciting a replacement subcontractor.
- (d) A recipient must require its prime contractor to employ the six good faith efforts described in § 33.301 even if the prime contractor has achieved its fair share objectives under subpart D of this part.
- (e) A recipient must ensure that each procurement contract it awards contains the term and condition specified in the Appendix A concerning compliance with the requirements of this part. A recipient must also ensure that this term and condition is included in each procurement contract awarded by an entity receiving an identified loan under a financial assistance agreement to capitalize a revolving loan fund.

§ 33.410 Can a recipient be penalized for failing to meet its fair share objectives?

A recipient cannot be penalized, or treated by EPA as being in noncompliance with this subpart, solely because its MBE or WBE participation does not meet its applicable fair share objective. However, EPA may take remedial action under § 33.105 for a recipient's failure to comply with other provisions of this part, including, but not limited to, the good faith efforts requirements described in subpart C of this part.

Source: Federal Requirements and Contract Provisions for Special Appropriation Act Projects, US Environmental Protection Agency, Region III, June 2008

**APPENDIX C: RESOURCE LISTING AND CONTACT INFORMATION
FOR UTILIZATION OF MINORITY AND WOMEN’S BUSINESS ENTERPRISES**

Resource Listing	Contact	Website if applicable
<p>State of Maryland Governor’s Office of Minority Affairs The mission of the Governor's Office of Minority Affairs (GOMA) is facilitating minority business enterprise activities through coordinating and promoting government programs aimed at strengthening and preserving the state’s minority and women owned businesses.</p>	<p>Governor's Office of Minority Affairs Suite 1502 6 Saint Paul Street Baltimore MD 21202 767-8232 1-(877) 558-0998 f-(410) 333-7568 info@mdminoritybusiness.com</p>	<p>http://www.oma.state.md.us/</p>
<p>eMARYLAND MARKETPLACE ADVANTAGE The official online procurement tool for the state of Maryland.</p>	<p>Website</p>	<p>https://emma.maryland.gov/page.aspx/en/usr/login?ReturnUrl=%2fpage.aspx%2fen%2fbuy%2fhomepage</p>
<p>U.S. Small Business Administration (SBA) In addition to the national office, the SBA has local district and regional offices to assist small businesses in contracting with the public and private sector.</p>	<p>Website</p>	<p>www.sba.gov/category/navigation-structure/contracting/working-with-government</p>
<p>CCR/Pro-Net is an extensive database that combines the SBA’s Pro-Net database and the DOD’s Central Contractor Registration database of small businesses.</p>	<p>CCR Assistance Center 888-227-2423 269-961-5757 DSN: 661-5757</p>	<p>www.ccr.gov/ Select “Dynamic Small Business</p>
<p>U. S. Small Business Administration (SBA) - MD. District Office</p>	<p>City Crescent Bld. 6th Floor 10 South Howard St. Baltimore MD 21201 Phone: 410 962-6195</p>	<p>www.sba.gov/tools/local-assistance/districtoffices</p>
<p>Minority Business Development Administration (MBDA): The MBDA is an agency within the U.S. Dept. of Commerce, created to foster the development and growth of minority businesses in the U.S. and coordinates resources in the public and private sectors to help MBE’s. Recipients and bidders should contact the centers and provide notices of contracting opportunities. Also, see the Phoenix database, which matches minority companies with business opportunities.</p>	<p>1401 Constitution Ave NW Washington, D.C. 20230 Email: support@mbda.gov 1.888.324.1551</p>	<p>www.mbda.gov/</p>
<p>Standard Industrial Classification Codes (SIC) or North American Industry Classification System (NAICS) codes visit the website.</p>	<p>Website</p>	<p>www.sba.gov/content/north-american-industry-classification-system-codes-and-small-business-size-standards</p>

<p>Maryland Department of Transportation (MDOT) and the Minority/Disadvantaged Business Enterprise (MDOT – MBE/DBE). Loan recipients and bidders may locate qualified M/WBE’s through the MBE/WBE Directory.</p>	<p>Office Address 7201 Corporate Drive Hanover, MD 21076</p> <p>Or</p> <p>Mailing Address: P.O. Box 548 Hanover, MD 21076</p>	<p>www.mdot.maryland.gov/Office%20of%20Minority%20Business%20Enterprise/HomePage.html</p> <p>http://mbe.mdot.state.md.us/directory/ Click on “Proceed to Directory. Select any combination of the fields to identify M/WBE’s for the specific project opportunities.</p>
<p>U.S. EPA Office of Small, Disadvantaged Business Utilization (OSDBU) – OSDBU’s mission includes “fostering opportunities for partnerships, contracts, subagreements, and grants for small and socioeconomically disadvantaged concerns”. One of the resources to assist prime contractors is a listing of small and disadvantaged businesses (a vendor profile system) registered with OSDBU.</p>	<p>US.EPA Office of Small Programs 1200 Pennsylvania Avenue NW Mail Code 1230T Washington, D.C. 20460</p>	<p>http://cfpub.epa.gov/sbyps/ http://www.epa.gov/osdbu/ Select “search the OSDBU Registry” Click on the search criteria of interest (ethnicity, size, SIC, etc.)</p>
<p>National Black Chamber of Commerce</p>	<p>1350 Connecticut Ave. N.W. Suite 405 Washington D.C. 20036 Phone: 202 466-6888 Fax: 202 466-4918</p>	<p>www.nationalbcc.org</p> <p>Email: info@nationalbcc.org</p>
<p>Virginia Hispanic Chamber of Commerce (Northern Va.)</p>	<p>8300 Boone Blvd., 4TH Floor Vienna, VA 22182 Phone: 804.378.4099 Fax: 703 893-1269</p>	<p>www.vahcc.com</p>
<p>U.S. Hispanic Chamber of Commerce</p>	<p>2175 K Street NW Suite 100 Washington, D.C. 20037</p>	<p>www.usfcc.com</p>
<p>National Association of Minority Contractors (NAMC)</p>	<p>666 11 Street N.W. Suite 520 Washington D.C. 20001 Phone: 202 347-8250</p>	<p>www.namcnational.org/</p>
<p>Maryland/Washington Minority Contractors (MWMCA)</p>	<p>1107 North Point Blvd, Suite 227 Baltimore, MD 21224 410.282.6101 410.282.6102 –fax</p>	<p>www.mwmca.org</p>
<p>National Association of Women’s Business Owners (NAWBO) – National</p>	<p>1760 Old Meadow Rd. Ste 500 McLean VA 22102 Phone: 800.556.NAWBO 703.506.3268 703.506.3266-fax</p>	<p>www.nawbo.org</p>

NAWBO Baltimore Regional Chapter	4404 Silverbrook Lane, Suite E-204 Owings Mills MD 21117 Phone: 410 876-0502 410.654.9734-fax	www.nawbomaryland.org Email: info@nawbomaryland.org
NAWBO Delaware Chapter	P.O. Box 4657 Greenville Station Greenville, DE 19807-4657 Phone: 302 355.9945	www.nawbodelaware.org Email: info@nawbodelaware.org
MD/DC Minority Supplier Development Council (MSDC)	10770 Columbia Pike Lower Level, Suite L100 Silver Spring MD 20901 Phone: 301 592-6710 Fax: 301 592-6704	http://mddccouncil.org/
National Minority Supplier Development Council, Inc. (NMSDC)	1040 Avenue of the Americas, 2 nd Floor New York, New York 10018 Phone: 212 944-2430 212.719.9611-fax	www.nmsdcus.org/
UIDA Business Services is a Native American Procurement and Technical Assistance Center-maintains a comprehensive database of Native American owned firms	86 South Cobb Drive, MZ:0510 Marietta, GA 30063-0510 Phone, 770 494-0431 770.494.1236-fax or <u>Northeast Region</u> 2340 Dulles Corner Blvd Mail Stop: 1n01 Herndon, VA 20171 Phone: 703.561.3120 703.561.3124-fax	
Diversity Business (A multi-cultural online resource)	200 Pequot Avenue Southport, CT 06890 Phone 203.255.8966 203.255.8501-fax	www.diversitybusiness.com/
National Association of Women in Construction	327 S. Adams Street Fort Worth, TX 76104 Phone: 1-800-552-3506 Phone: 817.877.5551 817.877.0324-fax	www.nawic.org/

III. PRESIDENTIAL DOCUMENTS

PRESIDENTIAL EXECUTIVE ORDER 13202 OF FEBRUARY 17, 2001 and PRESIDENTIAL EXECUTIVE ORDER 13208 OF APRIL 8, 2001 are appended as Attachment II.

IV SEVERABILITY

In the event any provision of the within and foregoing Requirement, including any attachment thereto, shall be held illegal, invalid, unconstitutional or unenforceable by any court of competent jurisdiction, such holding shall not invalidate, render unenforceable or otherwise affect any other provision hereof.

V. PROJECT SIGNS

- 1. The prime contractor shall provide and erect a construction site sign as described below at a prominent location at each construction site.**
- 2. For projects funded in whole or in part by the Bipartisan Infrastructure Law (BIL), the prime contractor shall provide and erect an additional construction site sign at a prominent location at each construction site using the Investing in America Signage guidelines at <https://www.epa.gov/invest/investing-america-signage>.**

The owner shall approve the site for the signs' erection. The signs shall be prepared in accordance with detailed instructions provided by Maryland Department of the Environment (MDE).

It shall be the responsibility of the contractor to protect and maintain the signs in good condition throughout the life of the project.

Attachment II

Presidential Documents

Executive Order 13202 of February 17, 2001

Preservation of Open Competition and Government Neutrality Towards Government Contractors' Labor Relations on Federal and Federally Funded Construction Projects

By the authority vested in me as President by the Constitution and laws of the United States of America, including the Federal Property and Administrative Services Act, 40 U.S.C. 471 *et seq.*, and in order to (1) promote and ensure open competition on Federal and federally funded or assisted construction projects; (2) maintain Government neutrality towards Government contractors' labor relations on Federal and federally funded or assisted construction projects; (3) reduce construction costs to the Federal Government and to the taxpayers; (4) expand job opportunities, especially for small and disadvantaged businesses; and (5) prevent discrimination against Government contractors or their employees based upon labor affiliation or lack thereof; thereby promoting the economical, nondiscriminatory, and efficient administration and completion of Federal and federally funded or assisted construction projects, it is hereby ordered that:

Section 1. To the extent permitted by law, any executive agency awarding any construction contract after the date of this order, or obligating funds pursuant to such a contract, shall ensure that neither the awarding Government authority nor any construction manager acting on behalf of the Government shall, in its bid specifications, project agreements, or other controlling documents:

(a) Require or prohibit bidders, offerors, contractors, or subcontractors to enter into or adhere to agreements with one or more labor organizations, on the same or other related construction project(s); or

(b) Otherwise discriminate against bidders, offerors, contractors, or subcontractors for becoming or refusing to become or remain signatories or otherwise to adhere to agreements with one or more labor organizations, on the same or other related construction project(s).

(c) Nothing in this section shall prohibit contractors or subcontractors from voluntarily entering into agreements described in subsection (a).

Sec. 2. Contracts awarded before the date of this order, and subcontracts awarded pursuant to such contracts, whenever awarded, shall not be governed by this order.

Sec. 3. To the extent permitted by law, any executive agency issuing grants, providing financial assistance, or entering into cooperative agreements for construction projects, shall ensure that neither the bid specifications, project agreements, nor other controlling documents for construction contracts awarded after the date of this order by recipients of grants or financial assistance or by parties to cooperative agreements, nor those of any construction manager acting on their behalf, shall contain any of the requirements or prohibitions set forth in section 1(a) or (b) of this order.

Sec. 4. In the event that an awarding authority, a recipient of grants or financial assistance, a party to a cooperative agreement, or a construction manager acting on behalf of the foregoing, performs in a manner contrary to the provisions of sections 1 or 3 of this order, the executive agency awarding the contract, grant, or assistance shall take such action, consistent with law and regulation, as the agency determines may be appropriate.

Sec. 5. (a) The head of an executive agency may exempt a particular project, contract, subcontract, grant, or cooperative agreement from the requirements of any or all of the provisions of sections 1 and 3 of this order, if the agency head finds that special circumstances require an exemption in order to avert an imminent threat to public health or safety or to serve the national security.

(b) A finding of "special circumstances" under section 5(a) may not be based on the possibility or presence of a labor dispute concerning the use of contractors or subcontractors who are nonsignatories to, or otherwise do not adhere to, agreements with one or more labor organizations, or concerning employees on the project who are not members of or affiliated with a labor organization.

Sec. 6. (a) The term "construction contract" as used in this order means any contract for the construction, rehabilitation, alteration, conversion, extension, or repair of buildings, highways, or other improvements to real property.

(b) The term "executive agency" as used in this order shall have the same meaning it has in 5 U.S.C. 105, excluding the General Accounting Office.

(c) The term "labor organization" as used in this order shall have the same meaning it has in 42 U.S.C. 2000e(d).

Sec. 7. With respect to Federal contracts, within 60 days of the issuance of this order, the Federal Acquisition Regulatory Council shall take whatever action is required to amend the Federal Acquisition Regulation in order to implement the provisions of this order.

Sec. 8. As it relates to project agreements, Executive Order 12836 of February 1, 1993, which, among other things, revoked Executive Order 12818 of October 23, 1992, is revoked.

Sec. 9. The Presidential Memorandum of June 5, 1997, entitled "Use of Project Labor Agreements for Federal Construction Projects" (the "Memorandum"), is also revoked.

Sec. 10. The heads of executive departments and agencies shall revoke expeditiously any orders, rules, regulations, guidelines, or policies implementing or enforcing the Memorandum or Executive Order 12836 of February 1, 1993, as it relates to project agreements, to the extent consistent with law.

Sec. 11. This order is intended only to improve the internal management of the executive branch and is not intended to, nor does it, create any right to administrative or judicial review, or any right, whether substantive or procedural, enforceable by any party against the United States, its agencies or instrumentalities, its officers or employees, or any other person.



THE WHITE HOUSE,
February 17, 2001

Federal Register

Vol. 66, No. 70

Wednesday, April 11, 2001

Presidential Documents**Title 3—****Executive Order 13208 of April 8, 2001****The President****Amendment to Executive Order 13202, Preservation of Open Competition and Government Neutrality Towards Government Contractors' Labor Relations on Federal and Federally Funded Construction Projects**

By the authority vested in me as President by the Constitution and the laws of the United States of America, including the Federal Property and Administrative Services Act, 40 U.S.C. 471 *et seq.*, and in order to (1) promote and ensure open competition on Federal and federally funded or assisted construction projects; (2) maintain Government neutrality towards Government contractors' labor relations on Federal and federally funded or assisted construction projects; (3) reduce construction costs to the Federal Government and to the tax payers; (4) expand job opportunities, especially for small and disadvantaged businesses; (5) prevent discrimination against Government contractors or their employees based upon labor affiliation or lack thereof; and (6) prevent the inefficiency that may result from the disruption of a previously established contractual relationship in particular cases; thereby promoting the economical, nondiscriminatory, and efficient administration and completion of Federal and federally funded or assisted construction projects, it is hereby ordered that Executive Order 13202 of February 17, 2001, is amended by adding to section 5 of that order the following new subsection:

- (c) The head of an executive agency, upon application of an awarding authority, a recipient of grants or financial assistance, a party to a cooperative agreement, or a construction manager acting on behalf of the foregoing, may exempt a particular project from the requirements of any or all of the provisions of sections 1 and 3 of this order, if the agency head finds: (i) that the awarding authority, recipient of grants or financial assistance, party to a cooperative agreement, or construction manager acting on behalf of the foregoing had issued or was a party to, as of the date of this order, bid specifications, project agreements, agreements with one or more labor organizations, or other controlling documents with respect to that particular project, which contained any of the requirements or prohibitions set forth in sections 1(a) or (b) of this order; and (ii) that one or more construction contracts subject to such requirements or prohibitions had been awarded as of the date of this order.



THE WHITE HOUSE,
April 6, 2001.

[FR Doc. 01-9088
Filed 4-10-01; 8:45 am]
Billing code 3195-01-P

THE CONSTRUCTION SITE SIGN FOR PROJECTS FINANCIALLY SUPPORTED BY STATE REVOLVING LOAN FUNDS AND OTHER FUND SOURCES

White Background

Light Blue Scroll

Black Letters

PROJECT TITLE
Project Type (by MDE)

A PROJECT FINANCIALLY SUPPORTED BY THE
STATE OF MARYLAND AND
U.S. ENVIRONMENTAL PROTECTION AGENCY

UNDER THE DIRECTION
OF THE
MARYLAND DEPARTMENT
OF THE ENVIRONMENT

APPROVED BY THE
MARYLAND BOARD
OF PUBLIC WORKS

Westley W.O. Moore, Governor
Brooke E. Lierman, Comptroller
Dereck E. Davis, Treasurer



Total Project Cost: _____
State Loan: _____
State Grant: _____
Federal Funds: _____
Other Funds: _____
Local Funds: _____



4'

8'

Project Type:

Insert the selected item under the project title:

- ___ Green Infrastructure Project - Constructing environmentally beneficial “green” infrastructure
- ___ Wetlands - Creating wetlands to improve water quality and create wildlife habitat
- ___ Stream restoration - Restoring streams to improve water quality and create wildlife habitat
- ___ Living shorelines - Turning shorelines into living habitats to improve water quality and to reduce erosion and flooding
- ___ Septic connections - Connecting homes to public sewer to eliminate failing septic systems, improve water quality, and protect public health
- ___ Drinking water extension - Connecting homes to public water supply to improve drinking water quality
- ___ Stormwater project - Reducing stormwater runoff to improve water quality, protect public health, and reduce flooding
- ___ CSOs, Sewer project - Preventing sewer overflows to improve water quality and protect public health
- ___ ENR - Reducing pollution to improve Maryland waterways and the Chesapeake Bay and to protect public health

Investing in America Signage - Bipartisan Infrastructure Law

Use guidelines at <https://www.epa.gov/invest/investing-america-signage>

VI. FEDERAL WAGE RATE REQUIREMENTS UNDER THE DAVIS-BACON AND RELATED ACTS

Prevailing Wage Requirements for CWSRF Capitalization Grants

The recipient agrees to include in all agreements to provide assistance for the construction of treatment works carried out in whole or in part with such assistance made available by a State water pollution control revolving fund as authorized by Title VI of the Federal Water Pollution Control Act, also known as the CWA, (33 U.S.C. 1381 et seq.), or with such assistance made available under section 205(m) of that Act (33 U.S.C. 1285(m)), or both, a term and condition requiring compliance with the requirements of section 513 of that Act (33 U.S.C. 1372) in all procurement contracts and sub-grants, and require that loan recipients, procurement contractors and sub-grantees include such a term and condition in subcontracts and other lower tiered transactions. All contracts and subcontracts for the construction of treatment works carried out in whole or in part with assistance made available as stated herein shall insert in full in any contract in excess of \$2,000 the contract clauses as attached hereto entitled "Wage Rate Requirements Under the Clean Water Act, Section 513." This term and condition applies to all agreements to provide assistance under the authorities referenced herein, whether in the form of a loan, bond purchase, grant, or any other vehicle to provide financing for a project, where such agreements are executed on or after October 30, 2009.

Preamble

With respect to the CWSRF program, EPA provides capitalization grants to each State which in turn provides sub grants or loans to eligible entities within the State. Typically, the sub recipients are municipal or other local governmental entities that manage the funds. For these types of recipients, the provisions set forth under Roman numeral I, below, shall apply. Although EPA and the State remain responsible for ensuring sub recipients' compliance with the wage rate requirements set forth herein, those sub recipients shall have the primary responsibility to maintain payroll records as described in Section I-3(ii)(A), below and for compliance as described in Section I-5.

Occasionally, the sub recipient may be a private for profit or not for profit entity. For these types of recipients, the provisions set forth in Roman Numeral II, below, shall apply. Although EPA and the State remain responsible for ensuring sub recipients' compliance with the wage rate requirements set forth herein, those sub recipients shall have the primary responsibility to maintain payroll records as described in Section II-3(ii)(A), below and for compliance as described in Section II-5.

ATTACHMENT 1

I. Requirements Under Title VI of the Clean Water Act (CWA) For Sub recipients That Are Governmental

Entities:

The following terms and conditions specify how recipients will assist EPA in meeting its Davis-Bacon (DB) responsibilities when DB applies to EPA awards of financial assistance under Title VI of the CWA, with respect to State recipients and sub recipients that are governmental entities. If a sub recipient has questions regarding when DB applies, obtaining the correct DB wage determinations, DB provisions, or compliance monitoring, it may contact the State recipient. If a state recipient needs guidance, the recipient may contact EPA's Office of Grants and Debarment for guidance at EPA_Grants_Info@epa.gov. The recipient or sub recipient may also obtain additional guidance from the U.S. Department of Labor's (DOL) website at <http://www.dol.gov/whd/>.

1. Applicability of the DB prevailing wage requirements.

Under Title VI of the CWA, DB prevailing wage requirements apply to the construction, alteration, and repair of treatment works carried out in whole or in part with assistance made available by a State water pollution

control revolving fund. If a sub recipient encounters a unique situation at a site that presents uncertainties regarding DB applicability, the sub recipient must discuss the situation with the recipient State before authorizing work on that site.

2. Obtaining Wage Determinations.

(a) Sub recipients shall obtain the wage determination for the locality in which a covered activity subject to DB will take place prior to issuing requests for bids, proposals, quotes or other methods for soliciting contracts (solicitation) for activities subject to DB. These wage determinations shall be incorporated into solicitations and any subsequent contracts. Prime contracts must contain a provision requiring that subcontractors follow the wage determination incorporated into the prime contract.

- (i) While the solicitation remains open, the sub recipient shall monitor <https://sam.gov> weekly to ensure that the wage determination contained in the solicitation remains current. The sub recipients shall amend the solicitation if DOL issues a modification more than 10 days prior to the closing date (i.e. bid opening) for the solicitation. If DOL modifies or supersedes the applicable wage determination less than 10 days prior to the closing date, the sub recipients may request a finding from the State recipient that there is not a reasonable time to notify interested contractors of the modification of the wage determination. The State recipient will provide a report of its findings to the sub recipient.
- (ii) If the sub recipient does not award the contract within 90 days of the closure of the solicitation, any modifications or supersedes DOL makes to the wage determination contained in the solicitation shall be effective unless the State recipient, at the request of the sub recipient, obtains an extension of the 90-day period from DOL pursuant to 29 CFR 1.6(c)(3)(iv). The sub recipient shall monitor <https://sam.gov> on a weekly basis if it does not award the contract within 90 days of closure of the solicitation to ensure that wage determinations contained in the solicitation remain current.

(b) If the sub recipient carries out activity subject to DB by issuing a task order, work assignment or similar instrument to an existing contractor (ordering instrument) rather than by publishing a solicitation, the sub recipient shall insert the appropriate DOL wage determination from <https://sam.gov> into the ordering instrument.

(c) Sub recipients shall review all subcontracts subject to DB entered into by prime contractors to verify that the prime contractor has required its subcontractors to include the applicable wage determinations.

(d) As provided in 29 CFR 1.6(f), DOL may issue a revised wage determination applicable to a sub recipient's contract after the award of a contract or the issuance of an ordering instrument if DOL determines that the sub recipient has failed to incorporate a wage determination or has used a wage determination that clearly does not apply to the contract or ordering instrument. If this occurs, the sub recipient shall either terminate the contract or ordering instrument and issue a revised solicitation or ordering instrument or incorporate DOL's wage determination retroactive to the beginning of the contract or ordering instrument by change order. The sub recipient's contractor must be compensated for any increases in wages resulting from the use of DOL's revised wage determination.

3. Contract and Subcontract provisions.

(a) The Recipient shall insure that the sub recipient(s) shall insert in full in any contract in excess of \$2,000 which is entered into for the actual construction, alteration and/or repair, including painting and decorating, of a treatment work under the CWSRF - financed in whole or in part from Federal funds or in accordance with guarantees of a Federal agency or financed from funds obtained by pledge of any contract of a Federal agency to

make a loan, grant or annual contribution (except where a different meaning is expressly indicated), and which is subject to the labor standards provisions of any of the acts listed in § 5.1 or Title VI of the Clean Water Act, the following clauses:

(1) Minimum wages.

(i) All laborers and mechanics employed or working upon the site of the work will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act (29 CFR part 3)), the full amount of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor and such laborers and mechanics.

Contributions made or costs reasonably anticipated for bona fide fringe benefits under section 1(b)(2) of the DB Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of paragraph (a)(1)(iv) of this section; also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in § 5.5(a)(4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein: Provided that the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classification and wage rates conformed under paragraph (a)(1)(ii) of this section) and the DB poster (WH-1321) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers. Sub recipients may obtain wage determinations from DOL's website, <https://sam.gov/>.

(ii)(A) The sub recipient(s), on behalf of EPA, shall require that any class of laborers or mechanics, including helpers, which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. The State award official shall approve a request for an additional classification and wage rate and fringe benefits therefore only when the following criteria have been met:

(1) The work to be performed by the classification requested is not performed by a classification in the wage determination; and

(2) The classification is utilized in the area by the construction industry; and

(3) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

(B) If the contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the sub recipient(s) agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), documentation of the action taken and the request, including the local wage determination shall be sent by the sub recipient (s) to the State award official. The State award official will transmit a completed conformance request form (SF-1444 or similar) and supporting materials to WHD-CBACONFORMANCE_INCOMING@dol.gov and to the EPA DB Regional Coordinator concurrently. The DOL Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification request within 30 days of receipt and so advise the State award official or will notify the State award official within the 30-day period that additional time is necessary.

(C) In the event the contractor, the laborers or mechanics to be employed in the classification or their representatives, and the sub recipient(s) do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), documentation of the action taken and the request, including the local wage determination shall be sent by the sub recipient (s) to the State award official. The State award official will transmit a completed conformance request form (SF-1444 or similar), which indicates the State award official's disagreement and supporting materials to WHD-CBACONFORMANCE_INCOMING@dol.gov and to the EPA DB Regional Coordinator concurrently. The DOL Administrator, or an authorized representative, will issue a determination within 30 days of receipt of the request and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(D) The wage rate (including fringe benefits where appropriate) determined pursuant to paragraphs (a)(1)(ii)(B) or (C) of this section, shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

(iii) Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.

(iv) If the contractor does not make payments to a trustee or other third person, the contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program, Provided, That the Secretary of Labor has found, upon the written request of the contractor, that the applicable standards of the DB Act have been met. The Secretary of Labor may require the contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.

(2) Withholding. The sub recipient(s), shall upon written request of the EPA Award Official or an authorized representative of DOL, withhold or cause to be withheld from the contractor under this contract or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to DB prevailing wage requirements, which is held by the same prime contractor, so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees, and helpers, employed by the contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper, employed or working on the site of the work, all or part of the wages required by the contract, the EPA may, after written notice to the contractor, sponsor, applicant, or owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

(3) Payrolls and basic records.

(i) Payrolls and basic records relating thereto shall be maintained by the contractor during the course of the work and preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work. Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in section 1(b)(2)(B) of the DB Act), daily and weekly number of hours worked, deductions made and actual wages paid. Whenever the Secretary of Labor has found under 29 CFR 5.5(a)(1)(iv) that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in section 1(b)(2)(B) of the DB Act, the contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and

certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs.

(ii)(A) The contractor shall submit weekly, for each week in which any contract work is performed, a copy of all payrolls to the sub recipient, that is, the entity that receives the sub-grant or loan from the State capitalization grant recipient. Such documentation shall be available on request of the State recipient or EPA. As to each payroll copy received, the sub recipient shall provide written confirmation in a form satisfactory to the State indicating whether or not the project is in compliance with the requirements of 29 CFR 5.5(a)(1) based on the most recent payroll copies for the specified week. The payrolls shall set out accurately and completely all of the information required to be maintained under 29 CFR 5.5(a)(3)(i), except that full social security numbers and home addresses shall not be included on the weekly payrolls. Instead, the payrolls shall only need to include an individually identifying number for each employee (e.g., the last four digits of the employee's social security number). The required weekly payroll information may be submitted in any form desired. Optional Form WH-347 is available for this purpose from the Wage and Hour Division website at <http://www.dol.gov/whd/forms/wh347instr.htm> or its successor site.

The prime contractor is responsible for the submission of copies of payrolls by all subcontractors. Contractors and subcontractors shall maintain the full social security number and current address of each covered worker and shall provide them upon request to the sub recipient(s) for transmission to the State or EPA if requested by EPA, the State, the contractor, or the Wage and Hour Division of the DOL for purposes of an investigation or audit of compliance with prevailing wage requirements. It is not a violation of this section for a prime contractor to require a subcontractor to provide addresses and social security numbers to the prime contractor for its own records, without weekly submission to the sub recipient(s).

(B) Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the contractor or subcontractor or his or her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:

(1) That the payroll for the payroll period contains the information required to be provided under § 5.5 (a)(3)(ii) of Regulations, 29 CFR part 5, the appropriate information is being maintained under § 5.5 (a)(3)(i) of Regulations, 29 CFR part 5, and that such information is correct and complete;

(2) That each laborer or mechanic (including each helper, apprentice, and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in Regulations, 29 CFR part 3;

(3) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable wage determination incorporated into the contract.

(C) The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirement for submission of the "Statement of Compliance" required by paragraph (a)(3)(ii)(B) of this section.

(D) The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under section 1001 of title 18 and section 231 of title 31 of the United States Code.

(iii) The contractor or subcontractor shall make the records required under paragraph (a)(3)(i) of this section available for inspection, copying, or transcription by authorized representatives of the State, EPA or the DOL, and shall permit such representatives to interview employees during working hours on the job. If the contractor or subcontractor fails to submit the required records or to make them available, the EPA or State may, after

written notice to the contractor, sponsor, applicant, or owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

(4) Apprentices and trainees

(i) Apprentices. Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the DOL, Employment and Training Administration, Office of Apprenticeship Training, Employer and Labor Services, or with a State Apprenticeship Agency recognized by the Office, or if a person is employed in his or her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Office of Apprenticeship Training, Employer and Labor Services or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice. The allowable ratio of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the contractor as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate) specified in the contractor's or subcontractor's registered program shall be observed. Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeymen hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination. In the event the Office of Apprenticeship Training, Employer and Labor Services, or a State Apprenticeship Agency recognized by the Office, withdraws approval of an apprenticeship program, the contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(ii) Trainees. Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the DOL, Employment and Training Administration. The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration. Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman wage rate on the wage determination which provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. In the event the Employment and Training Administration withdraws approval of a training program,

the contractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(iii) Equal employment opportunity. The utilization of apprentices, trainees and journeymen under this part shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended and 29 CFR part 30.

(5) Compliance with Copeland Act requirements. The contractor shall comply with the requirements of 29 CFR part 3, which are incorporated by reference in this contract.

(6) Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clauses contained in 29 CFR 5.5(a)(1) through (10) and such other clauses as the EPA determines may be appropriate, and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in 29 CFR 5.5.

(7) Contract termination; debarment. A breach of the contract clauses in 29 CFR 5.5 may be grounds for termination of the contract, and for debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.

(8) Compliance with DB and Related Act requirements. All rulings and interpretations of the DB and Related Acts contained in 29 CFR parts 1, 3, and 5 are herein incorporated by reference in this contract.

(9) Disputes concerning labor standards. Disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the DOL set forth in 29 CFR parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and sub recipient(s), State, EPA, DOL, or the employees or their representatives.

(10) Certification of eligibility.

(i) By entering into this contract, the contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of section 3(a) of the DB Act or 29 CFR 5.12(a)(1).

(ii) No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of section 3(a) of the DB Act or 29 CFR 5.12(a)(1).

(iii) The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 U.S.C. 1001.

4. Contract Provision for Contracts in Excess of \$100,000.

(a) Contract Work Hours and Safety Standards Act. The sub recipient shall insert the following clauses set forth in paragraphs (a)(1), (2), (3), and (4) of this section in full in any contract in an amount in excess of \$100,000 and subject to the overtime provisions of the Contract Work Hours and Safety Standards Act. These clauses shall be inserted in addition to the clauses required by Item 3, above or 29 CFR 4.6. As used in this paragraph, the terms laborers and mechanics include watchmen and guards.

(1) Overtime requirements. No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.

(2) Violation; liability for unpaid wages; liquidated damages. In the event of any violation of the clause set forth in paragraph (a)(1) of this section the contractor and any subcontractor responsible therefore shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (a)(1) of this section, in the sum of \$29 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (a)(1) of this section.

(3) Withholding for unpaid wages and liquidated damages. The sub recipient, upon written request of the EPA Award Official or an authorized representative of the DOL, shall withhold or cause to be withheld, from any moneys payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph (a)(2) of this section.

(4) Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraph (a)(1) through (4) of this section and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs (a)(1) through (4) of this section.

(b) In addition to the clauses contained in Item 3, above, in any contract subject only to the Contract Work Hours and Safety Standards Act and not to any of the other statutes cited in 29 CFR 5.1, the Sub recipient shall insert a clause requiring that the contractor or subcontractor shall maintain payrolls and basic payroll records during the course of the work and shall preserve them for a period of three years from the completion of the contract for all laborers and mechanics, including guards and watchmen, working on the contract. Such records shall contain the name and address of each such employee, social security number, correct classifications, hourly rates of wages paid, daily and weekly number of hours worked, deductions made, and actual wages paid. Further, the Sub recipient shall insert in any such contract a clause providing that the records to be maintained under this paragraph shall be made available by the contractor or subcontractor for inspection, copying, or transcription by authorized representatives of the EPA and the DOL, and the contractor or subcontractor will permit such representatives to interview employees during working hours on the job.

5. Compliance Verification

(a) The sub recipient shall periodically interview a sufficient number of employees entitled to DB prevailing wages (covered employees) to verify that contractors or subcontractors are paying the appropriate wage rates. As provided in 29 CFR 5.6(a)(3), all interviews must be conducted in confidence. The sub recipient must use Standard Form 1445 (SF 1445) or equivalent documentation to memorialize the interviews. Copies of the SF 1445 are available from EPA on request.

(b) The sub recipient shall establish and follow an interview schedule based on its assessment of the risks of noncompliance with DB posed by contractors or subcontractors and the duration of the contract or subcontract. Sub recipients must conduct more frequent interviews if the initial interviews or other information indicated that there is a risk that the contractor or subcontractor is not complying with DB. Sub recipients shall immediately conduct interviews in response to an alleged violation of the prevailing wage requirements. All interviews shall be conducted in confidence.

(c) The sub recipient shall periodically conduct spot checks of a representative sample of weekly payroll data to verify that contractors or subcontractors are paying the appropriate wage rates. The sub recipient shall establish and follow a spot check schedule based on its assessment of the risks of noncompliance with DB posed by contractors or subcontractors and the duration of the contract or subcontract. At a minimum, if practicable, the sub recipient should spot check payroll data within two weeks of each contractor or subcontractor's submission of its initial payroll data and two weeks prior to the completion date the contract or subcontract. Sub recipients must conduct more frequent spot checks if the initial spot check or other information indicates that there is a risk that the contractor or subcontractor is not complying with DB. In addition, during the examinations the sub recipient shall verify evidence of fringe benefit plans and payments there under by contractors and subcontractors who claim credit for fringe benefit contributions.

(d) The sub recipient shall periodically review contractor's and subcontractor's use of apprentices and trainees to verify registration and certification with respect to apprenticeship and training programs approved by either the U.S DOL or a state, as appropriate, and that contractors and subcontractors are not using disproportionate numbers of, laborers, trainees and apprentices. These reviews shall be conducted in accordance with the schedules for spot checks and interviews described in Item 5(b) and (c) above.

(e) Sub recipients must immediately report potential violations of the DB prevailing wage requirements to the EPA DB contact listed above and to the appropriate DOL Wage and Hour District Office listed at <https://www.dol.gov/agencies/whd/contact/local-offices>.

II. Requirements Under Title VI of the CWA - For Sub recipients That Are Not Governmental Entities:

The following terms and conditions specify how recipients will assist EPA in meeting its DB responsibilities when DB applies to EPA awards of financial assistance under Title VI of the CWA with respect to sub recipients that are not governmental entities. If a sub recipient has questions regarding when DB applies, obtaining the correct DB wage determinations, DB provisions, or compliance monitoring, it may contact the State recipient for guidance. If a state recipient needs guidance, the recipient may contact EPA's Office of Grants and Debarment for guidance at EPA_Grants_Info@epa.gov. The recipient or sub recipient may also obtain additional guidance from DOL's website at <http://www.dol.gov/whd/>.

Under these terms and conditions, the sub recipient must submit its proposed DB wage determinations to the State recipient for approval prior to including the wage determination in any solicitation, contract task orders, work assignments, or similar instruments to existing contractors.

1. Applicability of the Davis- Bacon (DB) prevailing wage requirements.

Under Title VI of the CWA, DB prevailing wage requirements apply to the construction, alteration, and repair of treatment works carried out in whole or in part with assistance made available by a State water pollution control revolving fund. If a sub recipient encounters a unique situation at a site that presents uncertainties regarding DB applicability, the sub recipient must discuss the situation with the recipient State before authorizing work on that site.

2. Obtaining Wage Determinations.

(a) Sub recipients must obtain proposed wage determinations for specific localities at <https://sam.gov/>. After the sub recipient obtains its proposed wage determination, it must submit the wage determination to Ms. Bambi Turner, bambi.turner1@maryland.gov, (410) 537-3146, for approval prior to inserting the wage determination into a solicitation, contract or issuing task orders, work assignments or similar instruments to existing contractors (ordering instruments unless subsequently directed otherwise by the State recipient Award Official.)

(b) Sub recipients shall obtain the wage determination for the locality in which a covered activity subject to DB will take place prior to issuing requests for bids, proposals, quotes or other methods for soliciting contracts (solicitation) for activities subject to DB. These wage determinations shall be incorporated into solicitations and any subsequent contracts. Prime contracts must contain a provision requiring that subcontractors follow the wage determination incorporated into the prime contract.

- i) While the solicitation remains open, the sub recipient shall monitor <https://sam.gov/> on a weekly basis to ensure that the wage determination contained in the solicitation remains current. The sub recipients shall amend the solicitation if DOL issues a modification more than 10 days prior to the closing date (i.e. bid opening) for the solicitation. If DOL modifies or supersedes the applicable wage determination less than 10 days prior to the closing date, the sub recipients may request a finding from the State recipient that there is not a reasonable time to notify interested contractors of the modification of the wage determination. The State recipient will provide a report of its findings to the sub recipient.
- ii) If the sub recipient does not award the contract within 90 days of the closure of the solicitation, any modifications or supersedes DOL makes to the wage determination contained in the solicitation shall be effective unless the State recipient, at the request of the sub recipient, obtains an extension of the 90-day period from DOL pursuant to 29 CFR 1.6(c)(3)(iv). The sub recipient shall monitor <https://sam.gov/> on a weekly basis if it does not award the contract within 90 days of closure of the solicitation to ensure that wage determinations contained in the solicitation remain current.

(c) If the sub recipient carries out activity subject to DB by issuing a task order, work assignment or similar instrument to an existing contractor (ordering instrument) rather than by publishing a solicitation, the sub recipient shall insert the appropriate DOL wage determination from <https://sam.gov/> into the ordering instrument.

(d) Sub recipients shall review all subcontracts subject to DB entered into by prime contractors to verify that the prime contractor has required its subcontractors to include the applicable wage determinations.

(e) As provided in 29 CFR 1.6(f), DOL may issue a revised wage determination applicable to a sub recipient's contract after the award of a contract or the issuance of an ordering instrument if DOL determines that the sub recipient has failed to incorporate a wage determination or has used a wage determination that clearly does not apply to the contract or ordering instrument. If this occurs, the sub recipient shall either terminate the contract or ordering instrument and issue a revised solicitation or ordering instrument or incorporate DOL's wage determination retroactive to the beginning of the contract or ordering instrument by change order. The sub recipient's contractor must be compensated for any increases in wages resulting from the use of DOL's revised wage determination.

3. Contract and Subcontract provisions.

- (a) The Recipient shall insure that the sub recipient(s) shall insert in full in any contract in excess of \$2,000 which is entered into for the actual construction, alteration and/or repair, including painting and decorating, of a treatment work under the CWSRF - or in accordance with guarantees of a Federal agency or financed from funds obtained by pledge of any contract of a Federal agency to make a loan, grant or annual contribution (except where a different meaning is expressly indicated), and which is subject to the labor standards provisions of any of the acts listed in § 5.1 or Title VI of the CWA, the following clauses:

(1) Minimum wages.

(i) All laborers and mechanics employed or working upon the site of the work, will be paid unconditionally and

not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act (29 CFR part 3)), the full amount of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor and such laborers and mechanics.

Contributions made or costs reasonably anticipated for bona fide fringe benefits under section 1(b)(2) of the DB Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of paragraph (a)(1)(iv) of this section; also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in § 5.5(a)(4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein: Provided, that the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classification and wage rates conformed under paragraph (a)(1)(ii) of this section) and the DB poster (WH-1321) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers.

Sub recipients may obtain wage determinations from the DOL's website, <https://sam.gov/>.

(ii)(A) The sub recipient(s), on behalf of EPA, shall require that any class of laborers or mechanics, including helpers, which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. The State award official shall approve a request for an additional classification and wage rate and fringe benefits therefore only when the following criteria have been met:

- (1) The work to be performed by the classification requested is not performed by a classification in the wage determination; and
- (2) The classification is utilized in the area by the construction industry; and
- (3) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

(B) If the contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the sub recipient(s) agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), documentation of the action taken and the request, including the local wage determination shall be sent by the sub recipient(s) to the State award official. The State award official will transmit a completed conformance request form (SF-1444 or similar) and supporting materials to WHD-CBACONFORMANCE_INCOMING@dol.gov and to the EPA DB Regional Coordinator concurrently. The DOL Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification request within 30 days of receipt and so advise the State award official or will notify the State award official within the 30-day period that additional time is necessary.

(C) In the event the contractor, the laborers or mechanics to be employed in the classification or their representatives, and the sub recipient(s) do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), documentation of the action taken and the request, including the local wage determination shall be sent by the sub recipient (s) to the State award official. The State award official will transmit a completed conformance request form (SF-1444 or similar), which

indicates the State award official's disagreement and supporting materials to WHD-CBACONFIRMANCE_INCOMING@dol.gov and to the EPA DB Regional Coordinator concurrently. The DOL Administrator, or an authorized representative, will issue a determination within 30 days of receipt of the request and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(D) The wage rate (including fringe benefits where appropriate) determined pursuant to paragraphs (a)(1)(ii)(B) or (C) of this section, shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

(iii) Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.

(iv) If the contractor does not make payments to a trustee or other third person, the contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program, Provided, That the Secretary of Labor has found, upon the written request of the contractor, that the applicable standards of the DB Act have been met. The Secretary of Labor may require the contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.

(2) Withholding. The sub recipient(s) shall upon written request of the EPA Award Official or an authorized representative of the DOL, withhold or cause to be withheld from the contractor under this contract or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to DB prevailing wage requirements, which is held by the same prime contractor, so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees, and helpers, employed by the contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper, employed or working on the site of the work, all or part of the wages required by the contract, the EPA may, after written notice to the contractor, sponsor, applicant, or owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

(3) Payrolls and basic records.

(i) Payrolls and basic records relating thereto shall be maintained by the contractor during the course of the work and preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work. Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in section 1(b)(2)(B) of the DB Act), daily and weekly number of hours worked, deductions made and actual wages paid. Whenever the Secretary of Labor has found under 29 CFR 5.5(a)(1)(iv) that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in section 1(b)(2)(B) of the DB Act, the contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs.

(ii)(A) The contractor shall submit weekly, for each week in which any contract work is performed, a copy of all payrolls to the sub recipient, that is, the entity that receives the sub-grant or loan from the State capitalization

grant recipient. Such documentation shall be available on request of the State recipient or EPA. As to each payroll copy received, the sub recipient shall provide written confirmation in a form satisfactory to the State indicating whether or not the project is in compliance with the requirements of 29 CFR 5.5(a)(1) based on the most recent payroll copies for the specified week. The payrolls shall set out accurately and completely all of the information required to be maintained under 29 CFR 5.5(a)(3)(i), except that full social security numbers and home addresses shall not be included on the weekly payrolls. Instead, the payrolls shall only need to include an individually identifying number for each employee (e.g., the last four digits of the employee's social security number). The required weekly payroll information may be submitted in any form desired. Optional Form WH-347 is available for this purpose from the Wage and Hour Division website at <http://www.dol.gov/whd/forms/wh347instr.htm> or its successor site.

The prime contractor is responsible for the submission of copies of payrolls by all subcontractors. Contractors and subcontractors shall maintain the full social security number and current address of each covered worker and shall provide them upon request to the sub recipient(s) for transmission to the State or EPA if requested by EPA, the State, the contractor, or the Wage and Hour Division of the DOL for purposes of an investigation or audit of compliance with prevailing wage requirements. It is not a violation of this section for a prime contractor to require a subcontractor to provide addresses and social security numbers to the prime contractor for its own records, without weekly submission to the sub recipient(s).

(B) Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the contractor or subcontractor or his or her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:

(1) That the payroll for the payroll period contains the information required to be provided under § 5.5 (a)(3)(ii) of Regulations, 29 CFR part 5, the appropriate information is being maintained under § 5.5 (a)(3)(i) of Regulations, 29 CFR part 5, and that such information is correct and complete;

(2) That each laborer or mechanic (including each helper, apprentice, and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in Regulations, 29 CFR part 3;

(3) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable wage determination incorporated into the contract.

(C) The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirement for submission of the "Statement of Compliance" required by paragraph (a)(3)(ii)(B) of this section.

(D) The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under section 1001 of title 18 and section 231 of title 31 of the United States Code.

(iii) The contractor or subcontractor shall make the records required under paragraph (a)(3)(i) of this section available for inspection, copying, or transcription by authorized representatives of the State, EPA or the DOL, and shall permit such representatives to interview employees during working hours on the job. If the contractor or subcontractor fails to submit the required records or to make them available, the EPA or State may, after written notice to the contractor, sponsor, applicant, or owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

(4) Apprentices and trainees--

(i) Apprentices. Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the DOL, Employment and Training Administration, Office of Apprenticeship Training, Employer and Labor Services, or with a State Apprenticeship Agency recognized by the Office, or if a person is employed in his or her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Office of Apprenticeship Training, Employer and Labor Services or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice. The allowable ratio of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the contractor as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate) specified in the contractor's or subcontractors registered program shall be observed. Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeymen hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination. In the event the Office of Apprenticeship Training, Employer and Labor Services, or a State Apprenticeship Agency recognized by the Office, withdraws approval of an apprenticeship program, the contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(ii) Trainees. Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the DOL, Employment and Training Administration. The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration. Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman wage rate on the wage determination which provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. In the event the Employment and Training Administration withdraws approval of a training program, the contractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(iii) Equal employment opportunity. The utilization of apprentices, trainees and journeymen under this part shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended

and 29 CFR part 30.

(5) Compliance with Copeland Act requirements. The contractor shall comply with the requirements of 29 CFR part 3, which are incorporated by reference in this contract.

(6) Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clauses contained in 29 CFR 5.5(a)(1) through (10) and such other clauses as the EPA determines may be appropriate, and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in 29 CFR 5.5.

(7) Contract termination: debarment. A breach of the contract clauses in 29 CFR 5.5 may be grounds for termination of the contract, and for debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.

(8) Compliance with DB and Related Act requirements. All rulings and interpretations of the DB and Related Acts contained in 29 CFR parts 1, 3, and 5 are herein incorporated by reference in this contract.

(9) Disputes concerning labor standards. Disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the DOL set forth in 29 CFR parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and Sub recipient(s), State, EPA, DOL, or the employees or their representatives.

(10) Certification of eligibility.

(i) By entering into this contract, the contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of section 3(a) of the DB Act or 29 CFR 5.12(a)(1).

(ii) No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of section 3(a) of the DB Act or 29 CFR 5.12(a)(1).

(iii) The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 U.S.C. 1001.

4. Contract Provision for Contracts in Excess of \$100,000.

(a) Contract Work Hours and Safety Standards Act. The sub recipient shall insert the following clauses set forth in paragraphs (a)(1), (2), (3), and (4) of this section in full in any contract in an amount in excess of \$100,000 and subject to the overtime provisions of the Contract Work Hours and Safety Standards Act. These clauses shall be inserted in addition to the clauses required by Item 3, above or 29 CFR 4.6. As used in this paragraph, the terms laborers and mechanics include watchmen and guards.

(1) Overtime requirements. No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.

(2) Violation; liability for unpaid wages; liquidated damages. In the event of any violation of the clause set forth in paragraph (b)(1) of this section the contractor and any subcontractor responsible therefore shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for

liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (b)(1) of this section, in the sum of \$29 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (b)(1) of this section.

(3) Withholding for unpaid wages and liquidated damages. The sub recipient shall upon the request of the EPA Award Official or an authorized representative of the DOL, withhold or cause to be withheld, from any moneys payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph (a)(2) of this section.

(4) Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraph (a)(1) through (4) of this section and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs (a)(1) through (4) of this section.

(c) In addition to the clauses contained in Item 3, above, in any contract subject only to the Contract Work Hours and Safety Standards Act and not to any of the other statutes cited in 29 CFR 5.1, the Sub recipient shall insert a clause requiring that the contractor or subcontractor shall maintain payrolls and basic payroll records during the course of the work and shall preserve them for a period of three years from the completion of the contract for all laborers and mechanics, including guards and watchmen, working on the contract. Such records shall contain the name and address of each such employee, social security number, correct classifications, hourly rates of wages paid, daily and weekly number of hours worked, deductions made, and actual wages paid. Further, the Sub recipient shall insert in any such contract a clause providing that the records to be maintained under this paragraph shall be made available by the contractor or subcontractor for inspection, copying, or transcription by authorized representatives of the EPA and the DOL, and the contractor or subcontractor will permit such representatives to interview employees during working hours on the job.

5. Compliance Verification

(a) The sub recipient shall periodically interview a sufficient number of employees entitled to DB prevailing wages (covered employees) to verify that contractors or subcontractors are paying the appropriate wage rates. As provided in 29 CFR 5.6(a)(3), all interviews must be conducted in confidence. The sub recipient must use Standard Form 1445 (SF 1445) or equivalent documentation to memorialize the interviews. Copies of the SF 1445 are available from EPA on request.

(b) The sub recipient shall establish and follow an interview schedule based on its assessment of the risks of noncompliance with DB posed by contractors or subcontractors and the duration of the contract or subcontract. Sub recipients must conduct more frequent interviews if the initial interviews or other information indicated that there is a risk that the contractor or subcontractor is not complying with DB. Sub recipients shall immediately conduct interviews in response to an alleged violation of the prevailing wage requirements. All interviews shall be conducted in confidence.

(c). The sub recipient shall periodically conduct spot checks of a representative sample of weekly payroll data to verify that contractors or subcontractors are paying the appropriate wage rates. The sub recipient shall establish and follow a spot check schedule based on its assessment of the risks of noncompliance with DB posed by contractors or subcontractors and the duration of the contract or subcontract. At a minimum, if practicable the sub recipient should spot check payroll data within two weeks of each contractor or subcontractor's submission

of its initial payroll data and two weeks prior to the completion date the contract or subcontract. Sub recipients must conduct more frequent spot checks if the initial spot check or other information indicates that there is a risk that the contractor or subcontractor is not complying with DB. In addition, during the examinations the sub recipient shall verify evidence of fringe benefit plans and payments there under by contractors and subcontractors who claim credit for fringe benefit contributions.

(d). The sub recipient shall periodically review contractors and subcontractors use of apprentices and trainees to verify registration and certification with respect to apprenticeship and training programs approved by either DOL or a state, as appropriate, and that contractors and subcontractors are not using disproportionate numbers of, laborers, trainees and apprentices. These reviews shall be conducted in accordance with the schedules for spot checks and interviews described in Item 5(b) and (c) above.

(e) Sub recipients must immediately report potential violations of the DB prevailing wage requirements to the EPA DB contact listed above and to the appropriate DOL Wage and Hour District Office listed at <https://www.dol.gov/agencies/whd/contact/local-offices>.

Prevailing Wage Requirements for DWSRF Capitalization Grants

The recipient agrees to include in all agreements to provide assistance for any construction project carried out in whole or in part with such assistance made available by a drinking water revolving loan fund as authorized by Section 1452 of the Safe Drinking Water Act (42 U.S.C. 300j-12), a term and condition requiring compliance with the requirements of section 1450(e) of the Safe Drinking Water Act (42 U.S.C.300j-9(e)) in all procurement contracts and sub-grants, and require that loan recipients, procurement contractors and sub-grantees include such a term and condition in subcontracts and other lower tiered transactions. All contracts and subcontracts for any construction project carried out in whole or in part with assistance made available as stated herein shall insert in full in any contract in excess of \$2,000 the contract clauses as attached hereto entitled "Wage Rate Requirements Under The Clean Water Act, Section 513 and the Safe Drinking Water Act, Section 1450(e)." This term and condition applies to all agreements to provide assistance under the authorities referenced herein, whether in the form of a loan, bond purchase, grant, or any other vehicle to provide financing for a project, where such agreements are executed on or after October 30, 2009.

Preamble

With respect to the DWSRF program, EPA provides capitalization grants to each State which in turn provides sub grants or loans to eligible entities within the State. Typically, the sub recipients are municipal or other local governmental entities that manage the funds. For these types of recipients, the provisions set forth under Roman numeral I, below, shall apply. Although EPA and the State remain responsible for ensuring sub recipients' compliance with the wage rate requirements set forth herein, those sub recipients shall have the primary responsibility to maintain payroll records as described in Section I-3(ii)(A), below and for compliance as described in Section I-5.

Occasionally, the sub recipient may be a private for profit or not for profit entity. For these types of recipients, the provisions set forth in Roman Numeral II, below, shall apply. Although EPA and the State remain responsible for ensuring sub recipients' compliance with the wage rate requirements set forth herein, those sub recipients shall have the primary responsibility to maintain payroll records as described in Section II-3(ii)(A), below and for compliance as described in Section II-5.

ATTACHMENT 1

I. Requirements Under Section 1452(a)(5) of the Safe Drinking Water Act For Sub recipients That Are Governmental Entities:

The following terms and conditions specify how recipients will assist EPA in meeting its Davis-Bacon (DB) responsibilities when DB applies to EPA awards of financial assistance with respect to State recipients and sub

recipients that are governmental entities. If a sub recipient has questions regarding when DB applies, obtaining the correct DB wage determinations, DB provisions, or compliance monitoring, it may contact the State recipient. If a State recipient needs guidance, the recipient may contact EPA's Office of Grants and Debarment for guidance at EPA_Grants_Info@epa.gov. The recipient or sub recipient may also obtain additional guidance from the U.S. Department of Labor's (DOL) website at <http://www.dol.gov/whd/>

1. Applicability of the DB prevailing wage requirements.

DB prevailing wage requirements apply to the construction, alteration, and repair of treatment works carried out in whole or in part with assistance made available by a State water pollution control revolving fund and to any construction project carried out in whole or in part by assistance made available by a drinking water treatment revolving loan fund. If a sub recipient encounters a unique situation at a site that presents uncertainties regarding DB applicability, the sub recipient must discuss the situation with the recipient State before authorizing work on that site.

2. Obtaining Wage Determinations.

(a) Sub recipients shall obtain the wage determination for the locality in which a covered activity subject to DB will take place prior to issuing requests for bids, proposals, quotes or other methods for soliciting contracts (solicitation) for activities subject to DB. These wage determinations shall be incorporated into solicitations and any subsequent contracts. Prime contracts must contain a provision requiring that subcontractors follow the wage determination incorporated into the prime contract.

- (i) While the solicitation remains open, the sub recipient shall monitor <https://sam.gov/> weekly to ensure that the wage determination contained in the solicitation remains current. The sub recipients shall amend the solicitation if DOL issues a modification more than 10 days prior to the closing date (i.e. bid opening) for the solicitation. If DOL modifies or supersedes the applicable wage determination less than 10 days prior to the closing date, the sub recipients may request a finding from the State recipient that there is not a reasonable time to notify interested contractors of the modification of the wage determination. The State recipient will provide a report of its findings to the sub recipient.
- (ii) If the sub recipient does not award the contract within 90 days of the closure of the solicitation, any modifications or supersedes DOL makes to the wage determination contained in the solicitation shall be effective unless the State recipient, at the request of the sub recipient, obtains an extension of the 90-day period from DOL pursuant to 29 CFR 1.6(c)(3)(iv). The sub recipient shall monitor <https://sam.gov/> on a weekly basis if it does not award the contract within 90 days of closure of the solicitation to ensure that wage determinations contained in the solicitation remain current.

(b) If the sub recipient carries out activity subject to DB by issuing a task order, work assignment or similar instrument to an existing contractor (ordering instrument) rather than by publishing a solicitation, the sub recipient shall insert the appropriate DOL wage determination from <https://sam.gov/> into the ordering instrument.

(c) Sub recipients shall review all subcontracts subject to DB entered into by prime contractors to verify that the prime contractor has required its subcontractors to include the applicable wage determinations.

(d) As provided in 29 CFR 1.6(f), DOL may issue a revised wage determination applicable to a sub recipient's contract after the award of a contract or the issuance of an ordering instrument if DOL determines that the sub recipient has failed to incorporate a wage determination or has used a wage determination that clearly does not apply to the contract or ordering instrument. If this occurs, the sub recipient shall either terminate the contract

(B) If the contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the sub recipient(s) agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), documentation of the action taken and the request, including the local wage determination shall be sent by the sub recipient (s) to the State award official. The State award official will transmit a completed conformance request form (SF-1444 or similar) and supporting materials to WHD-CBACONFORMANCE_INCOMING@dol.gov and to the EPA DB Regional Coordinator concurrently. The Department of Labor Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification request within 30 days of receipt and so advise the State award official or will notify the State award official within the 30-day period that additional time is necessary.

(C) In the event the contractor, the laborers or mechanics to be employed in the classification or their representatives, and the sub recipient(s) do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), documentation of the action taken and the request, including the local wage determination shall be sent by the sub recipient (s) to the State award official. The State award official will transmit a completed conformance request form (SF-1444 or similar) which indicates the State award official's disagreement and supporting materials to WHD-CBACONFORMANCE_INCOMING@dol.gov and to the EPA DB Regional Coordinator concurrently. The Department of Labor Administrator, or an authorized representative, will issue a determination within 30 days of receipt of the request and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(D) The wage rate (including fringe benefits where appropriate) determined pursuant to paragraphs (a)(1)(ii)(B) or (C) of this section, shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

(iii) Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.

(iv) If the contractor does not make payments to a trustee or other third person, the contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program, Provided, That the Secretary of Labor has found, upon the written request of the contractor, that the applicable standards of the DB Act have been met. The Secretary of Labor may require the contractor to set aside assets in a separate account for the meeting of obligations under the plan or program.

(2) Withholding. The sub recipient(s), shall upon written request of the EPA Award Official or an authorized representative of the Department of Labor, withhold or cause to be withheld from the contractor under this contract or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to DB prevailing wage requirements, which is held by the same prime contractor, so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees, and helpers, employed by the contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper, employed or working on the site of the work, all or part of the wages required by the contract, the EPA may, after written notice to the contractor, sponsor, applicant, or owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

(3) Payrolls and basic records.

(i) Payrolls and basic records relating thereto shall be maintained by the contractor during the course of the work and preserved for a period of three years thereafter for all laborers and mechanics working at the site of

or ordering instrument and issue a revised solicitation or ordering instrument or incorporate DOL's wage determination retroactive to the beginning of the contract or ordering instrument by change order. The sub recipient's contractor must be compensated for any increases in wages resulting from the use of DOL's revised wage determination.

3. Contract and Subcontract provisions.

(a) The Recipient shall insure that the sub recipient(s) shall insert in full in any contract in excess of \$2,000 which is entered into for the actual construction, alteration and/or repair, including painting and decorating, of a treatment work under the CWSRF or a construction project carried out in whole or in part with assistance made available by the DWSRF, and which is subject to the labor standards provisions of any of the acts listed in § 5.1 or the Safe Drinking Water Act, Section 1452(a)(5), the following clauses:

(1) Minimum wages.

(i) All laborers and mechanics employed or working upon the site of the work will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act (29 CFR part 3)), the full amount of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor and such laborers and mechanics.

Contributions made or costs reasonably anticipated for bona fide fringe benefits under section 1(b)(2) of the DB Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of paragraph (a)(1)(iv) of this section; also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in § 5.5(a)(4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein: Provided that the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classification and wage rates conformed under paragraph (a)(1)(ii) of this section) and the DB poster (WH-1321) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers.

Sub recipients may obtain wage determinations from the U.S. Department of Labor's website, <https://sam.gov/>.

(ii)(A) The sub recipient(s), on behalf of EPA, shall require that any class of laborers or mechanics, including helpers, which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. The State award official shall approve a request for an additional classification and wage rate and fringe benefits therefore only when the following criteria have been met:

(1) The work to be performed by the classification requested is not performed by a classification in the wage determination; and

(2) The classification is utilized in the area by the construction industry; and

(3) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

the work. Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in section 1(b)(2)(B) of the DB Act), daily and weekly number of hours worked, deductions made and actual wages paid. Whenever the Secretary of Labor has found under 29 CFR 5.5(a)(1)(iv) that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in section 1(b)(2)(B) of the DB Act, the contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs.

(ii)(A) The contractor shall submit weekly, for each week in which any contract work is performed, a copy of all payrolls to the sub recipient, that is, the entity that receives the sub-grant or loan from the State capitalization grant recipient. Such documentation shall be available on request of the State recipient or EPA. As to each payroll copy received, the sub recipient shall provide written confirmation in a form satisfactory to the State indicating whether or not the project is in compliance with the requirements of 29 CFR 5.5(a)(1) based on the most recent payroll copies for the specified week. The payrolls shall set out accurately and completely all of the information required to be maintained under 29 CFR 5.5(a)(3)(i), except that full social security numbers and home addresses shall not be included on the weekly payrolls. Instead, the payrolls shall only need to include an individually identifying number for each employee (e.g., the last four digits of the employee's social security number). The required weekly payroll information may be submitted in any form desired. Optional Form WH-347 is available for this purpose from the Wage and Hour Division website at <http://www.dol.gov/whd/forms/wh347instr.htm> or its successor site.

The prime contractor is responsible for the submission of copies of payrolls by all subcontractors. Contractors and subcontractors shall maintain the full social security number and current address of each covered worker and shall provide them upon request to the sub recipient(s) for transmission to the State or EPA if requested by EPA, the State, the contractor, or the Wage and Hour Division of the Department of Labor for purposes of an investigation or audit of compliance with prevailing wage requirements. It is not a violation of this section for a prime contractor to require a subcontractor to provide addresses and social security numbers to the prime contractor for its own records, without weekly submission to the sub recipient(s).

(B) Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the contractor or subcontractor or his or her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:

- (1) That the payroll for the payroll period contains the information required to be provided under § 5.5 (a)(3)(ii) of Regulations, 29 CFR part 5, the appropriate information is being maintained under § 5.5 (a)(3)(i) of Regulations, 29 CFR part 5, and that such information is correct and complete;
- (2) That each laborer or mechanic (including each helper, apprentice, and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in Regulations, 29 CFR part 3;
- (3) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable wage determination incorporated into the contract.

(C) The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirement for submission of the "Statement of Compliance" required by paragraph (a)(3)(ii)(B) of this section.

(D) The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under section 1001 of title 18 and section 231 of title 31 of the United States Code.

(iii) The contractor or subcontractor shall make the records required under paragraph (a)(3)(i) of this section available for inspection, copying, or transcription by authorized representatives of the State, EPA or the Department of Labor, and shall permit such representatives to interview employees during working hours on the job. If the contractor or subcontractor fails to submit the required records or to make them available, the EPA or State may, after written notice to the contractor, sponsor, applicant, or owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

(4) Apprentices and trainees

(i) Apprentices. Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Office of Apprenticeship Training, Employer and Labor Services, or with a State Apprenticeship Agency recognized by the Office, or if a person is employed in his or her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Office of Apprenticeship Training, Employer and Labor Services or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice. The allowable ratio of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the contractor as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate) specified in the contractor's or subcontractor's registered program shall be observed. Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeymen hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination. In the event the Office of Apprenticeship Training, Employer and Labor Services, or a State Apprenticeship Agency recognized by the Office, withdraws approval of an apprenticeship program, the contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(ii) Trainees. Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the U.S. Department of Labor, Employment and Training Administration. The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration. Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress,

expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman wage rate on the wage determination which provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. In the event the Employment and Training Administration withdraws approval of a training program, the contractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(iii) Equal employment opportunity. The utilization of apprentices, trainees and journeymen under this part shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended and 29 CFR part 30.

(5) Compliance with Copeland Act requirements. The contractor shall comply with the requirements of 29 CFR part 3, which are incorporated by reference in this contract.

(6) Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clauses contained in 29 CFR 5.5(a)(1) through (10) and such other clauses as the EPA determines may be appropriate, and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in 29 CFR 5.5.

(7) Contract termination; debarment. A breach of the contract clauses in 29 CFR 5.5 may be grounds for termination of the contract, and for debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.

(8) Compliance with DB and Related Act requirements. All rulings and interpretations of the DB and Related Acts contained in 29 CFR parts 1, 3, and 5 are herein incorporated by reference in this contract.

(9) Disputes concerning labor standards. Disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and sub recipient(s), State, EPA, the U.S. Department of Labor, or the employees or their representatives.

(10) Certification of eligibility.

(i) By entering into this contract, the contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of section 3(a) of the DB Act or 29 CFR 5.12(a)(1).

(ii) No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of section 3(a) of the DB Act or 29 CFR 5.12(a)(1).

(iii) The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 U.S.C. 1001.

4. Contract Provision for Contracts in Excess of \$100,000.

(a) Contract Work Hours and Safety Standards Act. The sub recipient shall insert the following clauses set forth in paragraphs (a)(1), (2), (3), and (4) of this section in full in any contract in an amount in excess of \$100,000 and subject to the overtime provisions of the Contract Work Hours and Safety Standards Act. These clauses shall be inserted in addition to the clauses required by Item 3, above or 29 CFR 4.6. As used in this paragraph, the terms laborers and mechanics include watchmen and guards.

(1) Overtime requirements. No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.

(2) Violation; liability for unpaid wages; liquidated damages. In the event of any violation of the clause set forth in paragraph (a)(1) of this section the contractor and any subcontractor responsible therefore shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (a)(1) of this section, in the sum of \$29 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (a)(1) of this section.

(3) Withholding for unpaid wages and liquidated damages. The sub recipient, upon written request of the EPA Award Official or an authorized representative of the Department of Labor, shall withhold or cause to be withheld, from any moneys payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph (a)(2) of this section.

(4) Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraph (a)(1) through (4) of this section and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs (a)(1) through (4) of this section.

(b) In addition to the clauses contained in Item 3, above, in any contract subject only to the Contract Work Hours and Safety Standards Act and not to any of the other statutes cited in 29 CFR 5.1, the Sub recipient shall insert a clause requiring that the contractor or subcontractor shall maintain payrolls and basic payroll records during the course of the work and shall preserve them for a period of three years from the completion of the contract for all laborers and mechanics, including guards and watchmen, working on the contract. Such records shall contain the name and address of each such employee, social security number, correct classifications, hourly rates of wages paid, daily and weekly number of hours worked, deductions made, and actual wages paid. Further, the Sub recipient shall insert in any such contract a clause providing that the records to be maintained under this paragraph shall be made available by the contractor or subcontractor for inspection, copying, or transcription by authorized representatives of the EPA and the Department of Labor, and the contractor or subcontractor will permit such representatives to interview employees during working hours on the job.

5. Compliance Verification

- (a) The sub recipient shall periodically interview a sufficient number of employees entitled to DB prevailing wages (covered employees) to verify that contractors or subcontractors are paying the appropriate wage rates. As provided in 29 CFR 5.6(a)(3), all interviews must be conducted in confidence. The sub recipient must use Standard Form 1445 (SF 1445) or equivalent documentation to memorialize the interviews. Copies of the SF 1445 are available from EPA on request.
- (b) The sub recipient shall establish and follow an interview schedule based on its assessment of the risks of noncompliance with DB posed by contractors or subcontractors and the duration of the contract or subcontract. Sub recipients must conduct more frequent interviews if the initial interviews or other information indicated that there is a risk that the contractor or subcontractor is not complying with DB. Sub recipients shall immediately conduct interviews in response to an alleged violation of the prevailing wage requirements. All interviews shall be conducted in confidence.
- (c) The sub recipient shall periodically conduct spot checks of a representative sample of weekly payroll data to verify that contractors or subcontractors are paying the appropriate wage rates. The sub recipient shall establish and follow a spot check schedule based on its assessment of the risks of noncompliance with DB posed by contractors or subcontractors and the duration of the contract or subcontract. At a minimum, if practicable, the sub recipient should spot check payroll data within two weeks of each contractor or subcontractor's submission of its initial payroll data and two weeks prior to the completion date the contract or subcontract. Sub recipients must conduct more frequent spot checks if the initial spot check or other information indicates that there is a risk that the contractor or subcontractor is not complying with DB. In addition, during the examinations the sub recipient shall verify evidence of fringe benefit plans and payments there under by contractors and subcontractors who claim credit for fringe benefit contributions.
- (d) The sub recipient shall periodically review contractor's and subcontractor's use of apprentices and trainees to verify registration and certification with respect to apprenticeship and training programs approved by either the U.S Department of Labor or a state, as appropriate, and that contractors and subcontractors are not using disproportionate numbers of, laborers, trainees and apprentices. These reviews shall be conducted in accordance with the schedules for spot checks and interviews described in Item 5(b) and (c) above.
- (e) Sub recipients must immediately report potential violations of the DB prevailing wage requirements to the EPA DB contact listed above and to the appropriate DOL Wage and Hour District Office listed at <https://www.dol.gov/agencies/whd/contact/local-offices>.

II. Requirements Under Section 1452(a)(5) of the Safe Drinking Water Act For Sub recipients That Are Not Governmental Entities:

The following terms and conditions specify how recipients will assist EPA in meeting its DB responsibilities when DB applies to EPA awards of financial assistance under the Safe Drinking Water Act, Section 1452(a)(5) with respect to sub recipients that are not governmental entities. If a sub recipient has questions regarding when DB applies, obtaining the correct DB wage determinations, DB provisions, or compliance monitoring, it may contact the State recipient for guidance. If a State recipient needs guidance, the recipient may contact EPA's Office of Grants and Debarment for guidance at EPA_Grants_Info@epa.gov The recipient or sub recipient may also obtain additional guidance from DOL's website at <http://www.dol.gov/whd/>

Under these terms and conditions, the sub recipient must submit its proposed DB wage determinations to the State recipient for approval prior to including the wage determination in any solicitation, contract task orders, work assignments, or similar instruments to existing contractors.

1. Applicability of the Davis- Bacon (DB) prevailing wage requirements.

Under the Safe Drinking Water Act, Section 1452(a)(5), DB prevailing wage requirements apply to the construction, alteration, and repair of treatment works carried out in whole or in part with assistance made available by a State water pollution control revolving fund and to any construction project carried out in whole or in part by assistance made available by a drinking water treatment revolving loan fund. If a sub recipient encounters a unique situation at a site that presents uncertainties regarding DB applicability, the sub recipient must discuss the situation with the recipient State before authorizing work on that site.

2. Obtaining Wage Determinations.

(a) Sub recipients must obtain proposed wage determinations for specific localities at <https://sam.gov/>. After the sub recipient obtains its proposed wage determination, it must submit the wage determination to Ms. Bambi Turner, bambi.turner1@maryland.gov, (410) 537-3146, for approval prior to inserting the wage determination into a solicitation, contract or issuing task orders, work assignments or similar instruments to existing contractors (ordering instruments unless subsequently directed otherwise by the State recipient Award Official.)

(b) Sub recipients shall obtain the wage determination for the locality in which a covered activity subject to DB will take place prior to issuing requests for bids, proposals, quotes or other methods for soliciting contracts (solicitation) for activities subject to DB. These wage determinations shall be incorporated into solicitations and any subsequent contracts. Prime contracts must contain a provision requiring that subcontractors follow the wage determination incorporated into the prime contract.

- (i) While the solicitation remains open, the sub recipient shall monitor <https://sam.gov/> on a weekly basis to ensure that the wage determination contained in the solicitation remains current. The sub recipients shall amend the solicitation if DOL issues a modification more than 10 days prior to the closing date (i.e. bid opening) for the solicitation. If DOL modifies or supersedes the applicable wage determination less than 10 days prior to the closing date, the sub recipients may request a finding from the State recipient that there is not a reasonable time to notify interested contractors of the modification of the wage determination. The State recipient will provide a report of its findings to the sub recipient.
- (ii) If the sub recipient does not award the contract within 90 days of the closure of the solicitation, any modifications or supersedes DOL makes to the wage determination contained in the solicitation shall be effective unless the State recipient, at the request of the sub recipient, obtains an extension of the 90-day period from DOL pursuant to 29 CFR 1.6(c)(3)(iv). The sub recipient shall monitor <https://sam.gov/> on a weekly basis if it does not award the contract within 90 days of closure of the solicitation to ensure that wage determinations contained in the solicitation remain current.

(c) If the sub recipient carries out activity subject to DB by issuing a task order, work assignment or similar instrument to an existing contractor (ordering instrument) rather than by publishing a solicitation, the sub recipient shall insert the appropriate DOL wage determination from <https://sam.gov/> into the ordering instrument.

(d) Sub recipients shall review all subcontracts subject to DB entered into by prime contractors to verify that the prime contractor has required its subcontractors to include the applicable wage determinations.

(e) As provided in 29 CFR 1.6(f), DOL may issue a revised wage determination applicable to a sub recipient's contract after the award of a contract or the issuance of an ordering instrument if DOL determines that the sub recipient has failed to incorporate a wage determination or has used a wage determination that clearly does not

apply to the contract or ordering instrument. If this occurs, the sub recipient shall either terminate the contract or ordering instrument and issue a revised solicitation or ordering instrument or incorporate DOL's wage determination retroactive to the beginning of the contract or ordering instrument by change order. The sub recipient's contractor must be compensated for any increases in wages resulting from the use of DOL's revised wage determination.

3. Contract and Subcontract provisions.

(a) The Recipient shall insure that the sub recipient(s) shall insert in full in any contract in excess of \$2,000 which is entered into for the actual construction, alteration and/or repair, including painting and decorating, of a treatment work under the CWSRF or a construction project carried out in whole or in part with assistance made available by the DWSRF, and which is subject to the labor standards provisions of any of the acts listed in § 5.1 or the Safe Drinking Water Act, Section 1452(a)(5), the following clauses:

(1) Minimum wages.

(i) All laborers and mechanics employed or working upon the site of the work, will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act (29 CFR part 3)), the full amount of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor and such laborers and mechanics.

Contributions made or costs reasonably anticipated for bona fide fringe benefits under section 1(b)(2) of the DB Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of paragraph (a)(1)(iv) of this section; also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in § 5.5(a)(4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein: Provided, that the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classification and wage rates conformed under paragraph (a)(1)(ii) of this section) and the DB poster (WH-1321) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers.

Sub recipients may obtain wage determinations from DOL's website, <https://sam.gov/>.

(ii)(A) The sub recipient(s), on behalf of EPA, shall require that any class of laborers or mechanics, including helpers, which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. The State award official shall approve a request for an additional classification and wage rate and fringe benefits therefore only when the following criteria have been met:

(1) The work to be performed by the classification requested is not performed by a classification in the wage determination; and

(2) The classification is utilized in the area by the construction industry; and

(3) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage

rates contained in the wage determination.

(B) If the contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the sub recipient(s) agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), documentation of the action taken and the request, including the local wage determination shall be sent by the sub recipient(s) to the State award official. The State award official will transmit a completed conformance request form (SF-1444 or similar) and supporting materials to WHD-CBACONFORMANCE_INCOMING@dol.gov and to the EPA DB Regional Coordinator concurrently. The Department of Labor Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification request within 30 days of receipt and so advise the State award official or will notify the State award official within the 30-day period that additional time is necessary.

(C) In the event the contractor, the laborers or mechanics to be employed in the classification or their representatives, and the sub recipient(s) do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), documentation of the action taken and the request, including the local wage determination shall be sent by the sub recipient (s) to the State award official. The State award official will transmit a completed conformance request form (SF-1444 or similar) which indicates the State award official's disagreement and supporting materials to WHD-CBACONFORMANCE_INCOMING@dol.gov, and to the EPA DB Regional Coordinator concurrently. The Department of Labor Administrator, or an authorized representative, will issue a determination within 30 days of receipt of the request and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(D) The wage rate (including fringe benefits where appropriate) determined pursuant to paragraphs (a)(1)(ii)(B) or (C) of this section, shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

(iii) Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.

(iv) If the contractor does not make payments to a trustee or other third person, the contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program, Provided, That the Secretary of Labor has found, upon the written request of the contractor, that the applicable standards of the DB Act have been met. The Secretary of Labor may require the contractor to set aside assets in a separate account for the meeting of obligations under the plan or program.

(2) Withholding. The sub recipient(s) shall upon written request of the EPA Award Official or an authorized representative of the Department of Labor, withhold or cause to be withheld from the contractor under this contract or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to DB prevailing wage requirements, which is held by the same prime contractor, so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees, and helpers, employed by the contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper, employed or working on the site of the work, all or part of the wages required by the contract, the EPA may, after written notice to the contractor, sponsor, applicant, or owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

(3) Payrolls and basic records.

(i) Payrolls and basic records relating thereto shall be maintained by the contractor during the course of the

work and preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work. Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in section 1(b)(2)(B) of the DB Act), daily and weekly number of hours worked, deductions made and actual wages paid. Whenever the Secretary of Labor has found under 29 CFR 5.5(a)(1)(iv) that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in section 1(b)(2)(B) of the DB Act, the contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs.

(ii)(A) The contractor shall submit weekly, for each week in which any contract work is performed, a copy of all payrolls to the sub recipient, that is, the entity that receives the sub-grant or loan from the State capitalization grant recipient. Such documentation shall be available on request of the State recipient or EPA. As to each payroll copy received, the sub recipient shall provide written confirmation in a form satisfactory to the State indicating whether or not the project is in compliance with the requirements of 29 CFR 5.5(a)(1) based on the most recent payroll copies for the specified week. The payrolls shall set out accurately and completely all of the information required to be maintained under 29 CFR 5.5(a)(3)(i), except that full social security numbers and home addresses shall not be included on the weekly payrolls. Instead, the payrolls shall only need to include an individually identifying number for each employee (e.g., the last four digits of the employee's social security number). The required weekly payroll information may be submitted in any form desired. Optional Form WH-347 is available for this purpose from the Wage and Hour Division website at <http://www.dol.gov/whd/forms/wh347instr.htm> or its successor site.

The prime contractor is responsible for the submission of copies of payrolls by all subcontractors. Contractors and subcontractors shall maintain the full social security number and current address of each covered worker and shall provide them upon request to the sub recipient(s) for transmission to the State or EPA if requested by EPA, the State, the contractor, or the Wage and Hour Division of the Department of Labor for purposes of an investigation or audit of compliance with prevailing wage requirements. It is not a violation of this section for a prime contractor to require a subcontractor to provide addresses and social security numbers to the prime contractor for its own records, without weekly submission to the sub recipient(s).

(B) Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the contractor or subcontractor or his or her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:

(1) That the payroll for the payroll period contains the information required to be provided under § 5.5 (a)(3)(ii) of Regulations, 29 CFR part 5, the appropriate information is being maintained under § 5.5 (a)(3)(i) of Regulations, 29 CFR part 5, and that such information is correct and complete;

(2) That each laborer or mechanic (including each helper, apprentice, and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in Regulations, 29 CFR part 3;

(3) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable wage determination incorporated into the contract.

(C) The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirement for submission of the "Statement of Compliance" required by paragraph (a)(3)(ii)(B) of this section.

(D) The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under section 1001 of title 18 and section 231 of title 31 of the United States Code.

(iii) The contractor or subcontractor shall make the records required under paragraph (a)(3)(i) of this section available for inspection, copying, or transcription by authorized representatives of the State, EPA or the Department of Labor, and shall permit such representatives to interview employees during working hours on the job. If the contractor or subcontractor fails to submit the required records or to make them available, the EPA or State may, after written notice to the contractor, sponsor, applicant, or owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

(4) Apprentices and trainees--

(i) Apprentices. Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the DOL, Employment and Training Administration, Office of Apprenticeship Training, Employer and Labor Services, or with a State Apprenticeship Agency recognized by the Office, or if a person is employed in his or her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Office of Apprenticeship Training, Employer and Labor Services or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice. The allowable ratio of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the contractor as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate) specified in the contractor's or subcontractors registered program shall be observed. Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeymen hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination. In the event the Office of Apprenticeship Training, Employer and Labor Services, or a State Apprenticeship Agency recognized by the Office, withdraws approval of an apprenticeship program, the contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(ii) Trainees. Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the DOL, Employment and Training Administration. The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration. Every trainee must be paid at not less

than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman wage rate on the wage determination which provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. In the event the Employment and Training Administration withdraws approval of a training program, the contractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(iii) Equal employment opportunity. The utilization of apprentices, trainees and journeymen under this part shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended and 29 CFR part 30.

(5) Compliance with Copeland Act requirements. The contractor shall comply with the requirements of 29 CFR part 3, which are incorporated by reference in this contract.

(6) Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clauses contained in 29 CFR 5.5(a)(1) through (10) and such other clauses as the EPA determines may be appropriate, and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in 29 CFR 5.5.

(7) Contract termination: debarment. A breach of the contract clauses in 29 CFR 5.5 may be grounds for termination of the contract, and for debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.

(8) Compliance with DB and Related Act requirements. All rulings and interpretations of the DB and Related Acts contained in 29 CFR parts 1, 3, and 5 are herein incorporated by reference in this contract.

(9) Disputes concerning labor standards. Disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and Sub recipient(s), State, EPA, DOL, or the employees or their representatives.

(10) Certification of eligibility.

(i) By entering into this contract, the contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of section 3(a) of the DB Act or 29 CFR 5.12(a)(1).

(ii) No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of section 3(a) of the DB Act or 29 CFR 5.12(a)(1).

(iii) The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 U.S.C. 1001.

4. Contract Provision for Contracts in Excess of \$100,000.

(a) Contract Work Hours and Safety Standards Act. The sub recipient shall insert the following clauses set forth in paragraphs (a)(1), (2), (3), and (4) of this section in full in any contract in an amount in excess of \$100,000 and subject to the overtime provisions of the Contract Work Hours and Safety Standards Act. These clauses shall be inserted in addition to the clauses required by Item 3, above or 29 CFR 4.6. As used in this paragraph, the terms laborers and mechanics include watchmen and guards.

(1) Overtime requirements. No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.

(2) Violation; liability for unpaid wages; liquidated damages. In the event of any violation of the clause set forth in paragraph (b)(1) of this section the contractor and any subcontractor responsible therefore shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (b)(1) of this section, in the sum of \$29 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (b)(1) of this section.

(3) Withholding for unpaid wages and liquidated damages. The sub recipient shall upon the request of the EPA Award Official or an authorized representative of the Department of Labor, withhold or cause to be withheld, from any moneys payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph (a)(2) of this section.

(4) Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraph (a)(1) through (4) of this section and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs (a)(1) through (4) of this section.

(b) In addition to the clauses contained in Item 3, above, in any contract subject only to the Contract Work Hours and Safety Standards Act and not to any of the other statutes cited in 29 CFR 5.1, the Sub recipient shall insert a clause requiring that the contractor or subcontractor shall maintain payrolls and basic payroll records during the course of the work and shall preserve them for a period of three years from the completion of the contract for all laborers and mechanics, including guards and watchmen, working on the contract. Such records shall contain the name and address of each such employee, social security number, correct classifications, hourly rates of wages paid, daily and weekly number of hours worked, deductions made, and actual wages paid. Further, the Sub recipient shall insert in any such contract a clause providing that the records to be maintained under this paragraph shall be made available by the contractor or subcontractor for inspection, copying, or transcription by authorized representatives of the EPA and the Department of Labor, and the contractor or subcontractor will permit such representatives to interview employees during working hours on the job.

5. Compliance Verification

- (a) The sub recipient shall periodically interview a sufficient number of employees entitled to DB prevailing wages (covered employees) to verify that contractors or subcontractors are paying the appropriate wage rates. As provided in 29 CFR 5.6(a)(3), all interviews must be conducted in confidence. The sub recipient must use Standard Form 1445 (SF 1445) or equivalent documentation to memorialize the interviews. Copies of the SF 1445 are available from EPA on request.
- (b) The sub recipient shall establish and follow an interview schedule based on its assessment of the risks of noncompliance with DB posed by contractors or subcontractors and the duration of the contract or subcontract. Sub recipients must conduct more frequent interviews if the initial interviews or other information indicated that there is a risk that the contractor or subcontractor is not complying with DB. Sub recipients shall immediately conduct interviews in response to an alleged violation of the prevailing wage requirements. All interviews shall be conducted in confidence.
- (c). The sub recipient shall periodically conduct spot checks of a representative sample of weekly payroll data to verify that contractors or subcontractors are paying the appropriate wage rates. The sub recipient shall establish and follow a spot check schedule based on its assessment of the risks of noncompliance with DB posed by contractors or subcontractors and the duration of the contract or subcontract. At a minimum, if practicable the sub recipient should spot check payroll data within two weeks of each contractor or subcontractor's submission of its initial payroll data and two weeks prior to the completion date the contract or subcontract. Sub recipients must conduct more frequent spot checks if the initial spot check or other information indicates that there is a risk that the contractor or subcontractor is not complying with DB. In addition, during the examinations the sub recipient shall verify evidence of fringe benefit plans and payments there under by contractors and subcontractors who claim credit for fringe benefit contributions.
- (d). The sub recipient shall periodically review contractors and subcontractors use of apprentices and trainees to verify registration and certification with respect to apprenticeship and training programs approved by either the U.S Department of Labor or a state, as appropriate, and that contractors and subcontractors are not using disproportionate numbers of, laborers, trainees and apprentices. These reviews shall be conducted in accordance with the schedules for spot checks and interviews described in Item 5(b) and (c) above.
- (e) Sub recipients must immediately report potential violations of the DB prevailing wage requirements to the EPA DB contact listed above and to the appropriate DOL Wage and Hour District Office listed at <https://www.dol.gov/agencies/whd/contact/local-offices>.

ATTACHMENT 2 OF ADDENDUM NO. 2

REPLACEMENT OF AND ADDITION TO CONTRACT DRAWINGS

LIST OF REPLACEMENT AND NEW CONTRACT DRAWINGS

ITEM NO.	DRAWING NO.	TITLE
1	C-000-01 R1	CIVIL LEGEND AND GENERAL NOTES
2	C-100-01 R1	EXISTING SITE PLAN
3	C-100-02 R1	ENLARGED SITE PLAN GRAVITY SLUDGE THICKENERS
4	C-100-03 R1	ENLARGED SITE PLAN GRAVITY SLUDGE THICKENERS
5	C-100-04 R1	ENLARGED SITE PLAN SECONDARY CLARIFIERS
6	C-100-05 R1	DEMOLITION PLAN GRAVITY SLUDGE THICKENERS
7	C-100-06 R1	DEMOLITION PLAN GRAVITY SLUDGE THICKENERS
8	C-100-07 R1	DEMOLITION PLAN SECONDARY CLARIFIERS
9	C-200-01 R1	PROPOSED SITE PLAN GRAVITY SLUDGE THICKENERS
10	C-200-02 R1	PROPOSED SITE PLAN GRAVITY SLUDGE THICKENERS
11	C-200-03 R1	PROPOSED SITE PLAN SECONDARY CLARIFIERS
12	C-200-04 R1	PROPOSED SITE GEOMETRIC PLAN GRAVITY SLUDGE THICKENERS
13	C-200-05 R1	PROPOSED SITE GEOMETRIC PLAN GRAVITY SLUDGE THICKENERS
14	C-200-06 R1	PROPOSED SITE GEOMETRIC PLAN SECONDARY CLARIFIERS
15	C-200-09 R1	UTILITY PROFILES
16	C-200-10	UTILITY PROFILES
17	C-200-11	UTILITY PROFILES
18	C-300-01 R1	GRAVITY SLUDGE THICKENER EROSION & SEDIMENT CONTROL & DRAINAGE AREA DELINEATION PLAN
19	C-300-02 R1	GRAVITY SLUDGE THICKENER EROSION & SEDIMENT CONTROL & DRAINAGE AREA DELINEATION PLAN
20	C-300-03 R1	SECONDARY CLARIFIERS EROSION & SEDIMENT CONTROL & DRAINAGE AREA DELINEATION PLAN
21	C-300-04 R1	SECONDARY CLARIFIERS EROSION & SEDIMENT CONTROL & DRAINAGE AREA DELINEATION PLAN
22	C-300-06	EROSION & SEDIMENT CONTROL NOTES
23	C-300-07	EROSION & SEDIMENT CONTROL DETAILS
24	CAEXH-1 R1	CRITICAL AREA EXHIBIT

25	SWM-1A	EXISTING CONDITIONS EXHIBIT – GRAVITY SLUDGE THICKENERS
26	SWM-1B	EXISTING CONDITIONS EXHIBIT – SECONDARY CLARIFIERS
27	SWM-2A	PROPOSED CONDITIONS EXHIBIT – GRAVITY SLUDGE THICKENERS
28	SWM-2B	PROPOSED CONDITIONS EXHIBIT – SECONDARY CLARIFIERS
29	S-000-03 R1	EXISTING CONDITIONS PHOTOS
30	M-100-15 R1	GRAVITY SLUDGE THICKENER NO. 1 AND 2 NEW WORK PLAN
31	M-100-17 R1	GRAVITY SLUDGE THICKENER NO. 4 – NEW WORK PLAN
32	M-100-24 R1	SCUM TREATMENT FACILITY NEW WORK PLANS
33	M-100-25 R1	PUMP AND BLOWER BUILDING NEW WORK PLAN AND SECTION

LEGEND

- EXISTING PROPERTY LINE
- EXISTING ADJOINING PROPERTY LINE
- EXISTING BUILDING
- EXISTING BUILDING FOOTING
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- EXISTING FLOTATION THICKENED SLUDGE (FTS) UTILITY
- EXISTING BLENDED SLUDGE (BS) UTILITY
- EXISTING SCRUBBER DRAIN BYPASS (SCBP) UTILITY
- EXISTING HIGH PRESSURE EFFLUENT WATER (HPEW) UTILITY
- EXISTING FERRIC CHLORIDE (FeCl) UTILITY
- EXISTING POLYMER (POLY) UTILITY
- EXISTING GRAVITY THICKENED SLUDGE (GTS) UTILITY
- EXISTING SUCTION LINE (SL) UTILITY
- EXISTING RAW SLUDGE (RS) UTILITY
- EXISTING DISCHARGE PIPE (DIS) UTILITY
- EXISTING SCUM PIPE
- EXISTING SANITARY LINE
- EXISTING STORMDRAIN LINE
- EXISTING BOLLARD
- EXISTING FENCE
- EXISTING RETAINING WALL
- EXISTING SOILS
- EXISTING FLOODPLAIN
- CHESAPEAKE BAY CRITICAL AREA
- EXISTING WATER BODY
- EXISTING CLEANOUT
- EXISTING STORM DRAIN MANHOLE
- EXISTING DECIDUOUS TREE
- EXISTING UTILITY POLE
- EXISTING LIGHT POLE
- EXISTING CURB
- EXISTING ROADWAY
- EXISTING ASPHALT PAVING
- LIMIT OF SAWCUT/EXCAVATION
- CONCRETE TO BE REMOVED
- ASPHALT TO BE REMOVED
- UTILITY TO BE REMOVED
- UTILITY TO BE ABANDONED
- LIMIT OF DISTURBANCE
- PROPOSED ASPHALT PAVING
- PROPOSED CONCRETE
- PROPOSED CURB
- PROPOSED WALL
- PROPOSED UTILITY - SCUM LINE
- PROPOSED CONTOUR
- SFOP SILT FENCE ON PAVEMENT
- SSF SUPER SILT FENCE
- SAME DAY STABILIZATION
- AGIP AT-GRADE INLET PROTECTION

GENERAL SHEET NOTES:

1. A TOPOGRAPHICAL BOUNDARY SURVEY WAS NOT PERFORMED FOR THIS PROJECT. EXISTING INFORMATION SHOWN IS BASED ON BALTIMORE CITY GIS, SUPPLEMENTED WITH VISUAL OBSERVATIONS IN THE FIELD, AND ENHANCED WITH AS-BUILT INFORMATION. ALL HORIZONTAL POSITIONS AND VERTICAL GEOMETRY REFLECT BALTIMORE CITY SURVEY CONTROL (BCSC) DATUM.
2. EXISTING UNDERGROUND UTILITIES SHOWN ON THE PLANS ARE BASED ON THE BEST AVAILABLE INFORMATION AND ARE SHOWN FOR THE CONVENIENCE OF THE CONTRACTOR ONLY. NO GUARANTEE IS MADE OR IMPLIED REGARDING THE ACCURACY OR COMPLETENESS THEREOF. THE CONTRACTOR IS RESPONSIBLE FOR THE VERIFICATION OF DEPTH, SIZE AND MATERIAL, LOCATION AND LIMIT OF SERVICE OF UTILITIES TO HIS OWN SATISFACTION BEFORE BEGINNING ANY EXCAVATION OR UTILITY INSTALLATION. THE OWNER AND ENGINEER DISCLAIM ANY RESPONSIBILITY FOR THE ACCURACY OR COMPLETENESS OF SAID INFORMATION. IF THE CONTRACTOR RELIES ON SAID INFORMATION, HE DOES SO AT HIS OWN RISK. THE GIVING OF INFORMATION ON THE PLANS WILL NOT RELIEVE THE CONTRACTOR OF THIS OBLIGATION TO SUPPORT AND PROTECT ALL SHOWN OR NOT SHOWN EXISTING UTILITIES AND APPURTENANCES. SHOULD ANY EXISTING UTILITY TO REMAIN BE DAMAGED BY THE CONTRACTOR, THE CONTRACTOR SHALL REPAIR DAMAGED CAUSE TO THE UTILITY OWNER'S SATISFACTION, AT THE CONTRACTORS EXPENSE.
3. LIVE UNDERGROUND UTILITIES MAY EXIST WITHIN THE WORK AREA. CONTRACTOR SHALL USE EXTREME CAUTION AND SHALL COMPLY WITH APPLICABLE FEDERAL, STATE AND LOCAL REGULATIONS.
4. INFORMATION SHOWN ON THIS DRAWING HAS BEEN PROVIDED AS A GUIDE TO ASSIST THE CONTRACTOR IN ESTABLISHING THE LOCATIONS OF PROPOSED CONSTRUCTION WITH RESPECT TO EXISTING SITE IMPROVEMENTS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE ALL CONSTRUCTION SURVEY STAKEOUT REQUIRED AND TO CONFIRM ALL INFORMATION SHOWN HEREON.

GENERAL DEMOLITION NOTES:

1. CONTRACTOR SHALL CONTACT THE CITY OF BALTIMORE 72 HOURS PRIOR TO COMMENCING ANY WORK.
2. CONTRACTOR SHALL COORDINATE WITH THE CITY OF BALTIMORE AND A PRIVATE UTILITY LOCATOR COMPANY PRIOR TO COMMENCING ANY WORK. THE CONTRACTOR MUST NOTIFY ALL PUBLIC UTILITY COMPANIES WITH UNDERGROUND FACILITIES IN THE AREA OF PROPOSED EXCAVATION AND HAVE THOSE FACILITIES LOCATED PRIOR TO COMMENCING EXCAVATION.
3. CONTRACTOR SHALL VERIFY FIELD CONDITIONS PRIOR TO AND DURING CONSTRUCTION/DEMOLITION AND NOTIFY THE OWNER IMMEDIATELY OF ANY DISCREPANCIES BETWEEN ACTUAL FIELD CONDITIONS AND THE APPROVED PLANS.
4. ALL UTILITY FRAMES AND COVERS TO REMAIN WITHIN THE PROJECT AREA SHALL BE ADJUSTED BY THE CONTRACTOR TO MEET NEW PAVEMENT OR GROUND ELEVATION. THE CONTRACTOR SHALL MAKE, CHECK, AND BE RESPONSIBLE FOR ALL MEASUREMENTS AND DIMENSIONS NECESSARY FOR THE PROPER CONSTRUCTION OF AND THE PREVENTION OF MISFITTINGS IN THE WORK. VERIFY LOCATIONS AND ELEVATIONS OF EXISTING UTILITIES BEFORE STARTING CONSTRUCTION IN EACH AREA.
5. EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED PRIOR TO ANY DISTURBANCE OR DEMOLITION IN ACCORDANCE WITH THE APPROVED EROSION AND SEDIMENT CONTROL PLAN.
6. CONTRACTOR SHALL STABILIZE ALL DISTURBED AREAS OUTSIDE OF THE L.O.D. BY THE END OF THE SAME WORKING DAY.
7. CONTRACTOR SHALL DISPOSE OF ALL DEMOLISHED AND DELETERIOUS MATERIALS NOT TO BE SALVAGED FOR REUSE ON SITE IN A SAFE AND LEGAL MANNER.
8. CONTRACTOR SHALL TAKE NECESSARY PRECAUTIONS TO PROTECT EXISTING UTILITY STRUCTURES TO REMAIN DURING DEMOLITION AND CONSTRUCTION ACTIVITIES AND TO PREVENT DEBRIS, SEDIMENT, OR WATER FROM ENTERING THE STRUCTURES.
9. CONTRACTOR SHALL PROTECT ALL FACILITIES AND UTILITIES TO REMAIN FROM DAMAGE WHETHER SHOWN HEREON OR NOT.
10. CONTRACTOR TO REMOVE ALL POLES, FOUNDATIONS, TIES, MANHOLES, MANHOLE COVERS, METERS/VAULTS, HAND BOXES, ETC. ASSOCIATED WITH EXISTING UTILITIES TO BE REMOVED UNLESS NOTED OTHERWISE. CONTRACTOR SHALL PROVIDE PROTECTION FOR ALL EXISTING UTILITIES TO REMAIN.
11. ALL PAVEMENT SHALL BE SAWCUT PRIOR TO REMOVAL WHERE EXISTING CURB IS BEING REMOVED AND/OR THERE IS ADJOINING PAVEMENT TO REMAIN. ALL SAWCUTS ARE TO BE NEAT, CLEAN AND STRAIGHT.
12. THE CONTRACTOR SHALL RESTORE ANY AND ALL AREAS DISTURBED DURING CONSTRUCTION TO ORIGINAL CONDITION OR BETTER.
13. ALL EXISTING PAINT MARKINGS ADJACENT TO THE PROJECT AREA WHICH BECOME FADED OR OBSCURED DUE TO CONSTRUCTION ACTIVITY SHALL BE REPAINTED OR RESTORED AT NO ADDITIONAL COST TO THE OWNER.
14. ALL ABANDONED UTILITIES SHALL BE PERMANENTLY CAPPED IN ACCORDANCE WITH UTILITY OWNERS REQUIREMENTS UNLESS OTHERWISE NOTED.
15. CONTRACTOR SHALL COORDINATE WITH OWNER AND UTILITY PROVIDER TO MINIMIZE DURATION OF UTILITY OUTAGES.
16. CONTRACTOR SHALL MAINTAIN VEHICULAR ACCESS TO AND AROUND OVERALL SITE DURING PAVEMENT OPEN CUT ACTIVITIES. CONTRACTOR SHALL FURNISH VEHICULAR AND PEDESTRIAN TRAFFIC PROTECTION IN ACCORDANCE WITH MUTCD LATEST VERSION.
17. REFER TO ENLARGED PLANS FOR ADDITIONAL DEMOLITION REQUIREMENTS.
18. CONTRACTOR SHALL TEST PIT AT ALL UTILITY CROSSINGS PRIOR TO DEMOLITION IN ORDER TO VERIFY DEPTH, SIZE, AND LOCATION OF EXISTING UTILITIES.

GENERAL EROSION & SEDIMENT CONTROL NOTES:

1. CONTRACTOR SHALL PROTECT ALL AREAS ADJACENT TO THE DESIGNATED LIMITS OF DISTURBANCE AND SHALL RESTORE ANY AND ALL AREAS DISTURBED DURING CONSTRUCTION TO THEIR ORIGINAL OR BETTER CONDITION.
2. NO DISTURBED AREA SHALL BE LEFT UNSTABILIZED OVERNIGHT UNLESS RUNOFF IS DIRECTED TO AN MDE APPROVED SEDIMENT CONTROL DEVICE.
3. INFORMATION SHOWN IS BASED ON GIS AND SUPPLEMENTED WITH VISUAL OBSERVATIONS IN THE FIELD. IT IS PROVIDED AS A GUIDE TO ASSIST THE CONTRACTOR IN ESTABLISHING THE LOCATIONS OF PROPOSED CONSTRUCTION WITH RESPECT TO EXISTING SITE IMPROVEMENTS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE ALL CONSTRUCTION SURVEY LAYOUT REQUIRED AND TO CONFIRM ALL INFORMATION SHOWN HEREON.
4. UNDERGROUND UTILITIES ARE SHOWN ON THIS DRAWING FOR THE CONVENIENCE OF THE USER OF THE DRAWING AND THERE IS NO WARRANTY OR GUARANTEE AS TO THE CORRECTNESS OR COMPLETENESS OF THE INFORMATION GIVEN.
5. SEDIMENT CONTROL DETAILS AND NOTES ARE SHOWN ON C-300-03 THROUGH C-300-05.
6. SEE SHEET C-300-00 FOR SEQUENCE OF CONSTRUCTION.

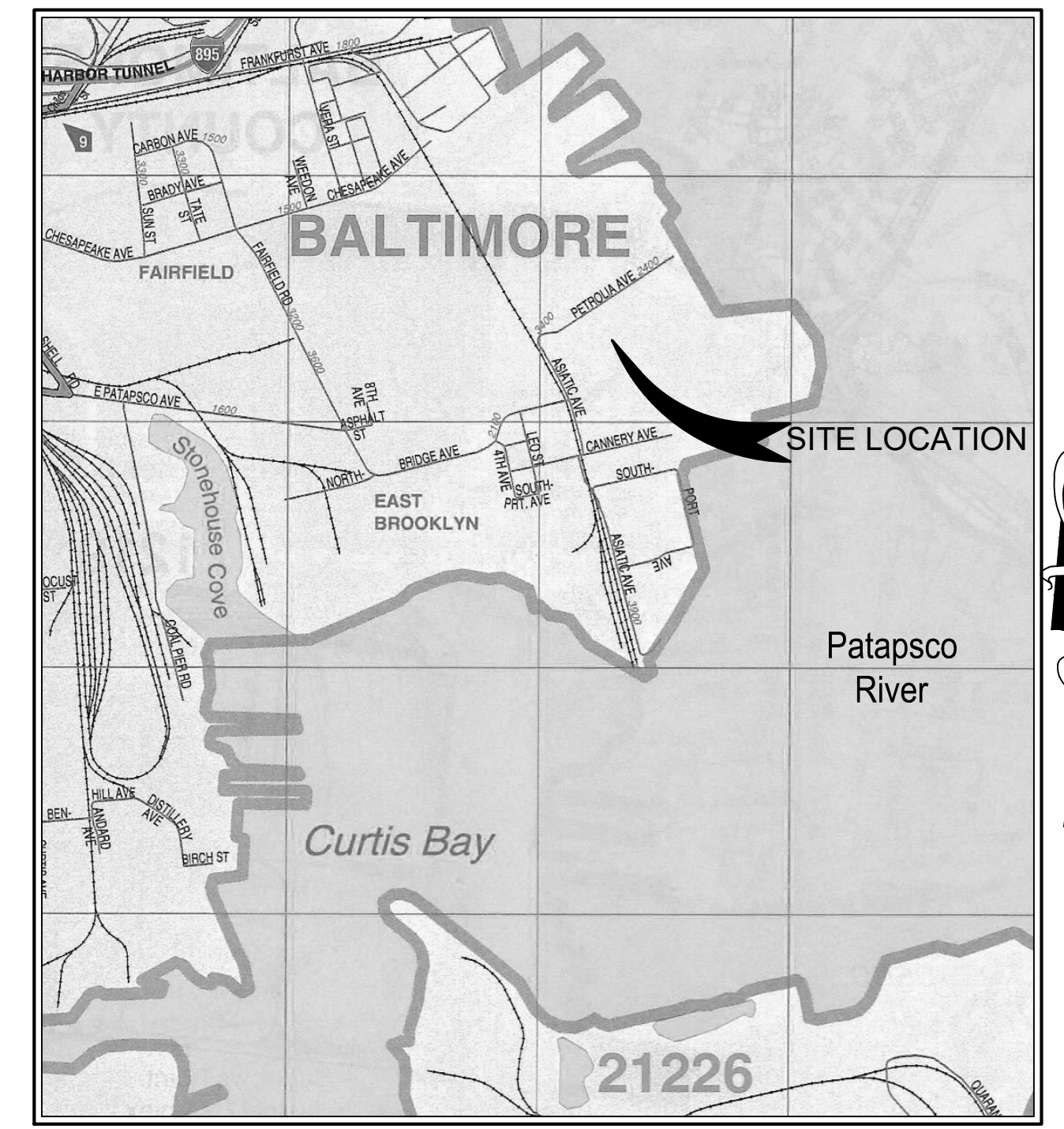
GENERAL PROPOSED NOTES:

1. EXISTING UNDERGROUND UTILITIES DESIGNATED ON THE PLANS ARE BASED ON CURRENTLY AVAILABLE INFORMATION AND ARE SHOWN FOR REFERENCE ONLY. THE OWNER AND ENGINEER DISCLAIM ANY RESPONSIBILITY FOR THE ACCURACY OR COMPLETENESS OF SAID INFORMATION BEYOND THE DESIGNATION INDICATED. THE QUALITY LEVEL DESIGNATED IS IN ACCORDANCE WITH ASCE "STANDARD GUIDELINE FOR THE COLLECTION AND DEPICTION OF EXISTING SUBSURFACE UTILITY DATA" (CI/ASCE 38-02). THE CONTRACTOR SHALL MAKE HIMSELF FAMILIAR WITH THOSE STANDARDS PRIOR TO ANY RELIANCE ON THE INFORMATION SHOWN ON THESE PLANS. PRIOR TO ANY EXCAVATION, IN THE ABSENCE OF QUALITY LEVEL A OR B DESIGNATION, THE CONTRACTOR SHALL VERIFY, TO HIS OWN SATISFACTION, THE EXISTENCE, DEPTH, SIZE, MATERIAL, AND LOCATION OF ALL UNDERGROUND UTILITIES, AND DETERMINE WHETHER THOSE UTILITIES ARE LIVE. ANY EARTHWORK IN LOCATIONS WHERE UTILITIES ARE POSSIBLE SHALL BE DONE WITH EXTREME CAUTION. THE GIVING OF INFORMATION ON THE PLANS WILL NOT RELIEVE THE CONTRACTOR OF HIS OBLIGATION TO SUPPORT AND PROTECT ALL DESIGNATED OR UNDESIGNATED EXISTING UTILITIES AND APPURTENANCES. SHOULD ANY EXISTING UTILITY BE DAMAGED BY THE CONTRACTOR, THE CONTRACTOR SHALL REPAIR THE DAMAGE CAUSED TO THE UTILITY OWNER'S SATISFACTION, AT THE CONTRACTOR'S EXPENSE.
2. CONTRACTOR SHALL NOTIFY THE OWNER, AT LEAST 72 HOURS PRIOR TO START OF CONSTRUCTION.
3. CONTRACTOR SHALL REPAIR OR REPLACE SURFACES DAMAGED BY ALL CONSTRUCTION ACTIVITY INCLUDING AREAS USED AS CONTRACTOR'S STAGING OR STORAGE AREAS TO A LIKE NEW CONDITION TO THE OWNER'S SATISFACTION.
4. CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS TO PERFORM ALL CONSTRUCTION ACTIVITY.
5. CONTRACTOR SHALL FURNISH TRAFFIC CONTROL AND PEDESTRIAN CONTROL DEVICES IN ACCORDANCE WITH MUTCD, LATEST EDITION.
6. CONTRACTOR SHALL PROTECT ALL AREAS BEYOND THE LIMITS OF DISTURBANCE AND SHALL RESTORE ANY AND ALL AREAS DISTURBED DURING CONSTRUCTION TO THEIR ORIGINAL OR BETTER CONDITION. SEE EROSION AND SEDIMENT CONTROL PLAN FOR LIMITS OF DISTURBANCE.
7. CONTRACTOR SHALL FURNISH SHORING, SHEATHING, OR OTHERWISE SUPPORT EXCAVATIONS TO PROTECT EXCAVATIONS FROM CAVE-INS, AS NECESSARY, UNTIL BACKFILL PLACEMENT IS COMPLETE PER SPECIFICATIONS.
8. CONTRACTOR SHALL TEST PIT AT ALL PROPOSED UTILITY CROSSINGS PRIOR TO CONSTRUCTION OF PROPOSED UTILITY PIPING TO VERIFY DEPTH, SIZE, AND LOCATION OF EXISTING UTILITIES ALONG THE PATH OF THE PROPOSED PIPING.

INDEX OF SHEETS

SHEET NO.	SHEET DESIGNATION	DESCRIPTION
1	C-000-01	CIVIL LEGEND & NOTES
2	C-100-01	EXISTING CONDITIONS PLAN
3	C-100-02	ENLARGED SITE PLAN - GRAVITY SLUDGE THICKENERS
4	C-100-03	ENLARGED SITE PLAN - GRAVITY SLUDGE THICKENERS
5	C-100-04	ENLARGED SITE PLAN - SECONDARY CLARIFIERS
6	C-100-05	DEMOLITION PLAN - GRAVITY SLUDGE THICKENERS
7	C-100-06	DEMOLITION PLAN - GRAVITY SLUDGE THICKENERS
8	C-100-07	DEMOLITION PLAN - SECONDARY CLARIFIERS
9	C-200-01	PROPOSED SITE PLAN - GRAVITY SLUDGE THICKENERS
10	C-200-02	PROPOSED SITE PLAN - GRAVITY SLUDGE THICKENERS
11	C-200-03	PROPOSED SITE PLAN - SECONDARY CLARIFIERS
12	C-200-04	PROPOSED SITE GEOMETRIC PLAN - GRAVITY SLUDGE THICKENERS
13	C-200-05	PROPOSED SITE GEOMETRIC PLAN - GRAVITY SLUDGE THICKENERS
14	C-200-06	PROPOSED SITE GEOMETRIC PLAN - SECONDARY CLARIFIERS
15	C-200-07	SITE DETAILS
16	C-200-08	SITE DETAILS
17	C-200-09	UTILITY PROFILES
18	C-200-10	UTILITY PROFILES
19	C-200-11	UTILITY PROFILES
20	C-300-00	EROSION & SEDIMENT CONTROL COVER SHEET
21	C-300-01	GRAVITY SLUDGE THICKENER EROSION & SEDIMENT CONTROL & DRAINAGE AREA DELINEATION PLAN
22	C-300-02	GRAVITY SLUDGE THICKENER EROSION & SEDIMENT CONTROL & DRAINAGE AREA DELINEATION PLAN
23	C-300-03	SECONDARY CLARIFIER EROSION & SEDIMENT CONTROL & DRAINAGE AREA DELINEATION PLAN
24	C-300-04	SECONDARY CLARIFIER EROSION & SEDIMENT CONTROL & DRAINAGE AREA DELINEATION PLAN
25	C-300-05	EROSION & SEDIMENT CONTROL NOTES
26	C-300-06	EROSION & SEDIMENT CONTROL NOTES
27	C-300-07	EROSION & SEDIMENT CONTROL DETAILS
28	CAEXH-1	CRITICAL AREA EXHIBIT
29	SWM-1A	EXISTING CONDITIONS EXHIBIT - GRAVITY SLUDGE THICKENERS
30	SWM-1B	EXISTING CONDITIONS EXHIBIT - SECONDARY CLARIFIERS
31	SWM-2A	PROPOSED CONDITIONS EXHIBIT - GRAVITY SLUDGE THICKENERS
32	SWM-2B	PROPOSED CONDITIONS EXHIBIT - SECONDARY CLARIFIERS

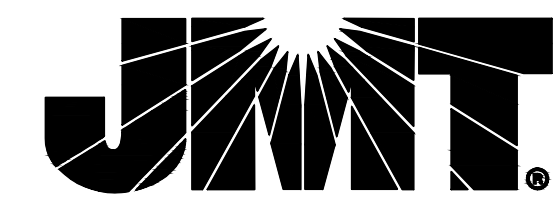
REVISIONS			
NO.	DESCRIPTION	DATE	BY



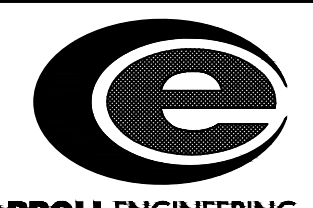
VICINITY MAP

ADC MAP 95
GRID C2
SCALE 1"=2000'
2000 1000 0 2000 4000
SCALE: 1"=2000'

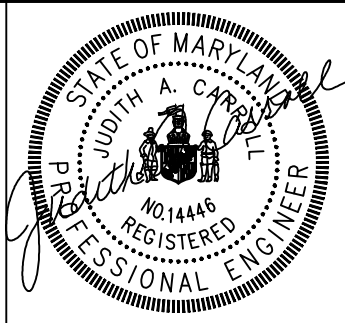
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CITY OF BALTIMORE
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OFFICE OF ENGINEERING & CONSTRUCTION

PATAPSCO WASTEWATER TREATMENT PLANT

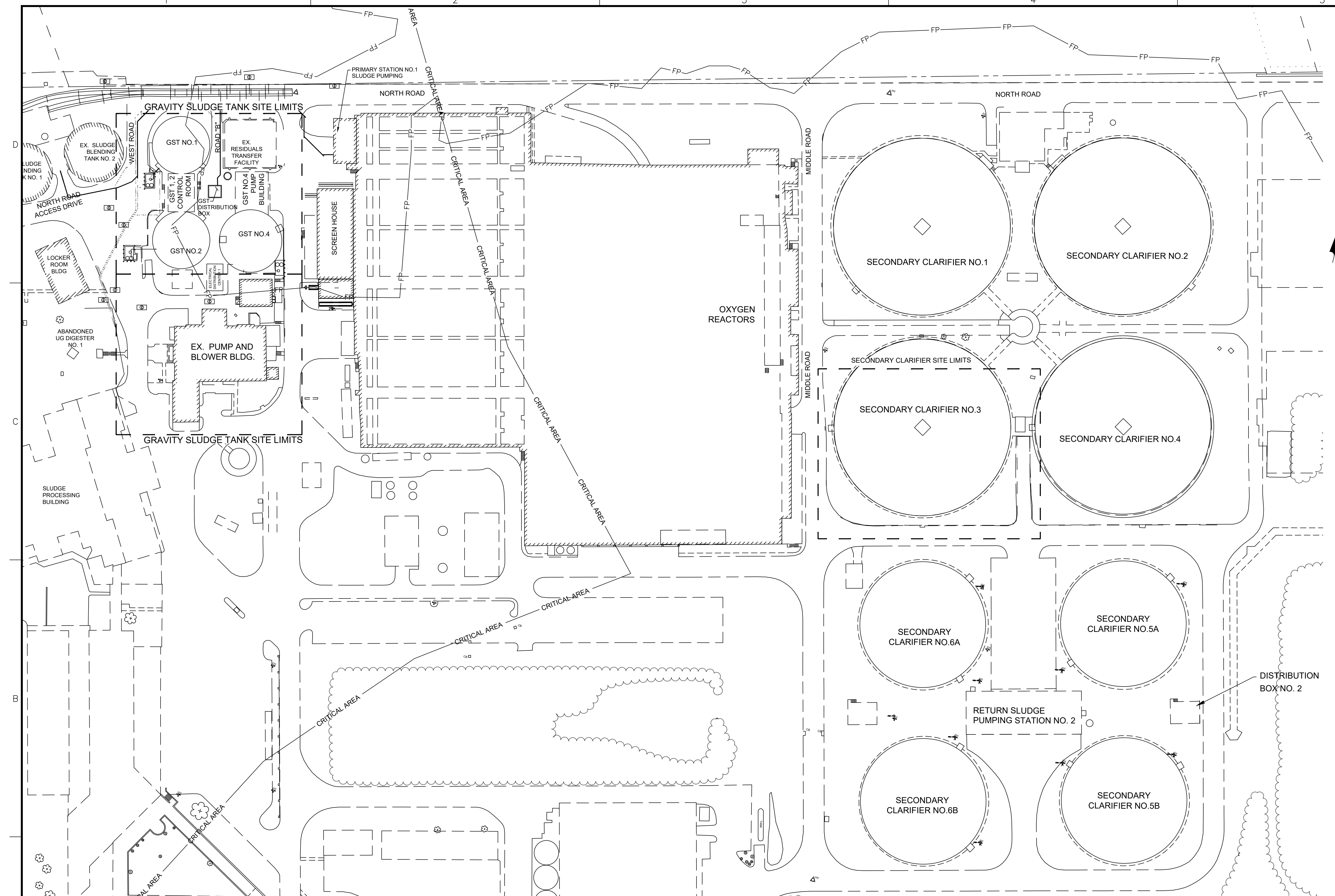
SANITARY CONTRACT NO. 994
CLARIFIER AND GRAVITY SLUDGE THICKENERS
REHABILITATION AT PATAPSCO WWTP

BCNR NO. 11446

CIVIL LEGEND AND GENERAL NOTES

SCALE: AS NOTED DATE: SEPTEMBER 2024
DRAWING NO.: C-000-01 R1 SHEET 17 OF 210

REVISIONS			
NO.	DESCRIPTION	DATE	BY



LEGEND

- EXISTING PROPERTY LINE
- - - EXISTING ADJOINING PROPERTY LINE
- ▭ EXISTING BUILDING
- ▭ EXISTING BUILDING FOOTING
- 100 — EXISTING MAJOR CONTOUR
- 99 — EXISTING MINOR CONTOUR
- ▭ EXISTING FLOTATION THICKENED SLUDGE (FTS) UTILITY
- ▭ EXISTING BLENDED SLUDGE (BS) UTILITY
- ▭ EXISTING SCRUBBER DRAIN BYPASS (SCBP) UTILITY
- ▭ EXISTING HIGH PRESSURE EFFLUENT WATER (HPEW) UTILITY
- ▭ EXISTING FERRIC CHLORIDE (FeCl) UTILITY
- ▭ EXISTING POLYMER (POLY) UTILITY
- ▭ EXISTING GRAVITY THICKENED SLUDGE (GTS) UTILITY
- ▭ EXISTING SUCTION LINE (SL) UTILITY
- ▭ EXISTING RAW SLUDGE (RS) UTILITY
- ▭ EXISTING DISCHARGE PIPE (DIS) UTILITY
- ▭ EXISTING SCUM PIPE
- ▭ EXISTING SANITARY LINE
- ▭ EXISTING STORMDRAIN LINE
- EXISTING BOLLARD
- ▭ EXISTING FENCE
- ▭ EXISTING RETAINING WALL
- ▭ EXISTING SOILS
- ▭ EXISTING FLOODPLAIN
- ▭ CHESAPEAKE BAY CRITICAL AREA
- ▭ EXISTING WATER BODY
- EXISTING CLEANOUT
- EXISTING STORM DRAIN MANHOLE
- EXISTING DECIDUOUS TREE
- EXISTING UTILITY POLE
- EXISTING LIGHT POLE
- ▭ EXISTING CURB
- ▭ EXISTING ROADWAY


EXISTING SITE PLAN
SCALE: 1"=60'-0"

GENERAL SHEET NOTES:


1. A TOPOGRAPHICAL BOUNDARY SURVEY WAS NOT PERFORMED FOR THIS PROJECT. EXISTING INFORMATION SHOWN IS BASED ON BALTIMORE CITY GIS, SUPPLEMENTED WITH VISUAL OBSERVATIONS IN THE FIELD, AND ENHANCED WITH AS-BUILT INFORMATION. ALL HORIZONTAL POSITIONS AND VERTICAL GEOMETRY REFLECT BALTIMORE CITY SURVEY CONTROL (BCSC) DATUM.
2. EXISTING UNDERGROUND UTILITIES SHOWN ON THE PLANS ARE BASED ON THE BEST AVAILABLE INFORMATION AND ARE SHOWN FOR THE CONVENIENCE OF THE CONTRACTOR ONLY. NO GUARANTEE IS MADE OR IMPLIED REGARDING THE ACCURACY OR COMPLETENESS THEREOF. THE CONTRACTOR IS RESPONSIBLE FOR THE VERIFICATION OF DEPTH, SIZE AND MATERIAL, LOCATION AND LIMIT OF SERVICE OF UTILITIES TO HIS OWN SATISFACTION BEFORE BEGINNING ANY EXCAVATION OR UTILITY INSTALLATION. THE OWNER AND ENGINEER DISCLAIM ANY RESPONSIBILITY FOR THE ACCURACY OR COMPLETENESS OF SAID INFORMATION. IF THE CONTRACTOR RELIES ON SAID INFORMATION, HE DOES SO AT HIS OWN RISK. THE GIVING OF INFORMATION ON THE PLANS WILL NOT RELIEVE THE CONTRACTOR OF THIS OBLIGATION TO SUPPORT AND PROTECT ALL SHOWN OR NOT SHOWN EXISTING UTILITIES AND APPURTENANCES. SHOULD ANY EXISTING UTILITY TO REMAIN BE DAMAGED BY THE CONTRACTOR, THE CONTRACTOR SHALL REPAIR DAMAGED CAUSE TO THE UTILITY OWNER'S SATISFACTION, AT THE CONTRACTORS EXPENSE.
3. LIVE UNDERGROUND UTILITIES MAY EXIST WITHIN THE WORK AREA. CONTRACTOR SHALL USE EXTREME CAUTION AND SHALL COMPLY WITH APPLICABLE FEDERAL, STATE AND LOCAL REGULATIONS.
4. INFORMATION SHOWN ON THIS DRAWING HAS BEEN PROVIDED AS A GUIDE TO ASSIST THE CONTRACTOR IN ESTABLISHING THE LOCATIONS OF PROPOSED CONSTRUCTION WITH RESPECT TO EXISTING SITE IMPROVEMENTS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE ALL CONSTRUCTION SURVEY STAKEOUT REQUIRED AND TO CONFIRM ALL INFORMATION SHOWN HEREON.



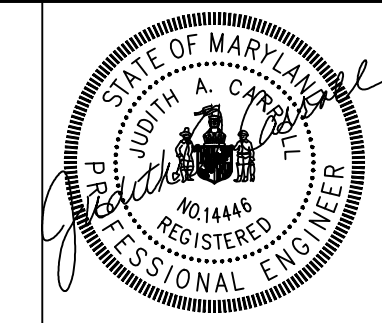
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PATAPSCO WASTEWATER TREATMENT PLANT

SANITARY CONTRACT NO. 994
CLARIFIER AND GRAVITY SLUDGE THICKENERS
REHABILITATION AT PATAPSCO WWTP

BCNR NO. 11446

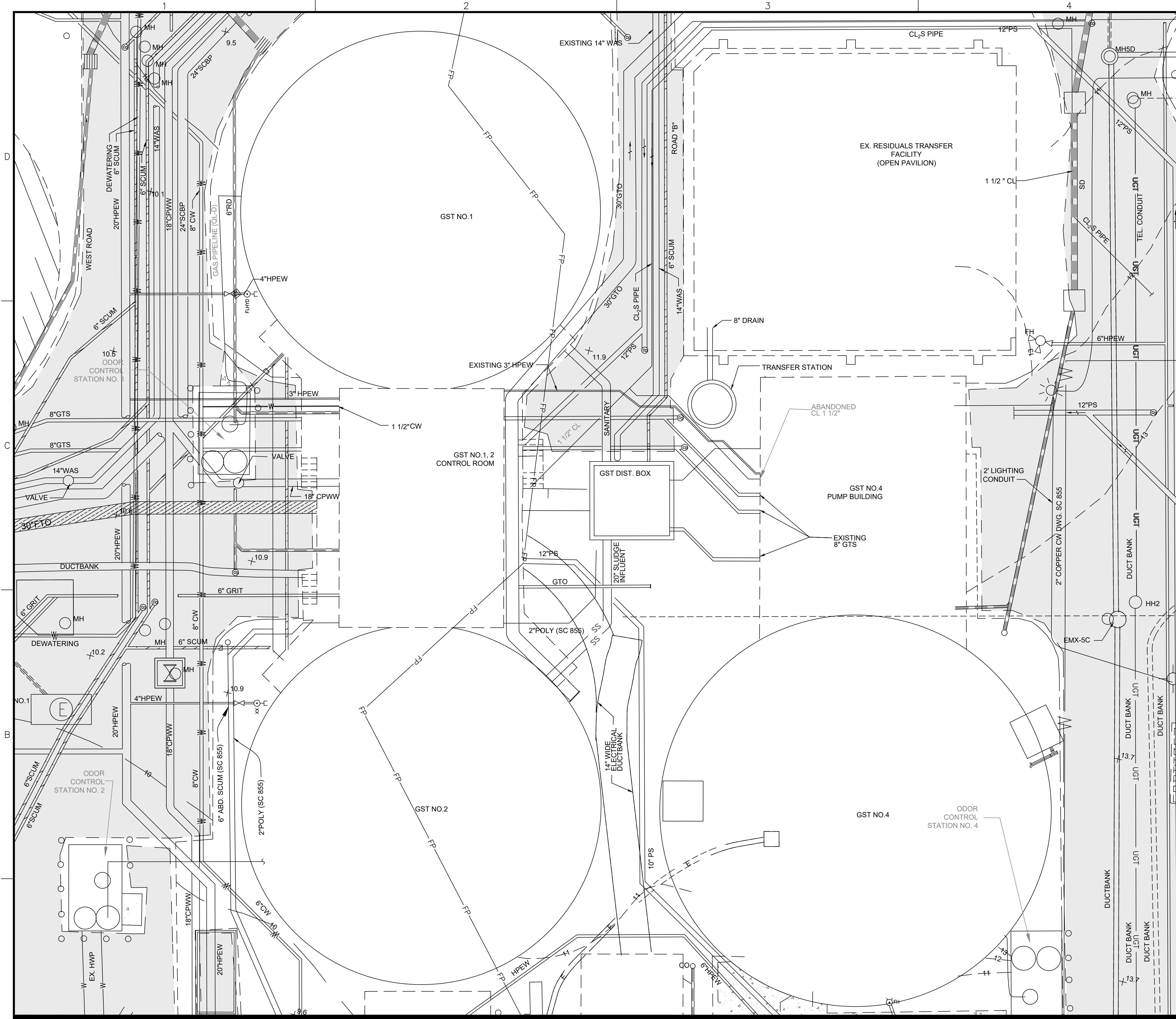
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SCALE: AS NOTED

DATE: SEPTEMBER 2024

DRAWING NO.: C-100-01 R1

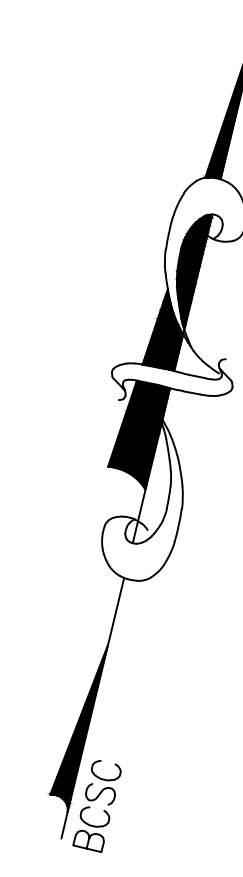
SHEET 18 OF 210



REVISIONS			
NO.	DESCRIPTION	DATE	BY

LEGEND

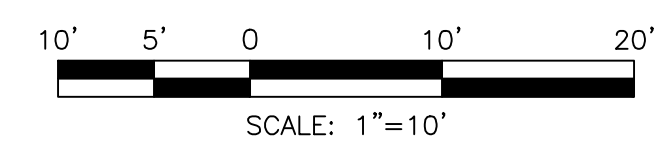
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- - - EXISTING ADJOINING PROPERTY LINE
- ▭ EXISTING BUILDING
- ▭ EXISTING BUILDING FOOTING
- ▭ EXISTING MINOR CONTOUR
- ▭ EXISTING MAJOR CONTOUR
- ▭ EXISTING FLOTATION THICKENED SLUDGE (FTS) UTILITY
- ▭ EXISTING BLENDED SLUDGE (BS) UTILITY
- ▭ EXISTING SCRUBBER DRAIN BYPASS (SCBP) UTILITY
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- ▭ EXISTING FENCE
- ▭ EXISTING RETAINING WALL
- ▭ EXISTING SOILS
- ▭ EXISTING FLOODPLAIN
- ▭ CHESAPEAKE BAY CRITICAL AREA
- ▭ EXISTING WATER BODY
- EXISTING CLEANOUT
- EXISTING STORM DRAIN MANHOLE
- EXISTING DECIDUOUS TREE
- EXISTING UTILITY POLE
- EXISTING LIGHT POLE
- ▭ EXISTING CURB
- ▭ EXISTING ROADWAY
- ▭ EXISTING ASPHALT PAVING




MATCHLINE C-100-03



ENLARGED SITE PLAN - GRAVITY SLUDGE THICKENERS
SCALE: 1"=10'-0"



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STATE OF MARYLAND
LUDWIG A. CARROLL
NO. 14446
REGISTERED PROFESSIONAL ENGINEER

CITY OF BALTIMORE
DEPARTMENT OF PUBLIC WORKS
OFFICE OF ENGINEERING & CONSTRUCTION

PATAPSCO WASTEWATER TREATMENT PLANT

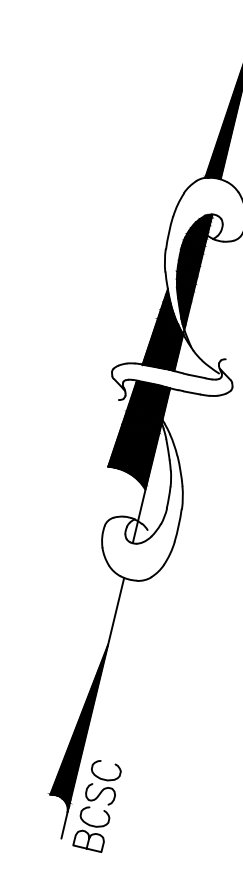
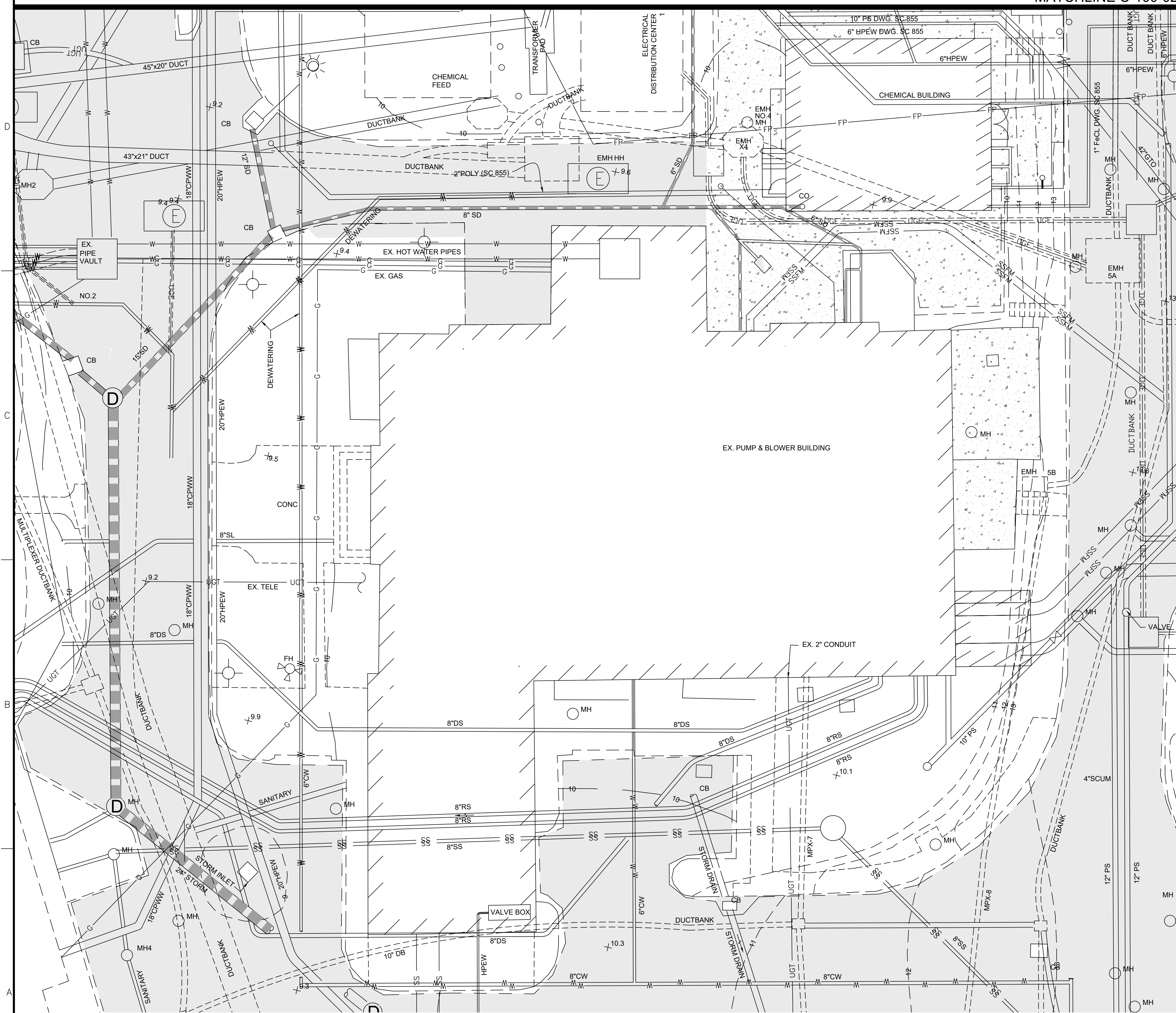
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REHABILITATION AT PATAPSCO WWTP

BCNR NO. 11446

ENLARGED SITE PLAN
GRAVITY SLUDGE THICKENERS

SCALE: AS NOTED DATE: SEPTEMBER 2024
DRAWING NO.: C-100-02 R1 SHEET 19 OF 210

REVISIONS			
NO.	DESCRIPTION	DATE	BY

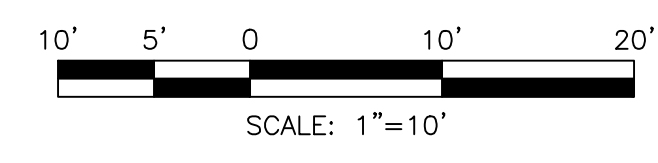


LEGEND


- EXISTING PROPERTY LINE
- - - EXISTING ADJOINING PROPERTY LINE
- ▭ EXISTING BUILDING
- ▨ EXISTING BUILDING FOOTING
- EXISTING MAJOR CONTOUR
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- ▨ EXISTING SANITARY LINE
- ▨ EXISTING STORM DRAIN LINE
- EXISTING BOLLARD
- ✕ EXISTING FENCE
- ▨ EXISTING RETAINING WALL
- ▨ EXISTING SOILS
- ▨ EXISTING FLOODPLAIN
- ▨ CHESAPEAKE BAY CRITICAL AREA
- ▨ EXISTING WATER BODY
- EXISTING CLEANOUT
- ⊙ EXISTING STORM DRAIN MANHOLE
- ⊙ EXISTING DECIDUOUS TREE
- ⊙ EXISTING UTILITY POLE
- ⊙ EXISTING LIGHT POLE
- EXISTING CURB
- ▨ EXISTING ROADWAY
- ▨ EXISTING ASPHALT PAVING




ENLARGED SITE PLAN - GRAVITY SLUDGE THICKENERS
SCALE: 1"=10'-0"



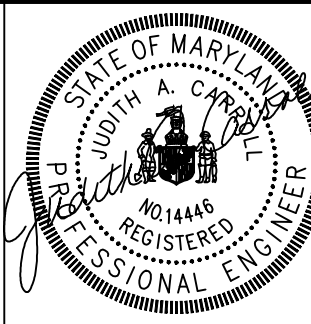
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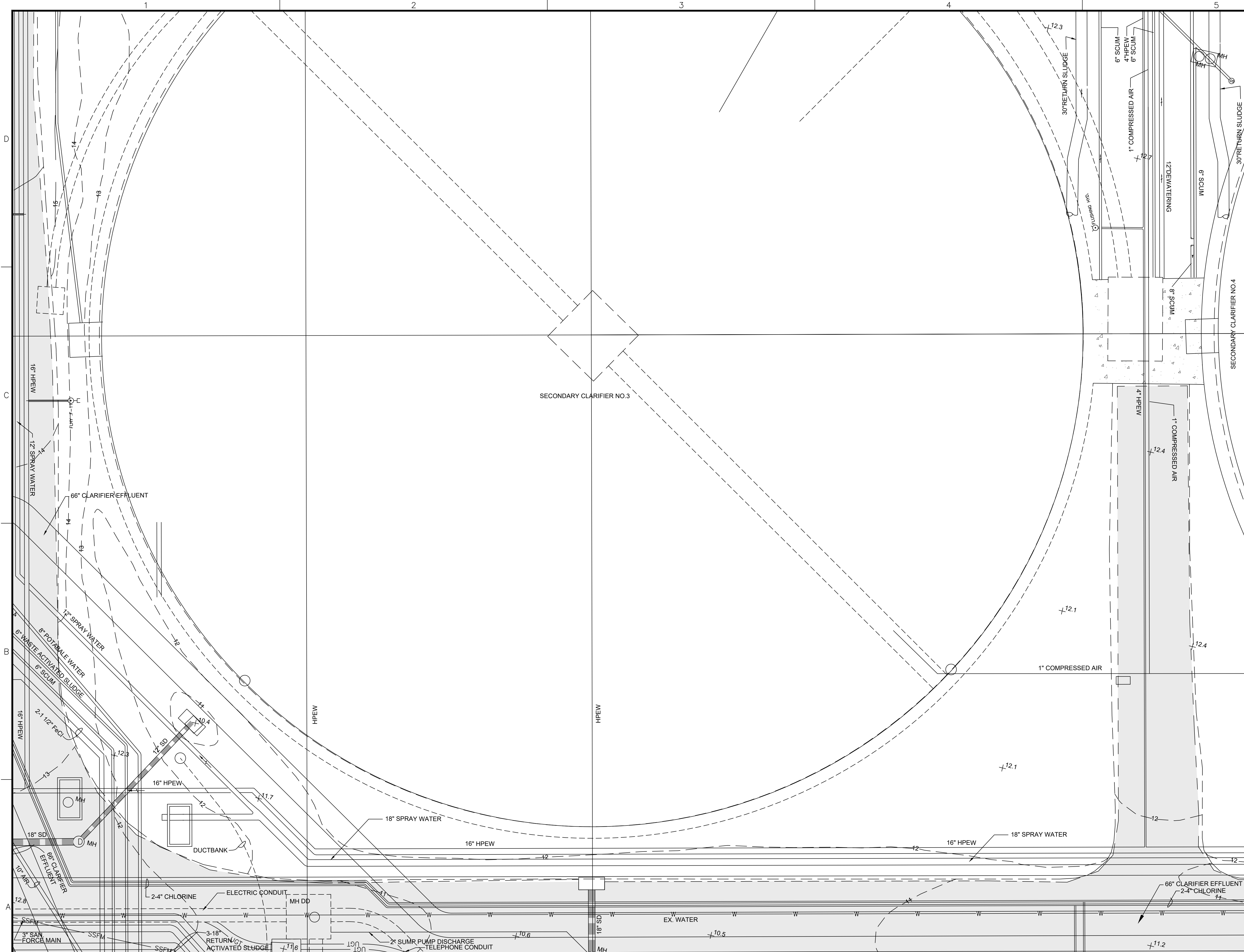


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PATAPSCO WASTEWATER TREATMENT PLANT
SANITARY CONTRACT NO. 994
CLARIFIER AND GRAVITY SLUDGE THICKENERS
REHABILITATION AT PATAPSCO WWTP
BCNR NO. 11446

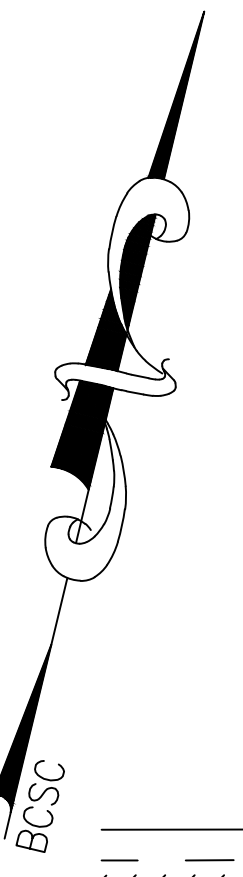
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GRAVITY SLUDGE THICKENERS

SCALE: AS NOTED

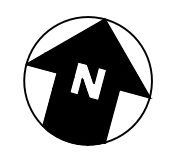
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DRAWING NO.: C-100-03 R1
SHEET 19A OF 210



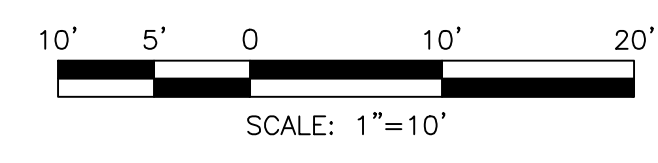
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NO.	DESCRIPTION	DATE	BY



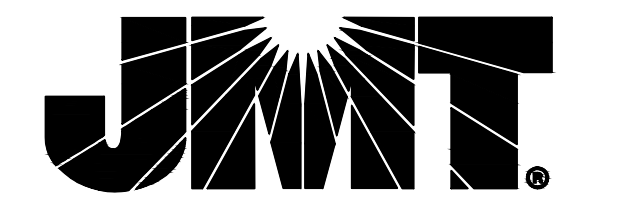
- LEGEND**
- EXISTING PROPERTY LINE
 - - - EXISTING ADJOINING PROPERTY LINE
 - ▭ EXISTING BUILDING
 - ▭ EXISTING BUILDING FOOTING
 - 100 — EXISTING MAJOR CONTOUR
 - 99 — EXISTING MINOR CONTOUR
 - ▨ EXISTING FLOTATION THICKENED SLUDGE (FTS) UTILITY
 - ▨ EXISTING BLENDED SLUDGE (BS) UTILITY
 - ▨ EXISTING SCRUBBER DRAIN BYPASS (SCBP) UTILITY
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 - ▨ EXISTING FERRIC CHLORIDE (FeCl) UTILITY
 - ▨ EXISTING POLYMER (POLY) UTILITY
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 - ▨ EXISTING RAW SLUDGE (RS) UTILITY
 - ▨ EXISTING DISCHARGE PIPE (DIS) UTILITY
 - ▨ EXISTING SCUM PIPE
 - ▨ EXISTING SANITARY LINE
 - ▨ EXISTING STORM DRAIN LINE
 - P EXISTING BOLLARD
 - X — EXISTING FENCE
 - X — EXISTING RETAINING WALL
 - // — EXISTING SOILS
 - FP — EXISTING FLOODPLAIN
 - CA — CHESAPEAKE BAY CRITICAL AREA
 - WB — EXISTING WATER BODY
 - EXISTING CLEANOUT
 - ⊙ EXISTING STORM DRAIN MANHOLE
 - ⊙ EXISTING DECIDUOUS TREE
 - ⊙ EXISTING UTILITY POLE
 - ⊙ EXISTING LIGHT POLE
 - EXISTING CURB
 - ▭ EXISTING ROADWAY
 - ▭ EXISTING ASPHALT PAVING




ENLARGED SITE PLAN - SECONDARY CLARIFIERS
 SCALE: 1"=10'-0"



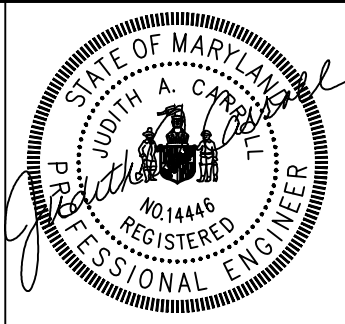
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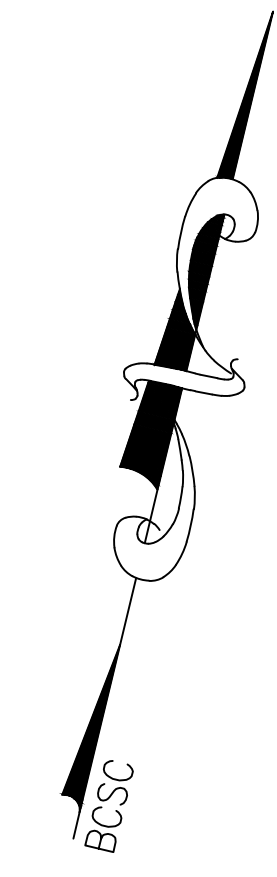


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 PATAPSCO WASTEWATER TREATMENT PLANT
 SANITARY CONTRACT NO. 994
 CLARIFIER AND GRAVITY SLUDGE THICKENERS
 REHABILITATION AT PATAPSCO WWTP
 BCNR NO. 11446

**ENLARGED SITE PLAN
 SECONDARY CLARIFIERS**

SCALE: AS NOTED DATE: SEPTEMBER 2024
 DRAWING NO.: C-100-04 R1 SHEET 20 OF 210

REVISIONS			
NO.	DESCRIPTION	DATE	BY



SHEET KEYNOTES:

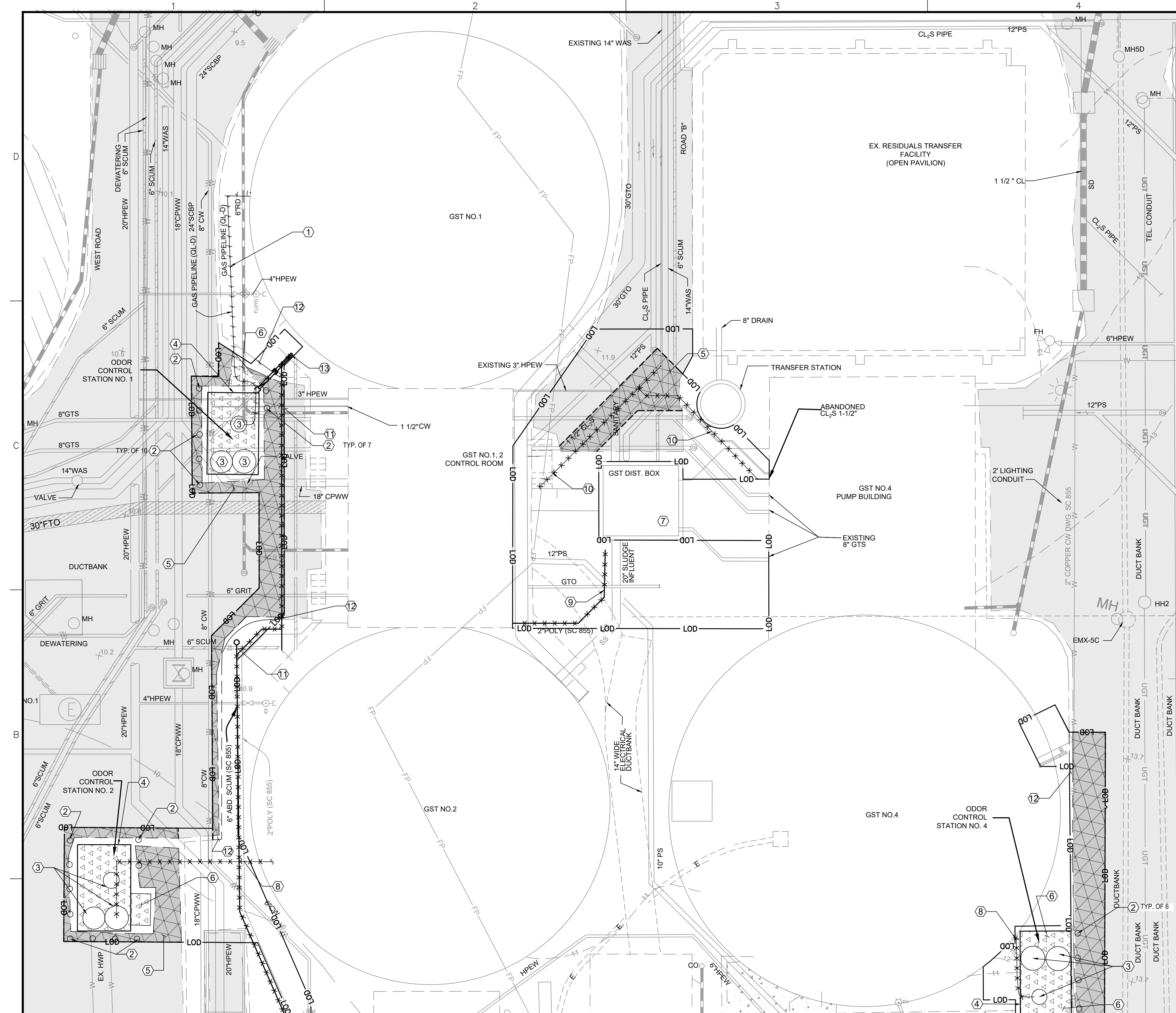
- ① EXISTING UNDERGROUND GAS PIPELINE TO BE ABANDONED AND CAP ENDS. CONTRACTOR TO TEST PIT AND FIELD VERIFY SIZE, MATERIAL, AND DEPTH PRIOR TO DEMOLITION.
- ② REMOVE AND DISPOSE OF EXISTING BOLLARDS (TYP.).
- ③ ODOR CONTROL STATION TANKS TO BE COMPLETELY REMOVED AND DISPOSED OF (TYP.).
- ④ DEMOLISH EXISTING RETAINING WALL.
- ⑤ ASPHALT TO BE REMOVED.
- ⑥ CONCRETE TO BE REMOVED AND DISPOSED OF.
- ⑦ DEMOLISH AND REPLACE EXISTING DISTRIBUTION CHAMBER MIXERS AND ASSOCIATED APPURTENANCES. SEE MECHANICAL PLANS.
- ⑧ ABOVEGROUND UTILITY CONNECTED TO THE ODOR CONTROL STATION SHALL BE REMOVED AND DISPOSED OF.
- ⑨ EXISTING POLYMER LINE TO BE REMOVED.
- ⑩ EXISTING SULFUR DICHLORIDE (Cl₂S) LINE TO BE REMOVED.
- ⑪ EXISTING ABANDONED SCUM LINE TO BE REMOVED.
- ⑫ REMOVE CURB AND ASSOCIATED SUBBASE.
- ⑬ REMOVE 5' OF ABANDONED SCUM LINE.

GENERAL NOTES:

SOME UNDERGROUND UTILITIES NOT SHOWN FOR VISUAL CLARITY. SEE EXISTING CONDITIONS PLAN FOR UNDERGROUND UTILITIES.

LEGEND

- EXISTING PROPERTY LINE
- EXISTING ADJOINING PROPERTY LINE
- EXISTING BUILDING
- EXISTING BUILDING FOOTING
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- EXISTING FLOTATION THICKENED SLUDGE (FTS) UTILITY
- EXISTING BLENDED SLUDGE (BS) UTILITY
- EXISTING SCRUBBER DRAIN BYPASS (SCBP) UTILITY
- EXISTING HIGH PRESSURE EFFLUENT WATER (HPEW) UTILITY
- EXISTING FERRIC CHLORIDE (FeCl₃) UTILITY
- EXISTING POLYMER (POLY) UTILITY
- EXISTING GRAVITY THICKENED SLUDGE (GTS) UTILITY
- EXISTING SUCTION LINE (SL) UTILITY
- EXISTING RAW SLUDGE (RS) UTILITY
- EXISTING DISCHARGE PIPE (DIS)
- EXISTING SCUM PIPE
- EXISTING SANITARY LINE
- EXISTING STORM DRAIN LINE
- EXISTING BOLLARD
- EXISTING FENCE
- EXISTING RETAINING WALL
- EXISTING SOILS
- EXISTING FLOODPLAIN
- CHESAPEAKE BAY CRITICAL AREA
- EXISTING WATER BODY
- EXISTING CLEANOUT
- EXISTING STORM DRAIN MANHOLE
- EXISTING DECIDUOUS TREE
- EXISTING UTILITY POLE
- EXISTING LIGHT POLE
- EXISTING CURB
- EXISTING ROADWAY
- EXISTING ASPHALT PAVING
- LIMIT OF SAWCUT/EXCAVATION
- CONCRETE TO BE REMOVED
- ASPHALT TO BE REMOVED
- UTILITY TO BE REMOVED
- UTILITY TO BE ABANDONED
- LOD — LIMIT OF DISTURBANCE



MATCHLINE C-100-06

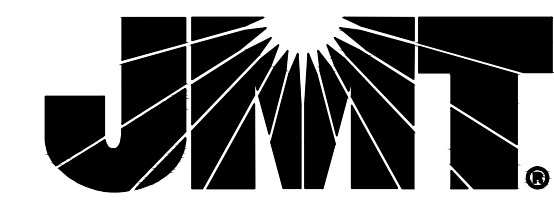


DEMOLITION PLAN - GRAVITY SLUDGE THICKENERS

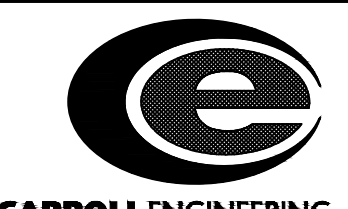
SCALE: 1"=10'-0"
 NOTE:
 CONTRACTOR SHALL PROVIDE PIPE CAPS FOR ALL UTILITY PIPING AT ODOR CONTROL STATIONS TO BE REMOVED.



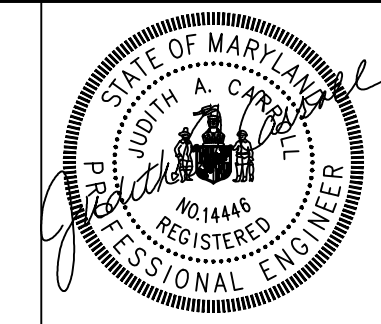
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PATAPSCO WASTEWATER TREATMENT PLANT

SANITARY CONTRACT NO. 994
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 REHABILITATION AT PATAPSCO WWTP

BCNR NO. 11446

DEMOLITION PLAN
GRAVITY SLUDGE THICKENERS

SCALE: AS NOTED DATE: SEPTEMBER 2024
 DRAWING NO.: C-100-05 R1 SHEET 21 OF 210

REVISIONS			
NO.	DESCRIPTION	DATE	BY

SHEET KEYNOTES:

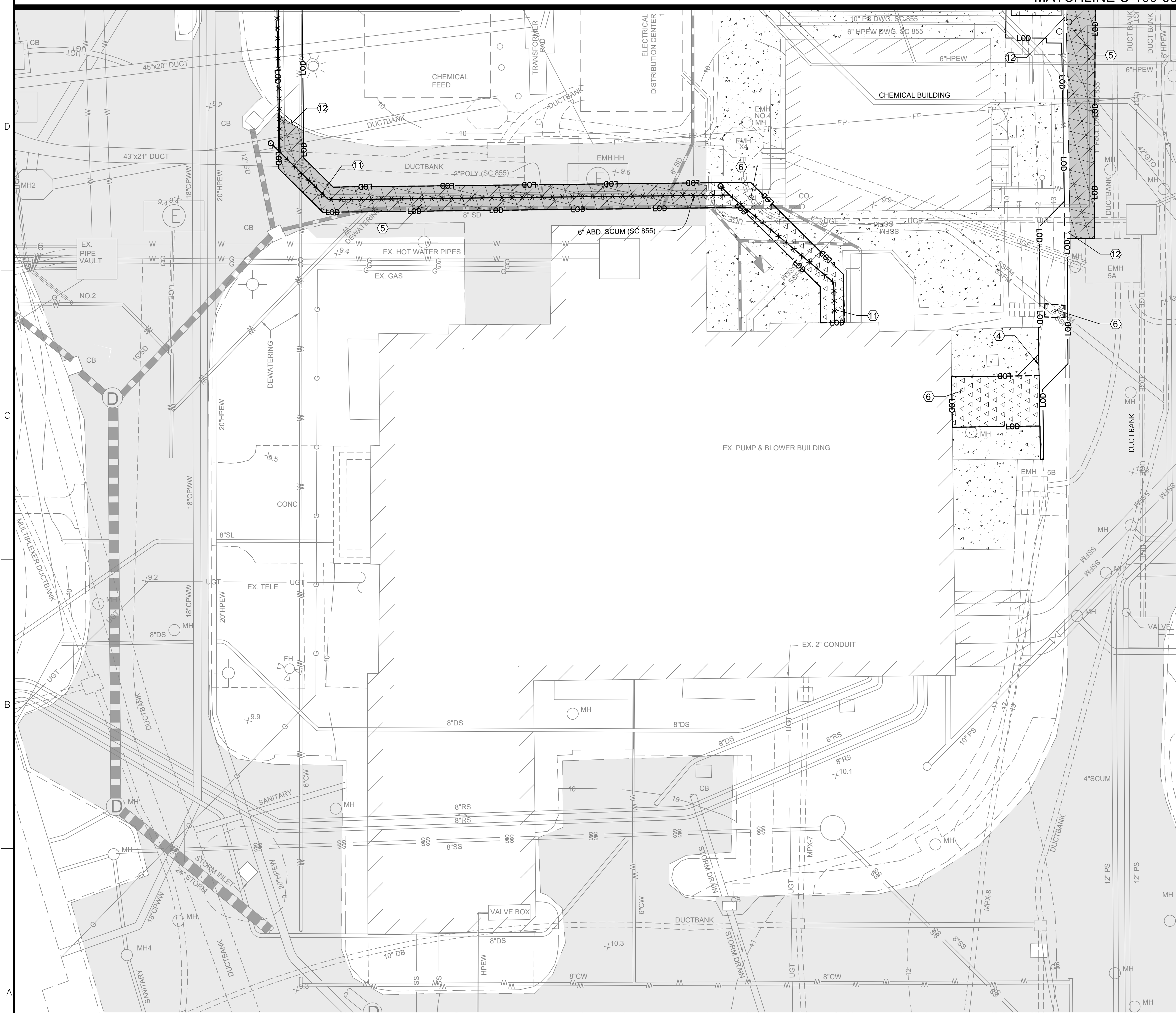
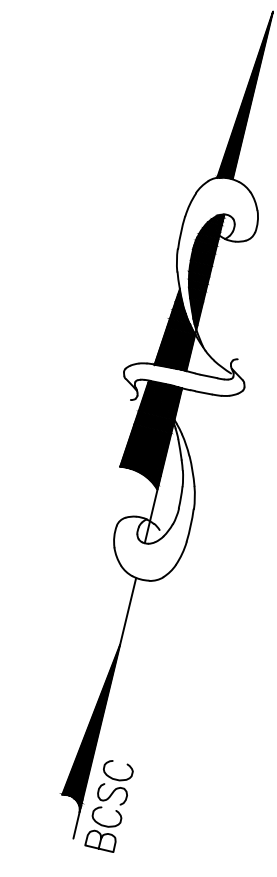
- ① EXISTING UNDERGROUND GAS PIPELINE TO BE ABANDONED AND CAP ENDS. CONTRACTOR TO TEST PIT AND FIELD VERIFY SIZE, MATERIAL, AND DEPTH PRIOR TO DEMOLITION.
- ② REMOVE AND DISPOSE OF EXISTING BOLLARDS (TYP.).
- ③ ODOR CONTROL STATION TANKS TO BE COMPLETELY REMOVED AND DISPOSED OF (TYP.).
- ④ DEMOLISH EXISTING RETAINING WALL.
- ⑤ ASPHALT TO BE REMOVED.
- ⑥ CONCRETE TO BE REMOVED AND DISPOSED OF.
- ⑦ DEMOLISH AND REPLACE EXISTING DISTRIBUTION CHAMBER MIXERS AND ASSOCIATED APPURTENANCES. SEE MECHANICAL PLANS.
- ⑧ ABOVEGROUND UTILITY CONNECTED TO THE ODOR CONTROL STATION SHALL BE REMOVED AND DISPOSED OF.
- ⑨ EXISTING POLYMER LINE TO BE REMOVED.
- ⑩ EXISTING SULFUR DICHLORIDE (Cl₂S) LINE TO BE REMOVED.
- ⑪ EXISTING ABANDONED SCUM LINE TO BE REMOVED.
- ⑫ REMOVE CURB AND ASSOCIATED SUBBASE.
- ⑬ REMOVE 5' OF ABANDONED SCUM LINE.

GENERAL NOTES:

SOME UNDERGROUND UTILITIES NOT SHOWN FOR VISUAL CLARITY. SEE EXISTING CONDITIONS PLAN FOR UNDERGROUND UTILITIES.

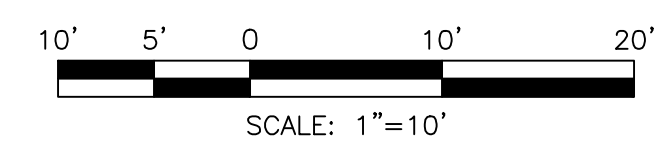
LEGEND

	EXISTING PROPERTY LINE
	EXISTING ADJOINING PROPERTY LINE
	EXISTING BUILDING
	EXISTING BUILDING FOOTING
	EXISTING MAJOR CONTOUR
	EXISTING MINOR CONTOUR
	EXISTING FLOTATION THICKENED SLUDGE (FTS) UTILITY
	EXISTING BLENDED SLUDGE (BS) UTILITY
	EXISTING SCRUBBER DRAIN BYPASS (SCBP) UTILITY
	EXISTING HIGH PRESSURE EFFLUENT WATER (HPEW) UTILITY
	EXISTING FERRIC CHLORIDE (FeCl) UTILITY
	EXISTING POLYMER (POLY) UTILITY
	EXISTING GRAVITY THICKENED SLUDGE (GTS) UTILITY
	EXISTING SUCTION LINE (SL) UTILITY
	EXISTING RAW SLUDGE (RS) UTILITY
	EXISTING DISCHARGE PIPE (DIS) UTILITY
	EXISTING SCUM PIPE
	EXISTING SANITARY LINE
	EXISTING STORM DRAIN LINE
	EXISTING BOLLARD
	EXISTING FENCE
	EXISTING RETAINING WALL
	EXISTING SOILS
	EXISTING FLOODPLAIN
	CHESAPEAKE BAY CRITICAL AREA
	EXISTING WATER BODY
	EXISTING CLEANOUT
	EXISTING STORM DRAIN MANHOLE
	EXISTING DECIDUOUS TREE
	EXISTING UTILITY POLE
	EXISTING LIGHT POLE
	EXISTING CURB
	EXISTING ROADWAY
	EXISTING ASPHALT PAVING
	LIMIT OF SAWCUT/EXCAVATION
	CONCRETE TO BE REMOVED
	ASPHALT TO BE REMOVED
	UTILITY TO BE REMOVED
	UTILITY TO BE ABANDONED
	LIMIT OF DISTURBANCE




DEMOLITION PLAN - GRAVITY SLUDGE THICKENERS


SCALE: 1"=10'-0"
NOTE:
CONTRACTOR SHALL PROVIDE PIPE CAPS FOR ALL UTILITY PIPING AT ODOR CONTROL STATIONS TO BE REMOVED.




PROFESSIONAL CERTIFICATION: I CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NO. 14446, EXPIRATION DATE 5/25/2025.



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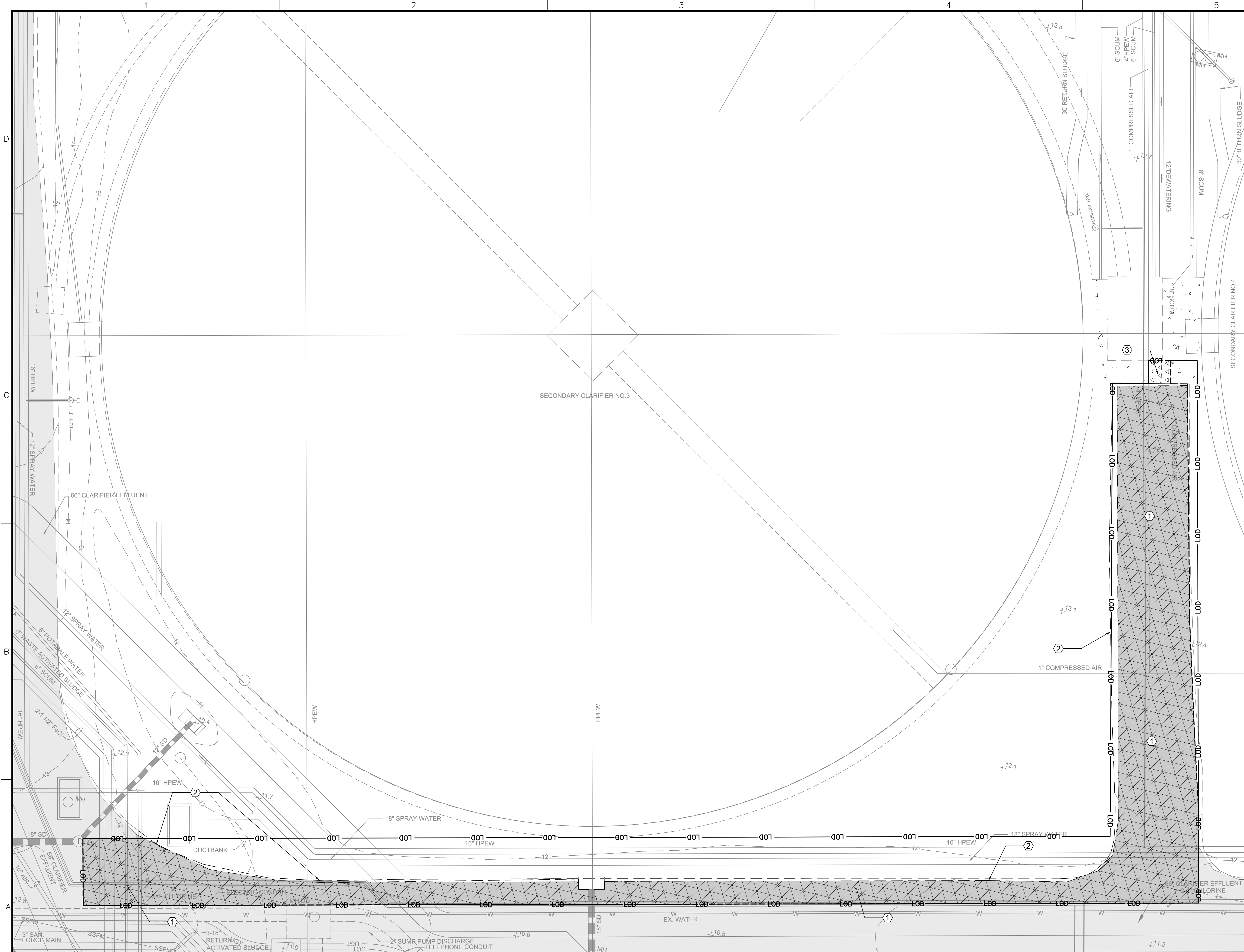
PATAPSCO WASTEWATER TREATMENT PLANT

SANITARY CONTRACT NO. 994
CLARIFIER AND GRAVITY SLUDGE THICKENERS
REHABILITATION AT PATAPSCO WWTP

BCNR NO. 11446

DEMOLITION PLAN
GRAVITY SLUDGE THICKENERS

SCALE: AS NOTED DATE: SEPTEMBER 2024
DRAWING NO.: C-100-06 R1 SHEET 22 OF 210



REVISIONS			
NO.	DESCRIPTION	DATE	BY

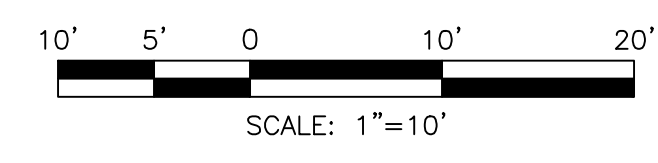
- SHEET KEYNOTES:**
- ASPHALT AND ASSOCIATED SUBBASE TO BE REMOVED AND DISPOSED OFFSITE.
 - CURB AND ASSOCIATED SUBBASE TO BE REMOVED AND DISPOSED OFFSITE.
 - CONCRETE AND ASSOCIATED SUBBASE TO BE REMOVED AND DISPOSED OFFSITE.

GENERAL NOTES:


SOME UNDERGROUND UTILITIES NOT SHOWN FOR VISUAL CLARITY. SEE EXISTING CONDITIONS PLAN FOR UNDERGROUND UTILITIES.

- LEGEND**
- EXISTING PROPERTY LINE
 - EXISTING ADJOINING PROPERTY LINE
 - EXISTING BUILDING
 - EXISTING BUILDING FOOTING
 - EXISTING MAJOR CONTOUR
 - EXISTING MINOR CONTOUR
 - EXISTING FLOTATION THICKENED SLUDGE (FTS) UTILITY
 - EXISTING BLENDED SLUDGE (BS) UTILITY
 - EXISTING SCRUBBER DRAIN BYPASS (SCBP) UTILITY
 - EXISTING HIGH PRESSURE EFFLUENT WATER (HPEW) UTILITY
 - EXISTING FERRIC CHLORIDE (FeCl) UTILITY
 - EXISTING POLYMER (POLY) UTILITY
 - EXISTING GRAVITY THICKENED SLUDGE (GTS) UTILITY
 - EXISTING SUCTION LINE (SL) UTILITY
 - EXISTING RAW SLUDGE (RS) UTILITY
 - EXISTING DISCHARGE PIPE (DIS)
 - EXISTING SCUM PIPE
 - EXISTING SANITARY LINE
 - EXISTING STORM DRAIN LINE
 - EXISTING BOLLARD
 - EXISTING FENCE
 - EXISTING RETAINING WALL
 - EXISTING SOILS
 - EXISTING FLOODPLAIN
 - CHESAPEAKE BAY CRITICAL AREA
 - EXISTING WATER BODY
 - EXISTING CLEANOUT
 - EXISTING STORM DRAIN MANHOLE
 - EXISTING DECIDUOUS TREE
 - EXISTING UTILITY POLE
 - EXISTING LIGHT POLE
 - EXISTING CURB
 - EXISTING ROADWAY
 - EXISTING ASPHALT PAVING
 - LIMIT OF SAWCUT/EXCAVATION
 - CONCRETE TO BE REMOVED
 - ASPHALT TO BE REMOVED
 - UTILITY TO BE REMOVED
 - UTILITY TO BE ABANDONED
 - LOD - LIMIT OF DISTURBANCE


DEMOLITION PLAN - SECONDARY CLARIFIERS
SCALE: 1"=10'-0"



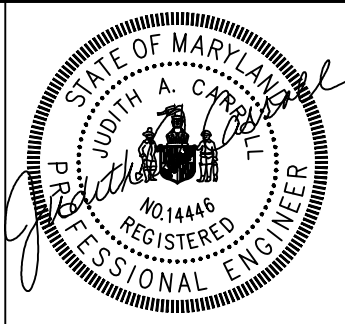
PROFESSIONAL CERTIFICATION: I CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.
LICENSE NO. 14446, EXPIRATION DATE 5/25/2025.



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PATAPSCO WASTEWATER TREATMENT PLANT

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REHABILITATION AT PATAPSCO WWTP
BCNR NO. 11446

**DEMOLITION PLAN
SECONDARY CLARIFIERS**

SCALE: AS NOTED DATE: SEPTEMBER 2024
DRAWING NO.: C-100-07 R1 SHEET 22A OF 210

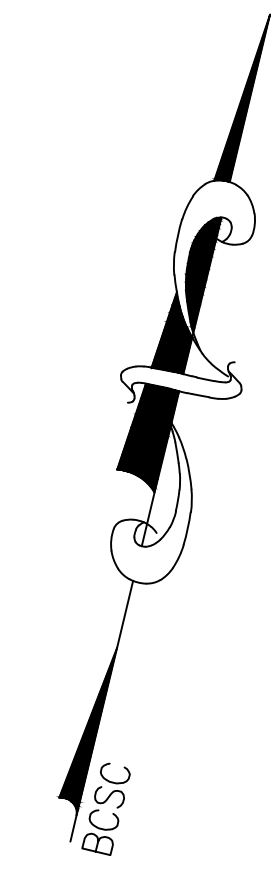


REVISIONS			
NO.	DESCRIPTION	DATE	BY

Utility Crossing Table				
X19	PROFILE B STA. 1+86	POLY	2"	4.80 SC855/C-200-03
X20	PROFILE B STA. 2+23	HPEW	4"	3.83 SC581/AC8
X21	PROFILE B STA. 2+34	SCUM	6"	6.00 SC581/AC8
X22	PROFILE B STA. 2+49	GRIT	6"	1.75 SC581/AC8
X23	PROFILE B STA. 2+53	ELECT.	20"x13"	6.00 SC581/AC8
X24	PROFILE B STA. 2+57	RAIN LEADER	6"	8.25 SC581/AC8
X25	PROFILE B STA. 2+65	FTO	30"	1.25 SC581/AC8
X26	PROFILE B STA. 2+70	CPPW	18"	2.25 SC581/AC8
X27	PROFILE B STA. 2+77	GST	8"	2.75 SC581/AC8
X28	PROFILE B STA. 2+83	GST	8"	4.17 SC581/AC8
X29	PROFILE B STA. 2+84	ROOF DRAIN	6"	8.25 SC581/AC8
X30	PROFILE B STA. 2+88	HPEW	3"	5.00 SC581/AC8

LEGEND

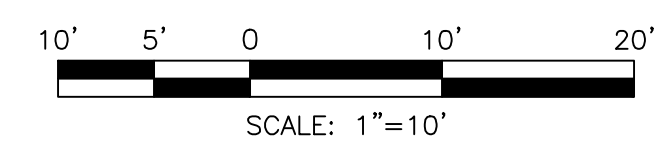
- EXISTING PROPERTY LINE
- EXISTING ADJOINING PROPERTY LINE
- EXISTING BUILDING
- EXISTING BUILDING FOOTING
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- EXISTING FLOTATION THICKENED SLUDGE (FTS) UTILITY
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- EXISTING FERRIC CHLORIDE (FeCl) UTILITY
- EXISTING POLYMER (POLY) UTILITY
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- EXISTING CURB
- EXISTING ROADWAY
- EXISTING ASPHALT PAVING
- PROPOSED ASPHALT PAVING
- PROPOSED CONCRETE
- PROPOSED CURB
- PROPOSED WALL
- PROPOSED UTILITY - SCUM LINE
- PROPOSED CONTOUR




MATCHLINE C-200-02




PROPOSED SITE PLAN - GRAVITY SLUDGE THICKENERS
SCALE: 1" = 10'-0"



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PATAPSCO WASTEWATER TREATMENT PLANT

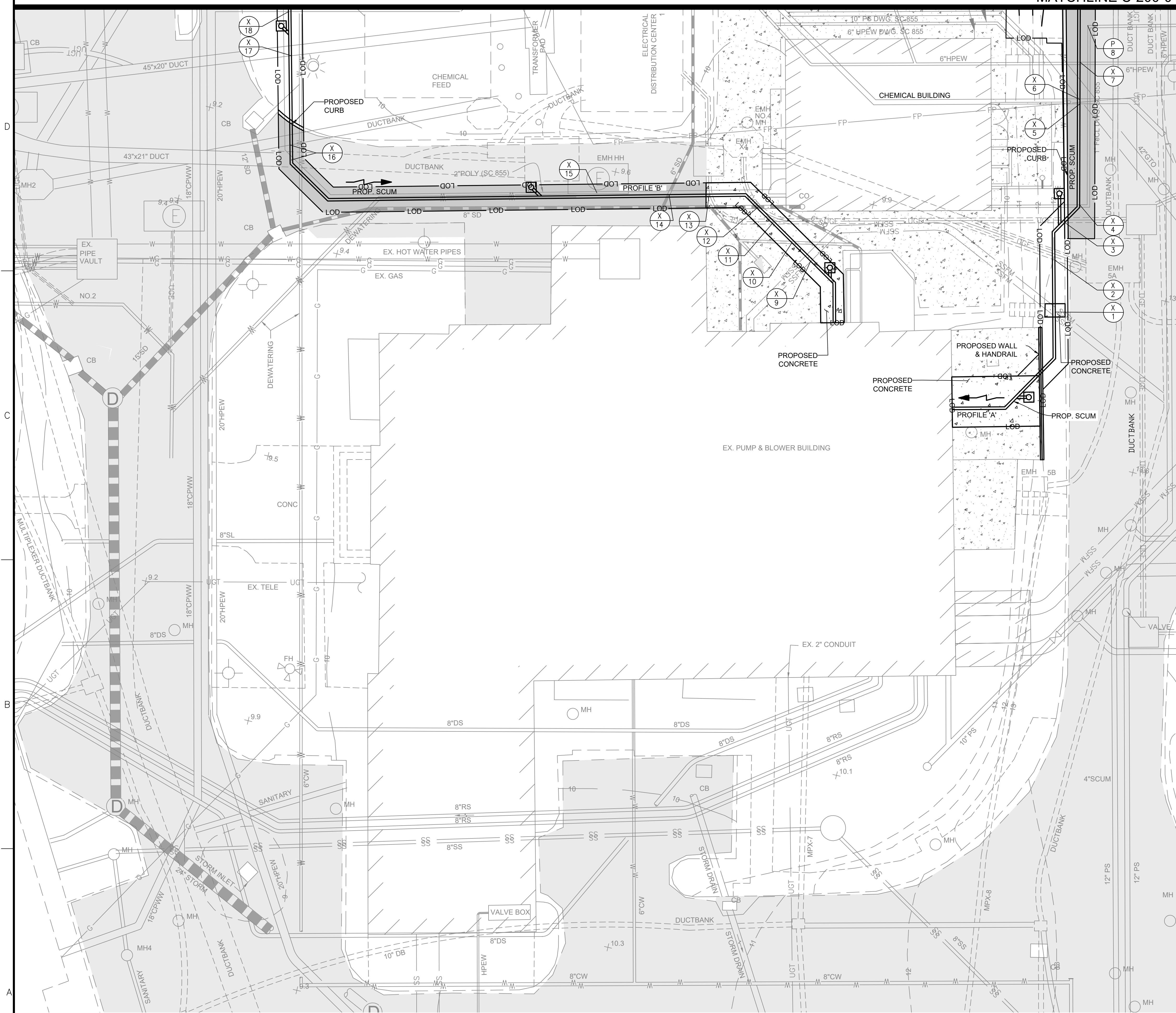
SANITARY CONTRACT NO. 994
CLARIFIER AND GRAVITY SLUDGE THICKENERS
REHABILITATION AT PATAPSCO WWTP

BCNR NO. 11446

PROPOSED SITE PLAN
GRAVITY SLUDGE THICKENERS

SCALE: AS NOTED DATE: SEPTEMBER 2024
DRAWING NO.: C-200-01 R1 SHEET 23 OF 210

REVISIONS			
NO.	DESCRIPTION	DATE	BY



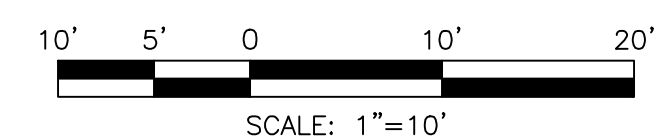
CROSSING ID NUMBER	STATION	CROSSING ID PIPE	PIPE SIZE	INVERT OF UTILITY CROSSING	CONTRACT/DRAWING NO.
X1	PROFILE A STA. 0+34	FM	36"	2.50	SC855/E-200-04
X2	PROFILE A STA. 0+45	DUCTBANK		6.00	SC855/E-200-04
X3	PROFILE A STA. 0+53	DUCTBANK		6.00	SC855/E-200-04
X4	PROFILE A STA. 0+57	FeCl	1.5"	11.00	SC855/C-200-04
X5	PROFILE A STA. 0+78	GTO	36"	5.00	SC855/C-200-04
X6	PROFILE A STA. 0+77	PS	10"	4.25	SC855/C-200-04
X7	PROFILE A STA. 0+85	HPEW	6"		SC855/C-200-04
P8 (PARALLEL PIPE)	PROFILE A STA. 0+57 TO 0+91	FeCl	1.5"	11.00	SC855/C-200-04
X9	PROFILE B STA. 0+15	FM	24"	4.33	SC855/C-200-03
X10	PROFILE B STA. 0+20	SD	6"	6.00	SC855
X11	PROFILE B STA. 0+26	DUCTBANK		6.00	SC855/E-200-04
X12	PROFILE B STA. 0+20	DUCTBANK		6.00	SC855/E-200-04
X13	PROFILE B STA. 0+40	DUCTBANK		6.00	SC855/E-200-04
X14	PROFILE B STA. 0+48	SD	6"	6.00	SC855/C-200-03
X15	PROFILE B STA. 0+62	EMH HH		2.00	SC855CE-200-04
X16	PROFILE B STA. 1+25	POLY, ELECT., WATER	2"	4.80	SC855/C-200-03
X17	PROFILE B STA. 1+32	ELECT.			SC855/C-200-01
X18	PROFILE B STA. 1+59	HPEW	6"	3.83	SC581/AC-11

LEGEND

- EXISTING PROPERTY LINE
- EXISTING ADJOINING PROPERTY LINE
- EXISTING BUILDING
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- EXISTING CURB
- EXISTING ROADWAY
- EXISTING ASPHALT PAVING
- PROPOSED ASPHALT PAVING
- PROPOSED CONCRETE
- PROPOSED CURB
- PROPOSED WALL
- PROPOSED UTILITY - SCUM LINE
- PROPOSED CONTOUR



PROPOSED SITE PLAN - GRAVITY SLUDGE THICKENERS
SCALE: 1" = 10'-0"



SCALE: 1" = 10'

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PATAPSCO WASTEWATER TREATMENT PLANT
SANITARY CONTRACT NO. 994
CLARIFIER AND GRAVITY SLUDGE THICKENERS
REHABILITATION AT PATAPSCO WWTP
BCNR NO. 11446

PROPOSED SITE PLAN
GRAVITY SLUDGE THICKENERS
SCALE: AS NOTED DATE: SEPTEMBER 2024
DRAWING NO.: C-200-02 R1 SHEET 23A OF 210

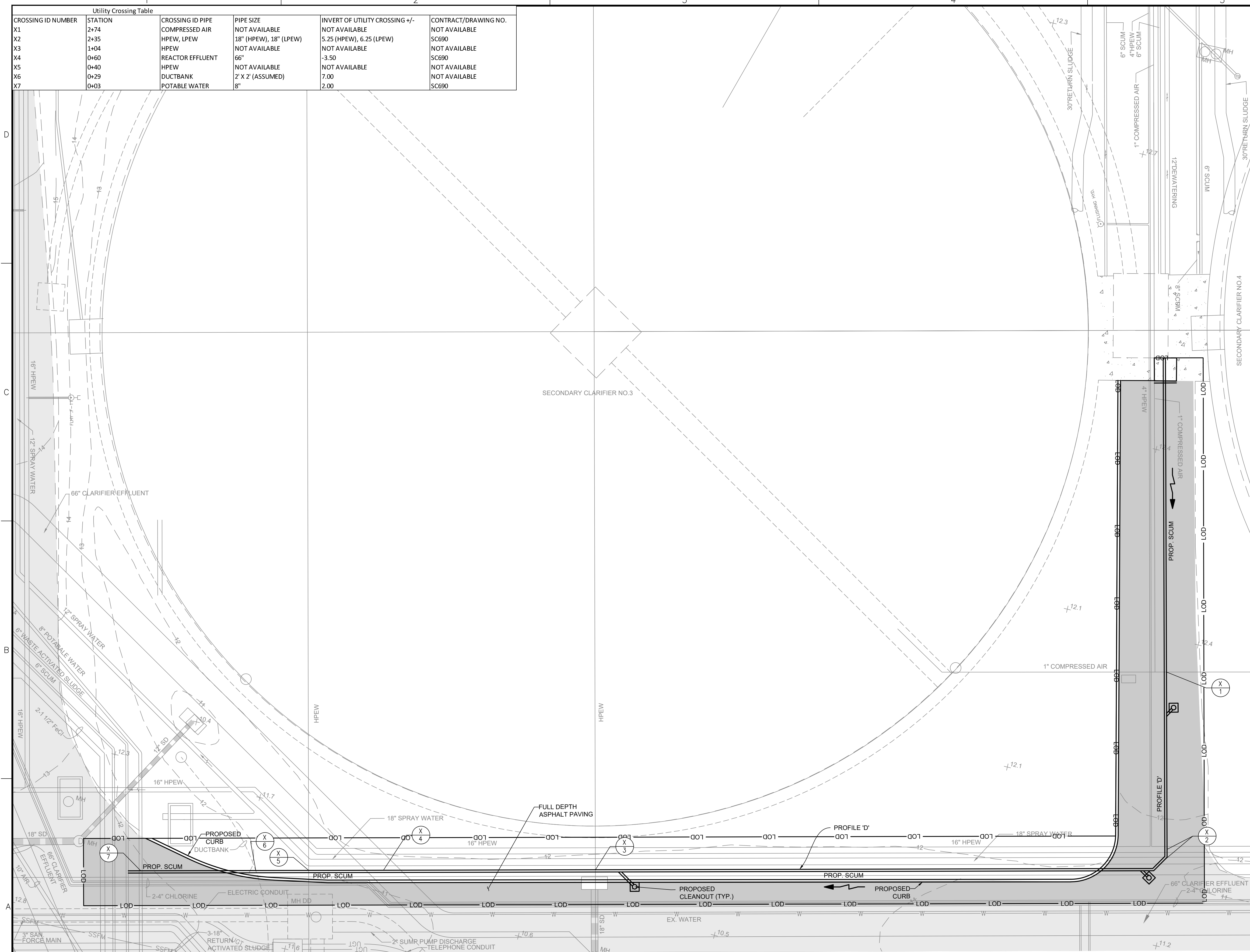
Utility Crossing Table					
CROSSING ID NUMBER	STATION	CROSSING ID PIPE	PIPE SIZE	INVERT OF UTILITY CROSSING +/-	CONTRACT/DRAWING NO.
X1	2+74	COMPRESSED AIR	NOT AVAILABLE	NOT AVAILABLE	NOT AVAILABLE
X2	2+35	HPEW, LPEW	18" (HPEW), 18" (LPEW)	5.25 (HPEW), 6.25 (LPEW)	SC690
X3	1+04	HPEW	NOT AVAILABLE	NOT AVAILABLE	NOT AVAILABLE
X4	0+60	REACTOR EFFLUENT	66"	-3.50	SC690
X5	0+40	HPEW	NOT AVAILABLE	NOT AVAILABLE	NOT AVAILABLE
X6	0+29	DUCTBANK	2' X 2' (ASSUMED)	7.00	NOT AVAILABLE
X7	0+03	POTABLE WATER	8"	2.00	SC690

REVISIONS			
NO.	DESCRIPTION	DATE	BY

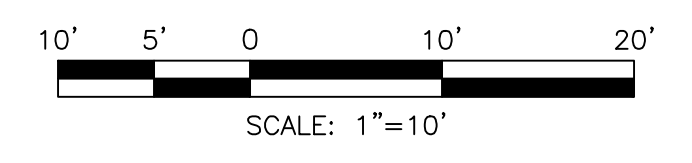
SHEET KEYNOTES:
1. SEVEN (7) UTILITY CROSSINGS ±

LEGEND

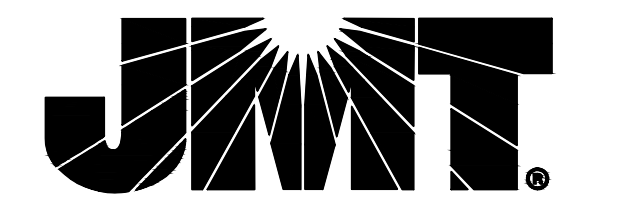
- EXISTING PROPERTY LINE
- EXISTING ADJOINING PROPERTY LINE
- EXISTING BUILDING
- EXISTING BUILDING FOOTING
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
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- EXISTING ASPHALT PAVING
- PROPOSED ASPHALT PAVING
- PROPOSED CONCRETE
- PROPOSED CURB
- PROPOSED WALL
- PROPOSED UTILITY - SCUM LINE
- PROPOSED CONTOUR



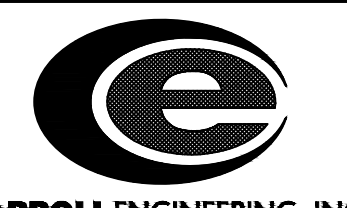
PROPOSED SITE PLAN-SECONDARY CLARIFIERS
SCALE: 1"=10'-0"



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BCNR NO. 11446

**PROPOSED SITE PLAN
SECONDARY CLARIFIERS**

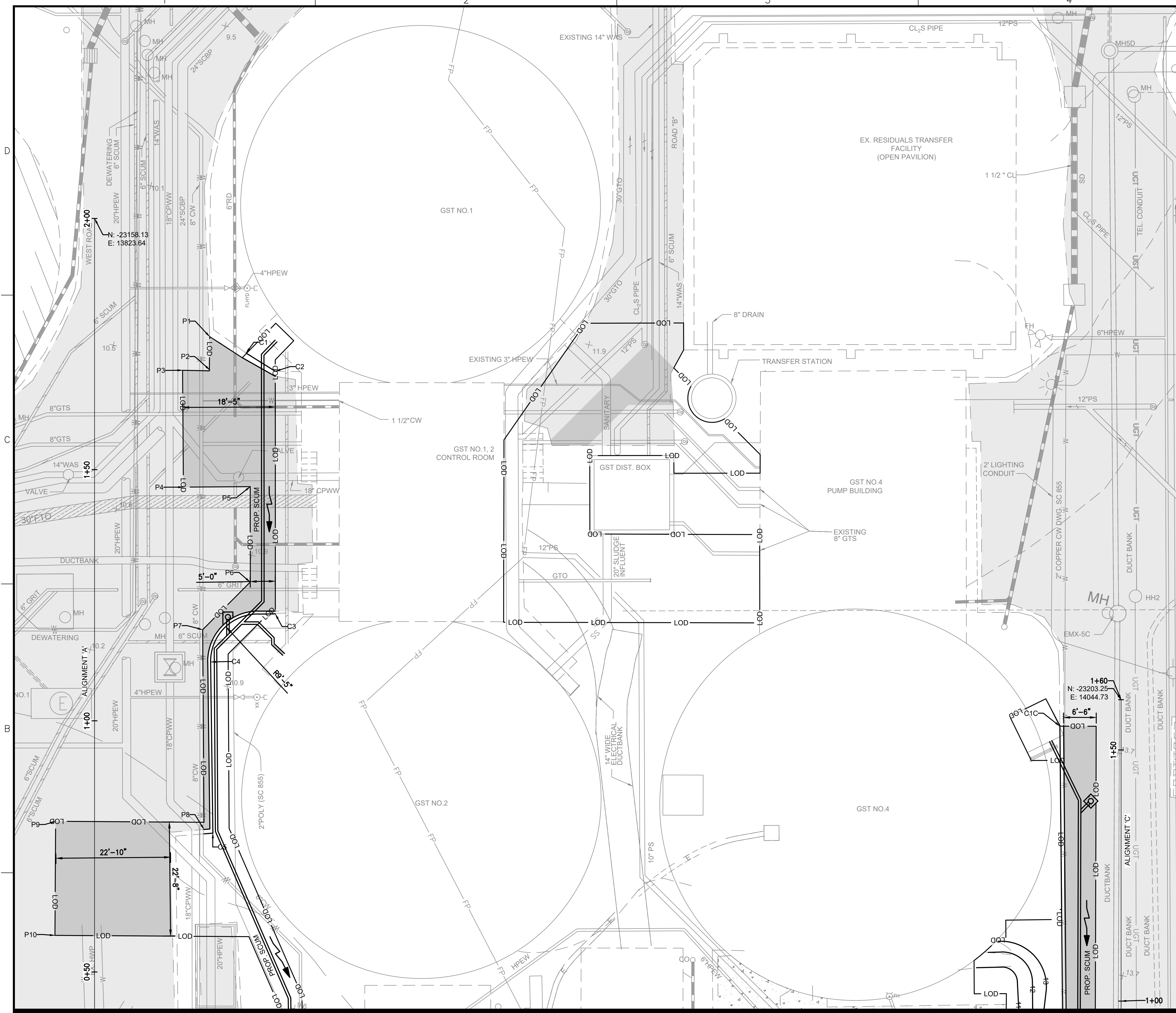
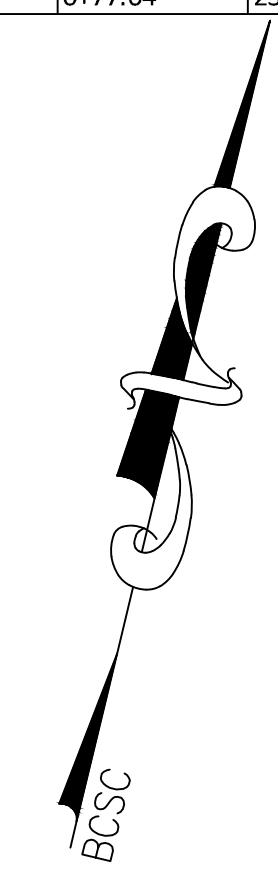
SCALE: AS NOTED DATE: SEPTEMBER 2024
DRAWING NO.: C-200-03 R1 SHEET 24 OF 210

REVISIONS			
NO.	DESCRIPTION	DATE	BY

ALIGNMENT A			ALIGNMENT B		ALIGNMENT C			
POINT	STATION	OFFSET (L/R)	POINT	STATION	OFFSET (L/R)	POINT	STATION	OFFSET (L/R)
P1	1+76.46	22.91 (R)	P1B	0+11.78	13.23 (L)	P1C	0+24.36	33.70 (L)
P2	1+69.83	22.97 (R)	P2B	0+20.57	4.56 (L)	P2C	0+14.33	33.56 (L)
P3	1+69.83	17.51 (R)	P3B	0+96.77	5.45 (L)	P3C	1+54.85	12.19 (L)
P4	1+46.51	17.68 (R)	P4B	1+03.61	5.53 (L)	P4C	0+51.90	11.21 (L)
P5	1+46.51	30.98 (R)	P5B	1+19.61	10.25 (R)	P5C	0+34.22	16.08 (L)
P6	1+27.61	30.98 (R)	P6B	1+19.61	17.42 (R)	P6C	0+07.86	15.71 (L)
P7	1+18.22	21.60 (R)	C1B	0+11.48	24.19 (R)			
P8	0+78.37	21.78 (R)	C2B	0+16.70	20.79 (L)			
P9	0+80.00	7.75 (L)						
P10	0+57.29	7.89 (L)						
C1	1+73.15	30.24 (R)						
C2	1+69.59	35.96 (R)						
C3	1+21.27	35.97 (R)						
C4	1+11.72	23.10 (R)						
C5	0+77.64	23.54 (R)						

LEGEND

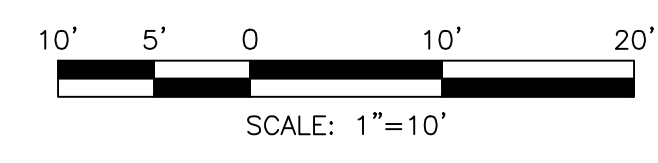
- EXISTING PROPERTY LINE
- EXISTING ADJOINING PROPERTY LINE
- EXISTING BUILDING
- EXISTING BUILDING FOOTING
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- EXISTING FLOTATION THICKENED SLUDGE (FTS) UTILITY
- EXISTING BLENDED SLUDGE (BS) UTILITY
- EXISTING SCRUBBER DRAIN BYPASS (SCBP) UTILITY
- EXISTING HIGH PRESSURE EFFLUENT WATER (HPEW) UTILITY
- EXISTING FERRIC CHLORIDE (FeCl) UTILITY
- EXISTING POLYMER (POLY) UTILITY
- EXISTING GRAVITY THICKENED SLUDGE (GTS) UTILITY
- EXISTING SUCTION LINE (SL) UTILITY
- EXISTING RAW SLUDGE (RS) UTILITY
- EXISTING DISCHARGE PIPE (DIS) UTILITY
- EXISTING SCUM PIPE
- EXISTING SANITARY LINE
- EXISTING STORMDRAIN LINE
- EXISTING BOLLARD
- EXISTING FENCE
- EXISTING RETAINING WALL
- EXISTING SOILS
- EXISTING FLOODPLAIN
- CHESAPEAKE BAY CRITICAL AREA
- EXISTING WATER BODY
- EXISTING CLEANOUT
- EXISTING STORM DRAIN MANHOLE
- EXISTING DECIDUOUS TREE
- EXISTING UTILITY POLE
- EXISTING LIGHT POLE
- EXISTING CURB
- EXISTING ROADWAY
- EXISTING ASPHALT PAVING
- PROPOSED ASPHALT PAVING
- PROPOSED CONCRETE
- PROPOSED CURB
- PROPOSED WALL
- PROPOSED UTILITY - SCUM LINE
- PROPOSED CONTOUR



MATCHLINE C-200-05



PROPOSED SITE GEOMETRIC PLAN - GRAVITY SLUDGE THICKENERS
SCALE: 1" = 10'-0"



PROFESSIONAL CERTIFICATION: I CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NO. 14446, EXPIRATION DATE 5/25/2025.

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CITY OF BALTIMORE
DEPARTMENT OF PUBLIC WORKS
OFFICE OF ENGINEERING & CONSTRUCTION
PATAPSCO WASTEWATER TREATMENT PLANT
SANITARY CONTRACT NO. 994
CLARIFIER AND GRAVITY SLUDGE THICKENERS
REHABILITATION AT PATAPSCO WWTP
BCNR NO. 11446

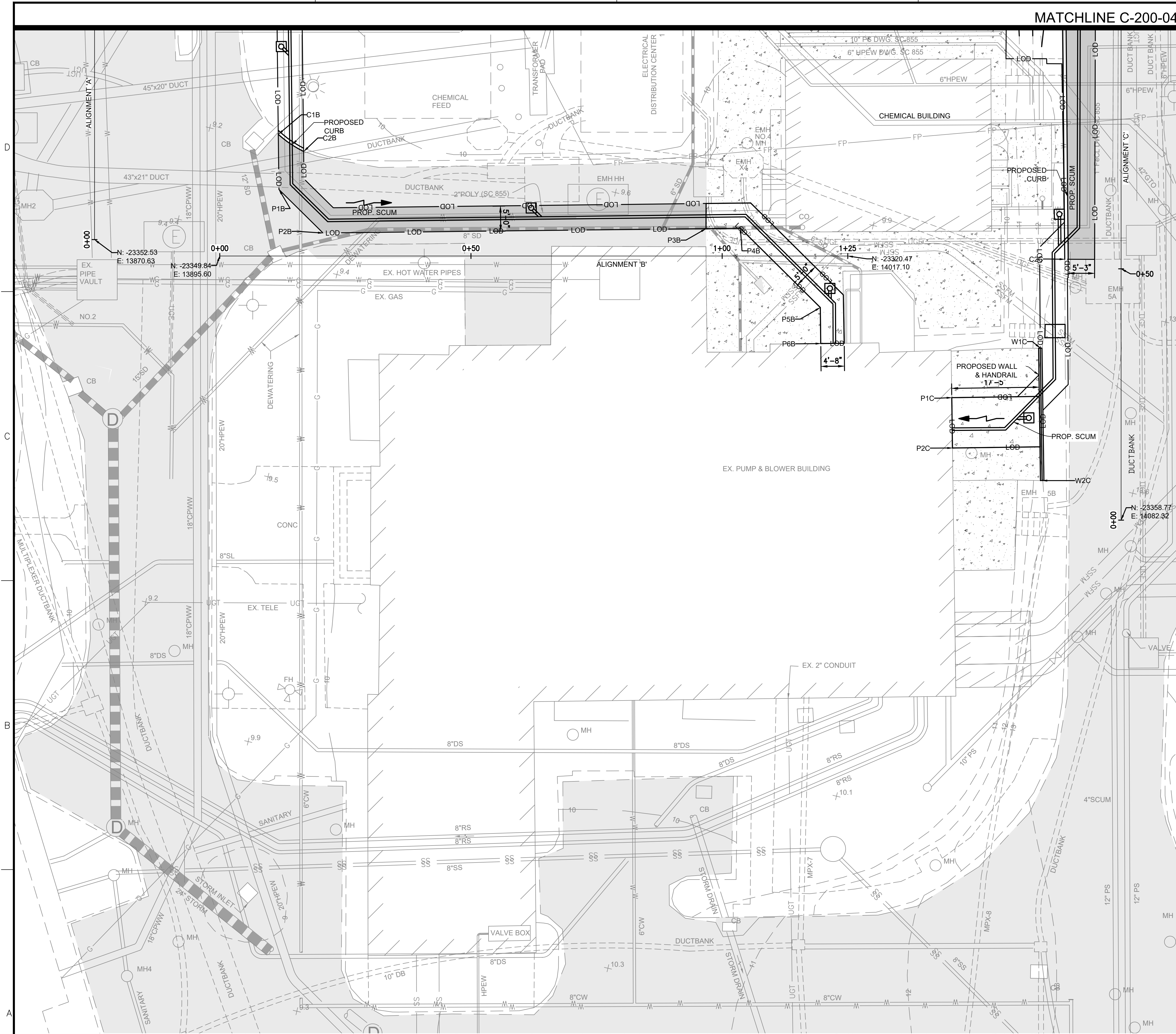
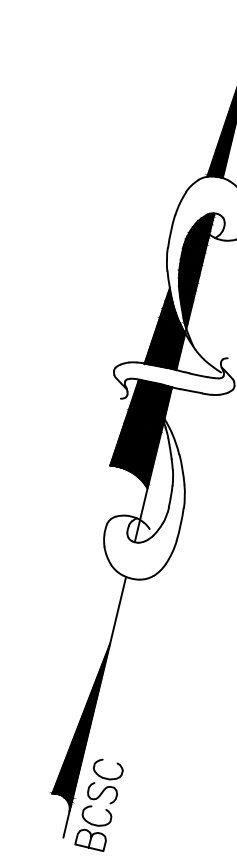
**PROPOSED SITE GEOMETRIC PLAN
GRAVITY SLUDGE THICKENERS**
SCALE: AS NOTED DATE: SEPTEMBER 2024
DRAWING NO.: C-200-04 R1 SHEET 25 OF 210

REVISIONS			
NO.	DESCRIPTION	DATE	BY

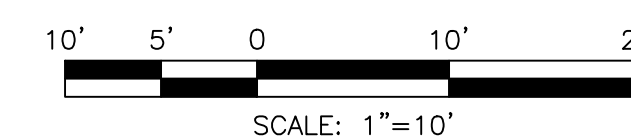
POINT	ALIGNMENT A		POINT	ALIGNMENT B		POINT	ALIGNMENT C	
	STATION	OFFSET (L/R)		STATION	OFFSET (L/R)		STATION	OFFSET (L/R)
P1	1+76.46	22.91 (R)	P1B	0+11.78	13.23 (L)	P1C	0+24.36	33.70 (L)
P2	1+69.83	22.97 (R)	P2B	0+20.57	4.56 (L)	P2C	0+14.33	33.56 (L)
P3	1+69.83	17.51 (R)	P3B	0+96.77	5.45 (L)	P3C	1+54.85	12.19 (L)
P4	1+46.51	17.68 (R)	P4B	1+03.61	5.53 (L)	P4C	0+51.90	11.21 (L)
P5	1+46.51	30.98 (R)	P5B	1+19.61	10.25 (R)	P5C	0+34.22	16.08 (L)
P6	1+27.61	30.98 (R)	P6B	1+19.61	17.42 (R)	P6C	0+07.86	15.71 (L)
P7	1+18.22	21.60 (R)	C1B	0+11.48	24.19 (R)			
P8	0+78.37	21.78 (R)	C2B	0+16.70	20.79 (L)			
P9	0+80.00	7.75 (L)						
P10	0+57.29	7.89 (L)						
C1	1+73.15	30.24 (R)						
C2	1+69.59	35.96 (R)						
C3	1+21.27	35.97 (R)						
C4	1+11.72	23.10 (R)						
C5	0+77.64	23.54 (R)						

LEGEND


- EXISTING PROPERTY LINE
- EXISTING ADJOINING PROPERTY LINE
- EXISTING BUILDING
- EXISTING BUILDING FOOTING
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- EXISTING FLOTATION THICKENED SLUDGE (FTS) UTILITY
- EXISTING BLENDED SLUDGE (BS) UTILITY
- EXISTING SCRUBBER DRAIN BYPASS (SCBP) UTILITY
- EXISTING HIGH PRESSURE EFFLUENT WATER (HPEW) UTILITY
- EXISTING FERRIC CHLORIDE (FeCl) UTILITY
- EXISTING POLYMER (POLY) UTILITY
- EXISTING GRAVITY THICKENED SLUDGE (GTS) UTILITY
- EXISTING SUCTION LINE (SL) UTILITY
- EXISTING RAW SLUDGE (RS) UTILITY
- EXISTING DISCHARGE PIPE (DIS) UTILITY
- EXISTING SCUM PIPE
- EXISTING SANITARY LINE
- EXISTING STORM DRAIN LINE
- EXISTING BOLLARD
- EXISTING FENCE
- EXISTING RETAINING WALL
- EXISTING SOILS
- EXISTING FLOODPLAIN
- CHESAPEAKE BAY CRITICAL AREA
- EXISTING WATER BODY
- EXISTING CLEANOUT
- EXISTING STORM DRAIN MANHOLE
- EXISTING DECIDUOUS TREE
- EXISTING UTILITY POLE
- EXISTING LIGHT POLE
- EXISTING CURB
- EXISTING ROADWAY
- EXISTING ASPHALT PAVING
- PROPOSED ASPHALT PAVING
- PROPOSED CONCRETE
- PROPOSED CURB
- PROPOSED WALL
- PROPOSED UTILITY - SCUM LINE
- PROPOSED CONTOUR




PROPOSED SITE GEOMETRIC PLAN - GRAVITY SLUDGE THICKENERS
SCALE: 1" = 10'-0"



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PATAPSCO WASTEWATER TREATMENT PLANT

SANITARY CONTRACT NO. 994
CLARIFIER AND GRAVITY SLUDGE THICKENERS
REHABILITATION AT PATAPSCO WWTP
BCNR NO. 11446

**PROPOSED SITE GEOMETRIC PLAN
GRAVITY SLUDGE THICKENERS**

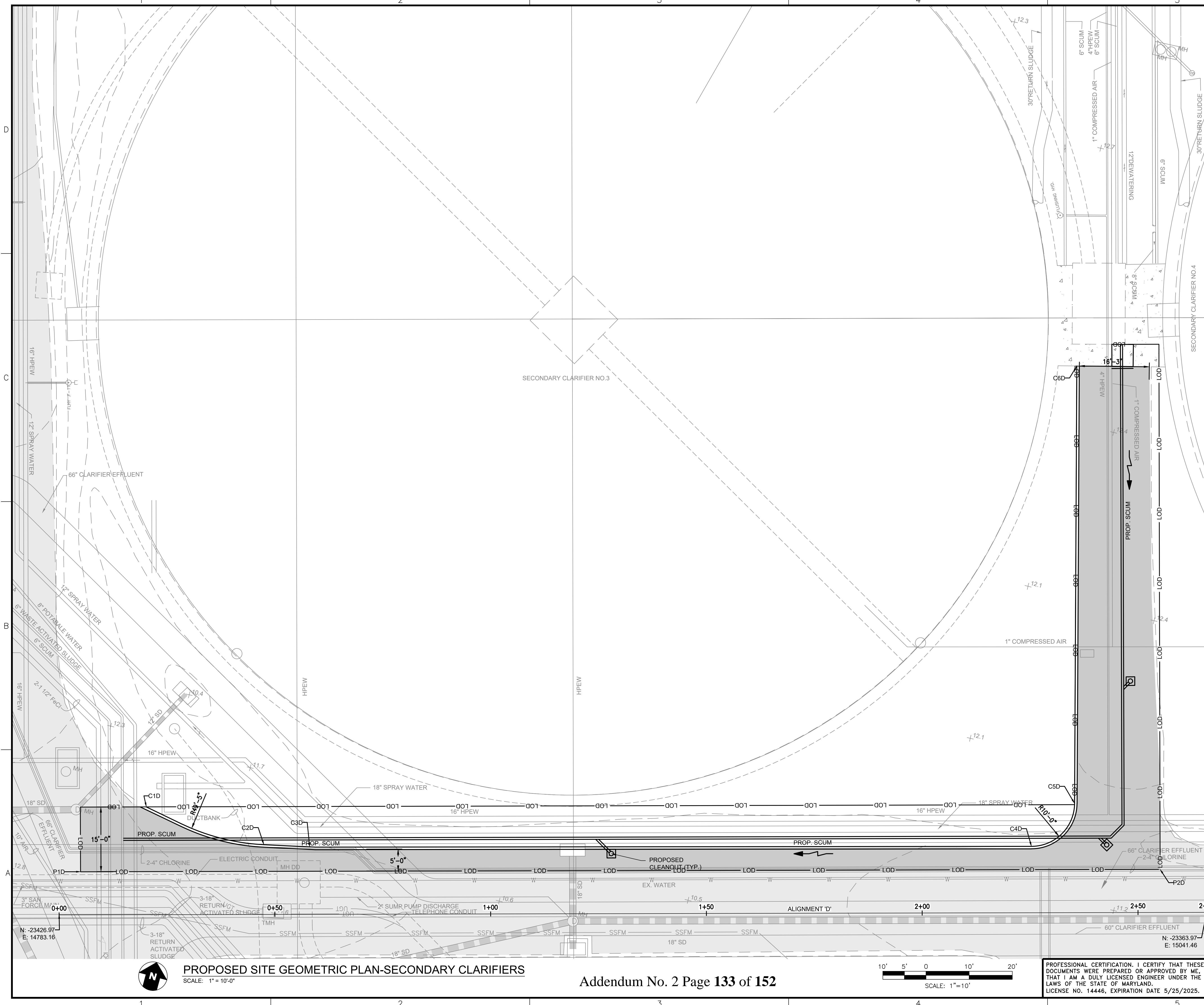
SCALE: AS NOTED DATE: SEPTEMBER 2024
DRAWING NO.: C-200-05 R1 SHEET 25A OF 210

REVISIONS			
NO.	DESCRIPTION	DATE	BY

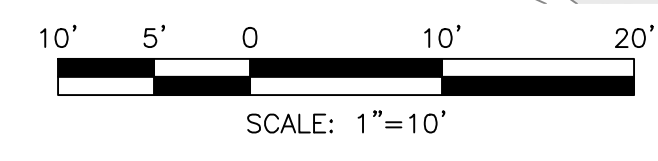
ALIGNMENT D		
POINT	STATION	OFFSET (L/R)
P1D	0+05.00	10.00 (L)
P2D	2+55.15	10.00 (L)
C1D	0+18.85	24.98 (L)
C2D	0+47.48	16.16 (L)
C3D	0+58.10	15.63 (L)
C4D	2+25.40	15.40 (L)
C5D	2+35.36	25.32 (L)
C6D	2+36.10	126.70 (L)

LEGEND


- EXISTING PROPERTY LINE
- - - EXISTING ADJOINING PROPERTY LINE
- ▭ EXISTING BUILDING
- ▭ EXISTING BUILDING FOOTING
- - - EXISTING MAJOR CONTOUR
- - - EXISTING MINOR CONTOUR
- ▨ EXISTING FLOTATION THICKENED SLUDGE (FTS) UTILITY
- ▨ EXISTING BLENDED SLUDGE (BS) UTILITY
- ▨ EXISTING SCRUBBER DRAIN BYPASS (SCBP) UTILITY
- ▨ EXISTING HIGH PRESSURE EFFLUENT WATER (HPEW) UTILITY
- ▨ EXISTING FERRIC CHLORIDE (FeCl) UTILITY
- ▨ EXISTING POLYMER (POLY) UTILITY
- ▨ EXISTING GRAVITY THICKENED SLUDGE (GTS) UTILITY
- ▨ EXISTING SUCTION LINE (SL) UTILITY
- ▨ EXISTING RAW SLUDGE (RS) UTILITY
- ▨ EXISTING DISCHARGE PIPE (DIS) UTILITY
- ▨ EXISTING SCUM PIPE
- ▨ EXISTING SANITARY LINE
- ▨ EXISTING STORM DRAIN LINE
- EXISTING BOLLARD
- X EXISTING FENCE
- ▨ EXISTING RETAINING WALL
- ▨ EXISTING SOILS
- ▨ EXISTING FLOODPLAIN
- ▨ CHESAPEAKE BAY CRITICAL AREA
- ▨ EXISTING WATER BODY
- EXISTING CLEANOUT
- EXISTING STORM DRAIN MANHOLE
- EXISTING DECIDUOUS TREE
- EXISTING UTILITY POLE
- EXISTING LIGHT POLE
- ▨ EXISTING CURB
- ▨ EXISTING ROADWAY
- ▨ EXISTING ASPHALT PAVING
- ▨ PROPOSED ASPHALT PAVING
- ▨ PROPOSED CONCRETE
- ▨ PROPOSED CURB
- ▨ PROPOSED WALL
- ▨ PROPOSED UTILITY - SCUM LINE
- ▨ PROPOSED CONTOUR




PROPOSED SITE GEOMETRIC PLAN-SECONDARY CLARIFIERS
SCALE: 1"=10'-0"



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CITY OF BALTIMORE
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PATAPSCO WASTEWATER TREATMENT PLANT

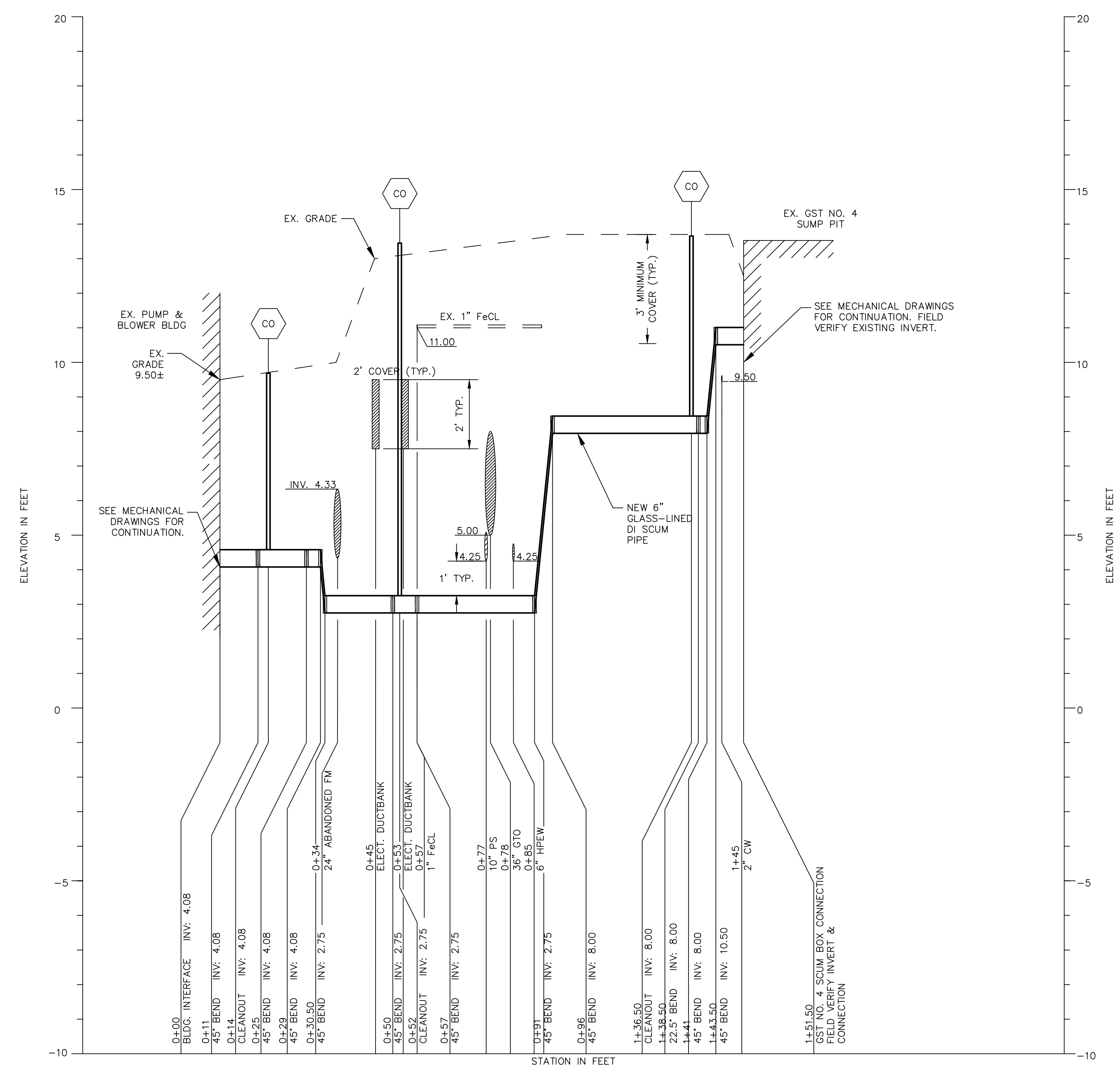
SANITARY CONTRACT NO. 994
CLARIFIER AND GRAVITY SLUDGE THICKENERS
REHABILITATION AT PATAPSCO WWTP
BCNR NO. 11446

**PROPOSED SITE GEOMETRIC PLAN
SECONDARY CLARIFIERS**

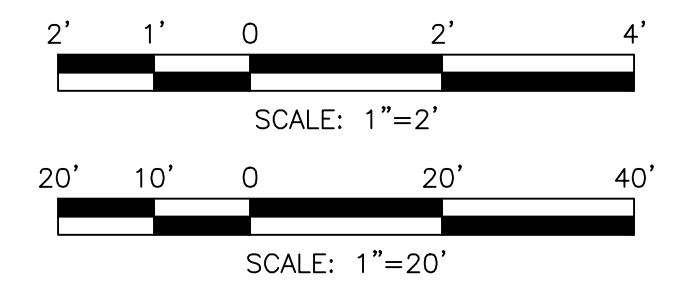
SCALE: AS NOTED DATE: SEPTEMBER 2024
DRAWING NO.: C-200-06 R1 SHEET 26 OF 210

REVISIONS			
NO.	DESCRIPTION	DATE	BY

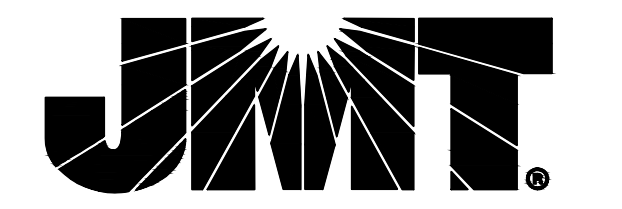
- SHEET NOTES:**
- CONTRACTOR TO TEST PIT AT ALL UTILITY CROSSINGS TO VERIFY DEPTH, SIZE, AND LOCATION OF EXISTING PIPES.
 - ALL PLUMBING COMPONENTS LOCATED BELOW THE FLOODPLAIN PROTECTION ELEVATION (9.2 FT. NAVD 88) MUST BE WATERTIGHT IN ACCORDANCE WITH ASCE 24.
 - DRAWING REFERENCE LIST:
 - SC 582 DWG. NO. AC-56, AC-57.
 - SC 690 DWG. NO. C-25, C-29, C-35, C-38



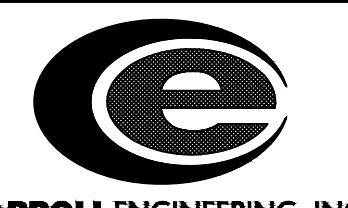
GST NO. 4 6" GLASS-LINED DI SCUM TRANSFER LINE - NEW WORK PROFILE 'A'
 SCALE: V: 1" = 2'-0"
 H: 1" = 20'-0"
 SEE SHEET C-200-01 & 02 FOR PLAN VIEW OF PROFILE



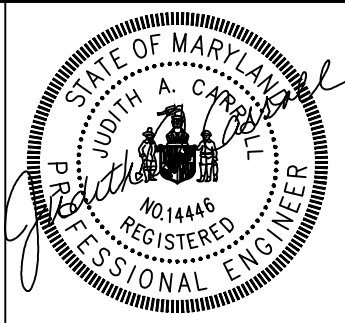
PROFESSIONAL CERTIFICATION: I CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.
 LICENSE NO. 14446, EXPIRATION DATE 5/25/2025.



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CITY OF BALTIMORE
 DEPARTMENT OF PUBLIC WORKS
 OFFICE OF ENGINEERING & CONSTRUCTION
 PATAPSCO WASTEWATER TREATMENT PLANT

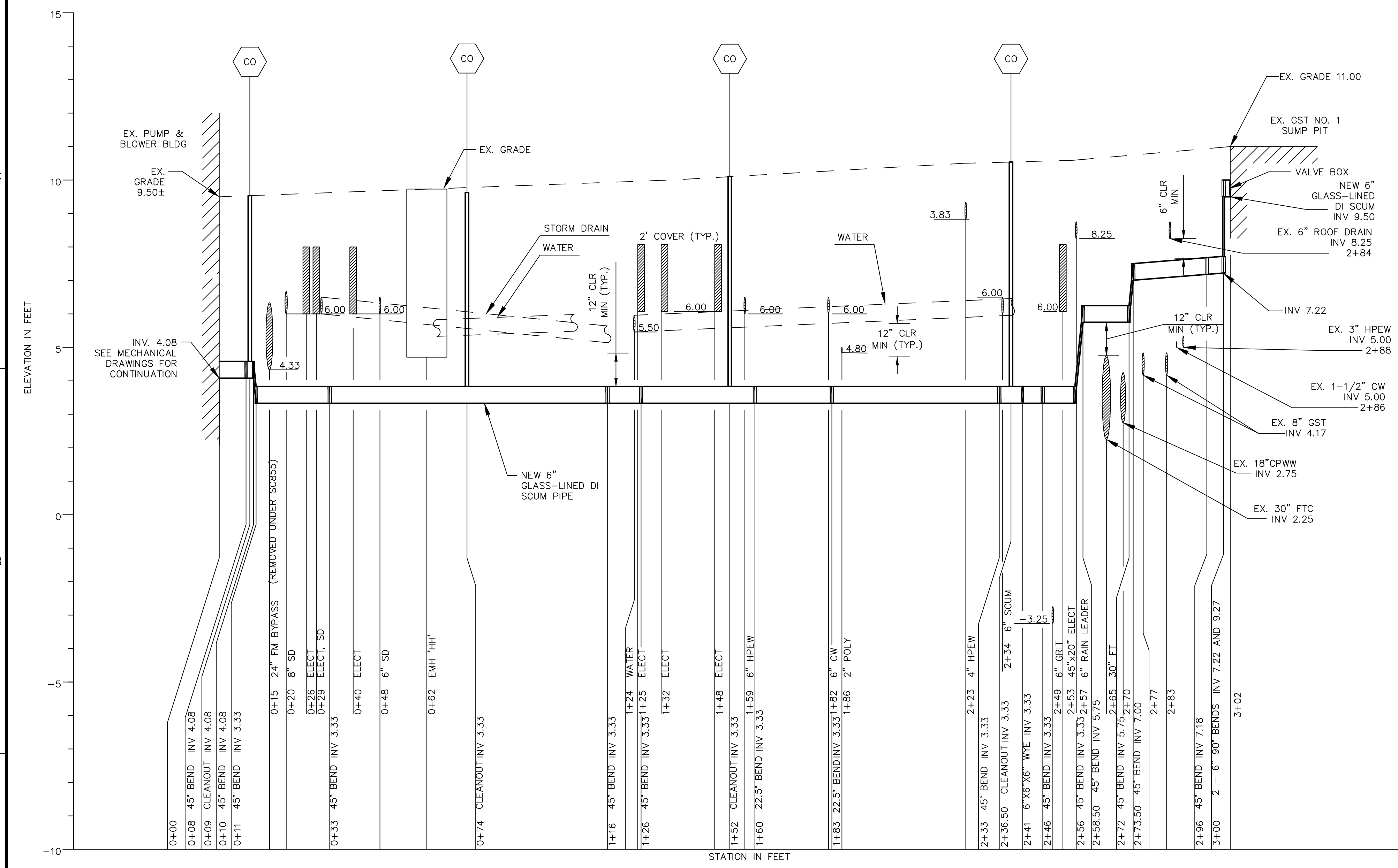
SANITARY CONTRACT NO. 994
 CLARIFIER AND GRAVITY SLUDGE THICKENERS
 REHABILITATION AT PATAPSCO WWTP
 BCNR NO. 11446

UTILITY PROFILES

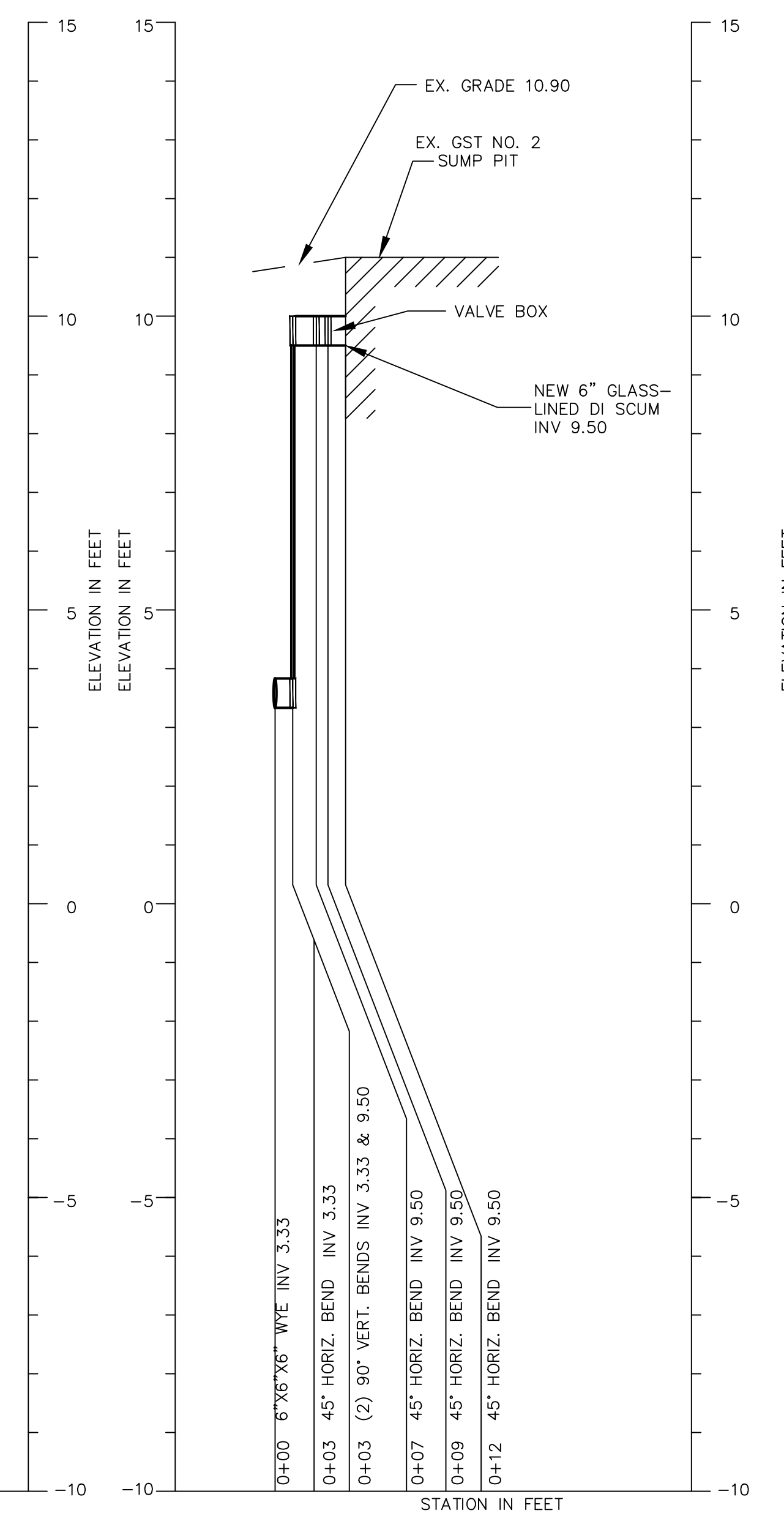
SCALE: AS NOTED DATE: SEPTEMBER 2024
 DRAWING NO.: C-200-09 R1 SHEET 29 OF 210

REVISIONS			
NO.	DESCRIPTION	DATE	BY

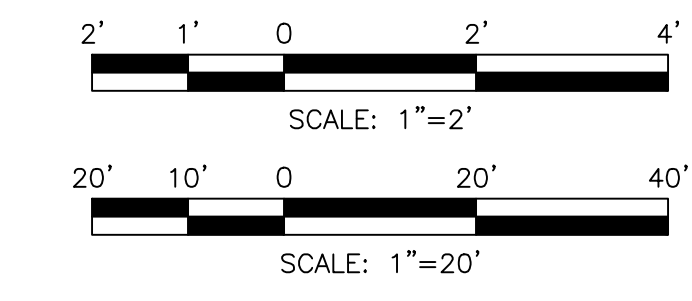
- SHEET NOTES:**
- CONTRACTOR TO TEST PIT AT ALL UTILITY CROSSINGS TO VERIFY DEPTH, SIZE, AND LOCATION OF EXISTING PIPES.
 - ALL PLUMBING COMPONENTS LOCATED BELOW THE FLOODPLAIN PROTECTION ELEVATION (9.2 FT. NAVD 88) MUST BE WATERTIGHT IN ACCORDANCE WITH ASCE 24.
 - DRAWING REFERENCE LIST:
 - SC 582 DWG. NO. AC-56, AC-57.
 - SC 690 DWG. NO. C-25, C-29, C-35, C-38



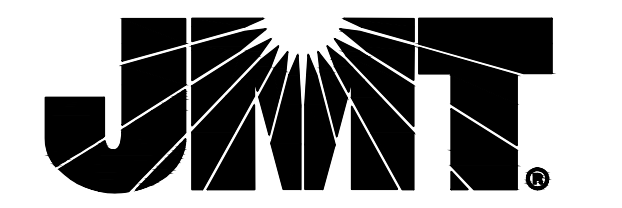
GST NO. 1 6" GLASS-LINED DI SCUM TRANSFER LINE - NEW WORK PROFILE 'B'
 SCALE: V: 1" = 2'-0"
 H: 1" = 20'-0"



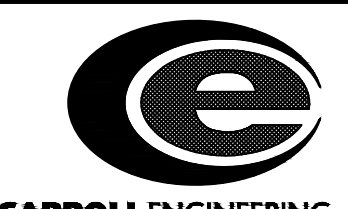
GST NO. 2 6" GLASS-LINED DI SCUM TRANSFER LINE - PROFILE 'C'
 SCALE: V: 1" = 2'-0"
 H: 1" = 20'-0"



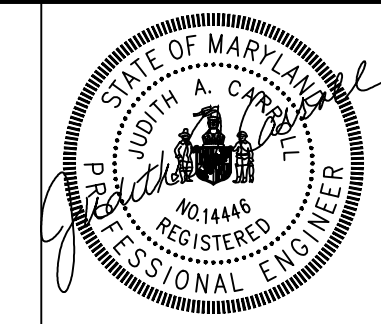
PROFESSIONAL CERTIFICATION: I CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NO. 14446, EXPIRATION DATE 5/25/2025.



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PATAPSCO WASTEWATER TREATMENT PLANT

SANITARY CONTRACT NO. 994
 CLARIFIER AND GRAVITY SLUDGE THICKENERS
 REHABILITATION AT PATAPSCO WWTP

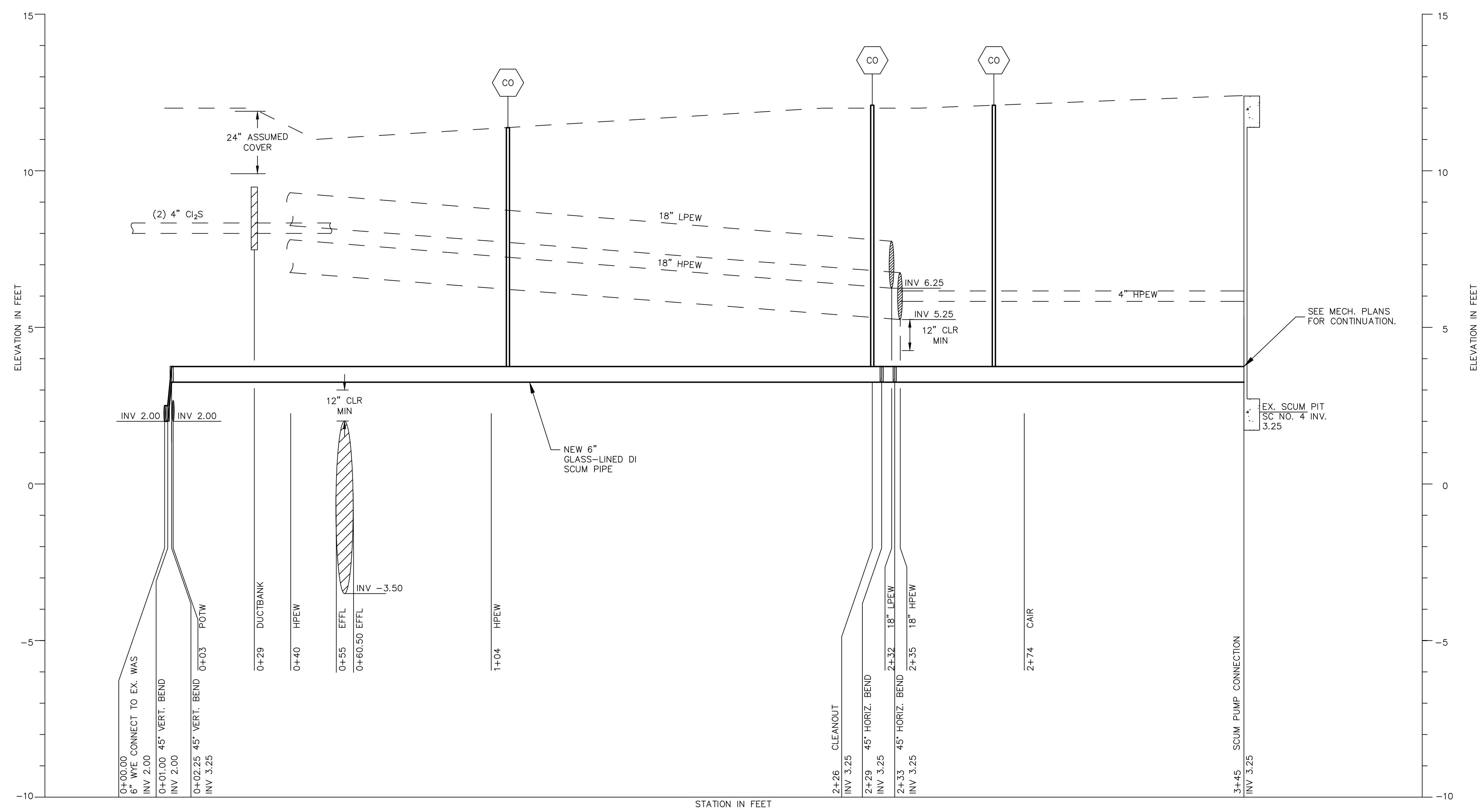
BCNR NO. 11446

UTILITY PROFILES

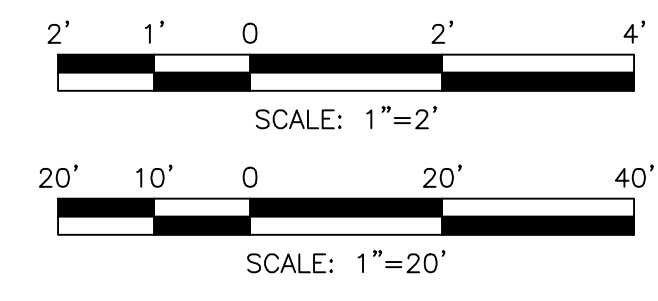
SCALE: AS NOTED DATE: SEPTEMBER 2024
 DRAWING NO.: C-200-10 SHEET 30 OF 210

REVISIONS			
NO.	DESCRIPTION	DATE	BY

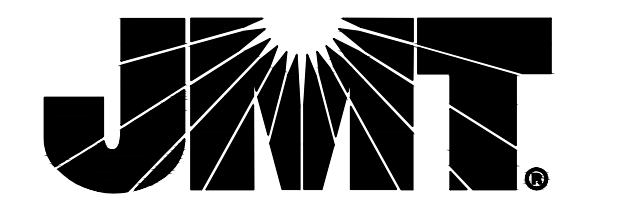
- SHEET NOTES:**
- CONTRACTOR TO TEST PIT AT ALL UTILITY CROSSINGS TO VERIFY DEPTH, SIZE, AND LOCATION OF EXISTING PIPES.
 - ALL PLUMBING COMPONENTS LOCATED BELOW THE FLOODPLAIN PROTECTION ELEVATION (9.2 FT. NAVD 88) MUST BE WATERTIGHT IN ACCORDANCE WITH ASCE 24.
 - DRAWING REFERENCE LIST:
 - SC 823 DWG. NO. C-1,2,3
 - SC 926RR DWG. NO. DW-9,10,11,20,23
 - SC582 DWG. NO. AC-56
 - SC855 DWG. NO. M-200-23



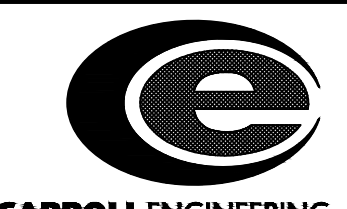
SC NO. 4 TO WAS 6" GLASS-LINED DI SCUM TRANSFER LINE - PROFILE 'D'
 SCALE: V: 1" = 2'-0"
 H: 1" = 20'-0"
 SEE SHEET C-200-03 FOR PLAN VIEW OF PROFILE



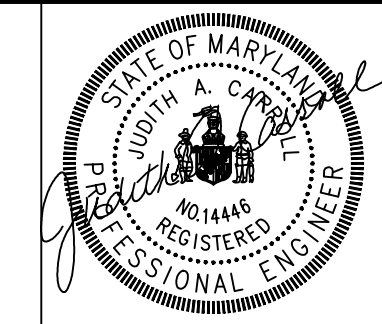
PROFESSIONAL CERTIFICATION: I CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.
 LICENSE NO. 14446, EXPIRATION DATE 5/25/2025.



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SANITARY CONTRACT NO. 994
 CLARIFIER AND GRAVITY SLUDGE THICKENERS
 REHABILITATION AT PATAPSCO WWTP
 BCNR NO. 11446

UTILITY PROFILES

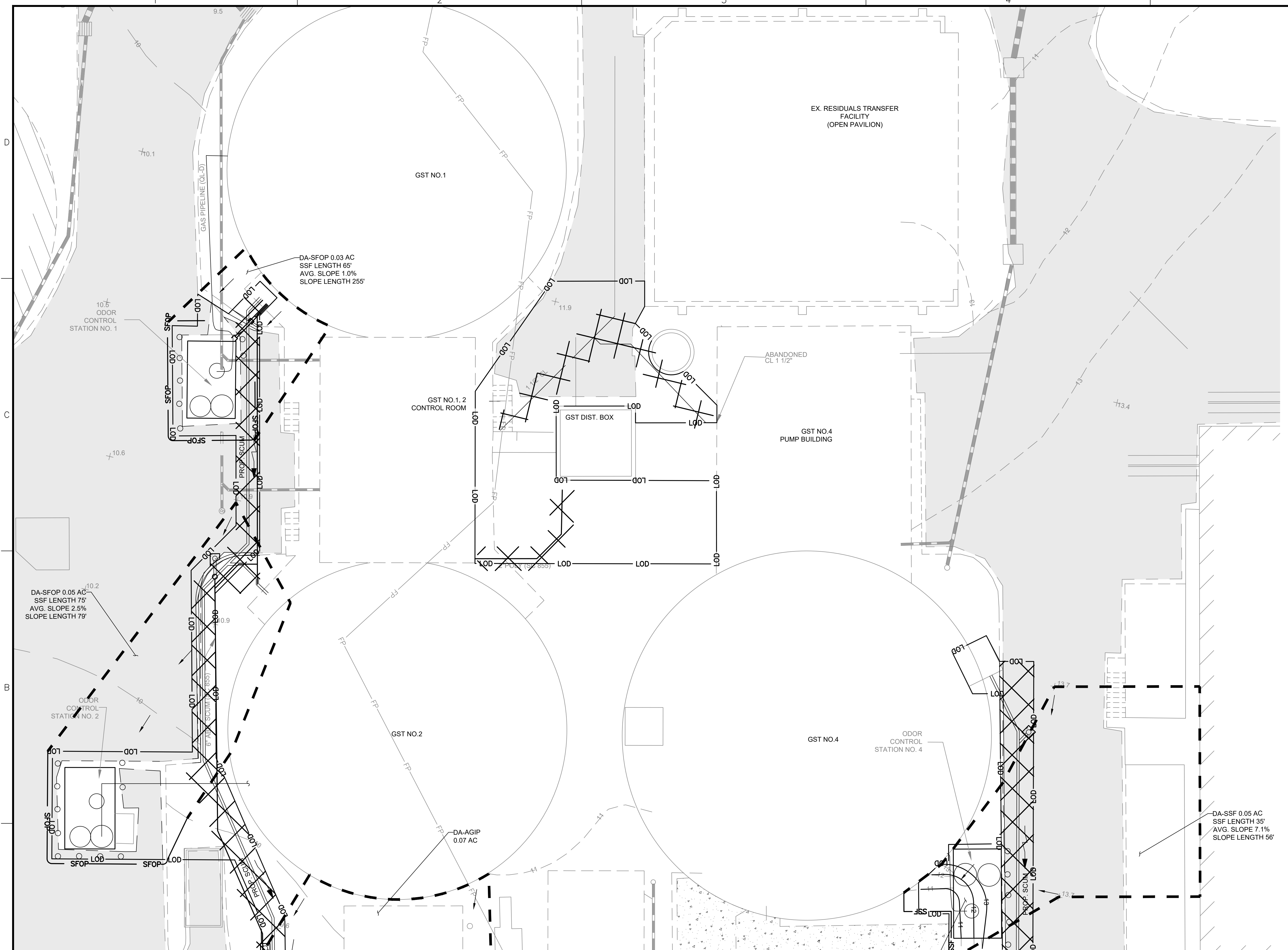
SCALE: AS NOTED

DATE: SEPTEMBER 2024

DRAWING NO.: C-200-11

SHEET 31 OF 210

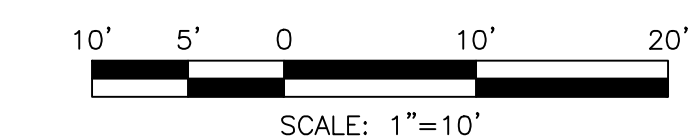
REVISIONS			
NO.	DESCRIPTION	DATE	BY



LEGEND

	EXISTING PROPERTY LINE
	EXISTING ADJOINING PROPERTY LINE
	EXISTING BUILDING
	EXISTING BUILDING FOOTING
	EXISTING MAJOR CONTOUR
	EXISTING MINOR CONTOUR
	EXISTING BOLLARD
	EXISTING FENCE
	EXISTING RETAINING WALL
	EXISTING SOILS
	EXISTING FLOODPLAIN
	CHESAPEAKE BAY CRITICAL AREA
	EXISTING WATER BODY
	EXISTING CURB
	EXISTING ROADWAY
	EXISTING ASPHALT PAVING
	PROPOSED ASPHALT PAVING
	PROPOSED CONCRETE
	PROPOSED CURB
	PROPOSED WALL
	PROPOSED UTILITY - SCUM LINE
	PROPOSED CONTOUR
	SILT FENCE ON PAVEMENT
	SUPER SILT FENCE
	SAME DAY STABILIZATION
	AT-GRADE INLET PROTECTION
	PORTABLE SEDIMENT TANK
	FILTER BAG
	DRAINAGE AREA DELINEATION
	DRAINAGE AREA FLOW ARROW


GRAVITY SLUDGE THICKENERS EROSION & SEDIMENT CONTROL PLAN
 SCALE: 1" = 10'-0"
 NOTE:
 1. ALL EROSION & SEDIMENT CONTROL DEVICES SHALL BE PLACED AT THE ORIGINAL LIMIT OF DISTURBANCE.
 2. FOR VISUAL CLARITY, UTILITIES TO REMAIN ARE NOT SHOWN ON THIS SHEET.




MATCHLINE C-300-02

AREA BEING CONVERTED TO PERMANENTLY STABILIZED GREEN SPACE (200± S.F.)

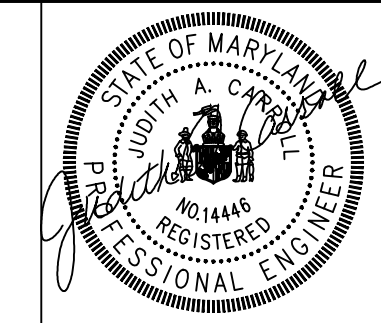
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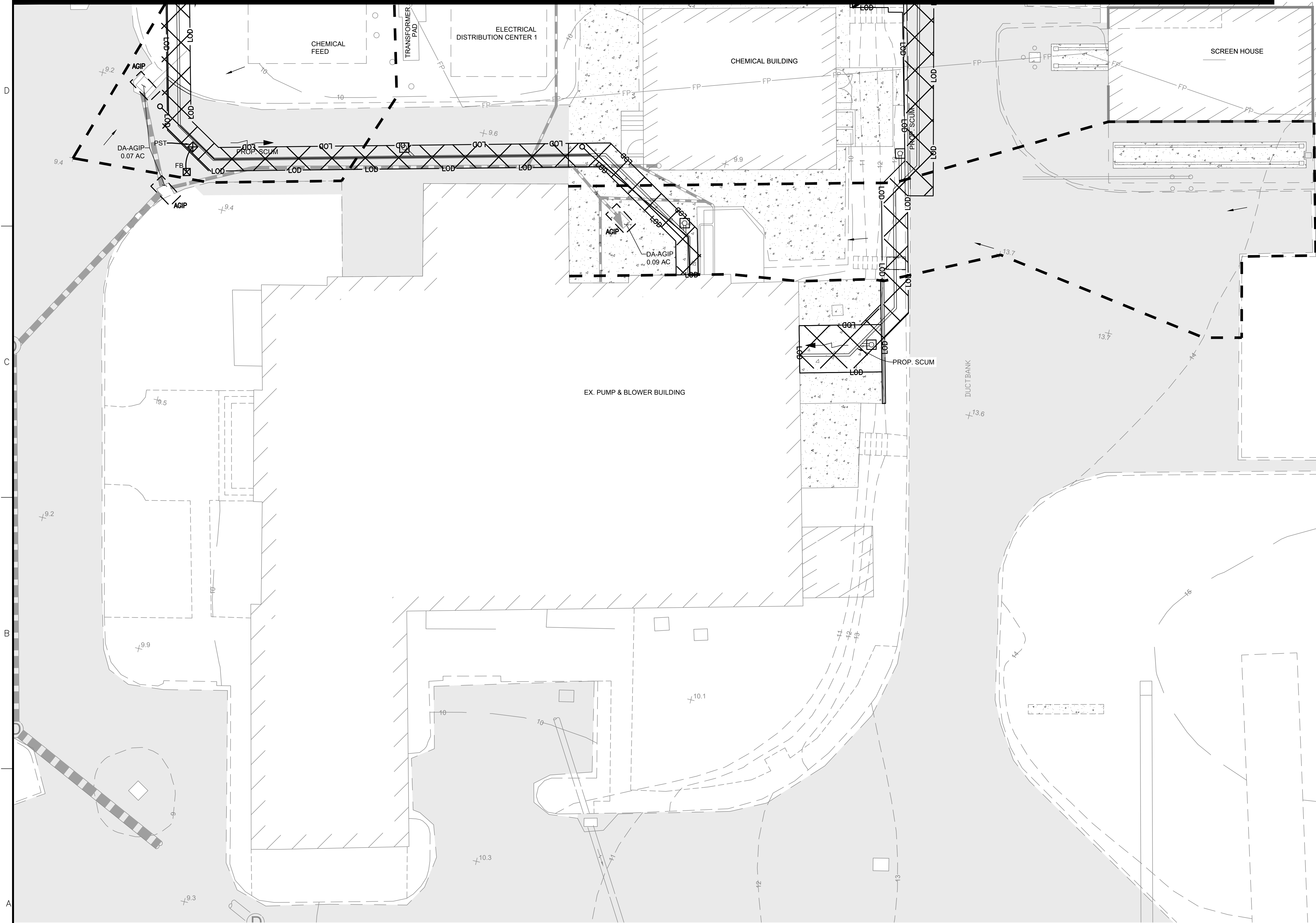
CITY OF BALTIMORE
 DEPARTMENT OF PUBLIC WORKS
 OFFICE OF ENGINEERING & CONSTRUCTION
 PATAPSCO WASTEWATER TREATMENT PLANT
 SANITARY CONTRACT NO. 994
 CLARIFIER AND GRAVITY SLUDGE THICKENERS
 REHABILITATION AT PATAPSCO WWTP
 BCNR NO. 11446

**GRAVITY SLUDGE THICKENER
 EROSION & SEDIMENT CONTROL &
 DRAINAGE AREA DELINEATION PLAN**

SCALE: AS NOTED DATE: SEPTEMBER 2024
 DRAWING NO.: C-300-01 R1 SHEET 33 OF 210

MATCHLINE C-300-01

REVISIONS			
NO.	DESCRIPTION	DATE	BY

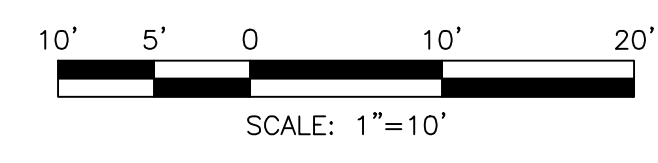


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- ▨ EXISTING BUILDING
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- 99 EXISTING MINOR CONTOUR
- *P EXISTING BOLLARD
- X EXISTING FENCE
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- 42UC EXISTING FLOODPLAIN
- FP CHESAPEAKE BAY CRITICAL AREA
- CRITICAL AREA
- EXISTING WATER BODY
- EXISTING CURB
- EXISTING ROADWAY
- EXISTING ASPHALT PAVING
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- PROPOSED CURB
- PROPOSED WALL
- PROPOSED UTILITY - SCUM LINE
- 10 PROPOSED CONTOUR
- SFOP SILT FENCE ON PAVEMENT
- SSF SUPER SILT FENCE
- ▨ SAME DAY STABILIZATION
- ▨ AGIP AT-GRADE INLET PROTECTION
- ▨ PST PORTABLE SEDIMENT TANK
- ▨ FB FILTER BAG
- DRAINAGE AREA DELINEATION
- DRAINAGE AREA FLOW ARROW



GRAVITY SLUDGE THICKENERS EROSION & SEDIMENT CONTROL PLAN
 SCALE: 1" = 10'-0"
 NOTE:
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 2. FOR VISUAL CLARITY, UTILITIES TO REMAIN ARE NOT SHOWN ON THIS SHEET.



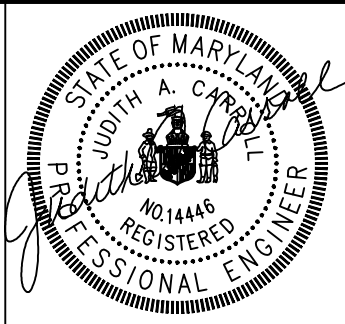
PROFESSIONAL CERTIFICATION: I CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NO. 14446, EXPIRATION DATE 5/25/2025.



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CITY OF BALTIMORE
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 PATAPSCO WASTEWATER TREATMENT PLANT

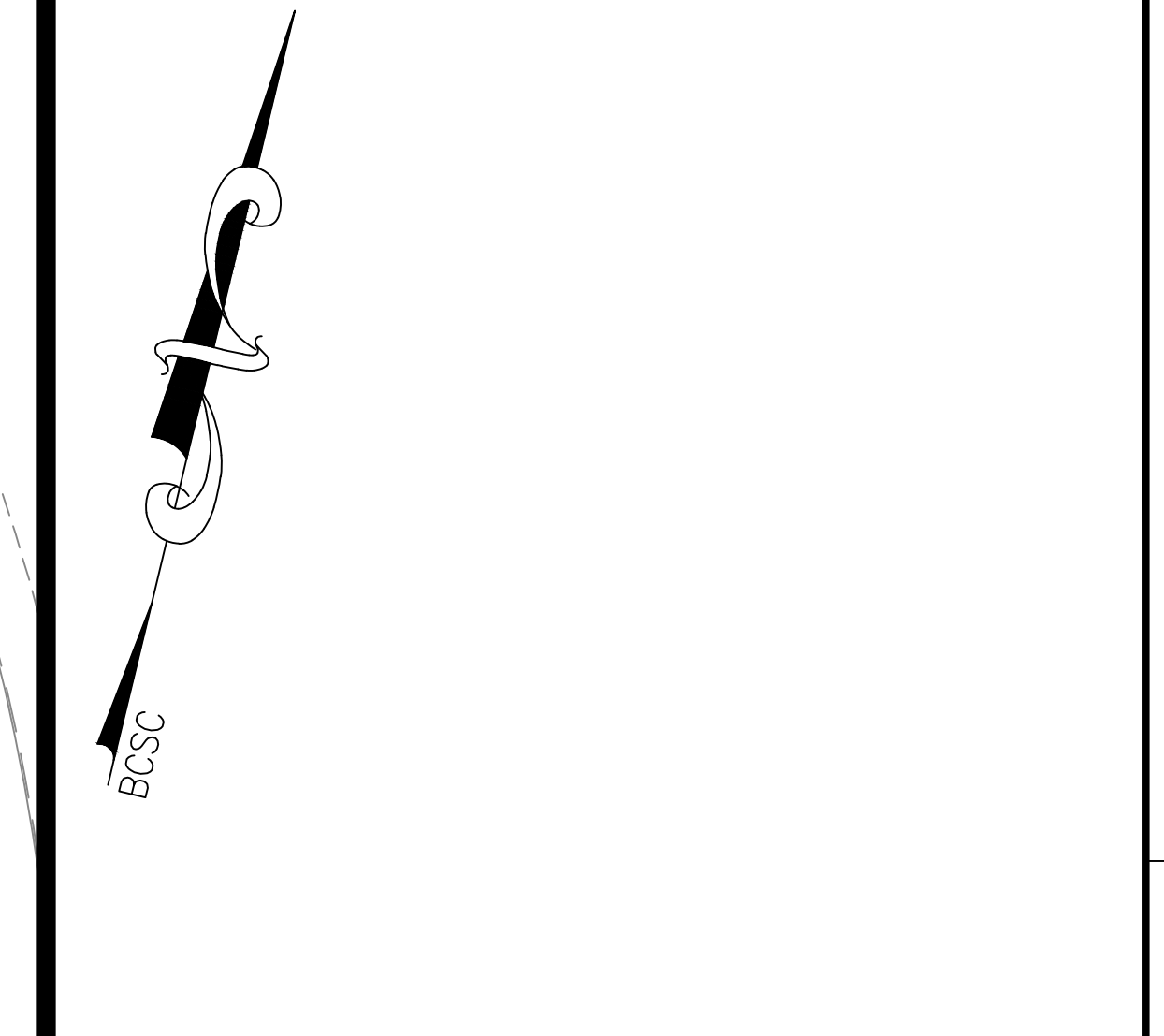
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**GRAVITY SLUDGE THICKENER
 EROSION & SEDIMENT CONTROL &
 DRAINAGE AREA DELINEATION PLAN**

SCALE: AS NOTED DATE: SEPTEMBER 2024
 DRAWING NO.: C-300-02 R1 SHEET 33A OF 210

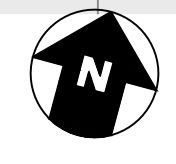
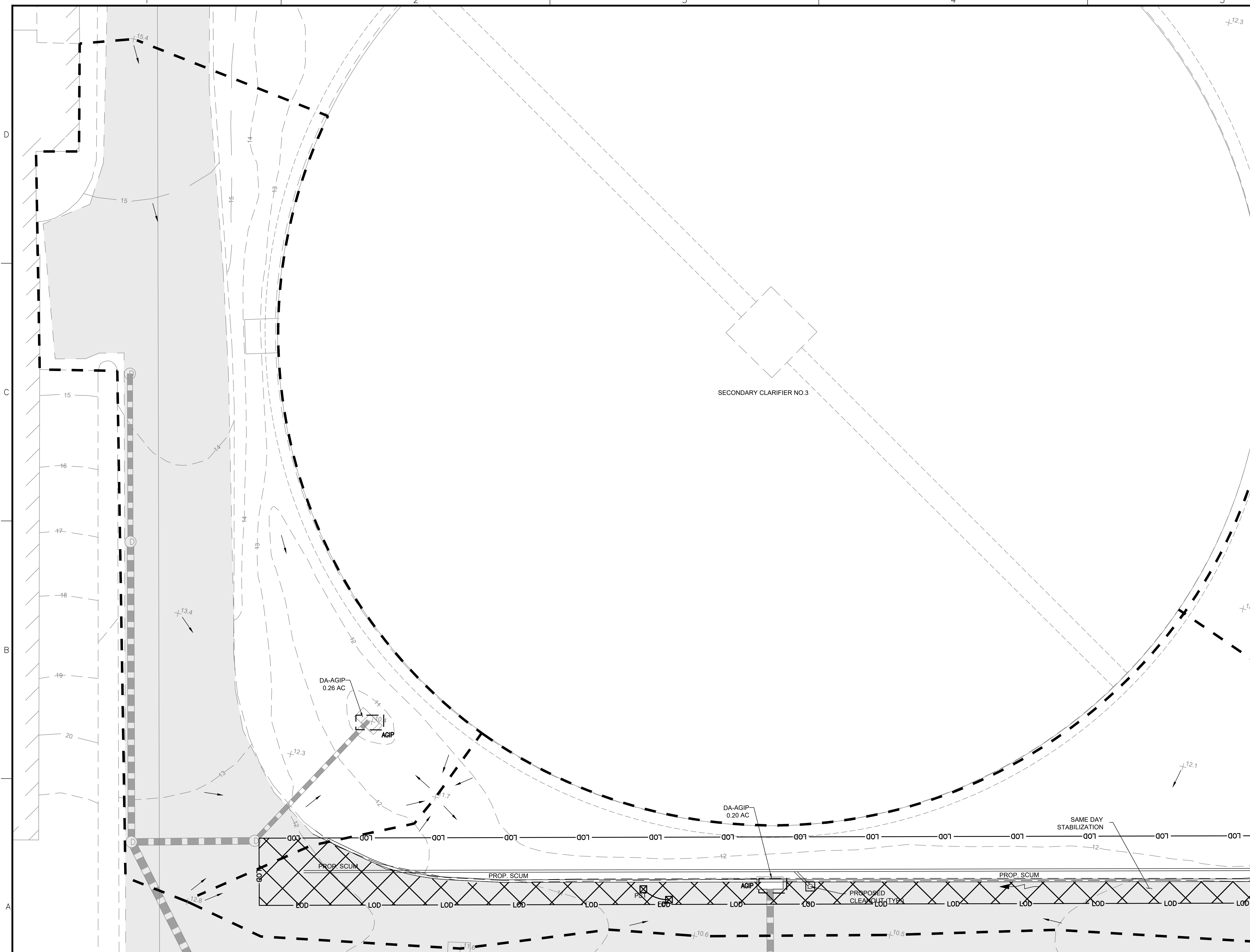
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	SAME DAY STABILIZATION
	AGIP - AT-GRADE INLET PROTECTION
	PST - PORTABLE SEDIMENT TANK
	FB - FILTER BAG
	DRAINAGE AREA DELINEATION
	DRAINAGE AREA FLOW ARROW

MATCHLINE C-300-04




SECONDARY CLARIFIERS EROSION & SEDIMENT CONTROL PLAN


SCALE: 1"=10'-0"
 NOTE:
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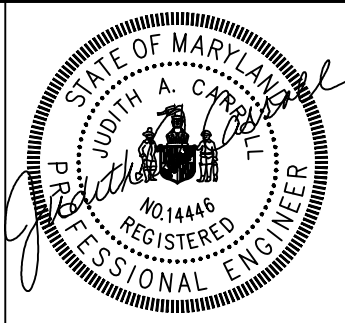
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 PATAPSCO WASTEWATER TREATMENT PLANT

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**SECONDARY CLARIFIERS
 EROSION & SEDIMENT CONTROL &
 DRAINAGE AREA DELINEATION PLAN**

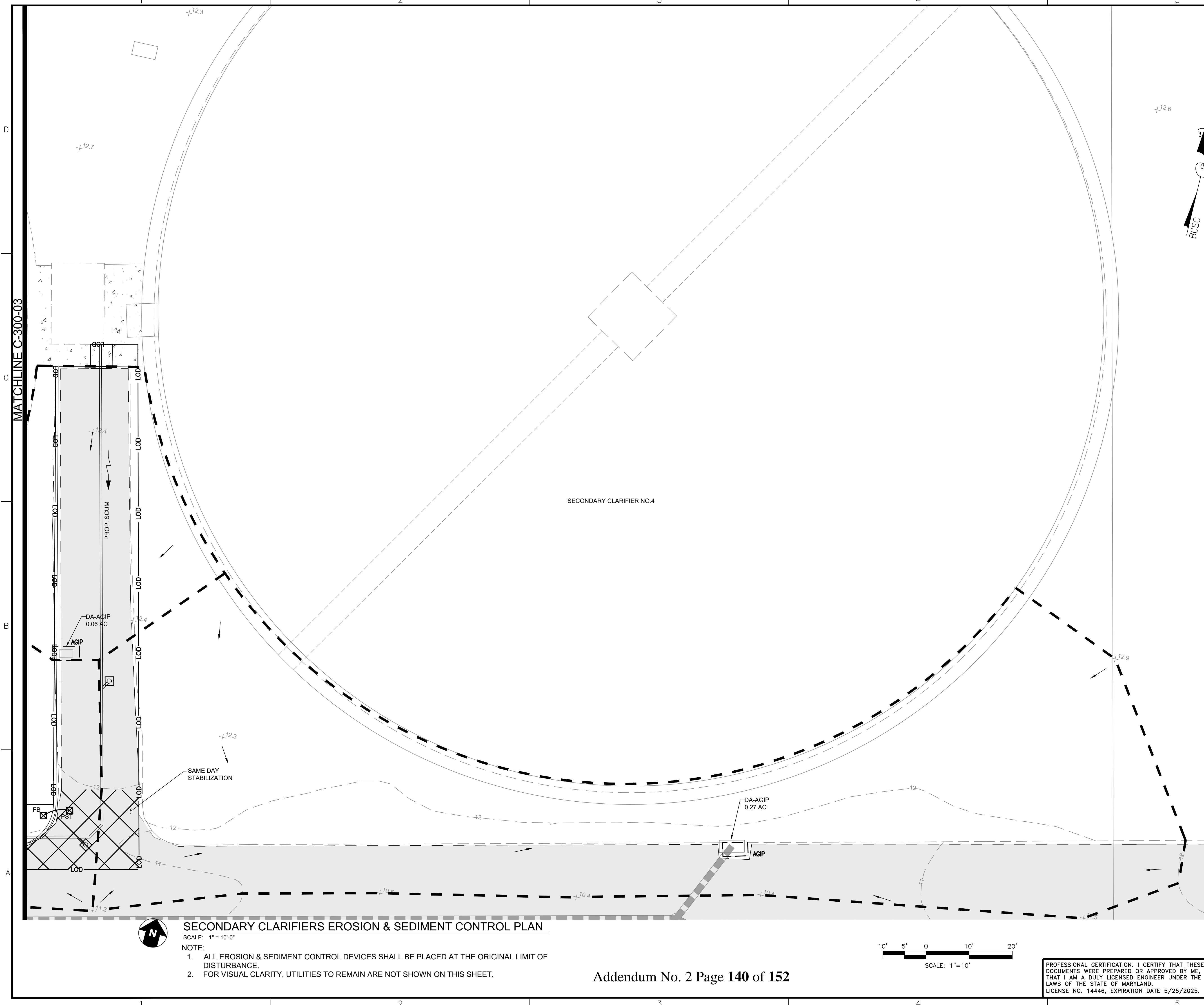
SCALE: AS NOTED

DATE: SEPTEMBER 2024

DRAWING NO.: C-300-03 R1

SHEET 34 OF 210

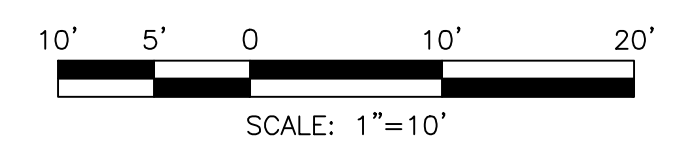
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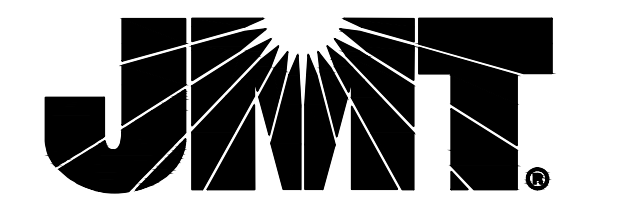
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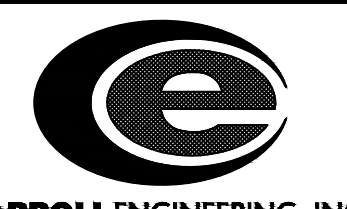
SECONDARY CLARIFIERS EROSION & SEDIMENT CONTROL PLAN
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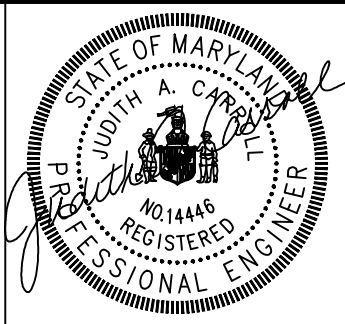
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 EROSION & SEDIMENT CONTROL &
 DRAINAGE AREA DELINEATION PLAN**

SCALE: AS NOTED

DATE: SEPTEMBER 2024

DRAWING NO.: C-300-04 R1

SHEET 34A OF 210

EROSION AND SEDIMENT CONTROL - STANDARD SPECIFICATIONS FOR BALTIMORE CITY PART 2 OF 2

SHEET REVISION DATE: NOVEMBER 15, 2022

REVISIONS			
NO.	DESCRIPTION	DATE	BY

B-4-5 STANDARDS AND SPECIFICATIONS FOR PERMANENT STABILIZATION

DEFINITION
TO STABILIZE DISTURBED SOILS WITH PERMANENT VEGETATION.

PURPOSE
TO USE LONG-LEAVED PERENNIAL GRASSES AND LEGUMES TO ESTABLISH PERMANENT GROUND COVER ON DISTURBED SOILS.

CONDITIONS WHERE PRACTICE APPLIES
EXPOSED SOILS WHERE GROUND COVER IS NEEDED FOR 6 MONTHS OR MORE.

- CRITERIA**
A. SEED MIXTURES
1. GENERAL USE
 - a. SELECT ONE OR MORE OF THE SPECIES OR MIXTURES LISTED IN TABLE B.3 FOR THE APPROPRIATE PLANT HARDNESS ZONE(FROM FIGURE B.3) AND BASED ON THE SITE CONDITION OR PURPOSE FOR THE PERMANENT SEEDING SUMMARY. THE SUMMARY IS TO BE PLACED ON THE PLAN.
 - b. ADDITIONAL PLANTING SPECIFICATIONS FOR EXCEPTIONAL SITES SUCH AS SHORELINES, STREAM BANKS, OR DUNES OR FOR SPECIAL PURPOSES SUCH AS WILDLIFE OR AESTHETIC TREATMENT MAY BE FOUND IN USDA-NRCS TECHNICAL FIELD OFFICE GUIDE, SECTION 342 - CRITICAL AREA PLANTING.
 - c. FOR SITES HAVING DISTURBED AREA OVER 5 ACRES, USE AND SHOW THE RATES RECOMMENDED BY THE SOIL TESTING AGENCY.
 - d. FOR AREAS RECEIVING LOW MAINTENANCE, APPLY UREA FORM FERTILIZER (46-0-0) AT 3.5 POUNDS PER 1000 SQUARE FEET (150 POUNDS PER ACRE) AT THE TIME OF SEEDING IN ADDITION TO THE SOIL AMENDMENTS SHOWN IN THE PERMANENT SEEDING SUMMARY.
 2. TURFGRASS MIXTURES
 - a. AREAS WHERE TURFGRASS MAY BE DESIRED INCLUDE LAWNS, PARKS, PLAYGROUNDS, AND COMMERCIAL SITES WHICH WILL RECEIVE A MEDIUM TO HIGH LEVEL OF MAINTENANCE.
 - b. SELECT ONE OR MORE OF THE SPECIES OR MIXTURES LISTED BELOW BASED ON THE SITE CONDITIONS OR PURPOSE. ENTER SELECTED MIXTURE(S), APPLICATION RATES, AND SEEDING DATES IN THE PERMANENT SEEDING SUMMARY. THE SUMMARY IS TO BE PLACED ON THE PLAN.
 - i. KENTUCKY BLUEGRASS: FULL SUN MIXTURE: FOR USE IN AREAS THAT RECEIVE INTENSIVE MANAGEMENT. IRRIGATION REQUIRED IN THE AREAS OF CENTRAL MARYLAND AND EASTERN SHORE. RECOMMENDED CERTIFIED KENTUCKY BLUEGRASS CULTIVARS SEEDING RATE: 1.5 TO 2.0 POUNDS PER 1000 SQUARE FEET. CHOOSE A MINIMUM OF THREE KENTUCKY BLUEGRASS CULTIVARS WITH EACH RANGING FROM 10 TO 35 PERCENT OF THE TOTAL MIXTURE BY WEIGHT.
 - ii. KENTUCKY BLUEGRASS/PERENNIAL RYE: FULL SUN MIXTURE: FOR USE IN FULL SUN AREAS WHERE RAPID ESTABLISHMENT IS NECESSARY AND WHEN TURF WILL RECEIVE MEDIUM TO INTENSIVE MANAGEMENT. CERTIFIED PERENNIAL RYEGRASS CULTIVARS/CERTIFIED KENTUCKY BLUEGRASS SEEDING RATE: 2 POUNDS MIXTURE PER 1000 SQUARE FEET. CHOOSE A MINIMUM OF THREE KENTUCKY BLUEGRASS CULTIVARS WITH EACH RANGING FROM 10 TO 35 PERCENT OF THE TOTAL MIXTURE BY WEIGHT.
 - iii. TALL FESCUE/KENTUCKY BLUEGRASS: FULL SUN MIXTURE: FOR USE IN DROUGHT PRONE AREAS AND/OR FOR AREAS RECEIVING LOW TO MEDIUM MANAGEMENT IN FULL SUN TO MEDIUM SHADE. RECOMMENDED MIXTURE INCLUDES; CERTIFIED TALL FESCUE CULTIVARS 95 TO 100 PERCENT, CERTIFIED KENTUCKY BLUEGRASS CULTIVARS 0 TO 5 PERCENT. SEEDING RATE: 5 TO 8 POUNDS PER 1000 SQUARE FEET. ONE OR MORE CULTIVARS MAY BE BLENDED.
 - iv. KENTUCKY BLUEGRASS/FINE FESCUE: SHADE MIXTURE: FOR USE IN AREAS WITH SHADE IN BLUEGRASS LAWNS. FOR ESTABLISHMENT IN HIGH QUALITY, INTENSIVELY MANAGED TURF AREA. MIXTURE INCLUDES; CERTIFIED KENTUCKY BLUEGRASS CULTIVARS 30 TO 40 PERCENT AND CERTIFIED FINE FESCUE AND 60 TO 70 PERCENT. SEEDING RATE: 1.5 TO 3 POUNDS PER 1000 SQUARE FEET. NOTES: SELECT TURFGRASS VARIETIES FROM THOSE LISTED IN THE MOST CURRENT UNIVERSITY OF MARYLAND PUBLICATION, AGRONOMY MEMO #77, "TURFGRASS CULTIVAR RECOMMENDATIONS FOR MARYLAND" CHOOSE CERTIFIED MATERIAL. CERTIFIED MATERIAL IS THE BEST GUARANTEE OF CULTIVAR PURITY. THE CERTIFICATION PROGRAM OF THE MARYLAND DEPARTMENT OF AGRICULTURE, TURF AND SEED SECTION, PROVIDES A RELIABLE MEANS OF CONSUMER PROTECTION AND ASSURES A PURE GENETIC LINE.
 3. IDEAL TIMES OF SEEDING FOR TURF GRASS MIXTURES
 - a. WESTERN MD:
 - MARCH 15 TO JUNE 1, AUGUST 1 TO OCTOBER 1 (HARDINESS ZONES: 5B, 6A)
 - b. CENTRAL MD:
 - MARCH 1 TO MAY 15, AUGUST 15 TO OCTOBER 15 (HARDINESS ZONE: 6B)
 - c. SOUTHERN MD, EASTERN SHORE:
 - MARCH 1 TO MAY 15, AUGUST 15 TO OCTOBER 15 (HARDINESS ZONES: 7A, 7B)

4. TILL AREAS TO RECEIVE SEED BY DISKING OR OTHER APPROVED METHODS TO A DEPTH OF 2 TO 4 INCHES, LEVEL AND RAKE THE AREAS TO PREPARE A PROPER SEEDBED. REMOVE STONES AND DEBRIS OVER 1.5 INCHES IN DIAMETER. THE RESULTING SEEDBED MUST BE IN SUCH CONDITION THAT FUTURE MOWING OF GRASSES WILL POSE NO DIFFICULTY.
5. IF SOIL MOISTURE IS DEFICIENT, SUPPLY NEW SEEDINGS WITH ADEQUATE WATER FOR PLANT GROWTH 0.5 TO 1 INCH EVERY 3 TO 4 DAYS DEPENDING ON SOIL TEXTURE) UNTIL THEY ARE FIRMLY ESTABLISHED. THIS IS ESPECIALLY TRUE WHEN SEEDINGS ARE MADE LATE IN THE PLANTING SEASON, IN ABNORMALLY DRY OR HOT SEASONS, OR ON ADVERSE SITES.

- B. SOD: TO PROVIDE QUICK COVER ON DISTURBED AREAS (2:1 GRADE OR FLATTER).
1. GENERAL SPECIFICATIONS
 - a. CLASS OF TURFGRASS SOD MUST BE MARYLAND STATE CERTIFIED. SOD LABELS MUST BE MADE AVAILABLE TO THE JOB FOREMAN AND INSPECTOR.
 - b. SOD MUST BE MACHINE CUT AT A UNIFORM SOIL THICKNESS OF 0.75 INCH, PLUS OR MINUS 0.25 INCH, AT THE TIME OF CUTTING. MEASUREMENT FOR THICKNESS MUST EXCLUDE TOP GROWTH AND THATCH. BROKEN PADS AND TORN OR UNEVEN ENDS WILL NOT BE ACCEPTABLE.
 - c. STANDARD SIZE SECTIONS OF SOD MUST BE STRONG ENOUGH TO SUPPORT THEIR OWN WEIGHT AND RETAIN THEIR SIZE AND SHAPE WHEN SUSPENDED VERTICALLY WITH A FIRM GRASP ON THE UPPER 10 PERCENT OF THE SECTION.
 - d. SOD MUST NOT BE HARVESTED OR TRANSPORTED WHEN MOISTURE CONTENT (EXCESSIVELY DRY OR WET) MAY ADVERSELY AFFECT ITS SURVIVAL.
 - e. SOD MUST BE HARVESTED, DELIVERED, AND INSTALLED WITHIN A PERIOD OF 36 HOURS. SOD NOT TRANSPORTED WITHIN THIS PERIOD MUST BE APPROVED BY AN AGRONOMIST OR SOIL SCIENTIST PRIOR TO ITS INSTALLATION.
 2. SOD INSTALLATION
 - a. DURING PERIODS OF EXCESSIVELY HIGH TEMPERATURE OR IN AREAS HAVING DRY SUBSOIL, LIGHTLY IRRIGATE THE SUBSOIL IMMEDIATELY PRIOR TO LAYING THE SOD.
 - b. LAY THE FIRST ROW OF SOD IN A STRAIGHT LINE WITH SUBSEQUENT ROWS PLACED PARALLEL TO IT AND TIGHTLY WEDGED AGAINST EACH OTHER. STAGGER LATERAL JOINTS TO PROMOTE MORE UNIFORM GROWTH AND STRENGTH. ENSURE THAT SOD IS NOT STRETCHED OR OVERLAPPED AND THAT ALL JOINTS ARE BUTTED TIGHT IN ORDER TO PREVENT VOIDS WHICH WOULD CAUSE AIR DRYING OF THE ROOTS.
 - c. WHEREVER POSSIBLE, LAY SOD WITH THE LONG EDGES PARALLEL TO THE CONTOUR AND WITH STAGGERING JOINTS. ROLL AND TAMP, PEG OR OTHERWISE SECURE THE SOD TO PREVENT SLIPPAGE ON SLOPES. ENSURE SOLID CONTACT EXISTS BETWEEN SOD ROOTS AND THE UNDERLYING SOIL SURFACE.
 - d. WATER THE SOD IMMEDIATELY FOLLOWING ROLLING AND TAMPING UNTIL THE UNDERSIDE OF THE NEW SOD PAD AND SOIL SURFACE BELOW THE SOD ARE THOROUGHLY WET. COMPLETE THE OPERATIONS OF LAYING, TAMPING AND IRRIGATING FOR ANY PIECE OF SOD WITHIN EIGHT HOURS.
 3. SOD MAINTENANCE
 - a. IN THE ABSENCE OF ADEQUATE RAINFALL, WATER DAILY DURING THE FIRST WEEK OR AS OFTEN AND SUFFICIENTLY AS NECESSARY TO MAINTAIN MOIST SOIL TO A DEPTH OF 4 INCHES. WATER SOD DURING THE HEAT OF THE DAY TO PREVENT WILTING.
 - b. AFTER THE FIRST WEEK, SOD WATERING IS REQUIRED AS NECESSARY TO MAINTAIN ADEQUATE MOISTURE CONTENT.
 - c. DO NOT MOW UNTIL THE SOD IS FIRMLY ROOTED. NO MORE THAN ONE THIRD OF THE GRASS LEAF MUST BE REMOVED BY THE INITIAL CUTTING OR SUBSEQUENT CUTTINGS. MAINTAIN A GRASS HEIGHT OF AT LEAST 3 INCHES UNLESS OTHERWISE SPECIFIED.

PERMANENT SEEDING SUMMARY

HARDNESS ZONE (FROM FIGURE B.3): 7A SEED MIXTURE (FROM TABLE B.3): SEE BELOW				FERTILIZER RATE (10-20-20)			LIME RATE
NO.	SPECIES	APPLICATION RATE (LB/AC)	SEEDING DATES	SEEDING DEPTHS	N	P ₂ O ₅	K ₂ O
	TALL FESCUE	60		½ IN.			
	PERENNIAL RYEGRASS	20	2/15-4/30 (2.15-10.3)	½ IN.	45 POUNDS PER ACRE (1.5 LB/1000 SF)	90 POUNDS PER ACRE (2.15 LB/1000 SF)	90 POUNDS PER ACRE (2.15 LB/1000 SF)
	KENTUCKY BLUEGRASS	40		½ IN.			2 TONS/AC (90 LB/1000 SF)

PERMANENT SEEDING NOTES

1. THE SEEDING DATES LISTED ARE AVERAGES FOR THE IDENTIFIED HARDNESS ZONE. WHEN SEEDING TOWARD THE END OF THE LISTED PLANTING DATES, OR WHEN CONDITIONS ARE EXPECTED TO BE LESS THAN OPTIMAL, SELECT AN APPROPRIATE NURSE CROP FROM THE TEMPORARY SEEDING SUMMARY FOUND ON THE EROSION AND SEDIMENT CONTROL - STANDARD SPECIFICATIONS FOR BALTIMORE CITY PART 1 OF 2, AND PLANT TOGETHER WITH THE PERMANENT SEEDING MIX.
2. SEEDING TOWARD THE END OF PLANTING DATE RANGES MAY REQUIRE SUPPLEMENTAL WATERING TO ENSURE PLANT ESTABLISHMENT.
3. FOR GUIDANCE ON STABILIZATION OUTSIDE OF A SEEDING SEASON, SEE B-4-4 STANDARDS AND SPECIFICATIONS FOR TEMPORARY STABILIZATION FOUND ON EROSION AND SEDIMENT CONTROL PART - STANDARD SPECIFICATIONS FOR BALTIMORE CITY 1 OF 2.

B-4-7 STANDARDS AND SPECIFICATIONS FOR HEAVY USE AREA PROTECTION

DEFINITION
THE STABILIZATION OF AREAS FREQUENTLY AND INTENSIVELY USED BY SURFACING WITH SUITABLE MATERIALS (E.G., MULCH AND AGGREGATE).

PURPOSE
TO PROVIDE A STABLE, NON-ERODING SURFACE FOR AREAS FREQUENTLY USED AND TO IMPROVE WATER QUALITY FROM THE RUNOFF OF THESE AREAS.

CONDITIONS WHERE PRACTICE APPLIES
THIS PRACTICE APPLIES TO INTENSIVELY USED AREAS (E.G., EQUIPMENT AND MATERIAL STORAGE, STAGING AREAS, HEAVILY USED TRAVEL LANES).

- CRITERIA**
1. A MINIMUM 4-INCH BASE COURSE OF CRUSHED STONE OR OTHER SUITABLE MATERIALS INCLUDING WOOD CHIPS OVER NONWOVEN GEOTEXTILE SHOULD BE PROVIDED AS SPECIFIED IN SECTION H-1 MATERIALS
 2. SELECT THE STABILIZING MATERIAL BASED ON THE INTENDED USE, DESIRED MAINTENANCE FREQUENCY, AND RUNOFF CONTROL.
 3. THE TRANSPORT OF SEDIMENTS, NUTRIENTS, OILS, CHEMICALS, PARTICULATE MATTER ASSOCIATED WITH VEHICULAR TRAFFIC AND EQUIPMENT, AND MATERIAL STORAGE NEEDS TO BE CONSIDERED IN THE SELECTION OF MATERIAL. ADDITIONAL CONTROL MEASURES MAY BE NECESSARY TO CONTROL SOME OF THESE POTENTIAL POLLUTANTS.
 4. SURFACE EROSION CAN BE A PROBLEM ON LARGE HEAVY USE AREAS. IN THESE SITUATIONS, MEASURES TO REDUCE THE FLOW LENGTH OF RUNOFF OR EROSION VELOCITIES NEED TO BE CONSIDERED.

MAINTENANCE
THE HEAVY USE AREAS MUST BE MAINTAINED IN A CONDITION THAT MINIMIZES EROSION. THIS MAY REQUIRE ADDING SUITABLE MATERIAL, AS SPECIFIED ON THE APPROVED PLANS, TO MAINTAIN A CLEAN SURFACE.

B-4-8 STANDARDS AND SPECIFICATIONS FOR STOCKPILE AREA

DEFINITION
A MOUND OR PILE OF SOIL PROTECTED BY APPROPRIATELY DESIGNED EROSION AND SEDIMENT CONTROL MEASURES.

PURPOSE
TO PROVIDE A DESIGNATED LOCATION FOR THE TEMPORARY STORAGE OF SOIL THAT CONTROLS THE POTENTIAL FOR EROSION, SEDIMENTATION, AND CHANGES TO DRAINAGE PATTERNS.

CONDITIONS WHERE PRACTICE APPLIES
STOCKPILE AREAS ARE UTILIZED WHEN IT IS NECESSARY TO SALVAGE AND STORE SOIL FOR LATER USE.

- CRITERIA**
1. THE STOCKPILE LOCATION AND ALL RELATED SEDIMENT CONTROL PRACTICES MUST BE CLEARLY INDICATED ON THE EROSION AND SEDIMENT CONTROL PLAN.
 2. THE FOOTPRINT OF THE STOCKPILE MUST BE SIZED TO ACCOMMODATE THE ANTICIPATED VOLUME OF MATERIAL AND BASED ON A SIDE SLOPE RATIO NO STEEPER THAN 2:1. BENCHING MUST BE PROVIDED IN ACCORDANCE WITH SECTION B-3 LAND GRADING.
 3. RUNOFF FROM THE STOCKPILE AREA MUST DRAIN TO A SUITABLE SEDIMENT CONTROL PRACTICE.
 4. ACCESS THE STOCKPILE AREA FROM THE UPGRADE SIDE.

5. CLEAR WATER RUNOFF INTO THE STOCKPILE AREA MUST BE MINIMIZED BY USE OF A DIVERSION DEVICE SUCH AS AN EARTH DIKE, TEMPORARY SWALE OR DIVERSION FENCE. PROVISIONS MUST BE MADE FOR DISCHARGING CONCENTRATED FLOW IN A NON-EROSIVE MANNER.

6. WHERE RUNOFF CONCENTRATES ALONG THE TOE OF THE STOCKPILE FILL, AN APPROPRIATE EROSION/SEDIMENT CONTROL PRACTICE MUST BE USED TO INTERCEPT THE DISCHARGE.

7. STOCKPILES MUST BE STABILIZED IN ACCORDANCE WITH THE 3/7 DAY STABILIZATION REQUIREMENT AS WELL AS STANDARD B-4-1 INCREMENTAL STABILIZATION AND STANDARD B-4-4 TEMPORARY STABILIZATION.

8. IF THE STOCKPILE IS LOCATED ON AN IMPERVIOUS SURFACE, A LINER SHOULD BE PROVIDED BELOW THE STOCKPILE TO FACILITATE CLEANUP. STOCKPILES CONTAINING CONTAMINATED MATERIAL MUST BE COVERED WITH IMPERMEABLE SHEETING.

MAINTENANCE
THE STOCKPILE AREA MUST CONTINUOUSLY MEET THE REQUIREMENTS FOR ADEQUATE VEGETATIVE ESTABLISHMENT IN ACCORDANCE WITH SECTION B-4 VEGETATIVE STABILIZATION. SIDE SLOPES MUST BE MAINTAINED AT NO STEEPER THAN A 2:1 RATIO. THE STOCKPILE AREA MUST BE KEPT FREE OF EROSION. IF THE VERTICAL HEIGHT OF A STOCKPILE EXCEEDS 20 FEET FOR 2:1 SLOPES, 30 FEET FOR 3:1 SLOPES, OR 40 FEET FOR 4:1 SLOPES, BENCHING MUST BE PROVIDED IN ACCORDANCE WITH SECTION B-3 LAND GRADING.

H-5 STANDARDS AND SPECIFICATIONS FOR DUST CONTROL

DEFINITION
CONTROLLING THE SUSPENSION OF DUST PARTICLES FROM CONSTRUCTION ACTIVITIES.

PURPOSE
TO PREVENT BLOWING AND MOVEMENT OF DUST FROM EXPOSED SOIL SURFACE TO REDUCE ON AND OFF-SITE DAMAGE INCLUDING HEALTH AND TRAFFIC HAZARDS.

CONDITIONS WHERE PRACTICE APPLIES
AREAS SUBJECT TO DUST BLOWING AND MOVEMENT WHERE ON AND OFF-SITE DAMAGE IS LIKELY WITHOUT TREATMENT.

SPECIFICATIONS

1. MULCHES: SEE SECTION B-4-2 SOIL PREPARATION, TOPSOILING, AND SOIL AMENDMENTS, SECTION B-4-3 SEEDING AND MULCHING, AND SECTION B-4-4 TEMPORARY STABILIZATION. MULCH MUST BE ANCHORED TO PREVENT BLOWING.
2. VEGETATIVE COVER: SEE SECTION B-4-4 TEMPORARY STABILIZATION.
3. TILLAGE: TILL TO ROUGHEN SURFACE AND BRING CLODS TO THE SURFACE. BEGIN PLOWING ON WINDWARD SIDE OF SITE. CHISEL-TYPE PLOWS SPACED ABOUT 12 INCHES APART, SPRING-TOOTHED HARROWS, AND SIMILAR PLOWS ARE EXAMPLES OF EQUIPMENT THAT MAY PRODUCE THE DESIRED EFFECT.
4. IRRIGATION: SPRINKLE SITE WITH WATER UNTIL THE SURFACE IS MOIST. REPEAT AS NEEDED. THE SITE MUST NOT BE IRRIGATED TO THE POINT THAT RUNOFF OCCURS.
5. BARRIERS: SOLID BOARD BARRIERS, SILT FENCES, SNOW FENCES, BURLAP FENCES, STRAW BALES, AND SIMILAR MATERIAL CAN BE USED TO CONTROL AIR CURRENTS AND SOIL BLOWING.
6. CHEMICAL TREATMENT: USE OF CHEMICAL TREATMENT REQUIRES APPROVAL BY THE APPROPRIATE PLAN REVIEW AUTHORITY.

SUPPLEMENTAL EROSION AND SEDIMENT CONTROL NOTES

1. FOR UTILITY TRENCHES OUTSIDE THE DRAINAGE AREA LIMITS OF EROSION AND SEDIMENT CONTROL (ESC) CONTROLS, THE CONTRACTOR SHALL OPEN ONLY A SECTION OF TRENCH THAT CAN BE BACKFILLED AND STABILIZED AT THE END OF EACH WORKDAY. NO DISTURBED AREA SHALL BE LEFT UNSTABILIZED OVERNIGHT. ANY EXCESS STOCKPILE MATERIAL SHALL BE REMOVED FROM THE SITE AT THE END OF EACH WORKDAY. FOR PERVIOUS SURFACES, THE USE OF ANY VEHICLE TRAFFIC IS PROHIBITED THE FIRST 24 HOURS AFTER A RAIN EVENT.
2. IF A STOCKPILE AREA IS NOT SHOWN ON THE APPROVED ESC PLAN, NO STOCKPILING SHALL BE ALLOWED. ALL EXCESS MATERIAL SHALL BE REMOVED FROM THE SITE AT THE END OF EACH WORK DAY AND SENT TO A DISPOSAL SITE GOVERNED BY AN APPROVED EROSION AND SEDIMENT CONTROL PLAN.
3. IF A STAGING AREA IS NOT SHOWN ON THE APPROVED ESC PLAN, NO STAGING AREA SHALL BE ALLOWED ON SITE. STAGING AREAS OUTSIDE OF THE LOD MUST BE LOCATED ON AN IMPERVIOUS SURFACE, AND SHALL NOT RESULT IN EARTH DISTURBANCE. STOCKPILES OF ERODIBLE MATERIAL WILL NOT BE PERMITTED AT A STAGING AREA
4. ALL DISTURBED AREAS SHALL BE STABILIZED PER THE STABILIZATION SCHEDULE.
5. THE ESC INSPECTOR HAS AUTHORITY TO REQUIRE ADDITIONAL ESC CONTROLS BEYOND THOSE SHOWN ON THE APPROVED ESC PLAN. ANY ADDITIONAL CONTROLS REQUIRED BY THE INSPECTOR SHALL BE PROVIDED BY THE CONTRACTOR AT THE DIRECTION OF THE INSPECTOR WITH 24 HOURS OF VERBAL NOTIFICATION BY THE ESC INSPECTOR.
6. WHERE NO STABILIZED CONSTRUCTION ENTRANCE (SCE) IS PROVIDED, THE CONTRACTOR SHALL DESIGNATE PIECES OF CONSTRUCTION EQUIPMENT THAT SHALL BE ALLOWED WITHIN THE LOD. THIS EQUIPMENT SHALL BE KEPT WITHIN THE LOD UNTIL THE PROPOSED WORK IS COMPLETE, AND SHALL HAVE TREADS/TIRES CLEANED PRIOR TO LEAVING THE LOD. ALL MATERIAL REMOVAL OR DELIVERY SHALL BE EITHER LIFTED FROM OR INTO THE LOD; AND, ANY SEDIMENT TRACKED OR DROPPED OUTSIDE THE LOD CLEANED IMMEDIATELY. FLUSHING WILL NOT BE PERMITTED.
7. WHERE SAME DAY STABILIZATION IS SPECIFIED ON THE ESC PLAN, IT SHALL BE CONSIDERED THE PRIMARY ESC CONTROL. ANY CONTROLS PROVIDED DOWNSTREAM OF AREAS SPECIFIED FOR SAME DAY STABILIZATION SHALL BE CONSIDERED SECONDARY CONTROLS UNLESS SPECIFIED OTHERWISE. (SECONDARY CONTROLS ARE DEFINED AS CONTROLS PROVIDED AS BACKUP MEASURES TO A PRIMARY CONTROL).
8. SAME DAY STABILIZATION IS DEFINED AS THE COMPLETION OF PROPOSED WORK WITHIN A DEFINED AREA WITH THE STIPULATION OF A NON-ERODIBLE SURFACE AT THE END OF EACH WORK DAY. EXAMPLES OF ACCEPTABLE NON-ERODIBLE SURFACES INCLUDE PAVEMENT, STEEL PLATES, A 2" MINIMUM STONE LAYER, OR STABILIZATION MATTING OVER PERMANENT SEEDING. THIRTY (30) MIL PLASTIC SHEETING WITH ANCHORING MAY BE CONSIDERED ACCEPTABLE IF EITHER SPECIFIED ON AN APPROVED PLAN, OR APPROVED BY THE ESC INSPECTOR. TEMPORARY SEEDING AND MULCH IS NOT CONSIDERED AN ACCEPTABLE SAME DAY STABILIZATION PRACTICE.

STANDARD STABILIZATION NOTE

FOLLOWING INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION MUST BE COMPLETED WITHIN:

- a. THREE (3) CALENDAR DAYS AS TO THE SURFACE OF ALL PERIMETER DIKES, SWALES, DITCHES, PERIMETER SLOPES, AND ALL SLOPES STEEPER THAN 3 HORIZONTAL TO 1 VERTICAL (3:1); AND
- b. SEVEN (7) CALENDAR DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE NOT UNDER ACTIVE GRADING

MAINTENANCE OF SEDIMENT CONTROL

CONTRACTOR SHALL, WITHOUT EXTRA COST TO THE PROJECT, REPAIR AND MAINTAIN EXISTING SEDIMENT CONTROL DEVICES UNTIL ALL AREAS WITHIN LIMITS OF CONSTRUCTION ARE STABILIZED. ALL SEDIMENT CONTROL MEASURES REFERRED TO ON THESE PLANS SHALL BE IN ACCORDANCE WITH THE PUBLICATION ENTITLED "2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL".

ESC CERTIFICATIONS

OWNER'S/DEVELOPER'S CERTIFICATION

I/WE DO HEREBY CERTIFY THAT ANY CLEARING, GRADING, CONSTRUCTION, AND/OR DEVELOPMENT WILL BE DONE PURSUANT TO THIS APPROVED PLAN AND ALL RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE CERTIFICATION OF ATTENDANCE AT AN APPROVED MARYLAND DEPARTMENT OF THE ENVIRONMENTAL SEDIMENT AND EROSION CONTROL TRAINING PROGRAM PRIOR TO THE BEGINNING OF WORK. THE CITY'S DPW AND DHCD AND MDE WILL BE ALLOWED RIGHT OF ENTRY FOR PERIODIC ON-SITE EVALUATION.

Brandon Fobeteh
PRINT NAME
200 N. Holliday Street Baltimore MD

Brandon fobeteh 10/28/2024
SIGNATURE DATE
4436510624

ADDRESS
TELEPHONE NUMBER

ENGINEERS CERTIFICATION

I DO HEREBY CERTIFY THAT THIS PLAN FOR EROSION SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED UPON PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE BALTIMORE CITY OFFICE OF RESEARCH AND ENVIRONMENTAL PROTECTION.

JUDITH A. CARROLL, PRESIDENT

PRINT NAME
215 SCHILLING CIRCLE SUITE 102
HUNT VALLEY, MD 21031

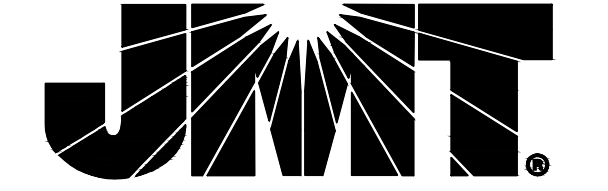
Judith A. Carroll 10/28/2024
SIGNATURE DATE
410-785-7423

ADDRESS
TELEPHONE NUMBER

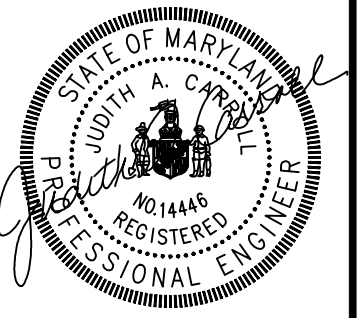
EROSION AND SEDIMENT CONTROL NOTES

1. THE CONTRACTOR WILL COMPLY WITH ALL REQUIREMENTS OF SEDIMENT AND EROSION CONTROL AS SET FORTH IN THE MARYLAND SEDIMENT AND EROSION MANUAL AND BALTIMORE CITY CODE ARTICLE 7.
2. SUBMIT A WRITTEN NOTIFICATION TO: THE DEPARTMENT OF PUBLIC WORKS, OFFICE OF RESEARCH AND ENVIRONMENTAL PROTECTION: 3001 DRUID PARK DRIVE, ROOM 228, BALTIMORE, MD 21215, PHONE NUMBER, 410-396-0732, DPW.ESCINSPECTIONS@BALTIMORECITY.GOV, AT LEAST 72 HOURS PRIOR TO START OF CONSTRUCTION STATING:
 - A. A REQUEST FOR A PRECONSTRUCTION MEETING,
 - B. WHEN CONTRACTOR INTENDS TO BEGIN CONSTRUCTION,
 - C. WHEN CONTRACTOR INTENDS TO INSTALL STORMWATER MANAGEMENT FACILITIES,
 - D. SOURCE OF BORROW MATERIAL,
 - E. LOCATION OF DISPOSAL AREA OF SITE MATERIAL,
 - F. CONTRACTOR'S TENTATIVE CLOSING DATE.
3. INITIAL DISTURBANCE WILL BE LIMITED TO THAT NECESSARY TO GAIN ENTRANCE TO THE SITE AND INSTALL NECESSARY SEDIMENT CONTROLS AS PER THE APPROVED PLANS.
4. ALL SEDIMENT CONTROLS AND CRITICAL SLOPES MUST BE STABILIZED WITHIN THREE (3) CALENDAR DAYS. ALL OTHER INACTIVE DISTURBED AREAS ON THE PROJECT SITE MUST BE STABILIZED WITHIN SEVEN (7) CALENDAR DAYS.
5. ALL EXCAVATED MATERIAL SHALL BE PLACED ON THE HIGH SIDE WHENEVER POSSIBLE AND CONFINED TO AN AREA WHERE IT WILL NOT BE OBSTRUCT THE NORMAL COURSE OF DRAINAGE.
6. PUMPING OF SEDIMENT LADEN WATER WILL NOT BE ALLOWED UNLESS IT IS FILTERED BY WAY OF AN APPROVED SEDIMENT TRAPPING DEVICE.
7. CONTINUOUS INSPECTION AND MAINTENANCE OF ALL SEDIMENT CONTROL DEVICES IS MANDATORY.
8. ANY SEDIMENT CONTROL DEVICES DISTURBED DURING UTILITY CONSTRUCTION MUST BE RESTORED IMMEDIATELY.
9. ALL POINTS OF INGRESS AND EGRESS SHALL BE PROTECTED TO MINIMIZE TRACKING OF MUD ON TO PUBLIC RIGHT-OF-WAYS.
10. ANY EARTH, GRAVEL, AND/OR OTHER MATERIAL TRACKED, SPILLED OR WASHED ON TO ADJACENT ROADS MUST BE IMMEDIATELY REMOVED AND DISPOSED OF IN A PROPER MANNER. NO FLUSHING WILL BE PERMITTED. ALL MATERIAL MUST BE REMOVED BY MEANS OF SHOVELING AND SWEEPING.
11. ON ALL SITES WITH DISTURBED AREAS IN EXCESS OF 5,000 SQ. FT., THE CONTRACTOR SHALL HAVE A BALTIMORE CITY EROSION AND SEDIMENT CONTROL INSPECTOR INSPECT AND APPROVE THE WORK COMPLETED AT THE STAGES OF CONSTRUCTION SPECIFIED BELOW:
 - A. UPON COMPLETION OF THE PERIMETER SEDIMENT CONTROLS;
 - B. DURING ALL GRADING AND BUILDING OPERATIONS;
 - C. UPON FINAL STABILIZATION OF THE ENTIRE SITE PRIOR TO REMOVAL OF THE SEDIMENT CONTROLS
12. THE CONTRACTOR SHALL NOT DEVIATE FROM THE APPROVED SEDIMENT AND EROSION CONTROL PLAN WITHOUT FIRST RECEIVING APPROVAL FROM THE OFFICE OF RESEARCH AND ENVIRONMENTAL PROTECTION. VARIATIONS TO THE ORIGINAL PLAN MUST BE SUBMITTED IN WRITING WITH ALL PROPOSED MODIFICATIONS STILL BEING HIGHLIGHTED. SUBSTANTIAL CHANGES WILL NECESSITATE AMENDMENT OF THE GRADING /BUILDING PERMIT.

EROSION AND SEDIMENT CONTROL WILL BE STRICTLY ENFORCED.



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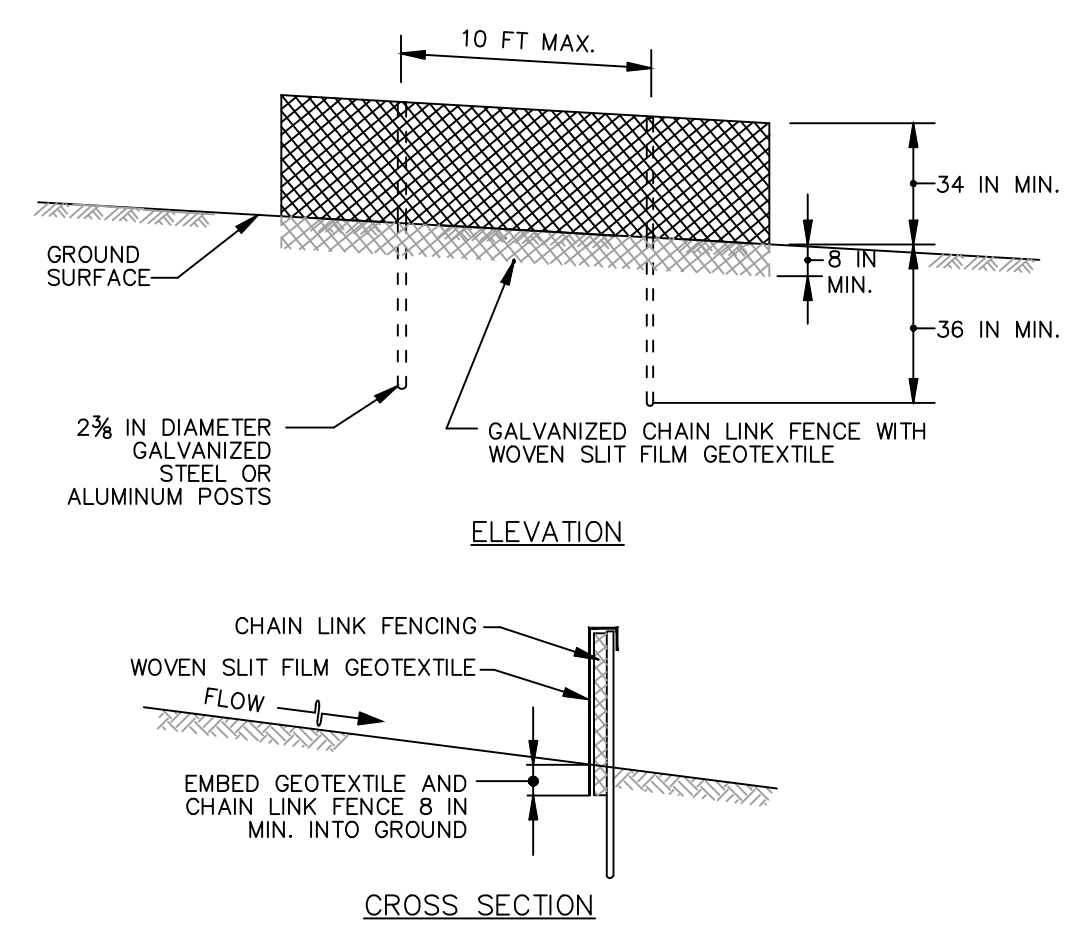


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CITY OF BALTIMORE
DEPARTMENT OF PUBLIC WORKS
OFFICE OF ENGINEERING & CONSTRUCTION
PATAPSCO WASTEWATER TREATMENT PLANT
SANITARY CONTRACT NO. 994
CLARIFIER AND GRAVITY SLUDGE THICKENERS
REHABILITATION AT PATAPSCO WWTP
BCNR NO. 11446

DETAIL E-3 SUPER SILT FENCE

STANDARD SYMBOL
SSF



CONSTRUCTION SPECIFICATIONS

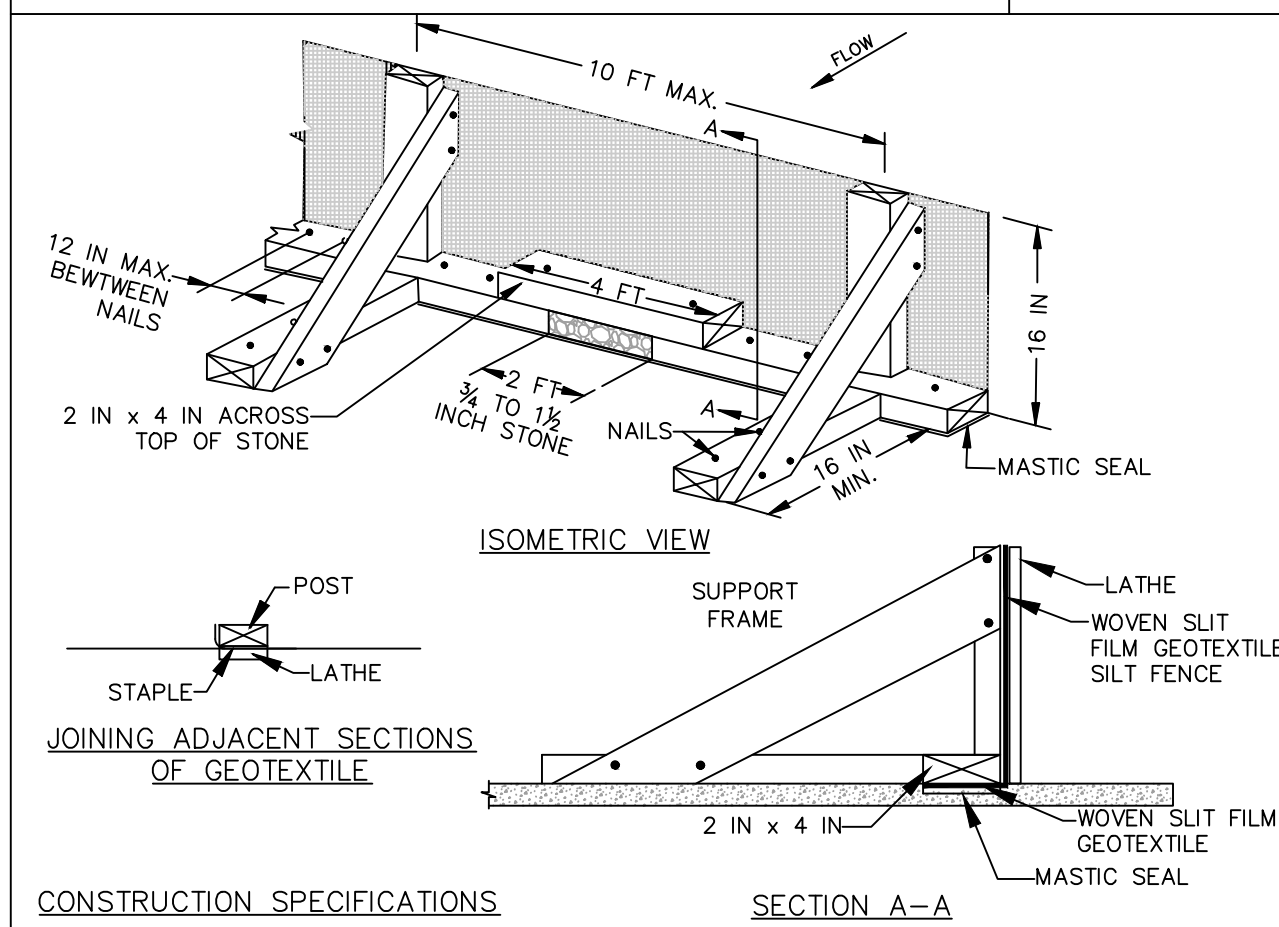
- INSTALL 2 3/8 INCH DIAMETER GALVANIZED STEEL POSTS OF 0.095 INCH WALL THICKNESS AND SIX FOOT LENGTH SPACED NO FURTHER THAN 10 FEET APART. DRIVE THE POSTS A MINIMUM OF 36 INCHES INTO THE GROUND.
- FASTEN 9 GAUGE OR HEAVIER GALVANIZED CHAIN LINK FENCE (2 3/8 INCH MAXIMUM OPENING) 42 INCHES IN HEIGHT SECURELY TO THE FENCE POSTS WITH WIRE TIES OR HUG RINGS.
- FASTEN WOVEN SLIT FILM GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS, SECURELY TO THE UPSLOPE SIDE OF CHAIN LINK FENCE WITH TIES SPACED EVERY 24 INCHES AT THE TOP AND MID SECTION. EMBED GEOTEXTILE AND CHAIN LINK FENCE A MINIMUM OF 8 INCHES INTO THE GROUND.
- WHERE ENDS OF THE GEOTEXTILE COME TOGETHER, THE ENDS SHALL BE OVERLAPPED BY 6 INCHES, FOLDED, AND STAPLED TO PREVENT SEDIMENT BY PASS.
- EXTEND BOTH ENDS OF THE SUPER SILT FENCE A MINIMUM OF FIVE HORIZONTAL FEET UPSLOPE AT 45 DEGREES TO THE MAIN FENCE ALIGNMENT TO PREVENT RUNOFF FROM GOING AROUND THE ENDS OF THE SUPER SILT FENCE.
- PROVIDE MANUFACTURER CERTIFICATION TO THE INSPECTION/ENFORCEMENT AUTHORITY SHOWING THAT GEOTEXTILE USED MEETS THE REQUIREMENTS IN SECTION H-1 MATERIALS.
- REMOVE ACCUMULATED SEDIMENT AND DEBRIS WHEN BULGES DEVELOP IN FENCE OR WHEN SEDIMENT REACHES 25% OF FENCE HEIGHT. REPLACE GEOTEXTILE IF TORN. IF UNDERMINING OCCURS, REINSTALL CHAIN LINK FENCING AND GEOTEXTILE.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION
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DETAIL E-2 SILT FENCE ON PAVEMENT

STANDARD SYMBOL
SFOP



CONSTRUCTION SPECIFICATIONS

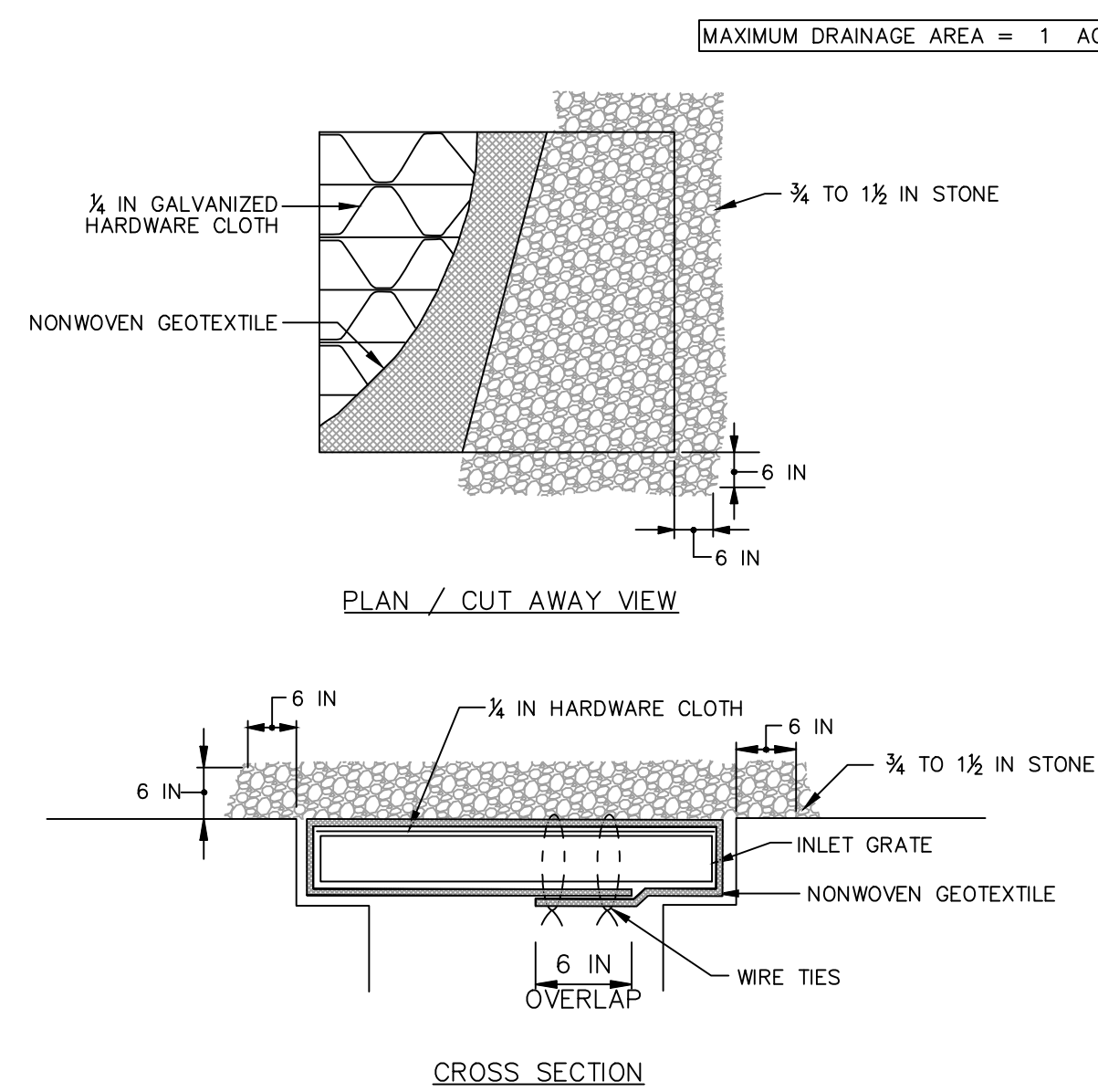
- USE NOMINAL 2 INCH X 4 INCH LUMBER.
- USE WOVEN SLIT FILM GEOTEXTILE, AS SPECIFIED IN SECTION H-1 MATERIALS.
- PROVIDE MANUFACTURER CERTIFICATION TO THE AUTHORIZED REPRESENTATIVE OF THE INSPECTION/ENFORCEMENT AUTHORITY SHOWING THAT THE GEOTEXTILE USED MEETS THE REQUIREMENTS IN SECTION H-1 MATERIALS.
- SPACE UPRIGHT SUPPORTS NO MORE THAN 10 FEET APART.
- PROVIDE A TWO FOOT OPENING BETWEEN EVERY SET OF SUPPORTS AND PLACE STONE IN THE OPENING OVER GEOTEXTILE.
- KEEP SILT FENCE TIGHT AND SECURELY STAPLE TO THE UPSLOPE SIDE OF UPRIGHT SUPPORTS. EXTEND GEOTEXTILE UNDER 2x4.
- WHERE TWO SECTIONS OF GEOTEXTILE ADJOIN: OVERLAP, FOLD, AND STAPLE TO POST IN ACCORDANCE WITH THIS DETAIL. ATTACH LATHE.
- PROVIDE A MASTIC SEAL BETWEEN PAVEMENT, GEOTEXTILE, AND 2x4 TO PREVENT SEDIMENT-LADEN WATER FROM ESCAPING BENEATH SILT FENCE INSTALLATION.
- SECURE BOARDS TO PAVEMENT WITH 40D 5 INCH MINIMUM LENGTH NAILS.
- REMOVE ACCUMULATED SEDIMENT AND DEBRIS WHEN BULGES DEVELOP IN SILT FENCE OR WHEN SEDIMENT REACHES 25% OF FENCE HEIGHT. REPLACE GEOTEXTILE IF TORN. MAINTAIN WATER TIGHT SEAL ALONG BOTTOM. REPLACE STONE IF DISPLACED.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION
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DETAIL E-9-2 AT-GRADE INLET PROTECTION

STANDARD SYMBOL
AGIP



CONSTRUCTION SPECIFICATIONS

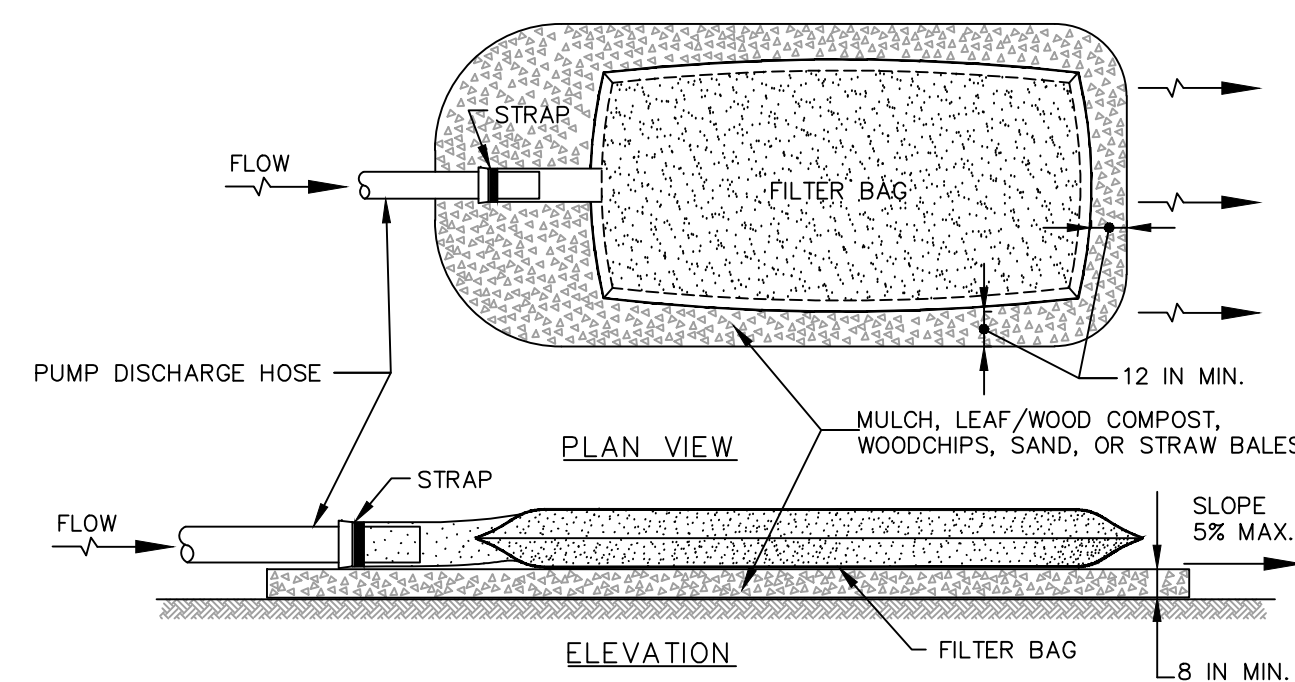
- USE NONWOVEN GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS.
- LIFT GRATE AND WRAP WITH NONWOVEN GEOTEXTILE TO COMPLETELY COVER ALL OPENINGS. SECURE WITH WIRE TIES AND SET GRATE BACK IN PLACE.
- PLACE CLEAN 3/4 TO 1 1/2 INCH STONE OR EQUIVALENT RECYCLED CONCRETE 6 INCHES THICK ON THE GRATE.
- STORM DRAIN INLET PROTECTION REQUIRES FREQUENT MAINTENANCE. REMOVE ACCUMULATED SEDIMENT AFTER EACH RAIN EVENT TO MAINTAIN FUNCTION AND AVOID PREMATURE CLOGGING. IF INLET PROTECTION DOES NOT COMPLETELY DRAIN WITHIN 24 HOURS AFTER A STORM EVENT, IT IS CLOGGED. WHEN THIS OCCURS, REMOVE ACCUMULATED SEDIMENT AND CLEAN, OR REPLACE GEOTEXTILE AND STONE.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION
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DETAIL F-4 FILTER BAG

STANDARD SYMBOL
FB



CONSTRUCTION SPECIFICATIONS

- TIGHTLY SEAL SLEEVE AROUND THE PUMP DISCHARGE HOSE WITH A STRAP OR SIMILAR DEVICE.
- PLACE FILTER BAG ON SUITABLE BASE (E.G., MULCH, LEAF/WOOD COMPOST, WOODCHIPS, SAND, OR STRAW BALES) LOCATED ON A LEVEL OR 5% MAXIMUM SLOPING SURFACE. DISCHARGE TO A STABILIZED AREA. EXTEND BASE A MINIMUM OF 12 INCHES FROM EDGES OF BAG.
- CONTROL PUMPING RATE TO PREVENT EXCESSIVE PRESSURE WITHIN THE FILTER BAG IN ACCORDANCE WITH THE MANUFACTURER RECOMMENDATIONS. AS THE BAG FILLS WITH SEDIMENT, REDUCE PUMPING RATE.
- REMOVE AND PROPERLY DISPOSE OF FILTER BAG UPON COMPLETION OF PUMPING OPERATIONS OR AFTER BAG HAS REACHED CAPACITY, WHICHEVER OCCURS FIRST. SPREAD THE DEWATERED SEDIMENT FROM THE BAG IN AN APPROVED UPLAND AREA AND STABILIZE WITH SEED AND MULCH BY THE END OF THE WORK DAY. RESTORE THE SURFACE AREA BENEATH THE BAG TO ORIGINAL CONDITION UPON REMOVAL OF THE DEVICE.
- USE NONWOVEN GEOTEXTILE WITH DOUBLE STITCHED SEAMS USING HIGH STRENGTH THREAD. SIZE SLEEVE TO ACCOMMODATE A MAXIMUM 4 INCH DIAMETER PUMP DISCHARGE HOSE. THE BAG MUST BE MANUFACTURED FROM A NONWOVEN GEOTEXTILE THAT MEETS OR EXCEEDS MINIMUM AVERAGE ROLL VALUES (MARV) FOR THE FOLLOWING:

GRAB TENSILE	250 LB	ASTM D-4632
PUNCTURE	150 LB	ASTM D-4833
FLOW RATE	70 GAL/MIN/FT ²	ASTM D-4491
PERMITTIVITY (SEC ⁻¹)	1.2 SEC ⁻¹	ASTM D-4491
UV RESISTANCE	70% STRENGTH @ 500 HOURS	ASTM D-4355
APPARENT OPENING SIZE (AOS)	0.15-0.18 MM	ASTM D-4751
SEAM STRENGTH	90%	ASTM D-4632

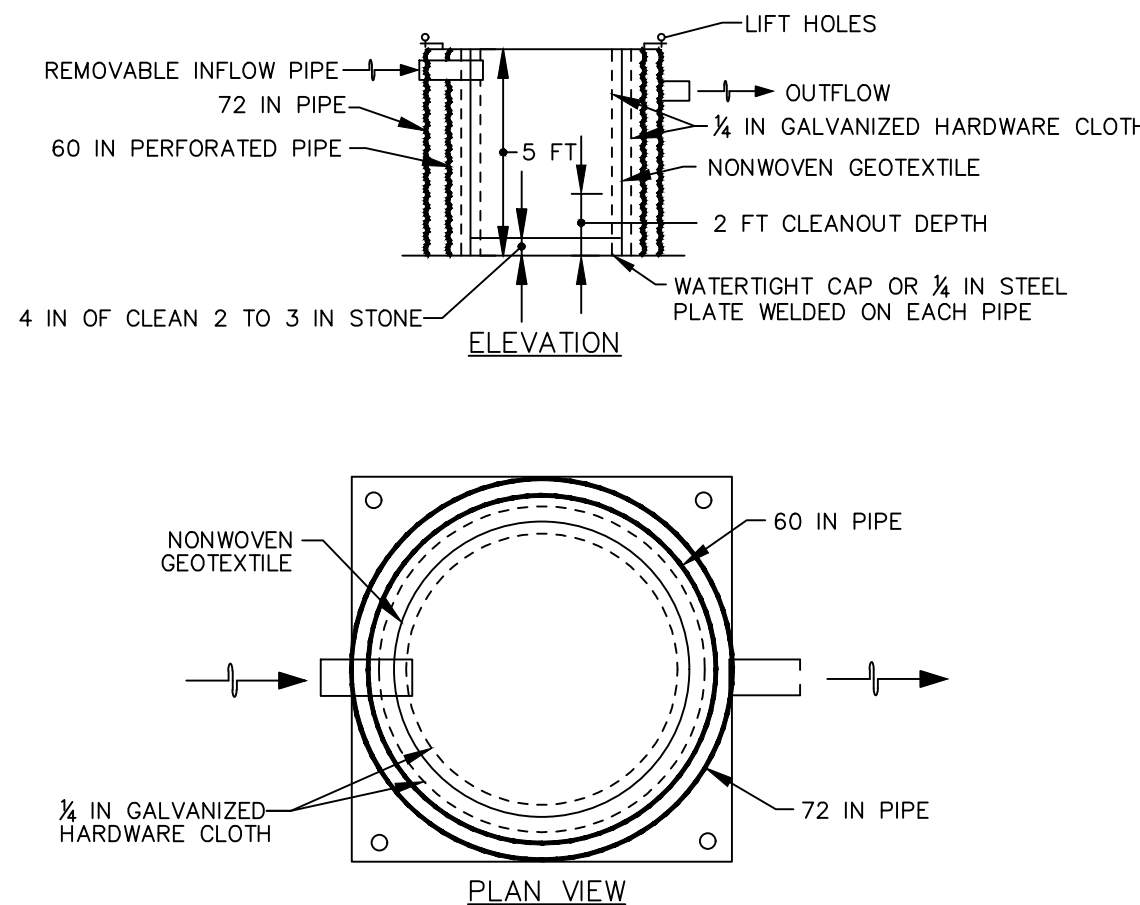
- REPLACE FILTER BAG IF BAG CLOGS OR HAS RIPS, TEARS, OR PUNCTURES. DURING OPERATION KEEP CONNECTION BETWEEN PUMP HOSE AND FILTER BAG WATER TIGHT. REPLACE BEDDING IF IT BECOMES DISPLACED.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION
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DETAIL F-3 PORTABLE SEDIMENT TANK

STANDARD SYMBOL
PST



CONSTRUCTION SPECIFICATIONS

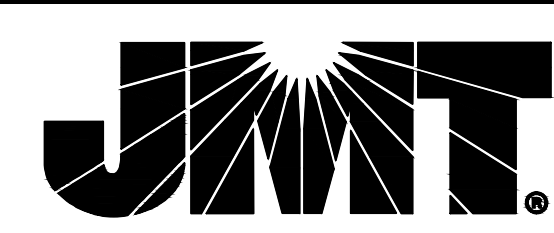
- PROVIDE 1 CUBIC FOOT OF STORAGE FOR EACH GALLON PER MINUTE OF PUMP CAPACITY. REQUIRED STORAGE VOLUME MAY BE ATTAINED BY PLACEMENT OF TANKS IN PARALLEL WITH INFLOW EVENLY DISTRIBUTED AMONG TANKS. OVERTOPPING OF TANKS IS NOT PERMITTED.
- USE 60 INCH CORRUGATED METAL OR PLASTIC PIPE WITH 1 INCH DIAMETER PERFORATIONS, 6 INCHES ON CENTER FOR THE INNER PIPE. LINE PIPE WITH NONWOVEN GEOTEXTILE, AS SPECIFIED IN SECTION H-1 MATERIALS, SANDWICHED BETWEEN, AND ATTACHED TO, 1/4 INCH HARDWARE CLOTH.
- OVERLAP GEOTEXTILE 8 INCHES MINIMUM AT VERTICAL SEAM AND AT THE BOTTOM PLATE.
- ANCHOR GEOTEXTILE AT BOTTOM OF TANK WITH 4 INCHES OF 2 TO 3 INCH CLEAN STONE OR EQUIVALENT RECYCLED CONCRETE.
- USE 72 INCH CORRUGATED METAL OR PLASTIC OUTER PIPE WITH PERMANENT OUTFLOW PIPE WITH INVERT LOWER THAN INFLOW PIPE.
- INFLOW PIPE MUST DISCHARGE INTO INNER PIPE AND BE REMOVABLE.
- PLACE TANK ON LEVEL SURFACE AND DISCHARGE TO A STABLE AREA AT A NONEROSIVE RATE.
- A PORTABLE SEDIMENT TANK REQUIRES FREQUENT MAINTENANCE. REMOVE ACCUMULATED SEDIMENT FROM INNER PIPE WHEN IT REACHES TWO FEET IN DEPTH. IF SYSTEM CLOGS, PULL OUT INNER PIPE, REMOVE ACCUMULATED SEDIMENT, AND REPLACE GEOTEXTILE. KEEP POINT OF DISCHARGE FREE OF EROSION.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

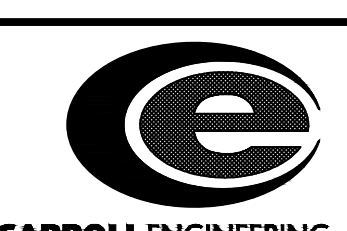
U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION
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REVISIONS			
NO.	DESCRIPTION	DATE	BY

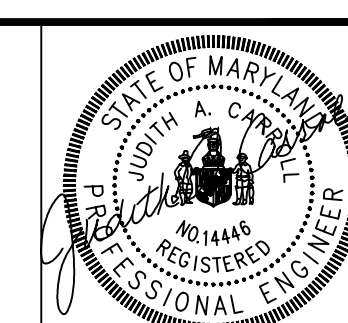
PROFESSIONAL CERTIFICATION: I CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NO. 14446, EXPIRATION DATE 5/25/2025.



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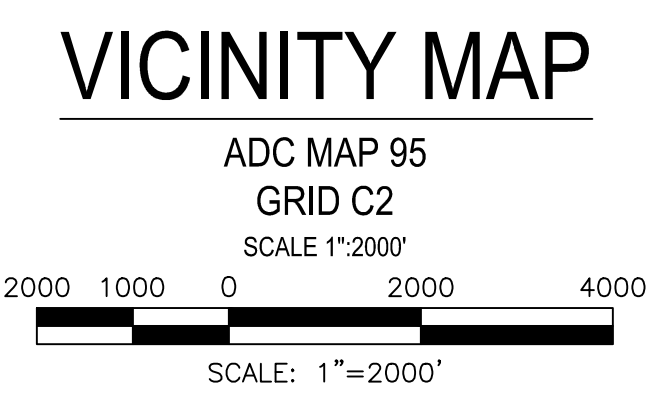
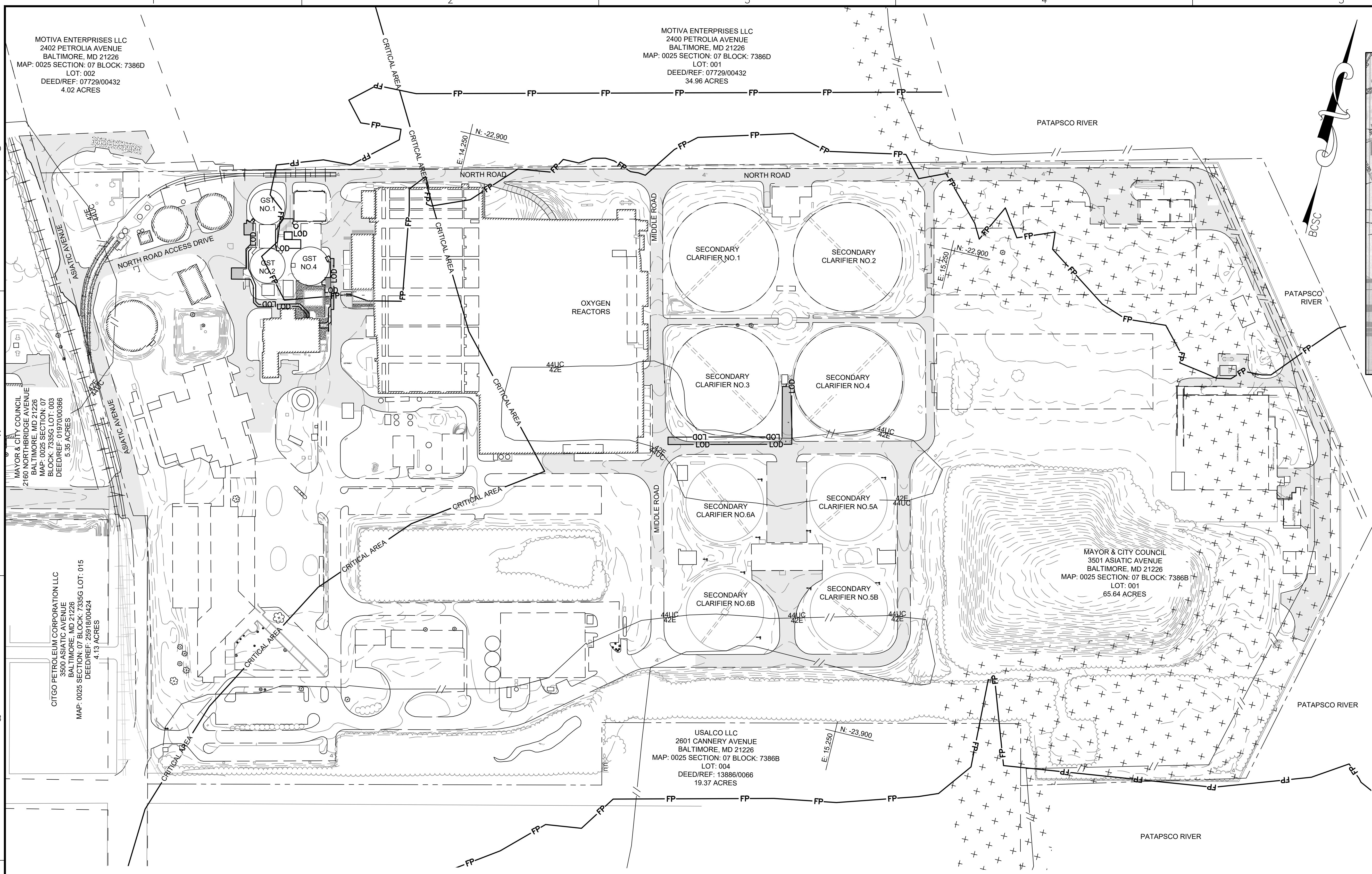
STATE OF MARYLAND
LUDWIG A. CARROLL
NO. 14446
REGISTERED PROFESSIONAL ENGINEER

CITY OF BALTIMORE
DEPARTMENT OF PUBLIC WORKS
OFFICE OF ENGINEERING & CONSTRUCTION
PATAPSCO WASTEWATER TREATMENT PLANT

SANITARY CONTRACT NO. 994
CLARIFIER AND GRAVITY SLUDGE THICKENERS
REHABILITATION AT PATAPSCO WWTP
BCNR NO. 11446

**EROSION & SEDIMENT CONTROL
DETAILS**

SCALE: AS NOTED DATE: SEPTEMBER 2024
DRAWING NO.: C-300-07 SHEET 37 OF 210



SOIL TYPES			
SYMBOL	DESCRIPTION	HSG	Kf
42E	Udorthents, smoothed, 0 to 35% slopes	C	0.24
44UC	Urban Land, 0 to 15% slopes	D	N/A

LEGEND	
	EXISTING PROPERTY LINE
	EXISTING ADJOINING PROPERTY LINE
	EXISTING BUILDING
	EXISTING BUILDING FOOTING
	EXISTING SUCTION LINE (SL) UTILITY
	EXISTING RAW SLUDGE (RS) UTILITY
	EXISTING DISCHARGE PIPE (DIS)
	EXISTING SCUM PIPE
	EXISTING SANITARY LINE
	EXISTING STORMDRAIN LINE
	EXISTING BOLLARD
	EXISTING FENCE
	EXISTING RETAINING WALL
	EXISTING SOILS
	EXISTING FLOODPLAIN
	CHESAPEAKE BAY CRITICAL AREA
	EXISTING WATER BODY
	EXISTING CLEANOUT
	EXISTING STORM DRAIN MANHOLE
	EXISTING DECIDUOUS TREE
	EXISTING UTILITY POLE
	EXISTING LIGHT POLE
	CRITICAL AREA 100 FOOT BUFFER
	LIMIT OF DISTURBANCE

CRITICAL AREA EXHIBIT
SCALE: 1"=100'-0"

PROJECT INFORMATION
1. OWNER:
MAYOR & CITY COUNCIL
PROPERTY ADDRESS:
3501 ASIATIC AVENUE
BALTIMORE MD 21226
WARD 25 SECTION 07 BLOCK 7386B LOT 001

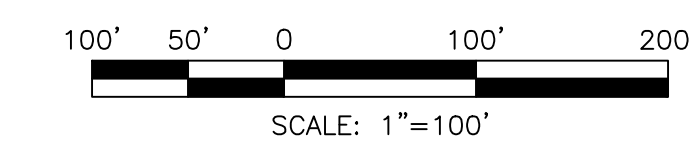
2. SITE MODIFICATIONS:
PROPOSED LINEAR UTILITY INSTALLATION: 1,825 Linear Ft.
PROJECT LOD = 11,950 Sq. Ft. OR 0.27 Ac.
LOD WITHIN THE CRITICAL AREA = 5,784 Sq. Ft.
EXISTING IMPERVIOUS AREA WITHIN THE LOD: 7,095 Sq. Ft.
PROPOSED IMPERVIOUS AREA WITH THE LOD: 6,343 Sq. Ft.
CHANGE IN IMPERVIOUS COVER = -752 Sq. Ft.

3. UTILITIES:
PUBLIC WATER
PUBLIC SEWER
PUBLIC GAS
PUBLIC OVERHEAD ELECTRIC
CABLE/TV/PHONE/INTERNET
WASTEWATER

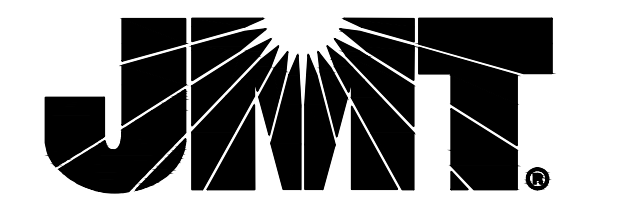
4. THE LIMIT-OF-DISTURBANCE DOES LIE WITHIN THE FLOODPLAIN AS SHOWN ON FEMA FLOOD MAP #2400870031F DATED APRIL 2TH, 2014, (ZONE AO, DEPTH TWO FEET), INDICATED BY LINETYPE (---FP---).

5. WATERSHED: 02130903 BALTIMORE HARBOR RIVER BASIN: 021309 PATAPSCO RIVER

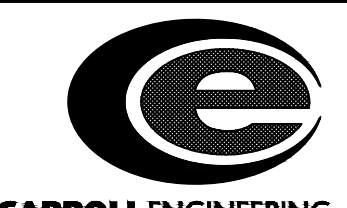
6. THE LIMIT-OF-DISTURBANCE IS WITHIN THE CHESAPEAKE BAY CRITICAL AREA, AN INTENSELY DEVELOPED AREA, BUT OUTSIDE THE 100-FOOT CBCA BUFFER.



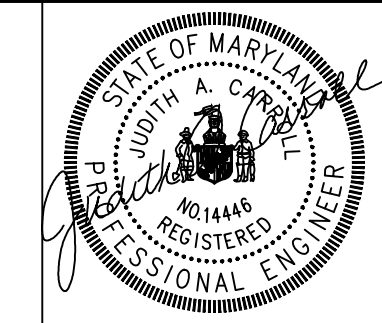
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LICENSE NO. 14446, EXPIRATION DATE 5/25/2025.



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HUNT VALLEY, MD 21031



CITY OF BALTIMORE
DEPARTMENT OF PUBLIC WORKS
OFFICE OF ENGINEERING & CONSTRUCTION

PATAPSCO WASTEWATER TREATMENT PLANT

SANITARY CONTRACT NO. 994
CLARIFIER AND GRAVITY SLUDGE THICKENERS
REHABILITATION AT PATAPSCO WWTP
BCNR NO. 11446

CRITICAL AREA EXHIBIT

SCALE: AS NOTED

DATE: SEPTEMBER 2024

DRAWING NO.: CAEXH-1 R1

SHEET 38 OF 210



REVISIONS			
NO.	DESCRIPTION	DATE	BY

LEGEND

- AREA SUBJECT TO LINEAR UTILITY WAIVER REQUEST
- EXISTING IMPERVIOUS AREA
- DRAINAGE AREA DELINEATION
- POI POINT OF INTEREST
- LOI POINT/LINE OF INTEREST
- TIME OF CONCENTRATION PATH
- LOD LIMIT OF DISTURBANCE

TABLE 1. - SITE IMPERVIOUS AREA REQUIRING TREATMENT (IART)

	SF	AC
A TOTAL LIMIT OF DISTURBANCE (LOD) ²	11,950	0.28
B LIMIT OF DISTURBANCE AREA EXCLUDED FROM SSA ³	4,580	0.10
C STORMWATER STUDY AREA (SSA) = (A - B) ⁴	7,370	0.18
D EX. IMP. AREA TREATED BY EXISTING WATER QUALITY FACILITY IMPACTED BY WORK	0	0.00
E EXISTING IMPERVIOUS AREA WITHIN SSA	7,095	0.16
F PROPOSED IMPERVIOUS AREA WITHIN SSA	6,343	0.14
G NEW IMPERVIOUS AREA = (F - E) IF REDEVELOPMENT, ELSE = F	-752	-0.02
H REDEVELOPMENT IMPERVIOUS AREA = (0.5 x (E-D)) IF REDEVELOPMENT, ELSE = 0	3,547	0.08
I TOTAL IMPERVIOUS AREA TO TREAT (D + G + H)	2,795	0.06
J TOTAL IMPERVIOUS AREA TREATED BY SWM	0	0.00
K VARIANCE/WAIVER - FEE-IN-LIEU PAID FOR UNTREATED IMPERVIOUS AREA	2,795	0.06
M TOTAL IMPERVIOUS AREA ACCOUNTED (I + K)	2,795	0.06

WATERSHED NAME: 02130903 BALTIMORE HARBOR, 021309 PATAPSCO RIVER

- NOTES**
- ROUND ACRES TO NO MORE THAN 2 PLACES AFTER THE DECIMAL POINT.
 - LOD AREA COVERS ALL EARTH DISTURBANCE ACTIVITIES.
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 - SSA IS THE AREA USED IN COMPUTING THE SWM REQUIREMENT. IT IS TYPICALLY SAME AS THE LOD, HOWEVER MAY BE REDUCED FROM THE LOD WHERE PORTIONS OF THE LOD ARE SUBJECT TO A WAIVER OF SWM REQUIREMENTS SUCH AS UTILITY CONNECTIONS OR TEMPORARY STOCKPILE AREAS.

EXISTING CONDITION TR-55 DATA SUMMARY

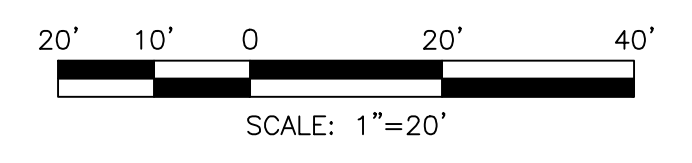
DRAINAGE AREA	OVERALL AREA (S.F./ ACRES)	IMPERVIOUS AREA (S.F./ ACRES)	CN	Tc (HR)
DA-1	6,885 / 0.16	5,750 / 0.13	95	0.100
DA-2	15,404 / 0.35	10,455 / 0.24	92	0.100
DA-3	2,245 / 0.05	2,445 / 0.05	98	0.100
DA-4	4,169 / 0.10	1,089 / 0.03	83	0.166

Natural Resources Inventory					
Federal Regulated (V/2)	Feature	Legend Symbol	State Regulated (V/2)	Feature	Legend Symbol
N	Wetlands		N	Tidal and Non-tidal Wetlands	
N	Major Waterways		N	Wetlands of Special State Concern	
Y	Floodplains		N	Wetland Buffers	
			N	Stream Buffers	
			N	Perennial Streams	
			Y	Floodplains	
			N	Forests	
			N	Forest Buffers	
			N	Critical Areas	

SOIL TYPES

SYMBOL	DESCRIPTION	HSG	Kf
42E	Udorthents, smoothed, 0 to 35% slopes	C	0.24
44UC	Urban Land, 0 to 15% slopes	D	N/A

EXISTING CONDITIONS EXHIBIT - GRAVITY SLUDGE THICKENERS
SCALE: 1"=20'-0"



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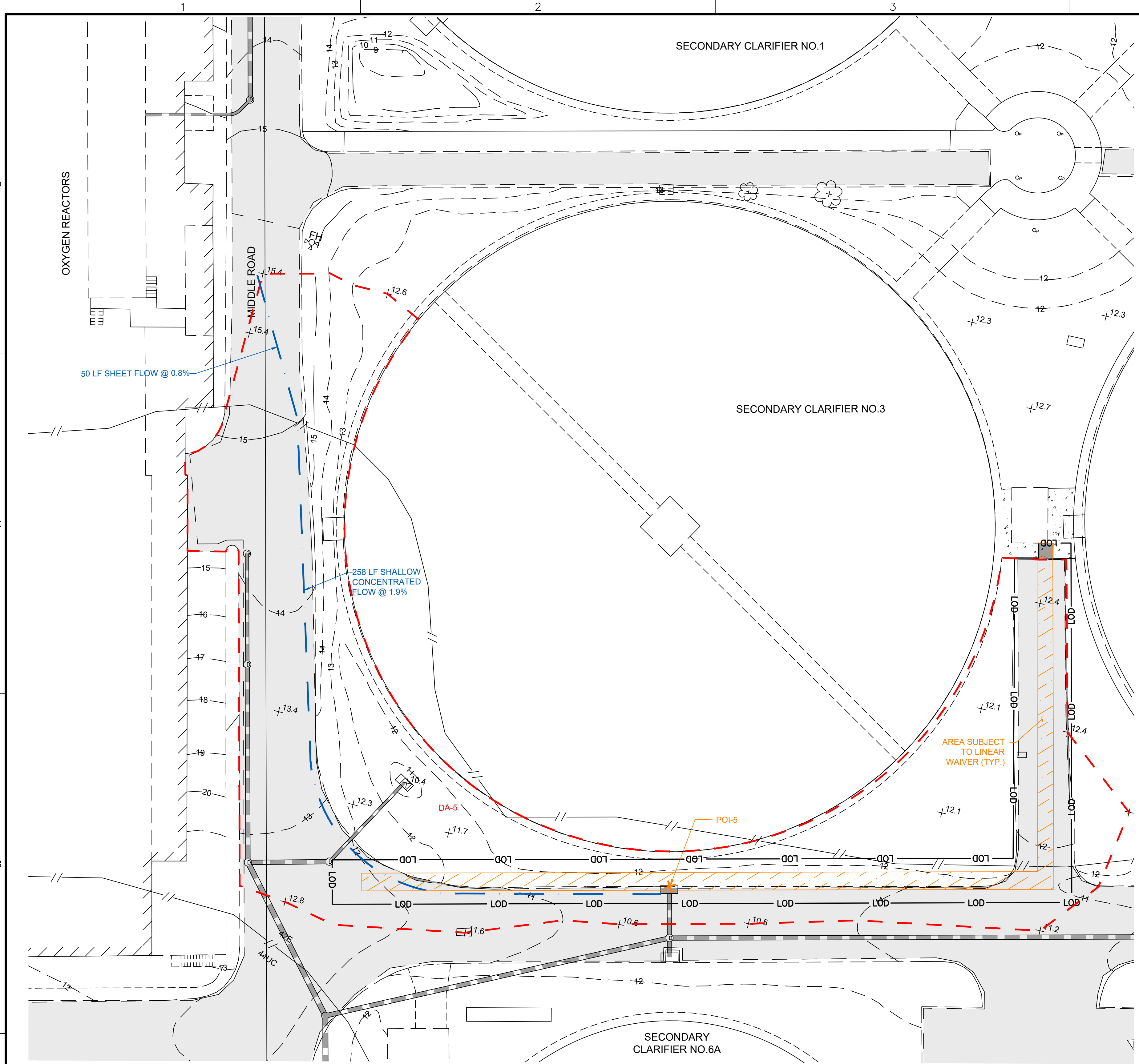


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OFFICE OF ENGINEERING & CONSTRUCTION
PATAPSCO WASTEWATER TREATMENT PLANT
SANITARY CONTRACT NO. 994
CLARIFIER AND GRAVITY SLUDGE THICKENERS
REHABILITATION AT PATAPSCO WWTP
BCNR NO. 11446

EXISTING CONDITIONS EXHIBIT -
GRAVITY SLUDGE THICKENERS

SCALE: AS NOTED
DRAWING NO.: SWM-1A

DATE: SEPTEMBER 2024
SHEET 38A OF 210



EXISTING CONDITIONS EXHIBIT - SECONDARY CLARIFIERS
SCALE: 1"=20'-0"

REVISIONS			
NO.	DESCRIPTION	DATE	BY

- LEGEND**
- AREA SUBJECT TO LINEAR UTILITY WAIVER REQUEST
 - EXISTING IMPERVIOUS AREA
 - DRAINAGE AREA DELINEATION
 - POINT OF INTEREST
 - POINT/LINE OF INTEREST
 - TIME OF CONCENTRATION PATH
 - LIMIT OF DISTURBANCE

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WATERSHED NAME: 02130903 BALTIMORE HARBOR, 021309 PATAPSCO RIVER

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EXISTING CONDITION TR-55 DATA SUMMARY

DRAINAGE AREA	OVERALL AREA (S.F./ ACRES)	IMPERVIOUS AREA (S.F./ ACRES)	CN	T _c (HR)
DA-5	23,212 / 0.53	11,369 / 0.26	88	0.100

Natural Resources Inventory					
Federal Regulated		State Regulated		Local Regulated	
Present? (Y/N)	Feature	Present? (Y/N)	Feature	Present? (Y/N)	Feature
N	Wetlands	N	Tidal and Non-tidal Wetlands	N	Steep Slopes
N	Major Waterways	N	Wetlands of Special State Concern	N	Highly Erodible Soils
Y	Floodplains	N	Stream Buffers	Y	Enhanced Stream Buffers
		N	Perennial Streams	N	Topography / Slopes
		Y	Floodplains	N	Springs
		N	Forests	N	Scree
		N	Forest Buffers	N	Intermittent Streams
		N	Critical Areas	Y	Vegetative Cover
		N		N	Soils
		N		N	Soils
		N		N	Existing Drainage Area
		N		N	Existing SWM Facilities

SOIL TYPES

SYMBOL	DESCRIPTION	HSG	Kf
42E	Udorthents, smoothed, 0 to 35% slopes	C	0.24
44UC	Urban Land, 0 to 15% slopes	D	N/A

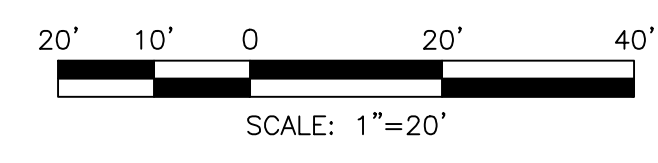
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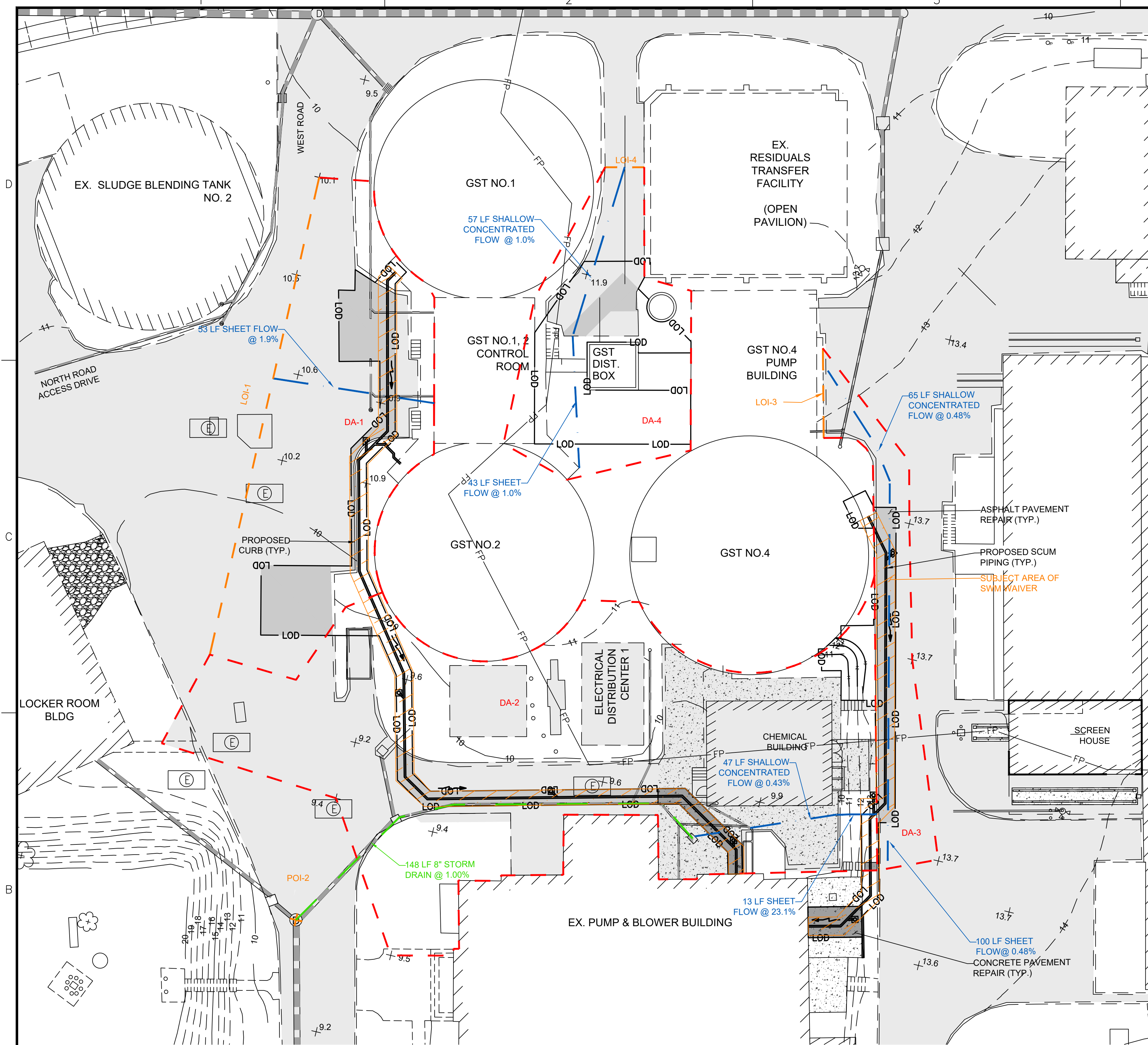
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SANITARY CONTRACT NO. 994
CLARIFIER AND GRAVITY SLUDGE THICKENERS
REHABILITATION AT PATAPSCO WWTP
BCNR NO. 11446

EXISTING CONDITIONS EXHIBIT - SECONDARY CLARIFIERS

SCALE: AS NOTED DATE: SEPTEMBER 2024
DRAWING NO.: SWM-1B SHEET 38B OF 210



PROFESSIONAL CERTIFICATION: I CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.
LICENSE NO. 14446, EXPIRATION DATE 5/25/2025.



REVISIONS			
NO.	DESCRIPTION	DATE	BY

LEGEND

- AREA SUBJECT TO LINEAR UTILITY WAIVER REQUEST
- RECONSTRUCTED IMPERVIOUS AREA
- DRAINAGE AREA DELINEATION
- POINT OF INTEREST
- POINT/LINE OF INTEREST
- TIME OF CONCENTRATION PATH
- LIMIT OF DISTURBANCE
- EXISTING SOILS

TABLE 3. STORMWATER MANAGEMENT DISCHARGE SUMMARY

REQUIREMENT	EXISTING DISCHARGE (CFS)	PROPOSED DISCHARGE w/SWM (CFS)	NOTES
L O I 1	Q _s	0.51	0.49
	Q ₀	1.00	0.98
	Q ₁₀₀	1.76	1.75
P O I 2	Q _s	1.00	0.96
	Q ₀	2.10	2.06
	Q ₁₀₀	3.79	3.76
L O I 3	Q _s	0.17	0.17
	Q ₀	0.33	0.33
	Q ₁₀₀	0.57	0.57
L O I 4	Q _s	0.17	0.17
	Q ₀	0.45	0.45
	Q ₁₀₀	0.90	0.90
P O I 5	Q _s	1.27	1.27
	Q ₀	2.93	2.93
	Q ₁₀₀	5.53	5.53
T O T A L S	Q _s	3.12	3.06
	Q ₀	6.81	6.72
	Q ₁₀₀	12.55	12.51

NOTES
1. TOTALS ARE THE ALGEBRAIC SUM OF ALL POI'S FOR EACH EVENT.

TABLE 2 - SITE ESDv & Rev REQUIREMENTS

	REQ. (cf)	PRO. (cf)	NOTES
ESDv	136	0	SEE NOTE TABLE 4
Rev	10	0	SEE NOTE TABLE 4

EXISTING CONDITION TR-55 DATA SUMMARY

DRAINAGE AREA	OVERALL AREA (S.F./ ACRES)	IMPERVIOUS AREA (S.F./ ACRES)	CN	T _c (HR)
DA-1	6,885 / 0.16	5,401 / 0.12	94	0.100
DA-2	15,404 / 0.35	10,019 / 0.23	91	0.100
DA-3	2,245 / 0.05	2,265 / 0.05	98	0.100
DA-4	4,169 / 0.10	1,089 / 0.03	83	0.166

SOIL TYPES

SYMBOL	DESCRIPTION	HSG	Kf
42E	Udorthents, smoothed, 0 to 35% slopes	C	0.24
44UC	Urban Land, 0 to 15% slopes	D	N/A

PROPOSED CONDITIONS EXHIBIT - GRAVITY SLUDGE THICKENERS
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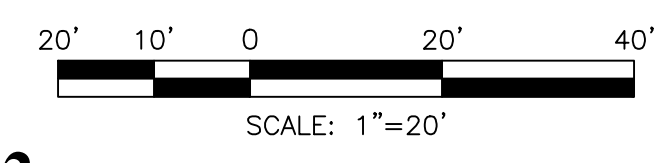
DESIGNER NOTE: EXPAND TABLES 3 AND 4 AS NEEDED FOR ADDITIONAL POIS/LOIS/PRACTICES

STORMWATER MANAGEMENT - TEMPLATE TABLES

TABLE 4. FACILITY DESIGN SUMMARY TABLE

PRACTICE ID	DIMENSIONS	1 DRAINAGE AREA (ac)	IMPERVIOUS AREA (ac)	ESDv VOLUME REQUIRED, (cf)	2 STORAGE VOLUME PROVIDED, ESD, (cf)	TREATMENT VOLUME CREDITED, ESD, (cf)	RECHARGE VOLUME PROVIDED, (cf)	5 TARGET PE (in)	6 PE PROVIDED (in)	7 IS FACILITY USED FOR 10-&100-YEAR QUANTITY CONTROL? (Y/N)	NOTES
FEE IN LIEU										N	FEE IN LIEU REQUESTED FOR PORTION OF DISTURBANCE NOT INCLUDED IN THE 3.3.A LINEAR UTILITY WAIVER (0.06 ACRES)
TOTALS											

- NOTES
- SHOW SURFACE AREA OR L x W, ESDv PONDING DEPTH, FILTER MEDIA THICKNESS OR OTHER RELEVANT DESIGN DATA.
 - DESIGN ESDv FOR THE PRACTICE'S DRAINAGE AREA.
 - STORAGE VOLUME PHYSICALLY PROVIDED IN THE PRACTICE.
 - TREATMENT VOLUME = STORAGE VOLUME FOR MOST PRACTICES. TREATMENT VOLUME = (STORAGE VOLUME PROVIDED / 0.75) FOR MICROBIORETENTION, SUBMERGED GRAVEL WETLANDS, BIOSWALES, WET SWALES, SAND FILTERS, BIOTRETENTION, AND PROPRIETARY SWM SYSTEMS WITH MDE APPROVAL LETTERS INDICATING TEMPORARY STORAGE EQUAL TO 75% OF ESDv.
 - RECHARGE VOLUME PROVIDED = STONE VOLUME UNDER UNDERDRAIN x 0.4 VOID RATIO
 - TARGET PE = PE FOR PRACTICE'S DRAINAGE AREA'S SOIL GROUP AND % IMPERVIOUS
 - PE PROVIDED = (TREATMENT VOLUME CREDITED x 12) / (RV x PRACTICE'S DRAINAGE AREA)
 - INCLUDE QUANTITY CONTROL ONLY FACILITIES IN TABLE, BUT TALLY IMP. AREA AND TREATMENT AS NOT APPLICABLE - N/A



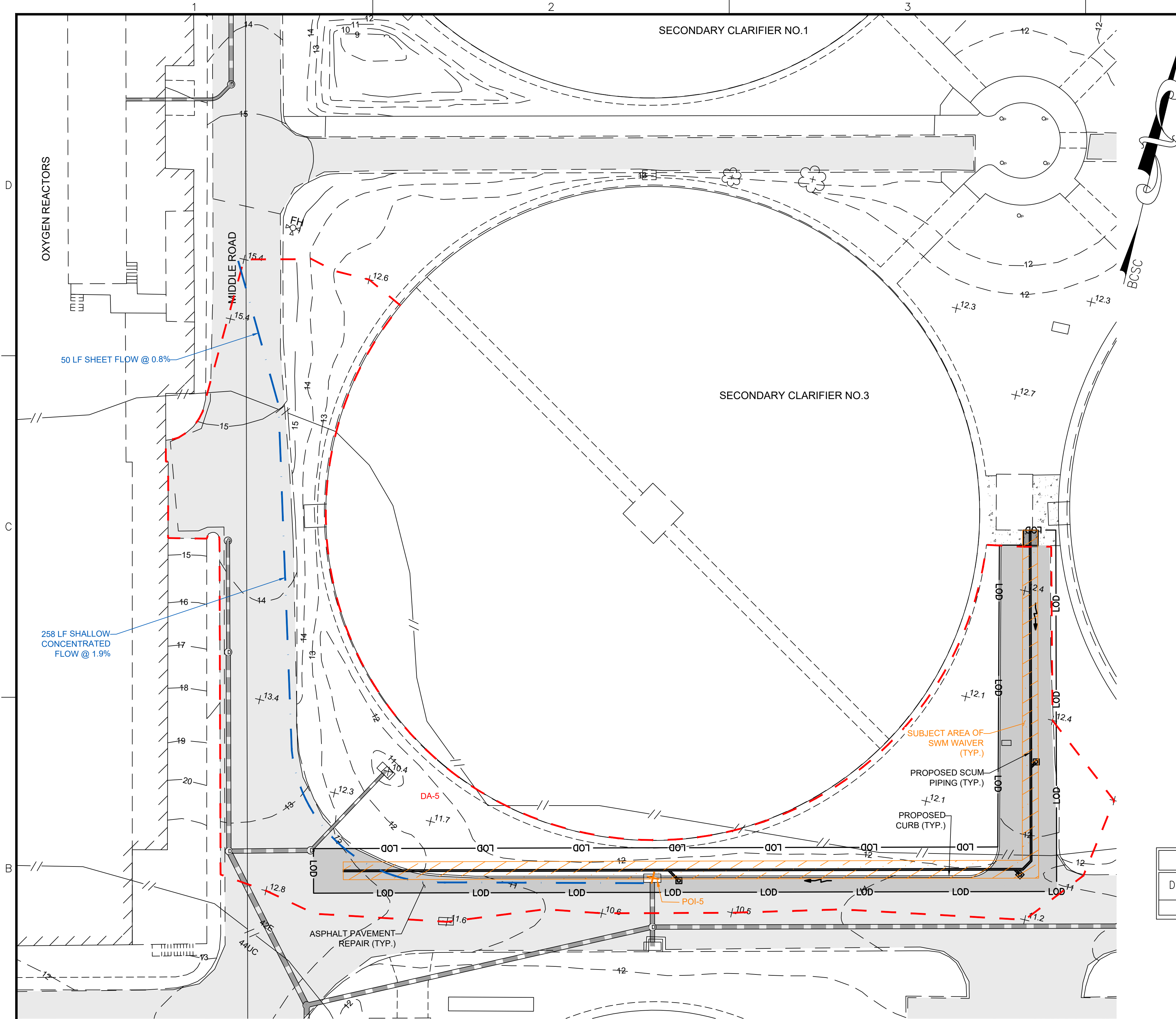
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PROPOSED CONDITIONS EXHIBIT - GRAVITY SLUDGE THICKENERS
SCALE: AS NOTED DATE: SEPTEMBER 2024
DRAWING NO.: SWM-2A SHEET 38C OF 210



REVISIONS			
NO.	DESCRIPTION	DATE	BY

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SOIL TYPES

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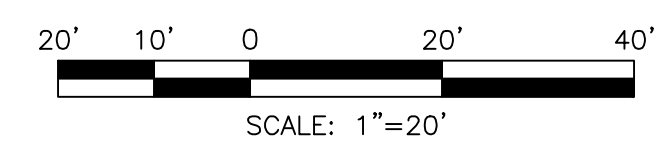
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STORMWATER MANAGEMENT - TEMPLATE TABLES

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OFFICE OF ENGINEERING & CONSTRUCTION

PATAPSCO WASTEWATER TREATMENT PLANT

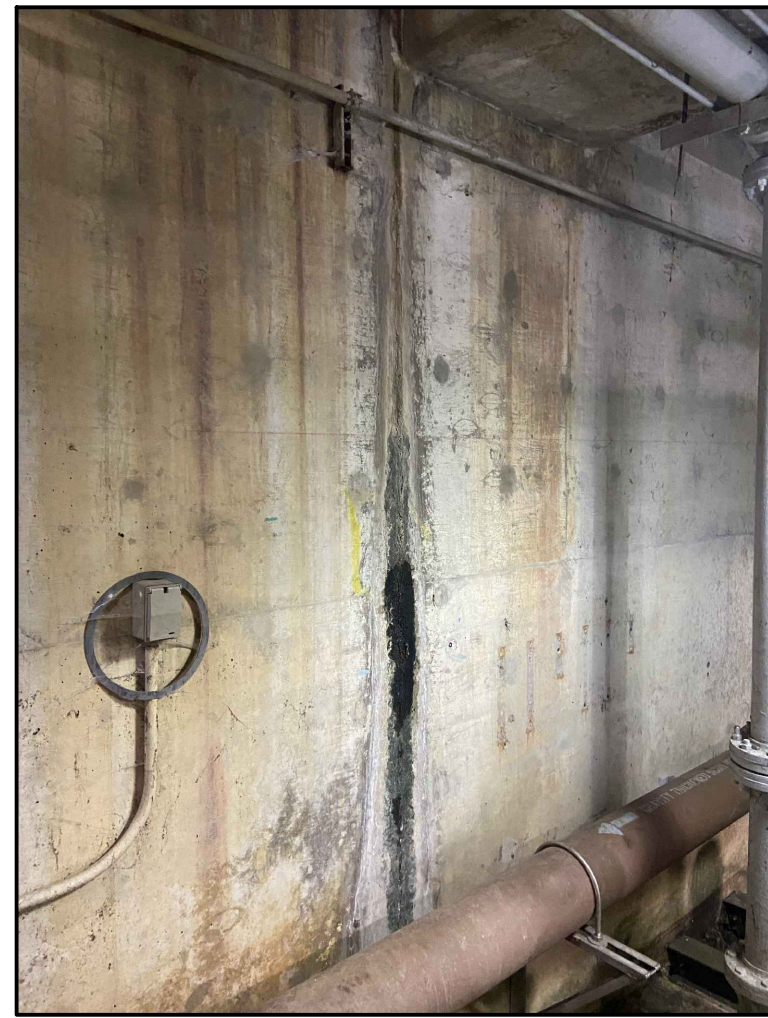
SANITARY CONTRACT NO. 994
CLARIFIER AND GRAVITY SLUDGE THICKENERS
REHABILITATION AT PATAPSCO WWTP

BCNR NO. 11446

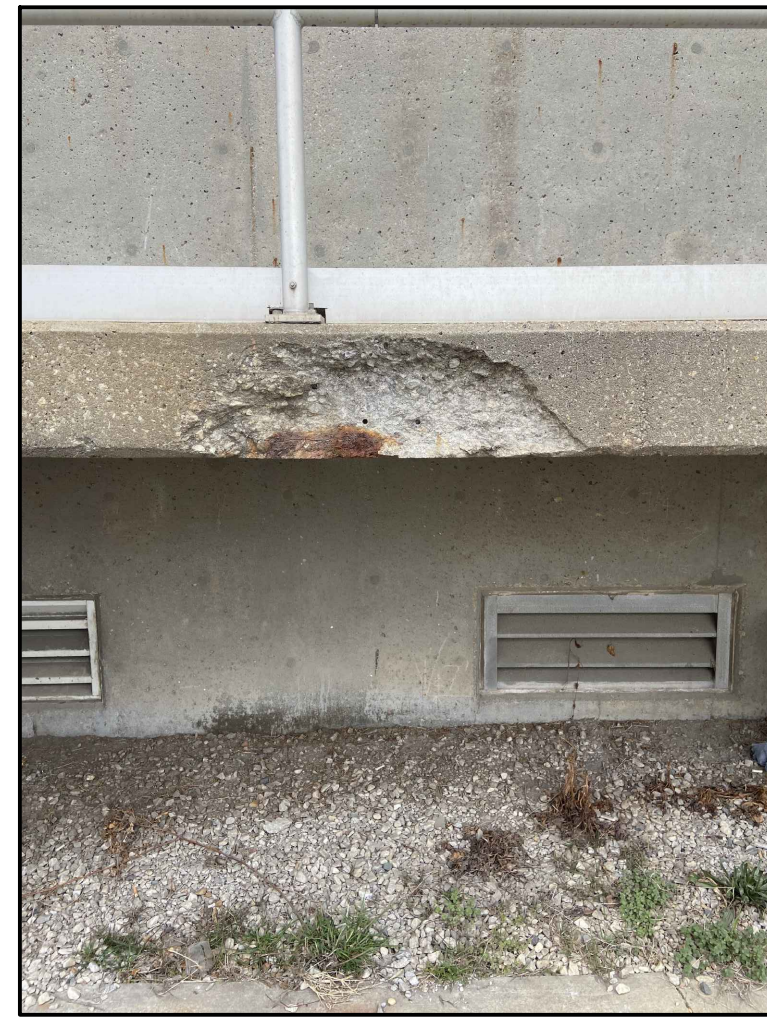
PROPOSED CONDITIONS EXHIBIT - SECONDARY CLARIFIERS

SCALE: AS NOTED DATE: SEPTEMBER 2024
DRAWING NO.: SWM-2B SHEET 38D OF 210

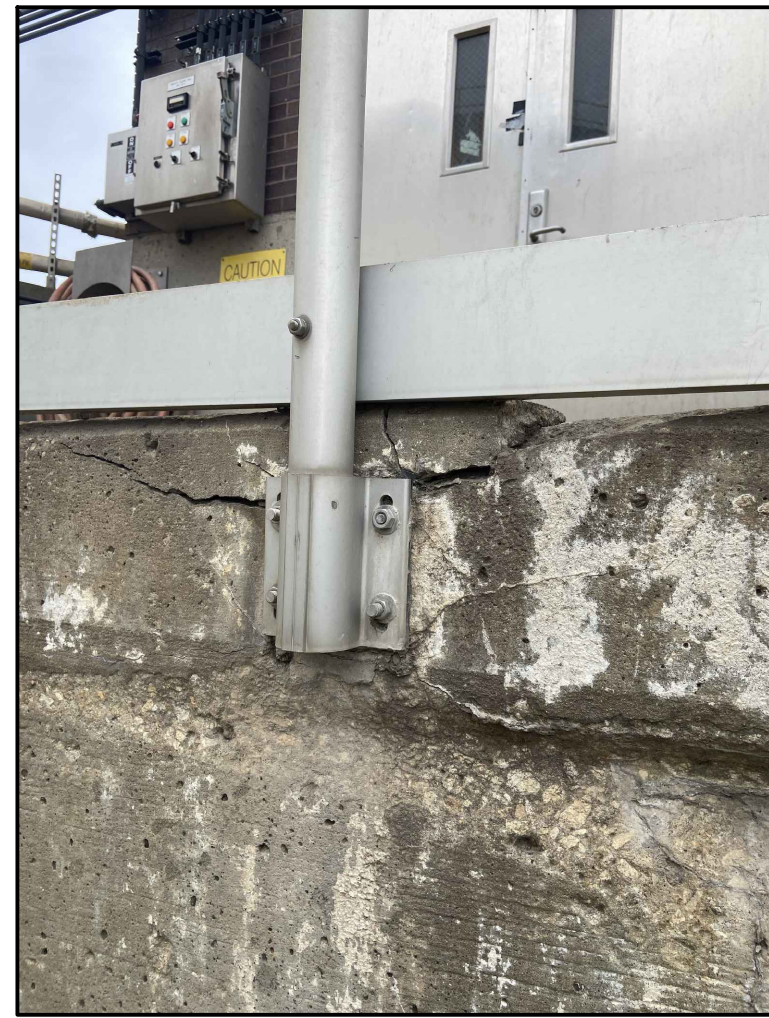
REVISIONS			
NO.	DESCRIPTION	DATE	BY



1 PHOTO - DETERIORATED EXPANSION JOINT AT GST BUILDING LOWER LEVEL
S-100-01 SCALE: NTS



2 PHOTO - SPALL AT GST BUILDING EXTERIOR PLATFORM
S-100-02 SCALE: NTS



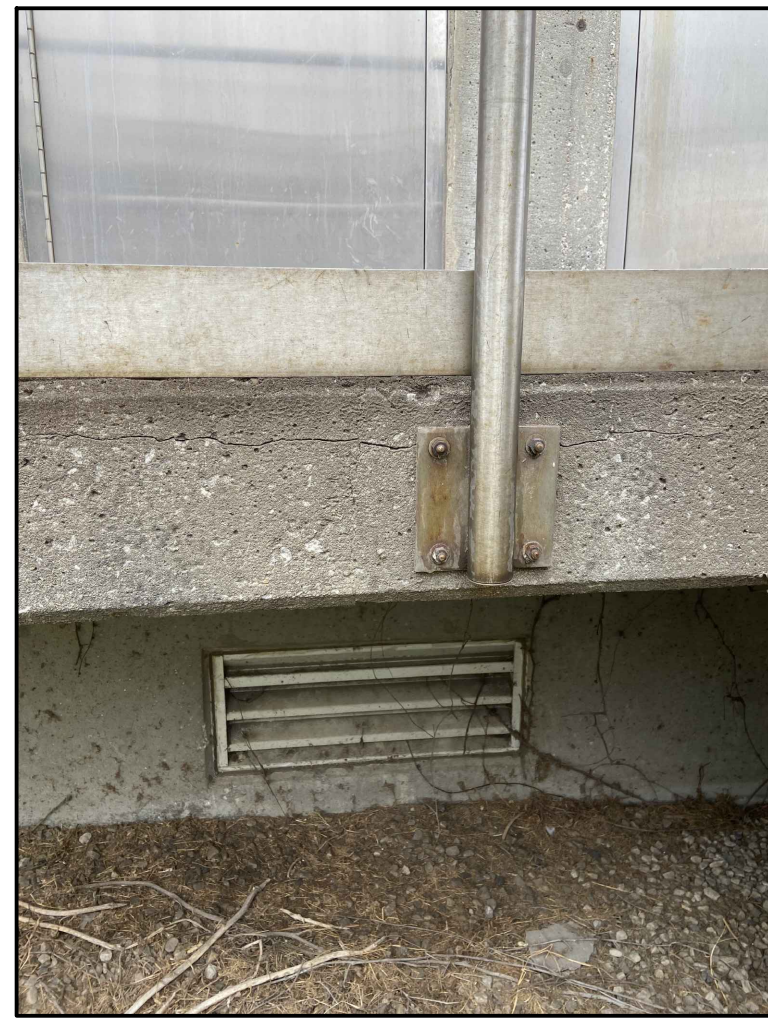
3 PHOTO - SPALL AT GST BUILDING EXTERIOR PLATFORM
S-100-02 SCALE: NTS



4 PHOTO - CRACK AT GST BUILDING EXTERIOR PLATFORM
S-100-02 SCALE: NTS



5 PHOTO - CORRODED ANCHORS AT GST WALKWAY
S-100-02 SCALE: NTS



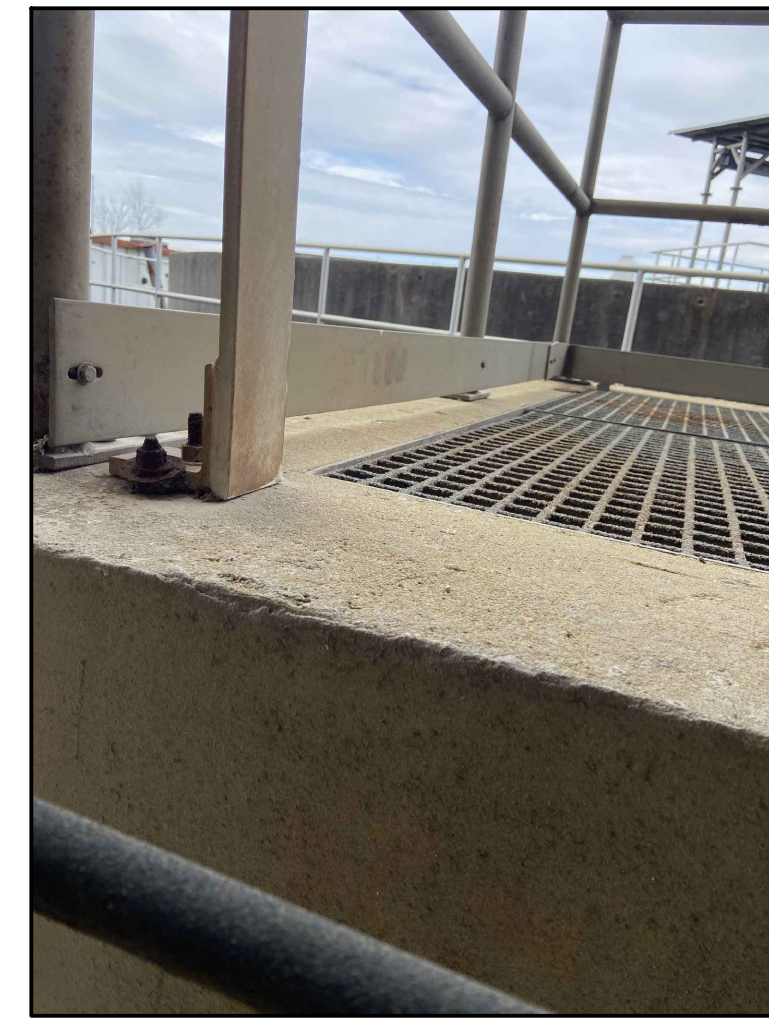
6 PHOTO - CRACK AT GST BUILDING EXTERIOR PLATFORM
S-100-02 SCALE: NTS



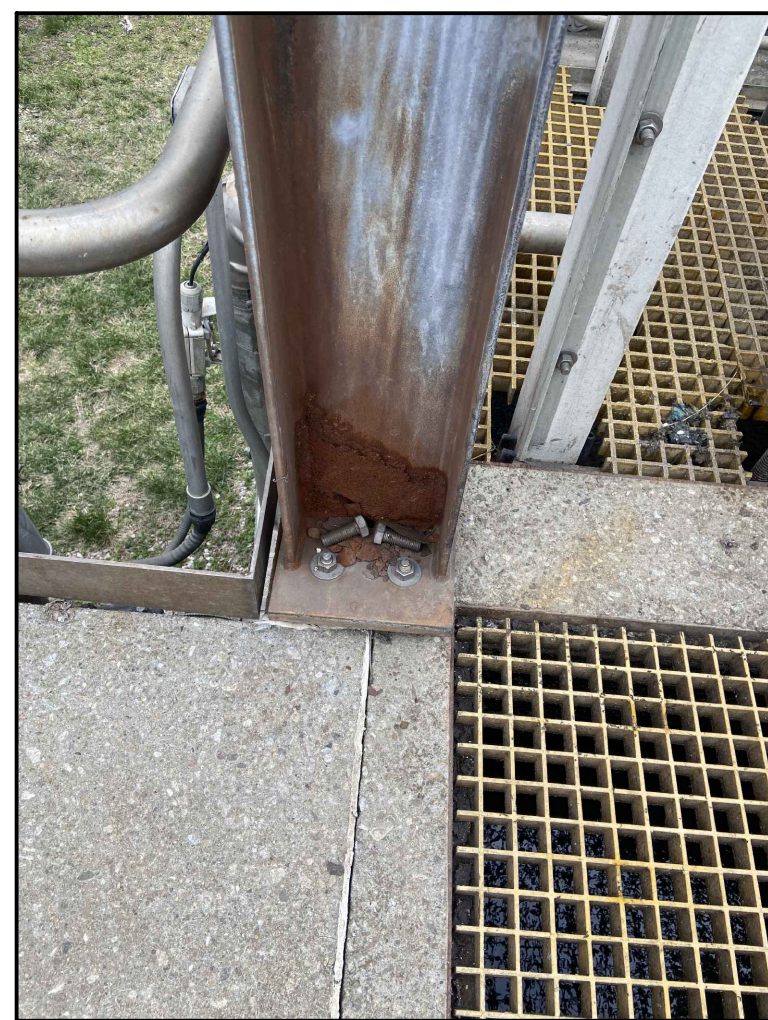
7 PHOTO - SPALL AND CORROSION AT GST EXTERIOR PLATFORM BEAM
S-100-02 SCALE: NTS



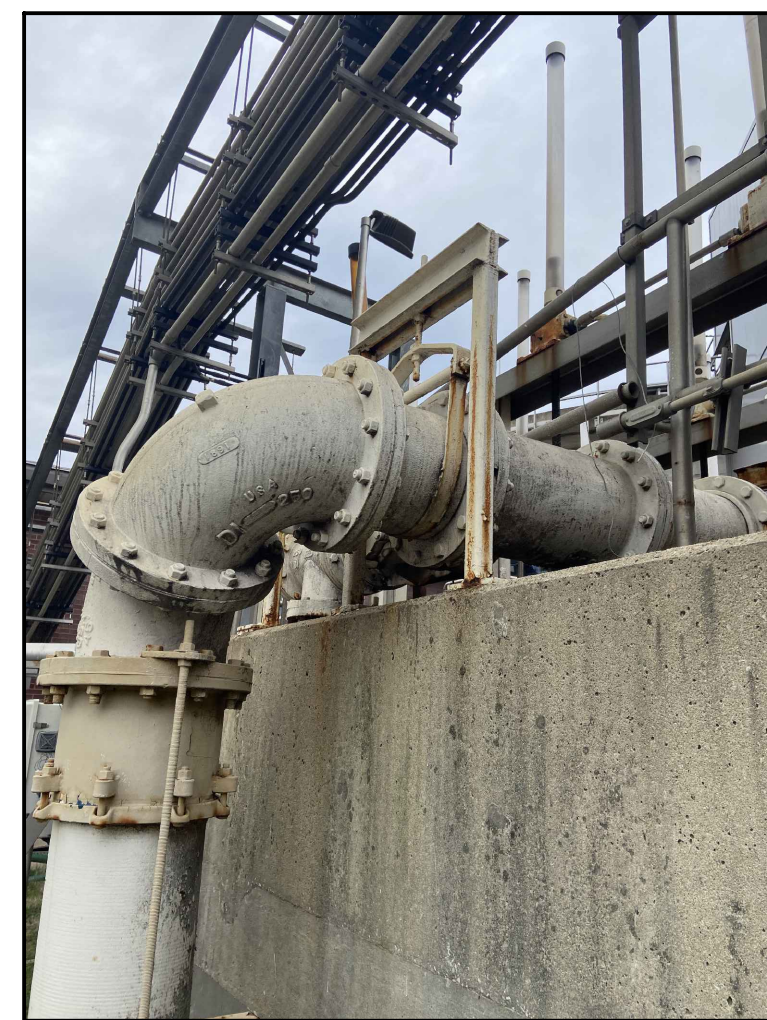
8 PHOTO - SPALL AND CORROSION AT GST EXTERIOR STAIR
S-100-02 SCALE: NTS



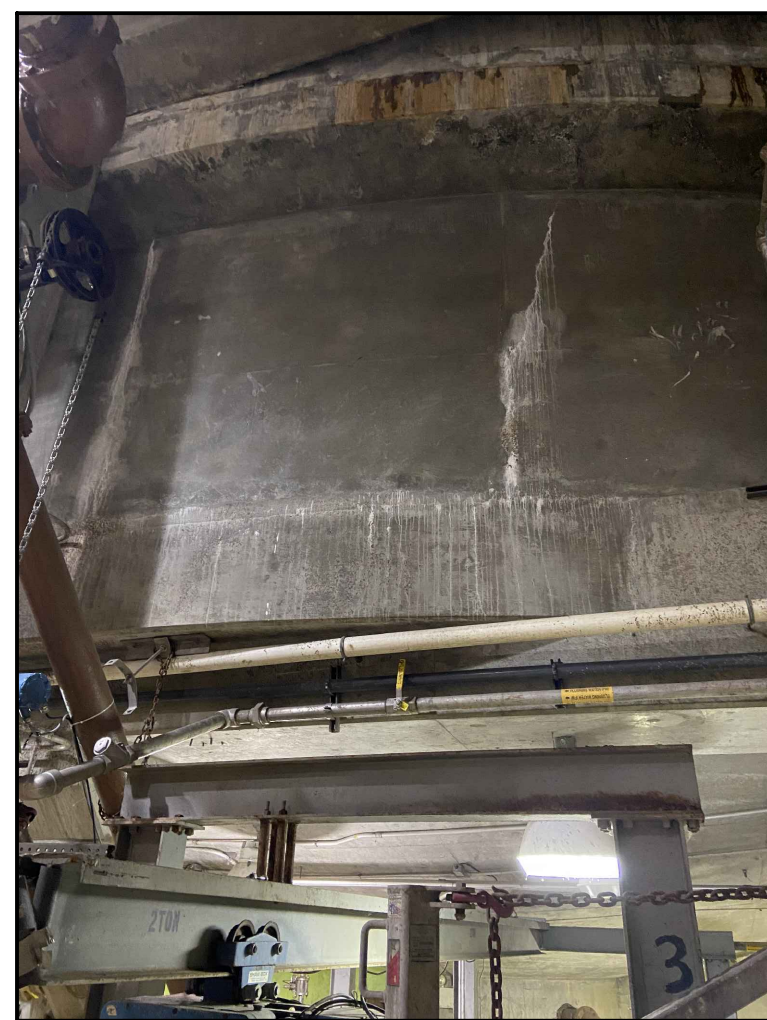
9 PHOTO - CORRODED ANCHORS AT GST OVERFLOW MANHOLE
S-100-03 SCALE: NTS



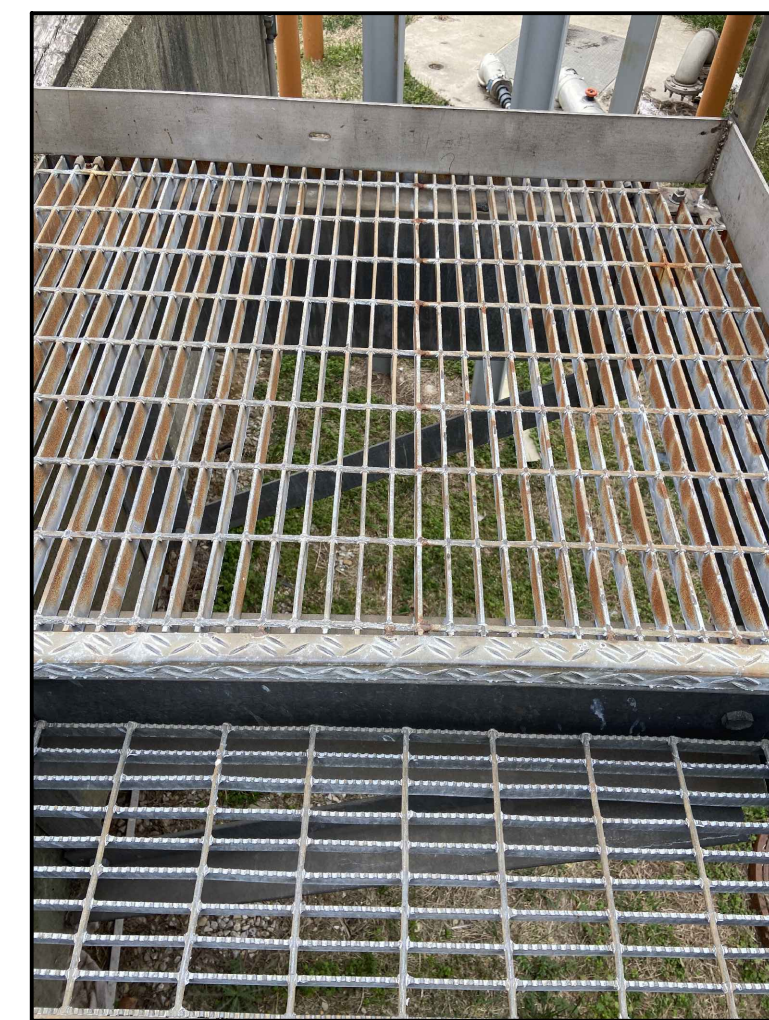
10 PHOTO - CORROSION AT GST DISTRIBUTION CHAMBER PIPE SUPPORTS
S-100-02 SCALE: NTS



11 PHOTO - CORROSION AT GST DISTRIBUTION CHAMBER PIPE SUPPORTS
S-100-02 SCALE: NTS

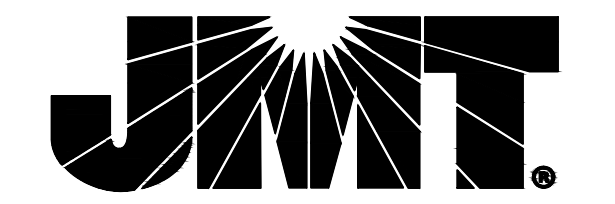


12 PHOTO - DETERIORATED JOINT AT GST LOWER LEVEL
S-100-01 SCALE: NTS



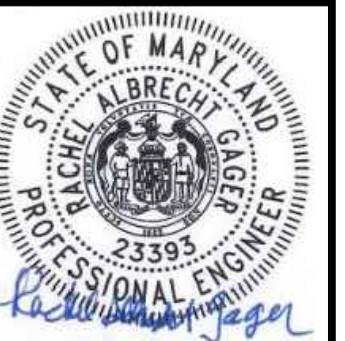
13 PHOTO - CORRODED GRATING AT STAIRS TO GST DISTRIBUTION CHAMBER
S-100-02 SCALE: NTS

PROFESSIONAL CERTIFICATION: I CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.
LICENSE NO. 23393, EXPIRATION DATE 08/25/2024



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ALBRECHT ENGINEERING INC
3500 BOSTON STREET
SUITE 329
BALTIMORE, MD 21224
410-522-5870



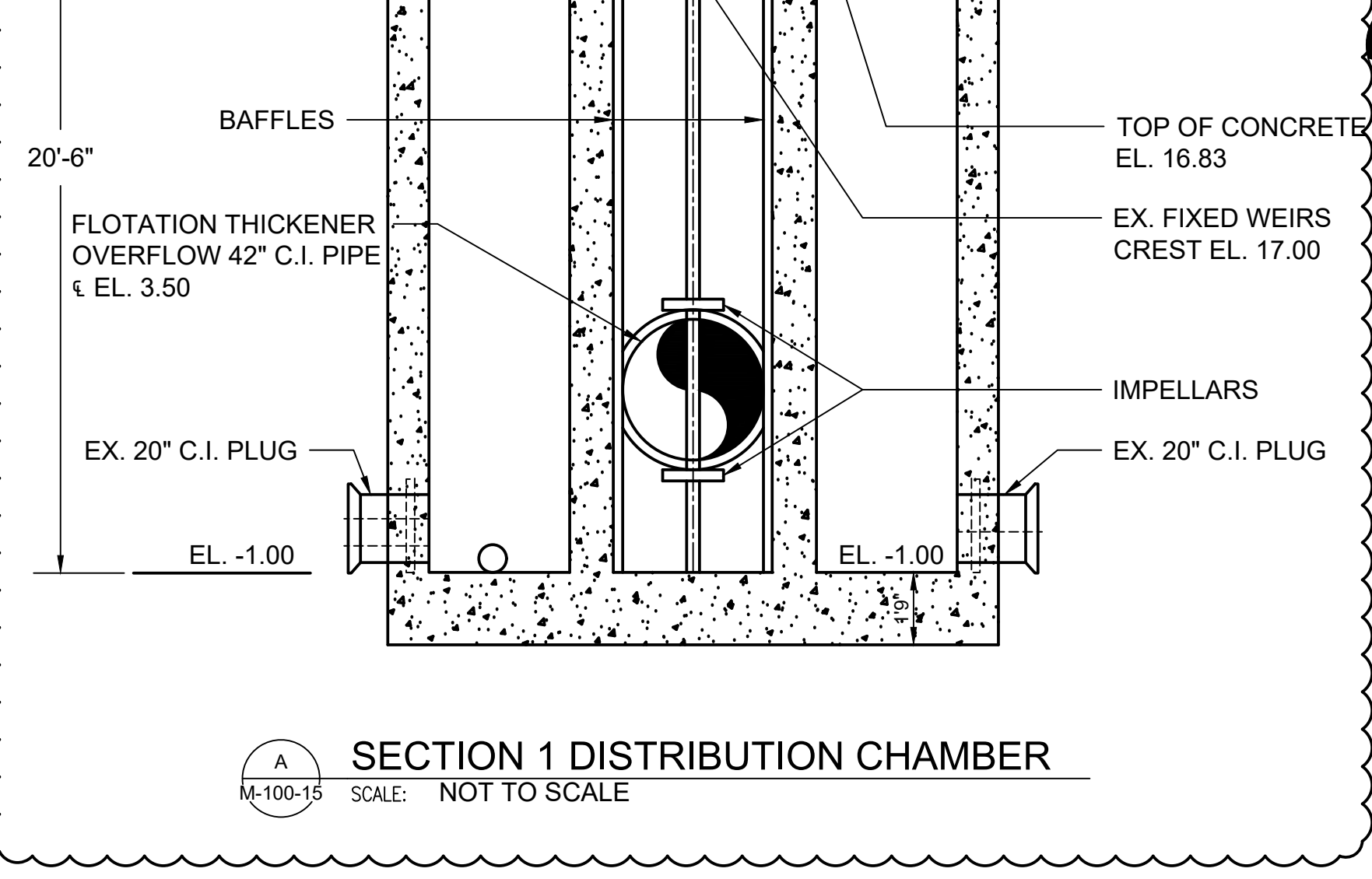
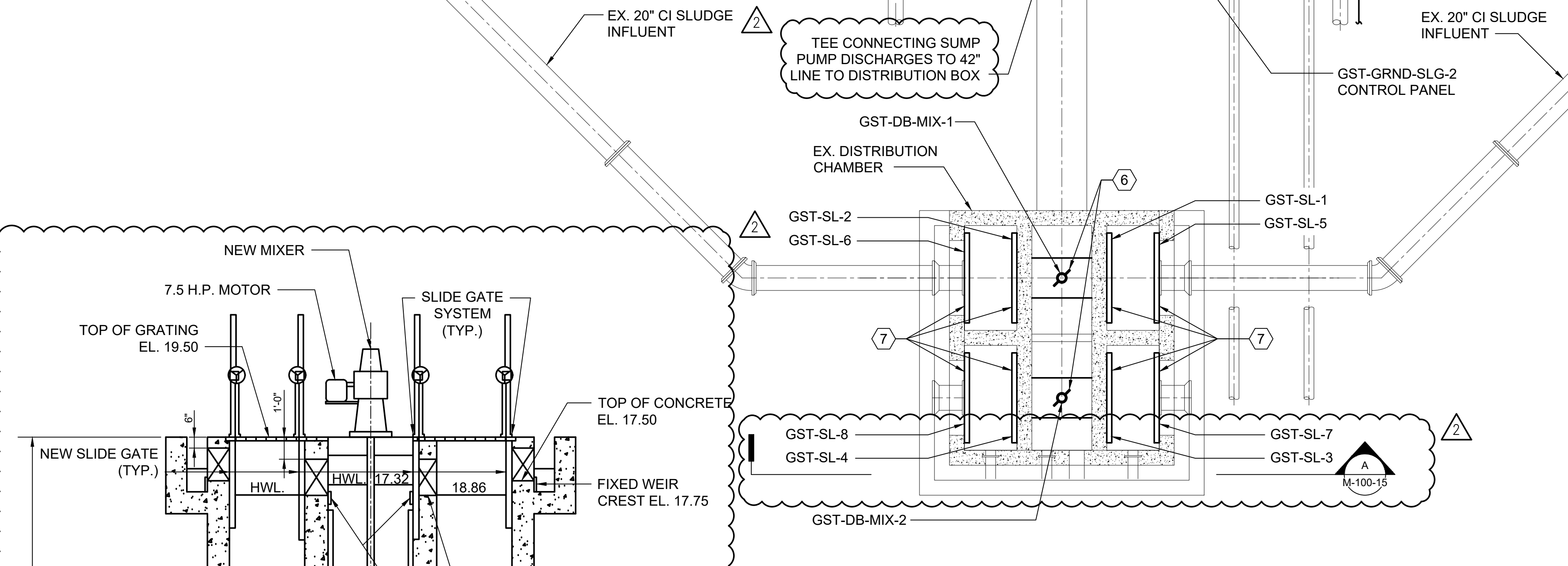
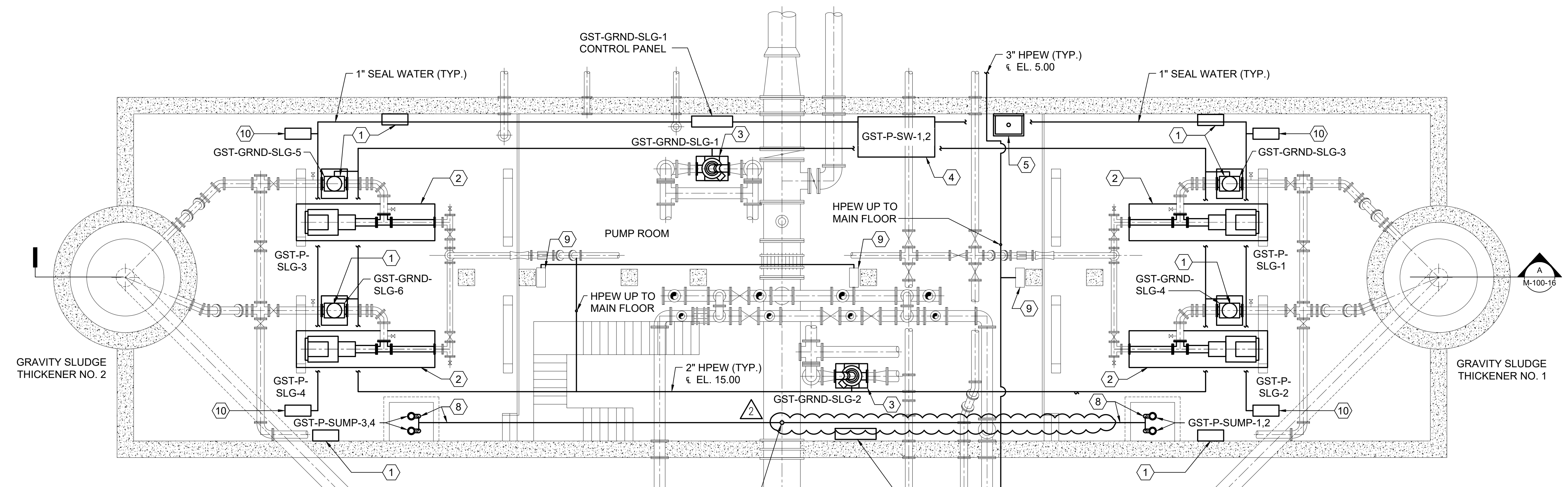
CITY OF BALTIMORE
DEPARTMENT OF PUBLIC WORKS
OFFICE OF ENGINEERING & CONSTRUCTION
PATAPSCO WASTEWATER TREATMENT PLANT
SANITARY CONTRACT NO. 994
CLARIFIER AND GRAVITY SLUDGE THICKENERS
REHABILITATION AT PATAPSCO WWTP

EXISTING CONDITIONS
PHOTOS

REVISIONS			
NO.	DESCRIPTION	DATE	BY
1	ADDENDUM NO. 2	10/30/2024	MDS

- GENERAL SHEET NOTES:**
- EXISTING CONDITIONS, ELEVATIONS, AND DIMENSIONS SHOWN HEREIN ARE BASED ON SC 7515 AS-BUILT DRAWINGS AND SHALL BE FIELD VERIFIED PRIOR TO CONSTRUCTION.
 - THE CONTRACTOR SHALL COORDINATE WITH THE CITY SO AS TO MINIMIZE DISRUPTION TO PLANT PROCESSES. REFER TO SPECIFICATION.
 - NOT ALL PIPES AND VALVING IS SHOWN FOR CLARITY.
 - CONTRACTOR RESPONSIBLE FOR ANY PIPING MODIFICATIONS REQUIRED TO ACCOMMODATE NEW WORK BASED UPON EQUIPMENT SELECTIONS

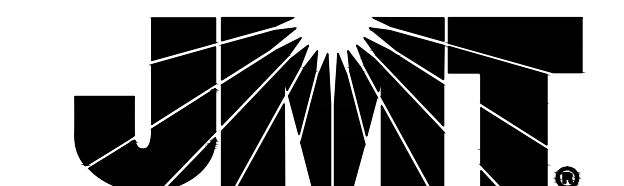
- SHEET KEYNOTES:**
- NEW THICKENED SLUDGE GRINDER AND CONTROL PANEL.
 - NEW UNDERFLOW PUMP.
 - NEW PRIMARY SLUDGE GRINDER AND CONTROL PANEL.
 - NEW SEAL WATER SKID SYSTEM.
 - NEW UTILITY SINK, PIPE, AND DRAIN.
 - NEW 3 HP MIXER. CONTRACTOR TO COORDINATE GST DISTRIBUTION BOX MIXER SUPPORTS
 - NEW SLIDE GATE AND ELECTRIC ACTUATOR.
 - NEW DUPLEX SUMP PUMP ARRANGEMENT AND CONTROL PANEL.
 - CONNECT TO EXISTING HOSE REEL.
 - NEW SEAL WATER APPURTENANCE PANEL.



GRAVITY SLUDGE THICKENER NO. 1 AND 2 - BASEMENT NEW WORK PLAN
SCALE: 3/16" = 1'-0"



CONFORMED DRAWINGS



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DEPARTMENT OF PUBLIC WORKS
OFFICE OF ENGINEERING & CONSTRUCTION
PATAPSCO WASTEWATER TREATMENT PLANT

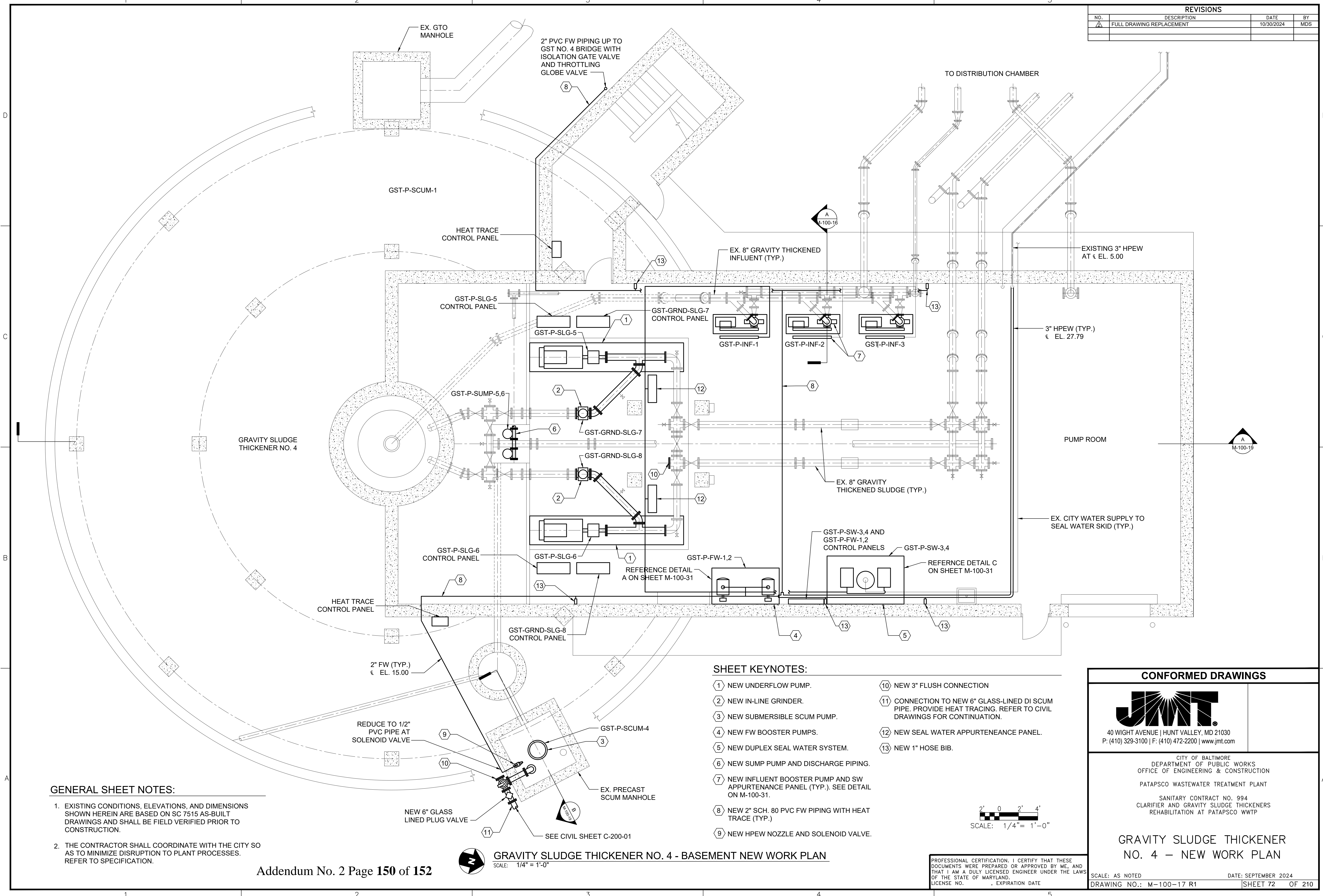
SANITARY CONTRACT NO. 994
CLARIFIER AND GRAVITY SLUDGE THICKENERS
REHABILITATION AT PATAPSCO WWTP

**GRAVITY SLUDGE THICKENER
NO. 1 AND 2
NEW WORK PLAN**

SCALE: AS NOTED DATE: SEPTEMBER 2024
DRAWING NO.: M-100-15 R1 SHEET 70 OF 210

PROFESSIONAL CERTIFICATION: I CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.
LICENSE NO. _____, EXPIRATION DATE _____

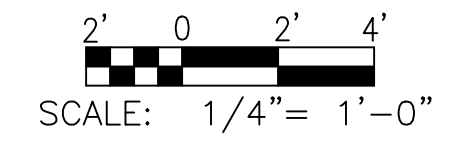
REVISIONS			
NO.	DESCRIPTION	DATE	BY
1	FULL DRAWING REPLACEMENT	10/30/2024	MDS



GENERAL SHEET NOTES:

- EXISTING CONDITIONS, ELEVATIONS, AND DIMENSIONS SHOWN HEREIN ARE BASED ON SC 7515 AS-BUILT DRAWINGS AND SHALL BE FIELD VERIFIED PRIOR TO CONSTRUCTION.
- THE CONTRACTOR SHALL COORDINATE WITH THE CITY SO AS TO MINIMIZE DISRUPTION TO PLANT PROCESSES. REFER TO SPECIFICATION.

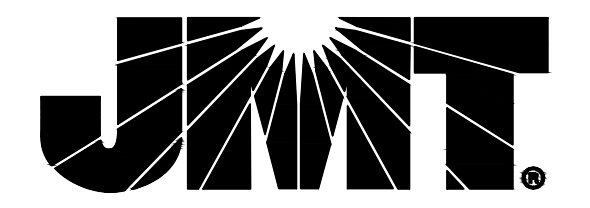
- SHEET KEYNOTES:**
- ① NEW UNDERFLOW PUMP.
 - ② NEW IN-LINE GRINDER.
 - ③ NEW SUBMERSIBLE SCUM PUMP.
 - ④ NEW FW BOOSTER PUMPS.
 - ⑤ NEW DUPLEX SEAL WATER SYSTEM.
 - ⑥ NEW SUMP PUMP AND DISCHARGE PIPING.
 - ⑦ NEW INFLUENT BOOSTER PUMP AND SW APPURTENANCE PANEL (TYP.). SEE DETAIL ON M-100-31.
 - ⑧ NEW 2" SCH. 80 PVC FW PIPING WITH HEAT TRACE (TYP.)
 - ⑨ NEW HPEW NOZZLE AND SOLENOID VALVE.
 - ⑩ NEW 3" FLUSH CONNECTION
 - ⑪ CONNECTION TO NEW 6" GLASS-LINED DI SCUM PIPE. PROVIDE HEAT TRACING. REFER TO CIVIL DRAWINGS FOR CONTINUATION.
 - ⑫ NEW SEAL WATER APPURTENANCE PANEL.
 - ⑬ NEW 1" HOSE BIB.



GRAVITY SLUDGE THICKENER NO. 4 - BASEMENT NEW WORK PLAN
 SCALE: 1/4" = 1'-0"

PROFESSIONAL CERTIFICATION: I CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.
 LICENSE NO. _____, EXPIRATION DATE _____

CONFORMED DRAWINGS



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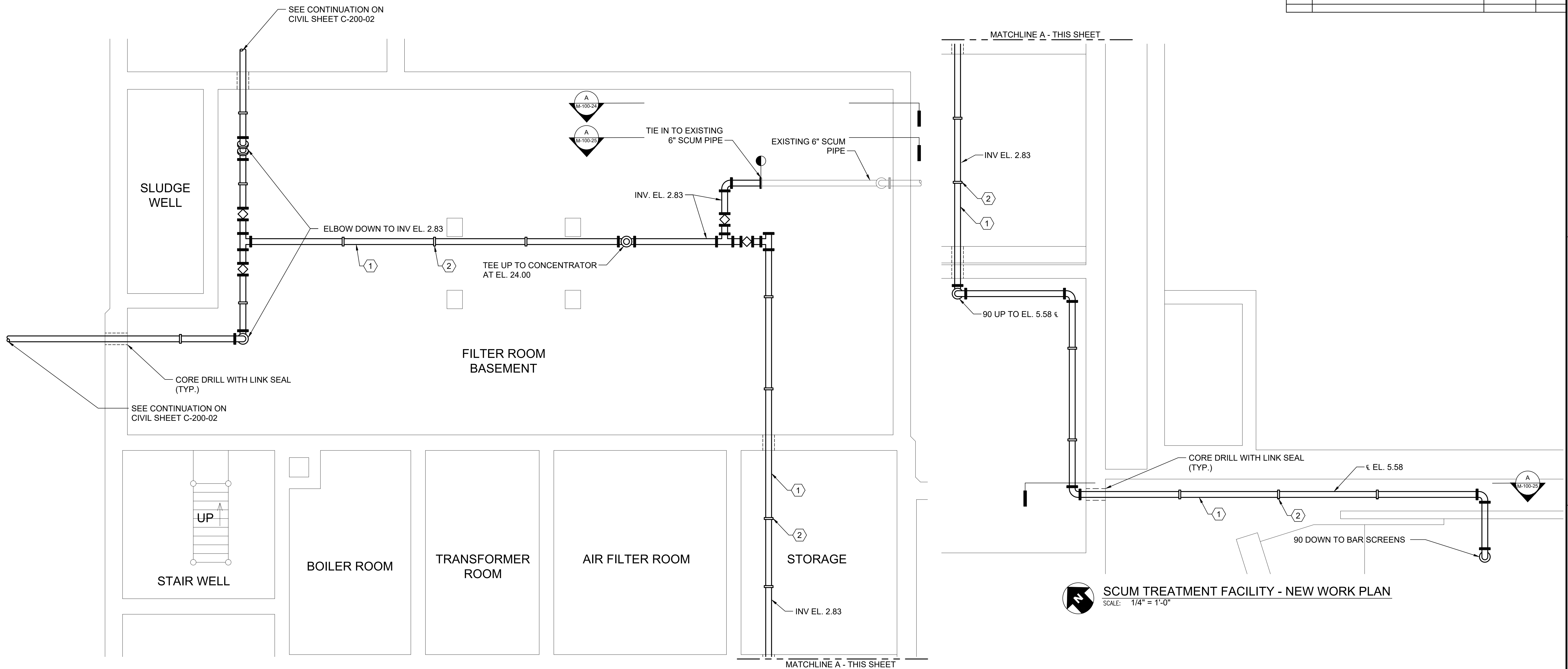
CITY OF BALTIMORE
 DEPARTMENT OF PUBLIC WORKS
 OFFICE OF ENGINEERING & CONSTRUCTION
 PATAPSCO WASTEWATER TREATMENT PLANT

SANITARY CONTRACT NO. 994
 CLARIFIER AND GRAVITY SLUDGE THICKENERS
 REHABILITATION AT PATAPSCO WWTP

**GRAVITY SLUDGE THICKENER
 NO. 4 – NEW WORK PLAN**

SCALE: AS NOTED DATE: SEPTEMBER 2024
 DRAWING NO.: M-100-17 R1 SHEET 72 OF 210

REVISIONS			
NO.	DESCRIPTION	DATE	BY
1	FULL DRAWING REPLACEMENT	10/30/2024	MDS



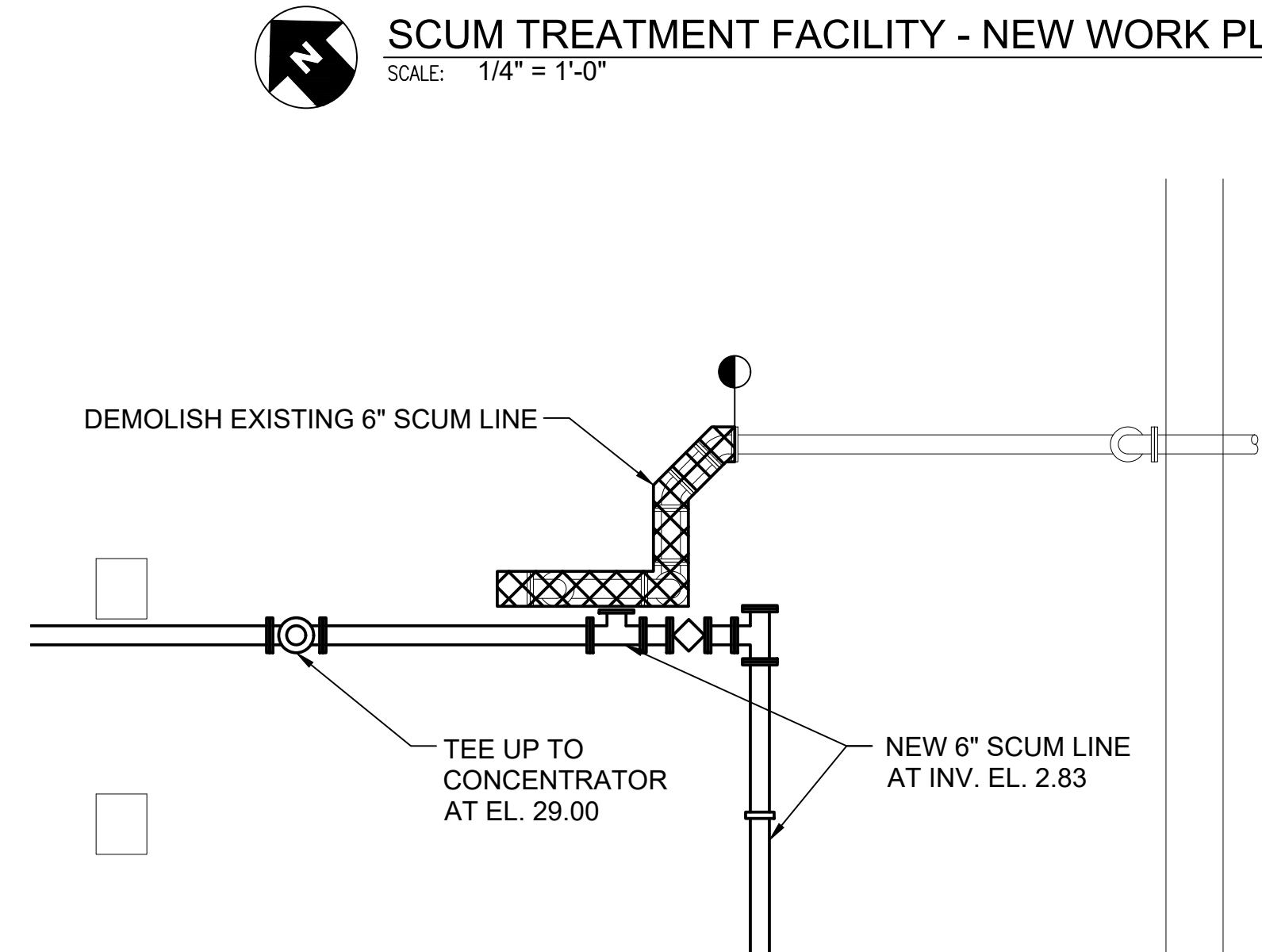
SCUM TREATMENT FACILITY - NEW WORK PLAN
SCALE: 1/4" = 1'-0"

GENERAL SHEET NOTES:

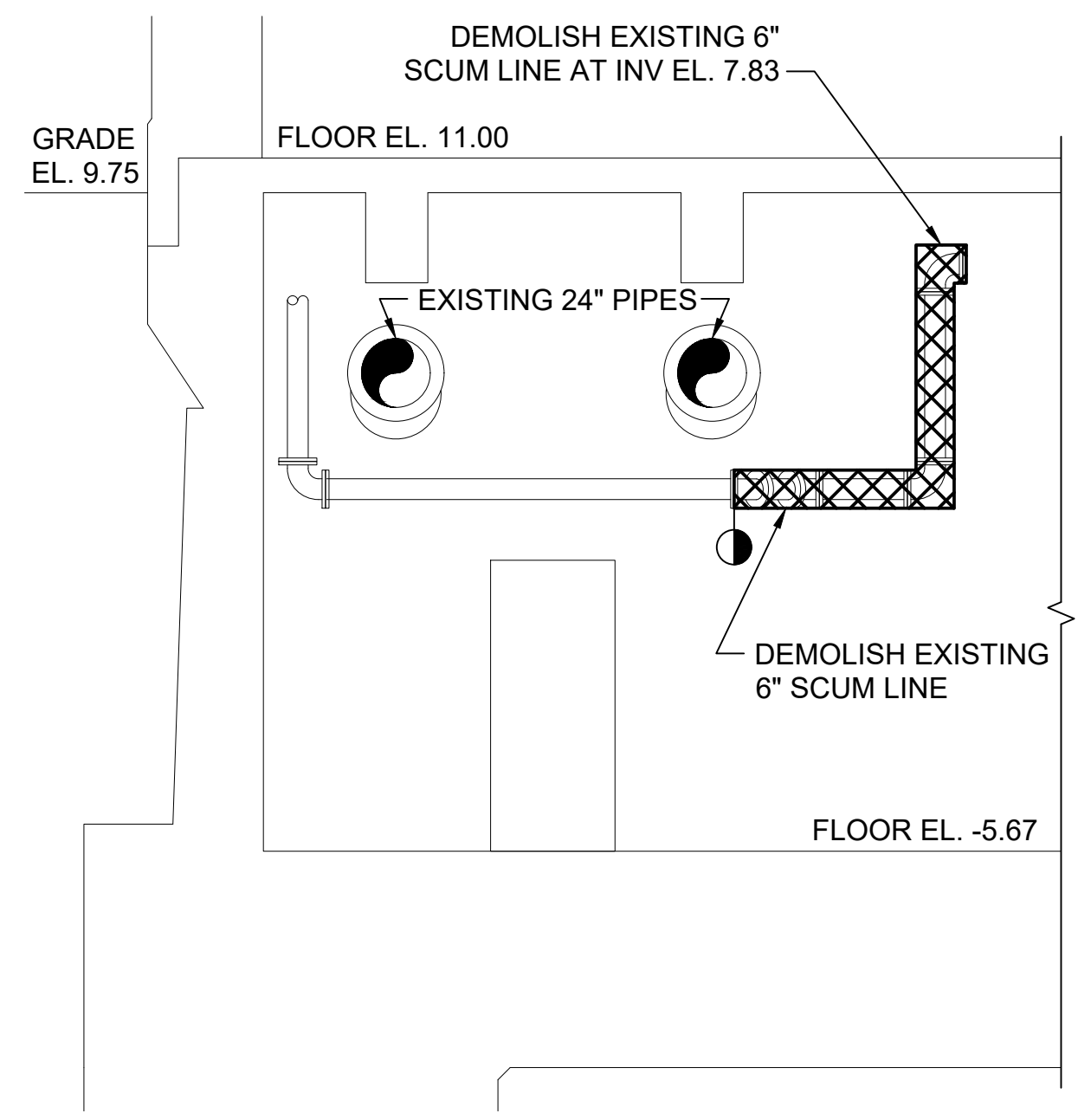
- EXISTING CONDITIONS, ELEVATIONS, AND DIMENSIONS SHOWN HEREIN ARE BASED ON SC 855 AS-BUILT DRAWINGS OF THE SCUM TREATMENT FACILITY WITHIN THE PUMP AND BLOWER BUILDING AND SHALL BE FIELD VERIFIED PRIOR TO CONSTRUCTION.
- THE CONTRACTOR SHALL COORDINATE WITH THE CITY SO AS TO MINIMIZE DISRUPTION TO PLANT PROCESSES. REFER TO SPECIFICATION.

SHEET KEYNOTES:

- ① 6" GLASS-LINED DI SCUM PIPING.
- ② NEW PIPE SUPPORT (TYP.)

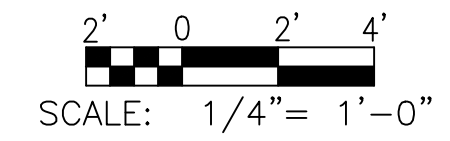


SCUM TREATMENT FACILITY - DEMOLITION PLAN
SCALE: 1/4" = 1'-0"



SCUM TREATMENT FACILITY DEMOLITION - SECTION
SCALE: 1/4" = 1'-0"

SCUM TREATMENT FACILITY - NEW WORK PLAN
SCALE: 1/4" = 1'-0"



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**SCUM TREATMENT FACILITY
NEW WORK PLANS**

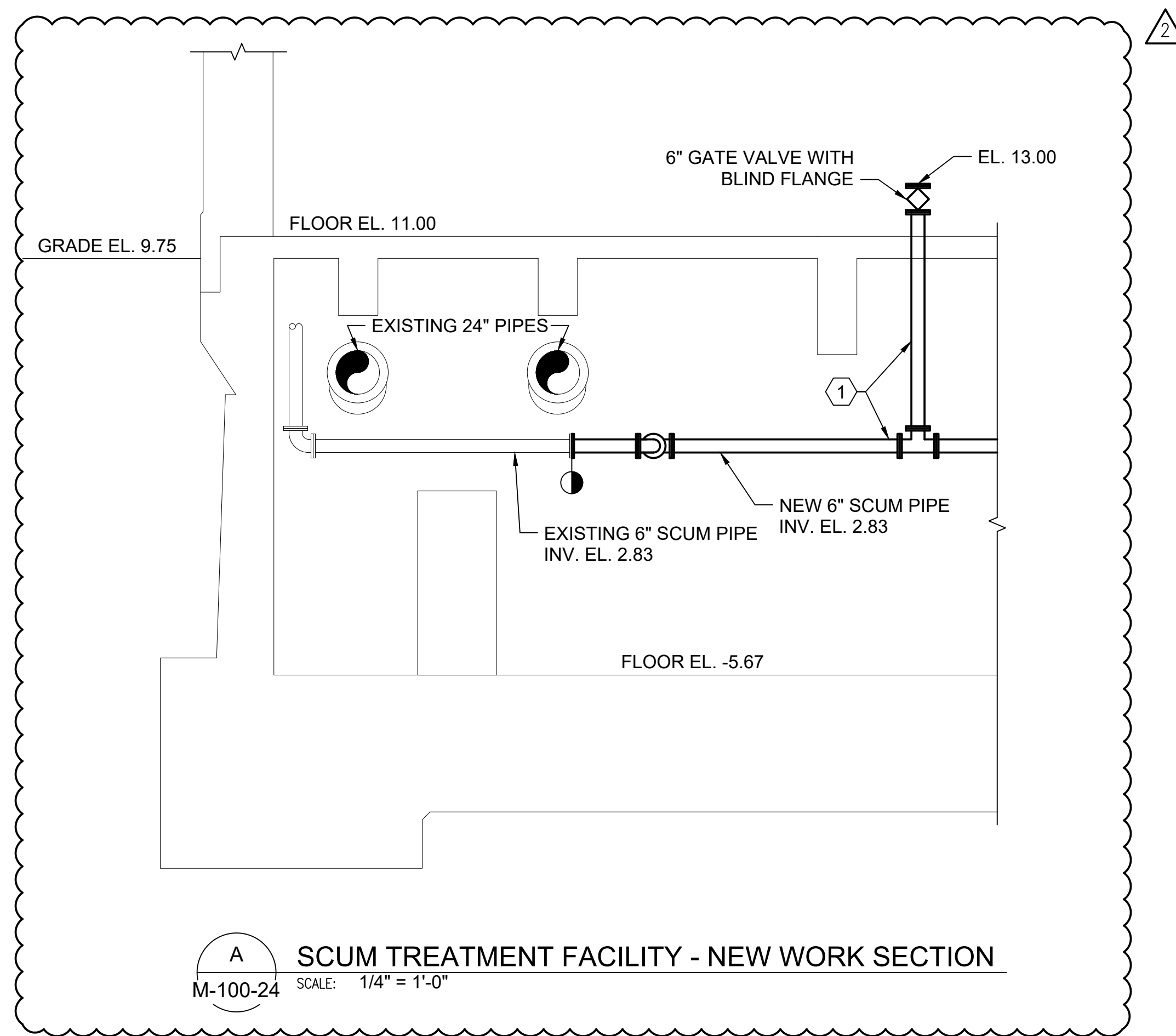
SCALE: AS NOTED DATE: SEPTEMBER 2024
DRAWING NO.: M-100-24 R1 SHEET 79 OF 210

PROFESSIONAL CERTIFICATION: I CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.
LICENSE NO. _____, EXPIRATION DATE _____

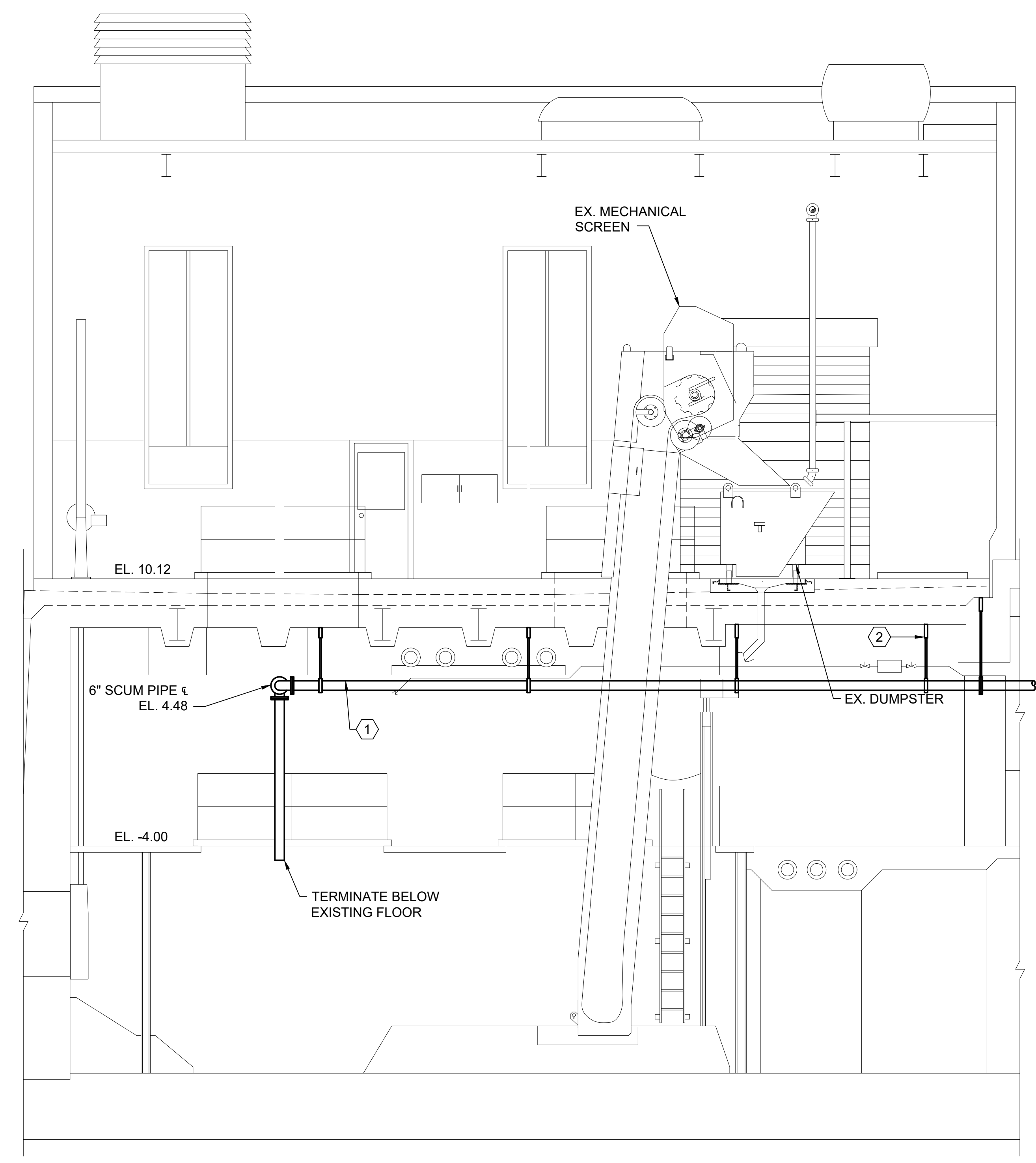
REVISIONS			
NO.	DESCRIPTION	DATE	BY
1	ADDENDUM NO. 2	10/30/2024	MDS

- GENERAL SHEET NOTES:**
- EXISTING CONDITIONS, ELEVATIONS, AND DIMENSIONS SHOWN HEREIN ARE BASED ON SC 855 AS-BUILT DRAWINGS AND SHALL BE FIELD VERIFIED PRIOR TO CONSTRUCTION.
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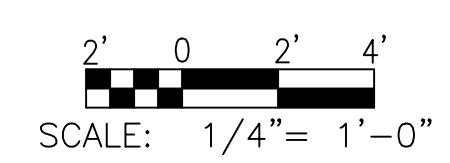
- SHEET KEYNOTES:**
- ① 6" GLASS-LINED DI SCUM PIPING.
 - ② NEW PIPE SUPPORT (TYP.)



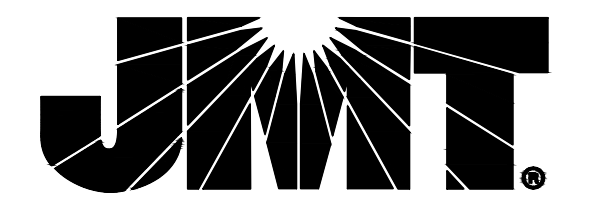
A SCUM TREATMENT FACILITY - NEW WORK SECTION
M-100-24 SCALE: 1/4" = 1'-0"



A PUMP AND BLOWER BUILDING - NEW WORK SECTION
M-100-25 SCALE: 1/4" = 1'-0"



CONFORMED DRAWINGS



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REHABILITATION AT PATAPSCO WWTP

**PUMP AND BLOWER BUILDING
NEW WORK PLAN AND SECTION**

SCALE: AS NOTED DATE: SEPTEMBER 2024
DRAWING NO.: M-100-25 R1 SHEET 80 OF 210

PROFESSIONAL CERTIFICATION: I CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.
LICENSE NO. _____, EXPIRATION DATE _____