MYSTIC HARBOUR WWTP BIOSOLIDS UPGRADE & BUILDING REHABILITATION

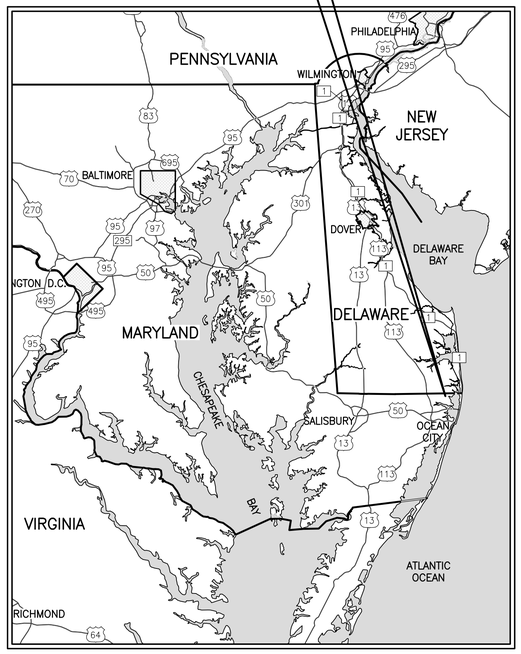
WORCESTER COUNTY, MARYLAND

GMB FILE NO. 250196

GENERAL NOTES

1. FIELD SURVEY PREPARED BY WILKINS–NOBLE, LLC. SEE PLAN DRAWINGS FOR CONTROL POINTS. HORIZONTAL CONTROL: NAD 83 – MARYLAND STATE PLANE COORDINATE SYSTEM, VERTICAL CONTROL: NAVD 88.
2. BOUNDARY INFORMATION SHOWN HEREON WAS DERIVED FROM THE LAND RECORDS OF WORCESTER COUNTY, MARYLAND, SUPPORTED BY BOUNDARY MONUMENTS FOUND/LOCATED DURING WILKINS–NOBLE FIELD SURVEY.
3. EXISTING UTILITIES ARE SHOWN ACCORDING TO THE BEST AVAILABLE INFORMATION AND SHOULD BE CONSTRUED AS APPROXIMATE ONLY.
4. THE CONTRACTOR SHALL CALL "MISS UTILITY" (1–800–441–8355) AND WORCESTER COUNTY DEPARTMENT OF PUBLIC WORKS (410–641–5251) AT LEAST 72 HOURS PRIOR TO DIGGING IN THE VICINITY OF EXISTING UNDERGROUND UTILITIES TO HAVE THEM LOCATED AND MARKED. IT SHALL THEN BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THESE UTILITIES, BY TEST PITS, A MINIMUM OF FIFTEEN (15) DAYS IN ADVANCE OF ACTUAL CONSTRUCTION OPERATIONS IN THE VICINITY OF THE UTILITIES.
5. THE FAILURE TO SHOW ON THE CONTRACT DOCUMENTS ANY EXISTING UTILITIES SHALL NOT RELIEVE THE CONTRACTOR OF HIS OR HER RESPONSIBILITIES OF DETERMINING THE LOCATION OF THESE UTILITIES. INTERRUPTION OF SERVICE SHALL BE REPAIRED BY THE CONTRACTOR ACCORDING TO UTILITY COMPANY SPECIFICATIONS.
6. CONTRACTOR TO CLEAR AND GRUB SITE AS NECESSARY TO CONSTRUCT PROPOSED IMPROVEMENTS.
7. CONTRACTOR SHALL PROVIDE ALL NECESSARY STAKE OUT OF LINE, GRADE AND ELEVATIONS FOR ALL CONSTRUCTION.
8. CONTRACTOR SHALL REPAIR OR REPLACE IN KIND ANY EXISTING FEATURES DAMAGED OR DESTROYED DURING CONSTRUCTION.
9. CONTRACTOR SHALL COMPLY WITH THE REQUIREMENTS OF ALL PERMITS SECURED, WHICH TAKE PRECEDENCE OVER SPECIFICATIONS.
10. CONTRACTOR SHALL ADJUST TO FINISH GRADE AS REQUIRED ANY VALVE BOXES, MANHOLES, ETC. PRIOR TO INSTALLATION OF SURFACE MATERIAL.
11. ALL SIGNING, TRAFFIC CONTROL AND SAFETY SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL MEET THE STATE OF DELAWARE STANDARDS.
12. MAINTAIN MINIMUM 1–FOOT VERTICAL CLEARANCE BETWEEN CROSSING PIPES UNLESS DIRECTED OTHERWISE BY ENGINEER.
13. ALL DISTURBED AREAS TO RECEIVE 4" OF TOPSOIL, SEEDED AND MULCH UNLESS OTHERWISE NOTED. REFER TO SPECIFICATIONS FOR CLEARING AND GRADING OPERATION.
14. CONTRACTOR TO CLEAR AND GRUB SITE AS NECESSARY TO CONSTRUCT PROPOSED IMPROVEMENTS.
15. FINAL LOCATION OF ALL PIPING TO BE SUBJECT TO FIELD DETERMINATION BY ENGINEER.
16. THE CONTRACTOR SHALL PROVIDE FITTINGS AS SHOWN ON THE PLAN AND PROFILES OR AS REQUIRED TO CONFORM TO FINAL LOCATION AND GRADE.
17. ALL PIPING FOR WHICH ELEVATIONS ARE NOT SHOWN SHALL HAVE 3'–6" MINIMUM COVER UNLESS DIRECTED OTHERWISE BY THE ENGINEER.
18. PROVIDE BUTTRESSES AT ALL BENDS, TEES, CAPS, OR PLUGS FOR ALL PRESSURE LINES. EXCAVATION AGAINST WHICH BUTTRESSES WILL BEAR SHALL BE FIRM BEARING, FLAT AND AT PROPER ANGLE TO THE PIPE CONNECTIONS. RESTRAINED JOINT FITTINGS MAY BE USED IN LIEU OF BUTTRESSES AT FITTINGS.
19. PROVIDE VALVE BOX FOR EACH UNDERGROUND VALVE UNLESS NOTED OTHERWISE.
20. REFER TO ELECTRICAL AND STRUCTURAL DRAWINGS FOR ADDITIONAL SYMBOLS AND ABBREVIATIONS.
21. MOWING STRIPS NOT SHOWN FOR CLARITY. CONTRACTOR SHALL PROVIDE MOWING STRIPS AROUND ALL NEW STRUCTURES AND PIPING IN ACCORDANCE WITH DETAIL. CONTRACTOR SHALL ALSO PROVIDE STONE UNDER ALL EXTERIOR STAIR CASES.
22. SOIL TEST BORINGS WERE TAKEN BY HILLIS–CARNES ENGINEERING ASSOCIATES, JANUARY 2026.
23. THE WWTP SITE IS OUTSIDE OF THE 100 YEAR FLOOD ZONE, PER FEMA FIRM MAP NO. 24047C0045H, DATED JULY 16, 2015.
24. THE CONTRACTOR SHALL COORDINATE WITH THE ENGINEER AND WASTEWATER TREATMENT PLANT LICENSED OPERATOR TO ENSURE THAT THE CONSTRUCTION WILL NOT INTERFERE WITH REQUIRED TREATMENT PLANT OPERATIONS. ALL WORK INVOLVING THE DAILY OPERATION OF THE WASTEWATER PLANT SHALL BE COORDINATED WITH THE MYSTIC HARBOUR WWTP STAFF PRIOR TO COMMENCING WORK.
25. EXISTING VALVES AND HYDRANTS SHALL BE OPERATED BY PLANT PERSONNEL ONLY.
26. PROVIDE VALVE BOX FOR EACH UNDERGROUND VALVE UNLESS NOTED OTHERWISE.
27. DAMAGE TO PAVED ROADWAYS OR CONCRETE SIDEWALKS ATTRIBUTABLE TO THE CONTRACTOR'S OPERATIONS SHALL BE REPLACED OR REPAIRED IN KIND BY THE CONTRACTOR AT HIS OWN EXPENSE.
28. WHERE SITE PLAN DOES NOT PROVIDE ELEVATIONS, REFER TO "Q" DRAWINGS.
29. WORK NOT SPECIFICALLY OUTLINED, BUT REASONABLY INCIDENTAL TO THE COMPLETION OF THE WORK, SHALL BE INCLUDED WITHOUT ADDITIONAL COMPENSATION TO THE OWNER.

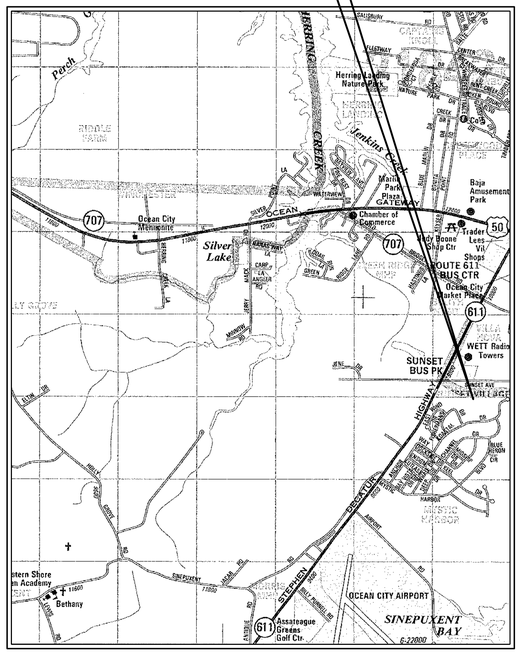
LOCATION



VICINITY MAP

SCALE: 1" = 20 MILES

MYSTIC HARBOUR WWTP



LOCATION MAP

SCALE: 1" = 2000'±

CONTACTS

OWNER/APPLICANT: WORCESTER COUNTY PUBLIC WORKS
6113 TIMMONS STREET
SNOW HILL, MD 21863

CONTACT: LEE BEAUCHAMP, P.E.
WATER/WASTEWATER SUPERINTENDENT
PHONE: 410–632–5623
FAX: 410–632–1753
EMAIL: lbeauchamp@co.worcester.md.us

ENGINEER: GEORGE, MILES & BUHR, LLC.
206 WEST MAIN STREET
SALISBURY, MD. 21801

CONTACT: CHRISTOPHER B. DERBYSHIRE, P.E.
PHONE: 410–742–3115
FAX: 410–548–5790
EMAIL: cderbyshire@gmbnet.com

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OCTOBER 2026

OWNER'S CERTIFICATION

"I, THE UNDERSIGNED, HEREBY CERTIFY THAT I AM THE OWNER OF THE PROPERTY DESCRIBED AND SHOWN ON THIS PLAN AND THAT THE PLAN HAS BEEN PREPARED UNDER MY DIRECTION."

LEE BEAUCHAMP, P.E. DATE

ENGINEER'S CERTIFICATION

"I CHRISTOPHER B. DERBYSHIRE, P.E. HEREBY CERTIFY THAT I AM A REGISTERED ENGINEER IN THE STATE OF MARYLAND, THAT THE INFORMATION SHOWN HERE ON HAS BEEN PREPARED UNDER MY SUPERVISION AND TO THE BEST OF MY KNOWLEDGE AND BELIEF REPRESENTS GOOD ENGINEERING PRACTICES AS REQUIRED BY THE APPLICABLE LAWS OF THE STATE OF MARYLAND."

ENGINEER'S SIGNATURE 10/12/2026 DATE

LIST OF DRAWINGS

SHEET NUMBER	TITLE
GENERAL	
G1.0	COVER SHEET
G1.1	DESIGN CRITERIA
DEMO	
D1.0	SITE AND YARD PIPING PLAN DEMOLITION
D2.0	SCREEN DEMOLITION
D3.0	SLUDGE DRYING BEDS DEMOLITION PLAN
CIVIL	
C1.0	OVERALL EXISTING CONDITIONS
C1.0A	EXISTING CONDITIONS
C1.1	OVERALL PROPOSED CONDITIONS
C1.1A	PROPOSED CONDITIONS
C1.2	EROSION AND SEDIMENT CONTROL NOTES
C1.3	EROSION AND SEDIMENT CONTROL DETAILS
C1.4	EROSION AND SEDIMENT CONTROL DETAILS
C2.0	STORMWATER PROFILES
C2.1	STORMWATER DETAILS
C3.0	PROPOSED SITE PLAN
C3.1	GRADING PLAN
C4.0	PIPE PROFILES
C4.1	PIPE PROFILES
C4.2	PIPE PROFILES
C5.0	SITE AND UTILITY DETAILS
C5.1	SITE AND UTILITY DETAILS
C5.2	SITE AND UTILITY DETAILS
STRUCTURAL	
S0.1	STRUCTURAL NOTES
S0.2	TYPICAL DETAILS
S1.1	SLUDGE DEWATERING BUILDING PLANS
S1.2	SLUDGE DEWATERING BUILDING SECTIONS
S2.1	SLUDGE DRYING BED FOUNDATION AND WALL PLAN
S2.2	SLUDGE DRYING BED SECTIONS AND DETAILS
S2.3	SLUDGE DRYING BED SECTIONS AND DETAILS
S2.4	CONVEYOR SUPPORT SECTIONS AND DETAILS
ARCHITECTURAL	
A1.0	DEMOLITION PLAN – STORAGE BUILDING
A1.1	FLOOR PLAN – STORAGE BUILDING
A1.2	ROOF PLAN – STORAGE BUILDING
A1.3	FLOOR PLAN – DEWATERING BUILDING
A2.1	ELEVATIONS – STORAGE BUILDING
A2.2	ELEVATIONS – STORAGE BUILDING
A2.3	ELEVATIONS – DEWATERING BUILDING
A3.1	BUILDING SECTIONS – DEWATERING BUILDING
A4.1	WALL SECTIONS – STORAGE BUILDING
A4.2	WALL SECTIONS – DEWATERING BUILDING
A5.1	SCHEDULES AND DOOR DETAIL
A8.1	REFLECTED CEILING PLAN – STORAGE BUILDING
A8.2	REFLECTED CEILING PLAN – DEWATERING BUILDING
A9.1	DETAILS – STORAGE BUILDING
A9.2	DETAILS – DEWATERING BUILDING
EQUIPMENT	
Q1.0	SCREENING PLAN AND SECTION
Q2.0	SLUDGE DEWATERING BUILDING
Q2.1	SLUDGE DEWATERING BUILDING SECTIONS
Q3.0	SLUDGE HOLDING TANKS
Q4.0	PROPOSED SLUDGE DRYING BEDS
Q4.1	EXISTING SLUDGE DRYING BEDS MODIFICATIONS
Q4.2	PROPOSED SLUDGE DRYING BEDS SECTIONS
Q4.3	EXISTING SLUDGE DRYING BEDS SECTIONS
ELECTRICAL	
E0.0	LEGEND ELECTRICAL
E1.0	SITE PLAN ELECTRICAL
E1.1	EXISTING PROCESS BUILDING ELECTRICAL AND SCREEN ROOM ELECTRICAL
E1.2	SLUDGE DEWATERING BUILDING POWER ELECTRICAL
E1.3	SLUDGE DEWATERING BUILDING LIGHTING ELECTRICAL
E1.4	EXISTING SLUDGE DRYING BEDS POWER ELECTRICAL
E1.5	NEW SLUDGE DRYING BEDS POWER ELECTRICAL
E1.6	STORAGE BUILDING – POWER AND LIGHTING – ELECTRICAL
E2.0	SLUDGE HOLDING TANKS POWER ELECTRICAL
E5.1	DETAILS ELECTRICAL
E5.2	DETAILS ELECTRICAL
E5.3	DETAILS ELECTRICAL
E5.4	DETAILS ELECTRICAL
E6.1	SINGLE LINE ELECTRICAL
E6.2	SINGLE LINE ELECTRICAL
E6.3	SINGLE LINE ELECTRICAL
E6.4	INTERCONNECT DIAGRAM ELECTRICAL
E6.5	INTERCONNECT DIAGRAM ELECTRICAL
E6.6	SCHEDULES ELECTRICAL
E6.7	SCHEDULES ELECTRICAL
MECHANICAL	
M0.0	LEGEND MECHANICAL
M0.1	GENERAL NOTES HVAC MECHANICAL
M1.1	SLUDGE DEWATERING BUILDING HVAC MECHANICAL
M1.2	STORAGE BUILDING HVAC MECHANICAL
M5.1	DETAILS HVAC MECHANICAL
M6.1	SCHEDULES HVAC MECHANICAL
PLUMBING	
P0.0	LEGEND PLUMBING
P1.0	SLUDGE DEWATERING BUILDING PLUMBING
P5.0	DETAILS, RISERS & SCHEDULES PLUMBING

PRINTS ISSUED FOR:
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NO.	REVISIONS	DATE
1	ISSUED FOR PERMIT	8/12/26

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I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 26278, EXPIRATION DATE: JUNE 21, 2027.

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MYSTIC HARBOUR WWTP
BIOSOLIDS UPGRADE &
BUILDING REHABILITATION
WORCESTER COUNTY, MARYLAND

STATE OF MARYLAND
CHRISTOPHER BRIAN DERBYSHIRE
No. 26278
PROFESSIONAL ENGINEER
10/12/26

COVER SHEET

SCALE	: AS NOTED
DESIGN BY	: JTH
DRAWN BY	: MMD
CHECKED BY	: CBD
GMB FILE	: 250196
DATE	: OCT 2026

SHEET NO.
G1.0

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PLOT CODE
PEN1–RED 006 INCHES (.15mm)
PEN2–YELLOW 007 INCHES (.18mm)
PEN3–GREEN 010 INCHES (.25mm)
PEN4–CYAN 014 INCHES (.35mm)
PEN5–BLUE 020 INCHES (.50mm)
PEN6–MAGENTA 027 INCHES (.70mm)
PEN7–WHITE 035 INCHES (.90mm)

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PROPOSED DESIGN CRITERIA

1. Flow

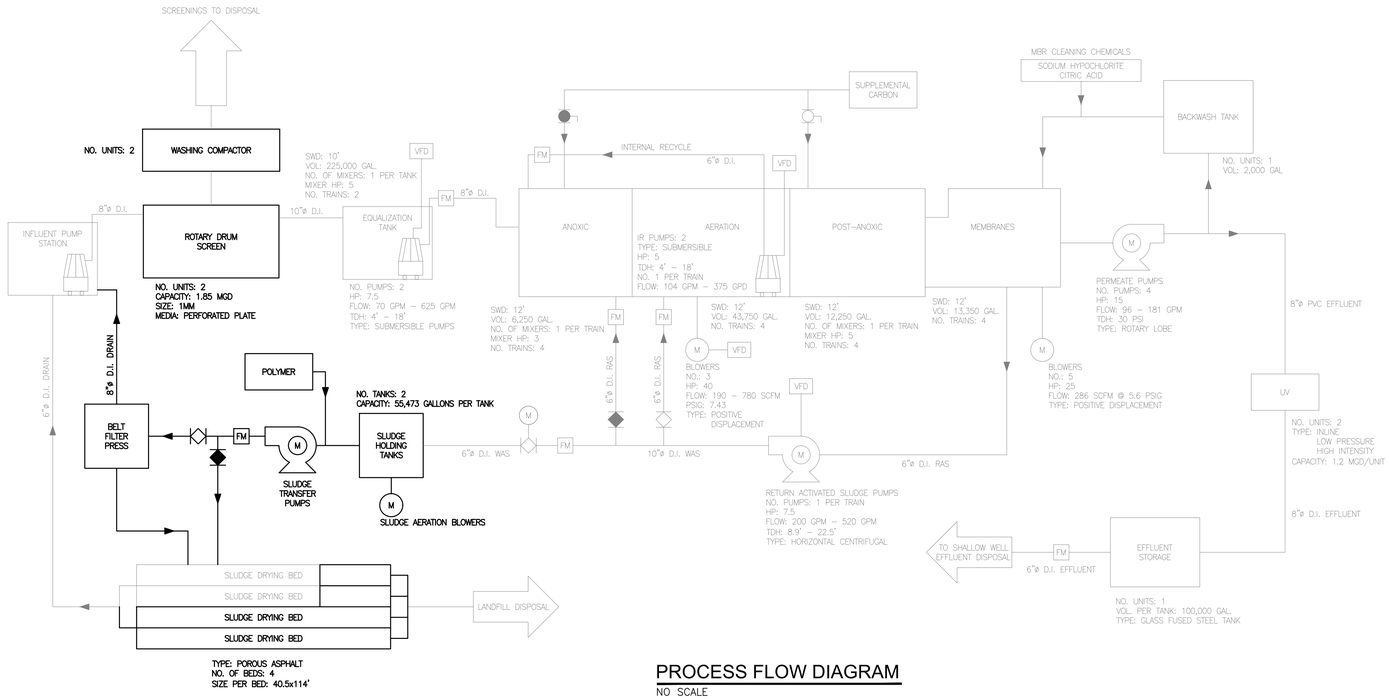
Flows, MGD (See Flow Schematic)		
Design Average Daily Flow (ADF)	0.6	MGD
Peak Daily Flow (PDF)	1.2	MGD
Peak Hourly Flow (PHF) (Before Flow Equalization)	1.80	MGD

2. Primary Screening (Replacement of Existing)

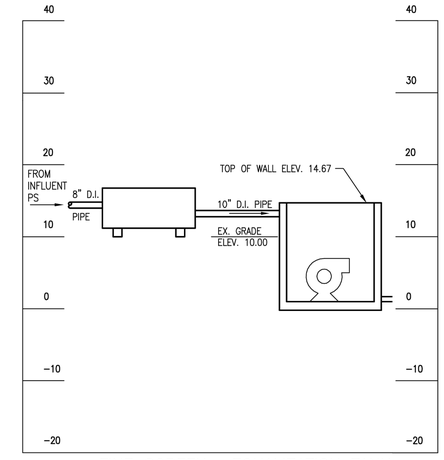
Internally Fed Drum Screen		
Units	2 (1 Duty + 1 Standby)	
Openings	1.00	mm
Peak Capacity Per Screen	1.85	MGD
Screenings Compactor		
Units	2.0	EA
Capacity	35.0	CF/HR
Motor Power	3.0	HP

3. Sludge Processing

Mechanical Dewatering		
Belt Filter Press	1.00	EA
Capacity	80.00	GPM
Expected Cake %	20.00	%
Sludge Pumps		
Units	2 (1 Duty + 1 Standby)	EA
Capacity	300.00	GPM
Pump Pressure	60.00	PSI
Type	Rotary Lobe	
Motor Power	30.00	HP
Motor Speed	1,750	RPM
Drive Type	VFD	
Stainless Steel Holding Tanks		
Units	2.00	EA
Tank Volume (each)	55,473.00	GAL
Sludge Storage Available @ 2% Solids (via decanting)	15.00	Days
Type of Aeration	Coarse Bubble	
Sludge Mixing Blowers		
Units	3 (2 Duty + 1 Standby)	EA
Air Flow Each	230.00	SCFM
Motor Power	15.00	HP
Motor Speed	3,510	RPM
Drive Type	Constant	
Sludge Drying Beds		
Type	Covered- Porous Paved	
Area	18,468	SQ.FT. Total
Number	4.00	Beds



PROCESS FLOW DIAGRAM
NO SCALE



PARTIAL HYDRAULIC PROFILE
NO SCALE: HORIZONTAL: NO SCALE
VERTICAL: 1" = 10'

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1	ISSUED FOR PERMIT	8/12/26

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MYSTIC HARBOUR WWTP BIOSOLIDS UPGRADE & BUILDING REHABILITATION

WORCESTER COUNTY, MARYLAND

STATE OF MARYLAND
CHRISTOPHER BRIAN DEMO
No. 26278
PROFESSIONAL ENGINEER
8/12/26

DESIGN CRITERIA

SCALE	: AS NOTED
DESIGN BY	: JTH
DRAWN BY	: MMD
CHECKED BY	: CBD
GMB FILE	: 250196
DATE	: OCT 2026

SHEET NO.
G1.1

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PLOT CODE
PEN1-RED 006 INCHES (.15mm)
PEN2-YELLOW 007 INCHES (.18mm)
PEN3-GREEN 010 INCHES (.25mm)
PEN4-CYAN 014 INCHES (.35mm)
PEN5-BLUE 020 INCHES (.50mm)
PEN6-MAGENTA 027 INCHES (.70mm)
PEN7-WHITE 039 INCHES (1.00mm)

DEMOLITION NOTES

1. REMOVE EXISTING SLUDGE FEED LINE TO LIMITS SHOWN.
2. REMOVE EXISTING 15–INCH STORM DRAIN PIPE IN ITS ENTIRETY.
3. REMOVE EXISTING 6–INCH CLEAN WATER EFFLUENT TO LIMITS SHOWN. SEE SHEET C1.0 FOR NEW PIPING LAYOUT.
4. SEE SHEET D3.0 FOR SLUDGE DRYING BED DEMOLITION.

LEGEND

· X X·X X · PIPING TO BE REMOVED

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MYSTIC HARBOUR WWTP BIOSOLIDS UPGRADE & BUILDING REHABILITATION

WORCESTER COUNTY, MARYLAND

STATE OF MARYLAND
CHRISTOPHER BRYAN DEMARCO
PROFESSIONAL ENGINEER
8/12/26

SITE AND YARD PIPING PLAN DEMOLITION

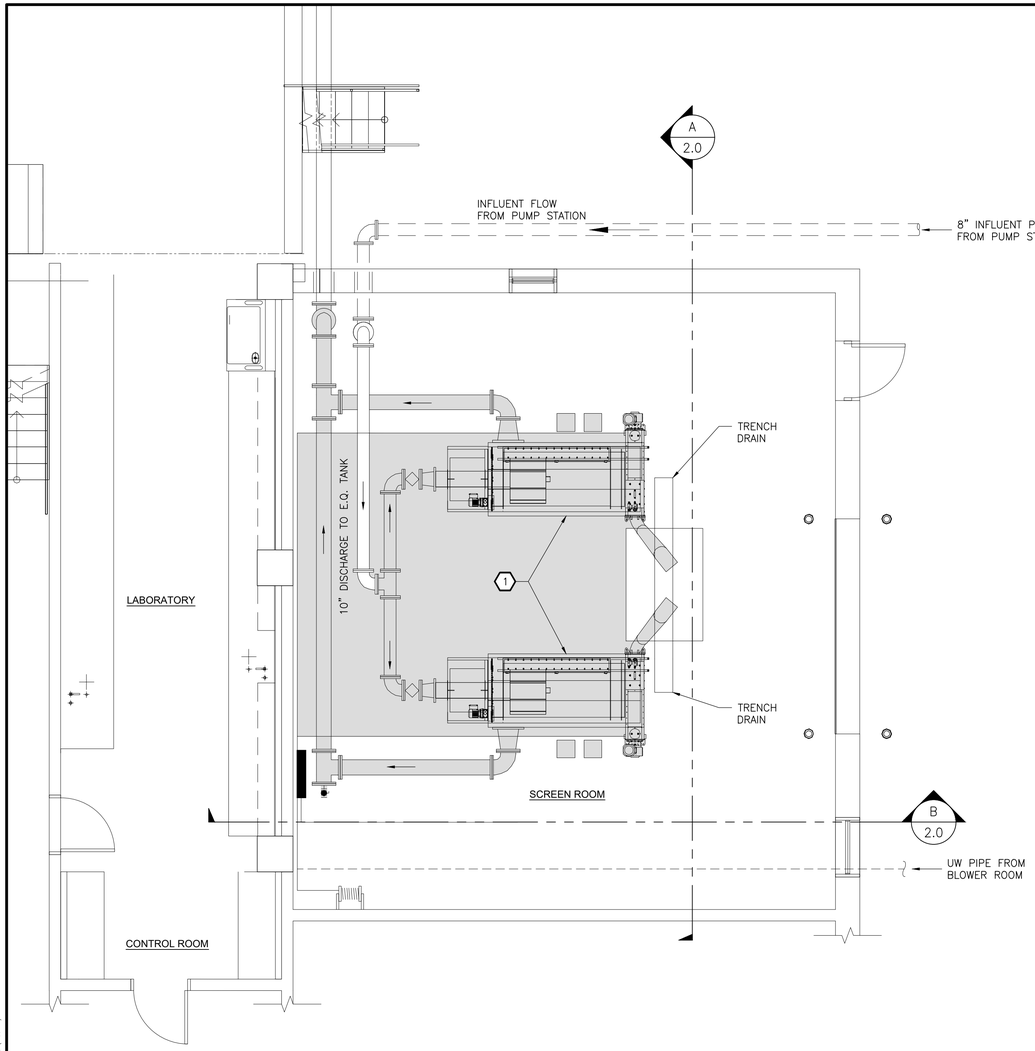
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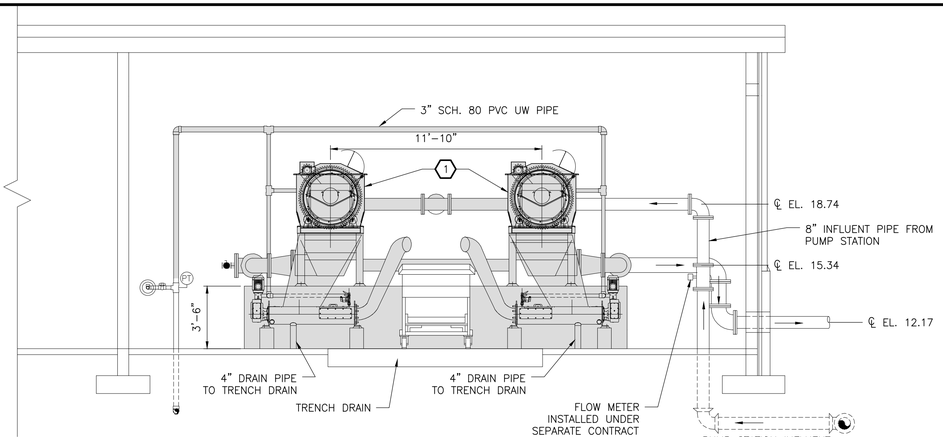
SHEET NO.
D1.0

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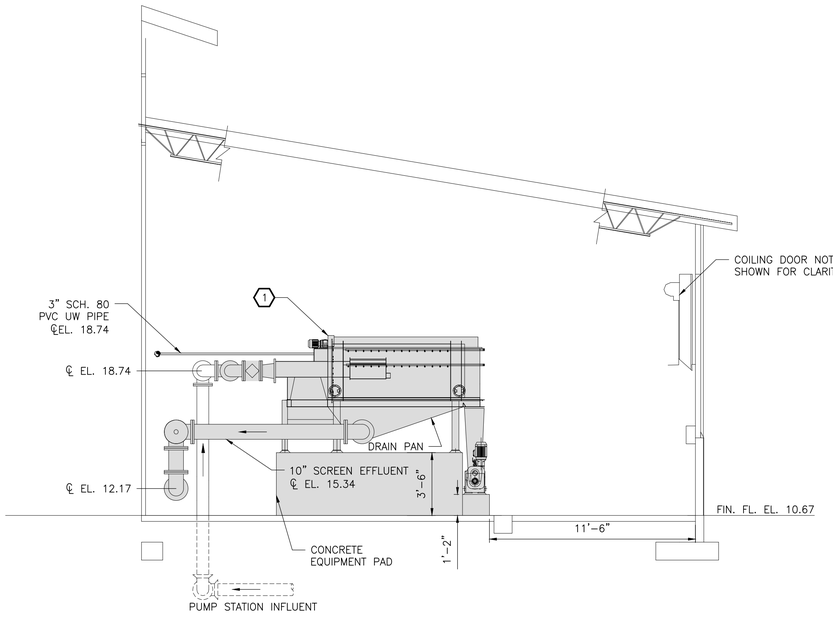
SCALE: 1" = 30'

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SECTION
SCALE: ¼" = 1'-0"
A
2.0



SECTION
SCALE: ¼" = 1'-0"
B
2.0

DEMOLITION NOTES

1. REMOVE SCREENS AND ASSOCIATED PIPING AND APPURTENANCES TO LIMITS SHOWN.

NOTE: EXISTING DUCTING AND VENTILATION EQUIPMENT TO BE REMOVED.

LEGEND

TO BE REMOVED

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MYSTIC HARBOUR WWTP BIOSOLIDS UPGRADE & BUILDING REHABILITATION

WORCESTER COUNTY, MARYLAND

STATE OF MARYLAND
CHRISTOPHER BRIAN DENNIS
No. 26278
REGISTERED
PROFESSIONAL ENGINEER
8/12/26

SCREEN DEMOLITION

SCALE	: AS NOTED
DESIGN BY	: JTH
DRAWN BY	: MMD
CHECKED BY	: CBD
GMB FILE	: 250196
DATE	: OCT 2026

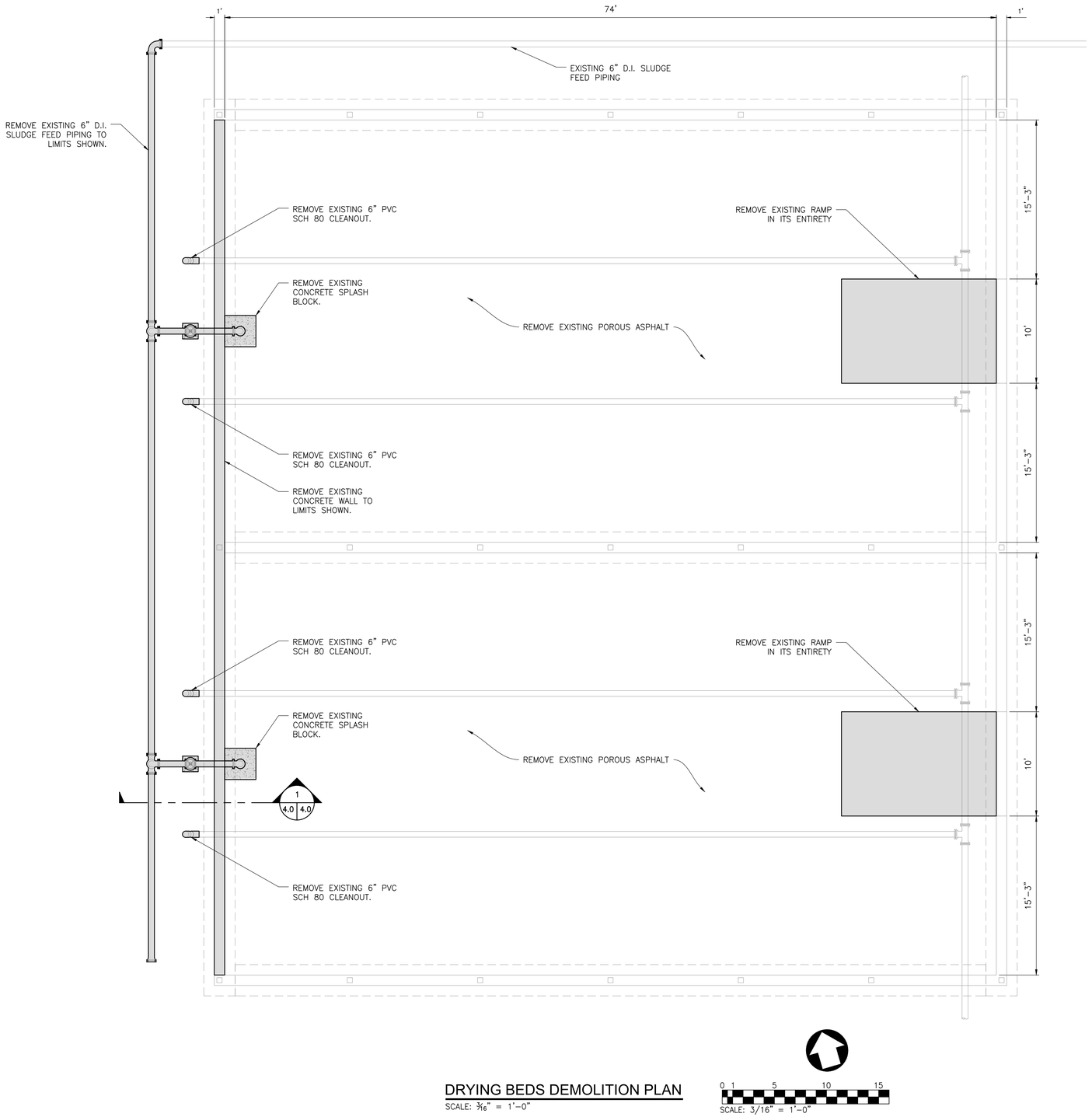
SHEET NO.
D2.0

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PLOT CODE
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PEN2-YELLOW .007 INCHES (.18mm)
PEN3-GREEN .007 INCHES (.18mm)
PEN4-CYAN .014 INCHES (.35mm)
PEN5-BLUE .020 INCHES (.50mm)
PEN6-MAGENTA .007 INCHES (.18mm)
PEN7-WHITE .028 INCHES (.70mm)

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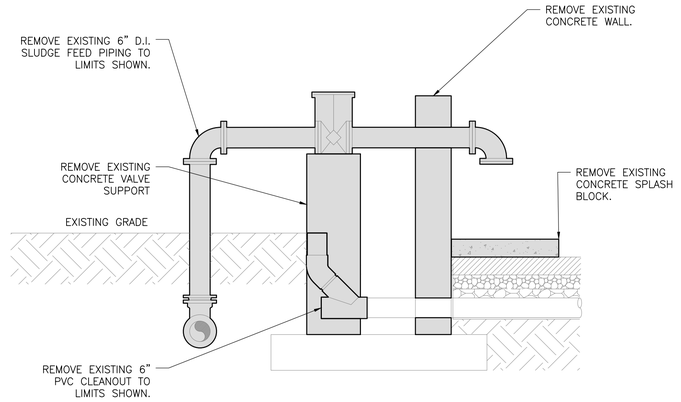


DRYING BEDS DEMOLITION PLAN

SCALE: 3/16" = 1'-0"

0 1 5 10 15

SCALE: 3/16" = 1'-0"



SECTION

1
4.0 4.0

SCALE: ½" = 1'-0"

0 1 3 6

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

LEGEND

ITEMS TO BE REMOVED

GENERAL NOTES

1. REMOVE THE EXISTING GREENHOUSE BACK WALL. COORDINATE DEMOLITION ACTIVITIES AND TIE-IN REQUIREMENTS WITH THE NEW GREENHOUSE MANUFACTURER TO ENSURE PROPER INTEGRATION WITH THE NEW GREENHOUSE SECTION.
2. REMOVE AND DISPOSE OF EXISTING FANS, DISCONNECTS, CONDUIT, WIRING AND ASSOCIATED EQUIPMENT. SAFELY DISCONNECT AND PROPERLY TERMINATE ELECTRICAL SERVICES.
3. PROVIDE TEMPORARY BRACING AS NECESSARY TO EXISTING STRUCTURE.

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NO.	REVISIONS	DATE
1	ISSUED FOR PERMIT	8/12/26

PROFESSIONAL CERTIFICATION.
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 26278, EXPIRATION DATE: JUNE 21, 2027.

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MYSTIC HARBOUR WWTP BIOSOLIDS UPGRADE & BUILDING REHABILITATION

WORCESTER COUNTY, MARYLAND

STATE OF MARYLAND
CHRISTOPHER BRIAN DEMO
No. 26278
PROFESSIONAL ENGINEER
8/12/26

SLUDGE DRYING BEDS DEMOLITION PLAN

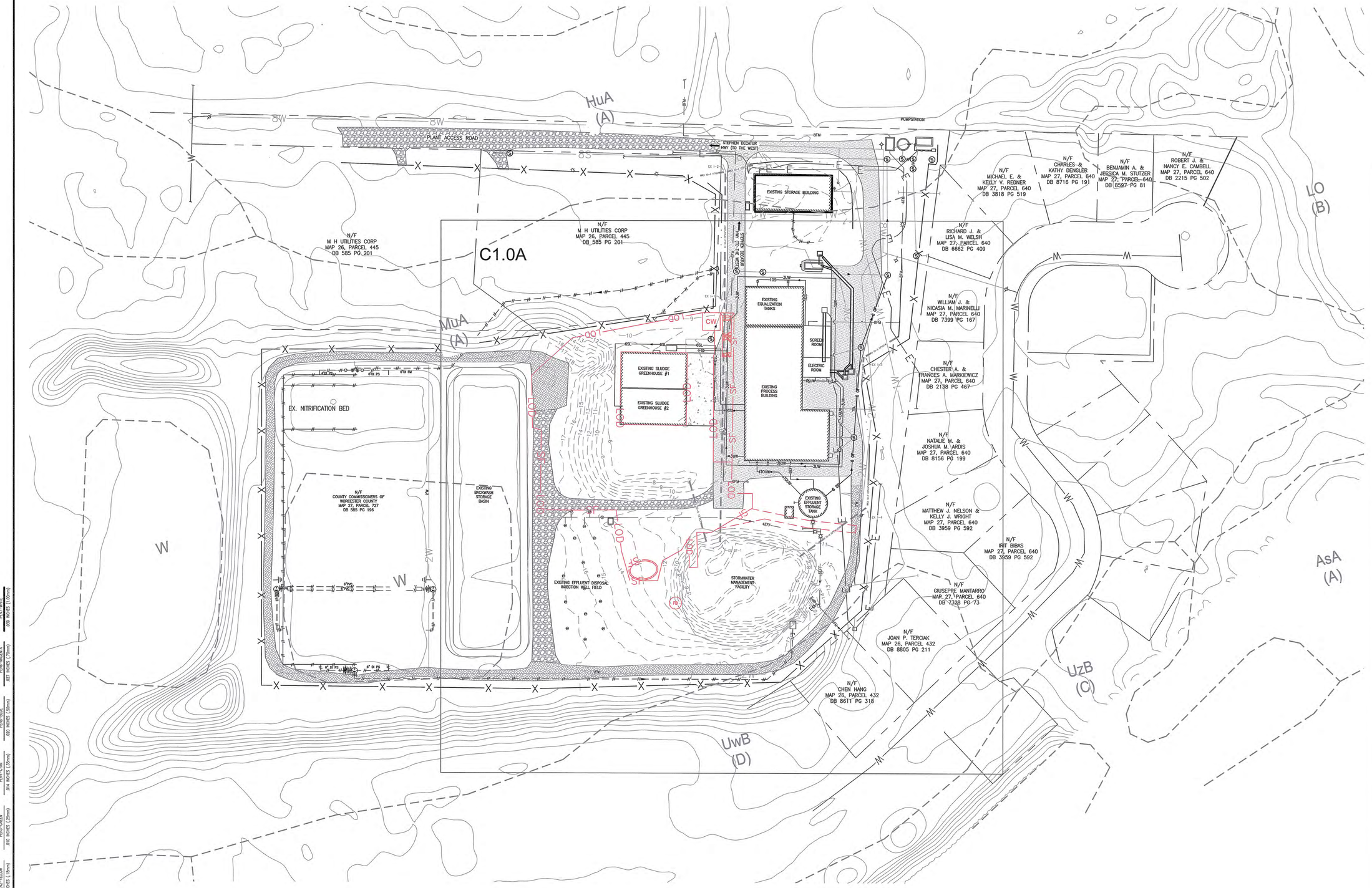
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DESIGN BY : JTH	D3.0
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DATE : OCT 2026	

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PLOT CODE
PEN1-RED 006 INCHES (.15mm)
PEN2-YELLOW 007 INCHES (.18mm)
PEN3-GREEN 009 INCHES (.23mm)
PEN4-CYAN 014 INCHES (.35mm)
PEN5-BLUE 020 INCHES (.50mm)
PEN6-MAGENTA 027 INCHES (.70mm)
PEN7-WHITE 039 INCHES (1.00mm)

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MYSTIC HARBOUR WWTP BIOSOLIDS UPGRADE & BUILDING REHABILITATION STORMWATER MANAGEMENT PLANS

WEST OCEAN CITY, MARYLAND

STATE OF MARYLAND · CHRISTOPHER J. PIETRZ · 54192 · PROFESSIONAL ENGINEER

8/28/2026

OVERALL EXISTING CONDITIONS

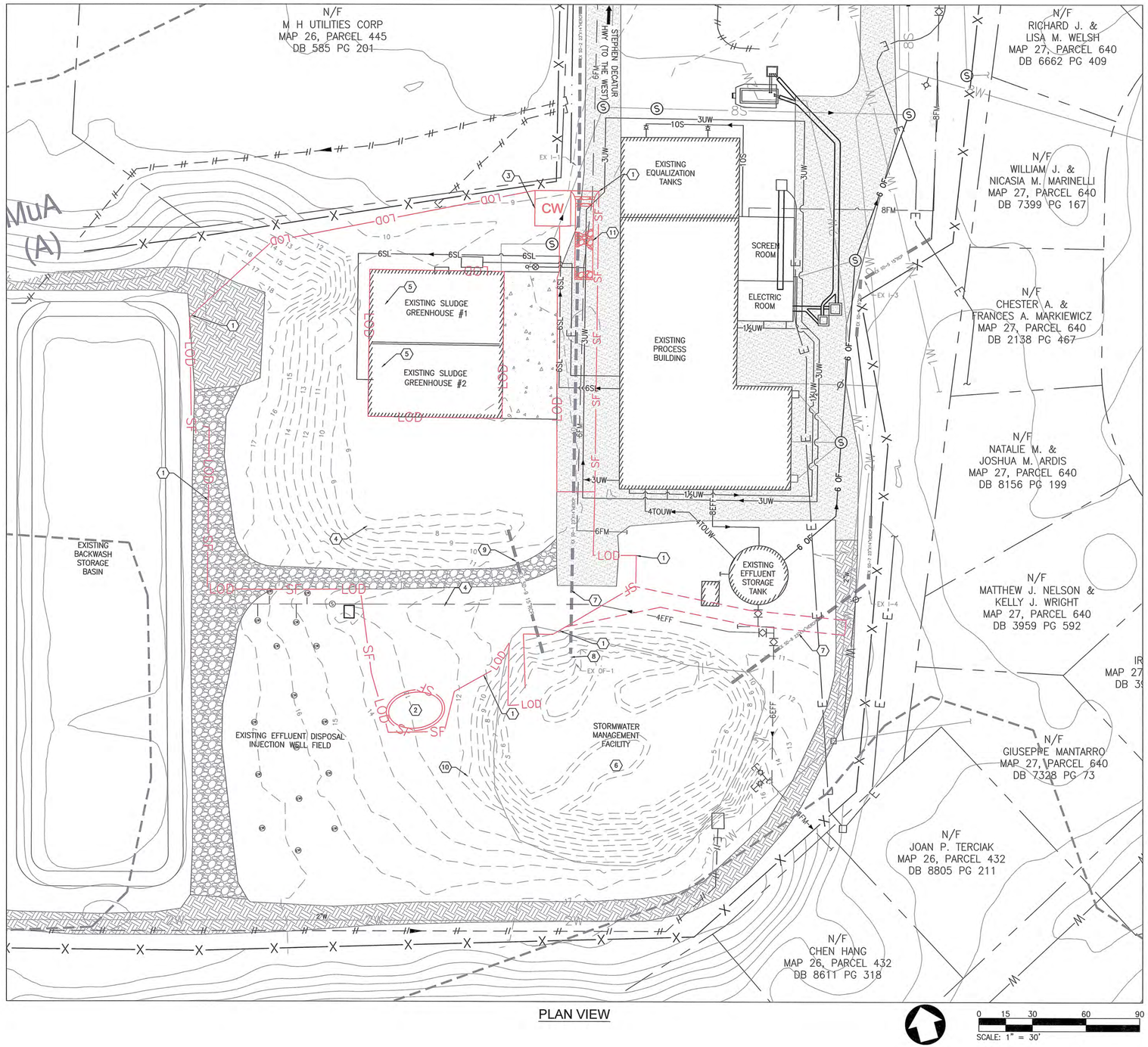
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CHECKED BY	: CJP
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DATE	: AUG 2026

SHEET NO. C1.0

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PLOT CODE
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PDN2-GREEN .010 INCHES (.25mm)
PDN1-YELLOW .007 INCHES (.18mm)
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PDN5-BLUE .020 INCHES (.50mm)
PDN6-MAGENTA .027 INCHES (.70mm)
PDN7-WHITE .039 INCHES (1.00mm)

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PLAN VIEW

CONSTRUCTION NOTES

1. LIMITS OF SILT FENCE (TYPICAL). SEE DETAIL SHEET C1.3.
2. TOPSOIL STOCKPILE (TYPICAL). SEE DETAIL ON SHEETS C1.3.
3. CONCRETE WASHOUT. SEE DETAIL ON SHEET C1.4.
4. EXISTING SWALE TO BE FILLED.
5. EXISTING SLUDGE GREENHOUSE TO REMAIN.
6. EXISTING STORMWATER MANAGEMENT FACILITY TO REMAIN.
7. EXISTING STORM DRAIN TO REMAIN
8. EXISTING STORMWATER MANAGEMENT FACILITY OUTFALL TO REMAIN.
9. EXISTING STORM DRAIN TO BE REMOVED WHEN EXISTING SWALE IS FILLED.
10. INSTALL FILTER BAG. SEE DETAIL ON SHEET C1.3. TO BE INSTALLED OVER UNDISTURBED LAND AND LEFT IN ITS NATURAL STATE UNTIL REMOVAL OF BAG.
11. INSTALL STABILIZED CONSTRUCTION ENTRANCE. SEE DETAIL ON SHEET C1.3.

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MYSTIC HARBOUR WWTP BIOSOLIDS
UPGRADE & BUILDING
REHABILITATION STORMWATER
MANAGEMENT PLANS

WEST OCEAN CITY, MARYLAND

STATE OF MARYLAND
CHRISTOPHER J. PRESTON
54492
PROFESSIONAL ENGINEER

8/28/2026

EXISTING
CONDITIONS

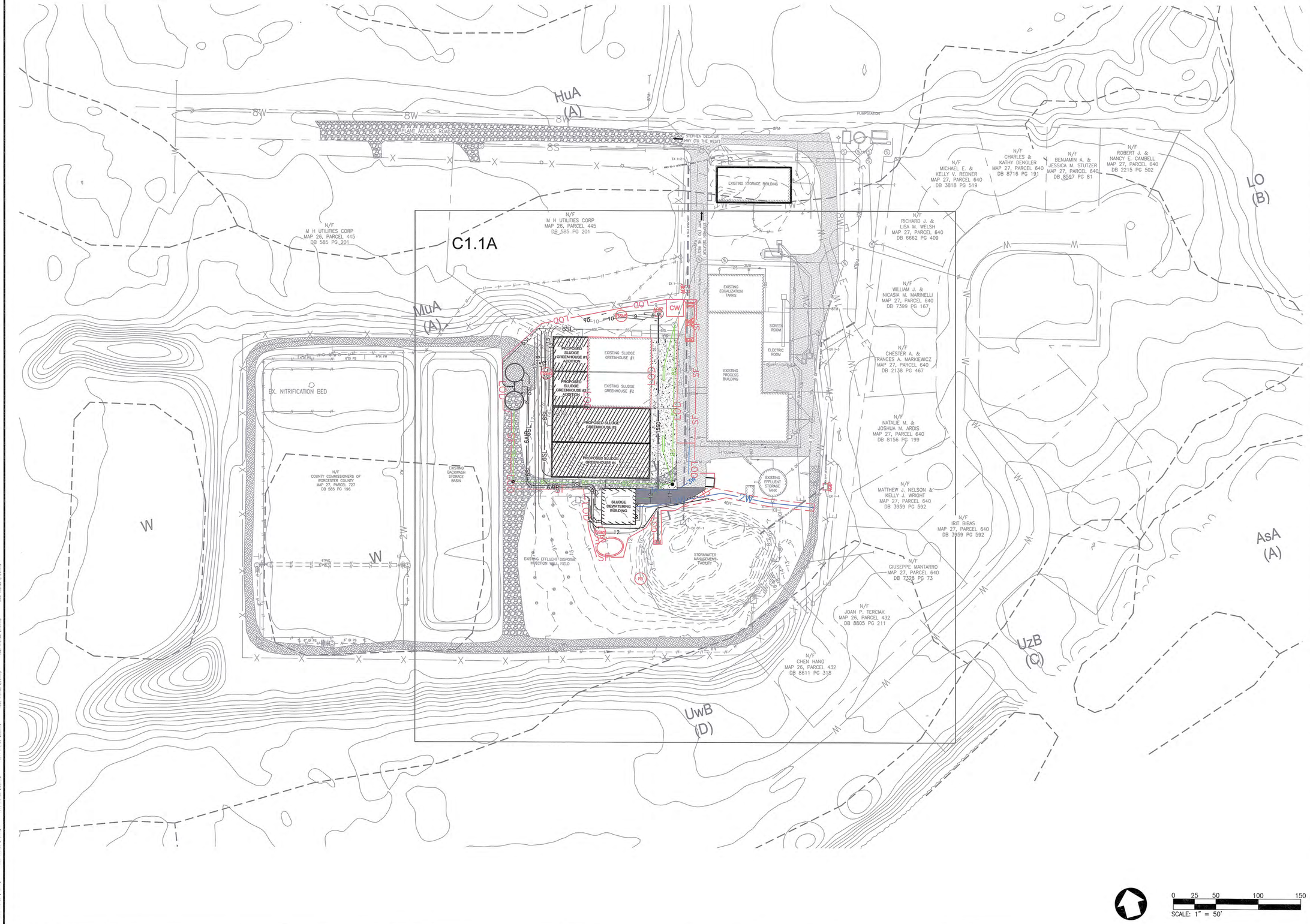
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GMB FILE	: 250196
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PEN3-GREEN .010 INCHES (.25mm)
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PEN6-MAGENTA .027 INCHES (.70mm)
PEN7-WHITE .039 INCHES (1.00mm)

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MYSTIC HARBOUR WWTP BIOSOLIDS UPGRADE & BUILDING REHABILITATION STORMWATER MANAGEMENT PLANS

WEST OCEAN CITY, MARYLAND

STATE OF MARYLAND
STEPHEN J. PETRO
21683
PROFESSIONAL ENGINEER
8/28/2026

OVERALL PROPOSED CONDITIONS

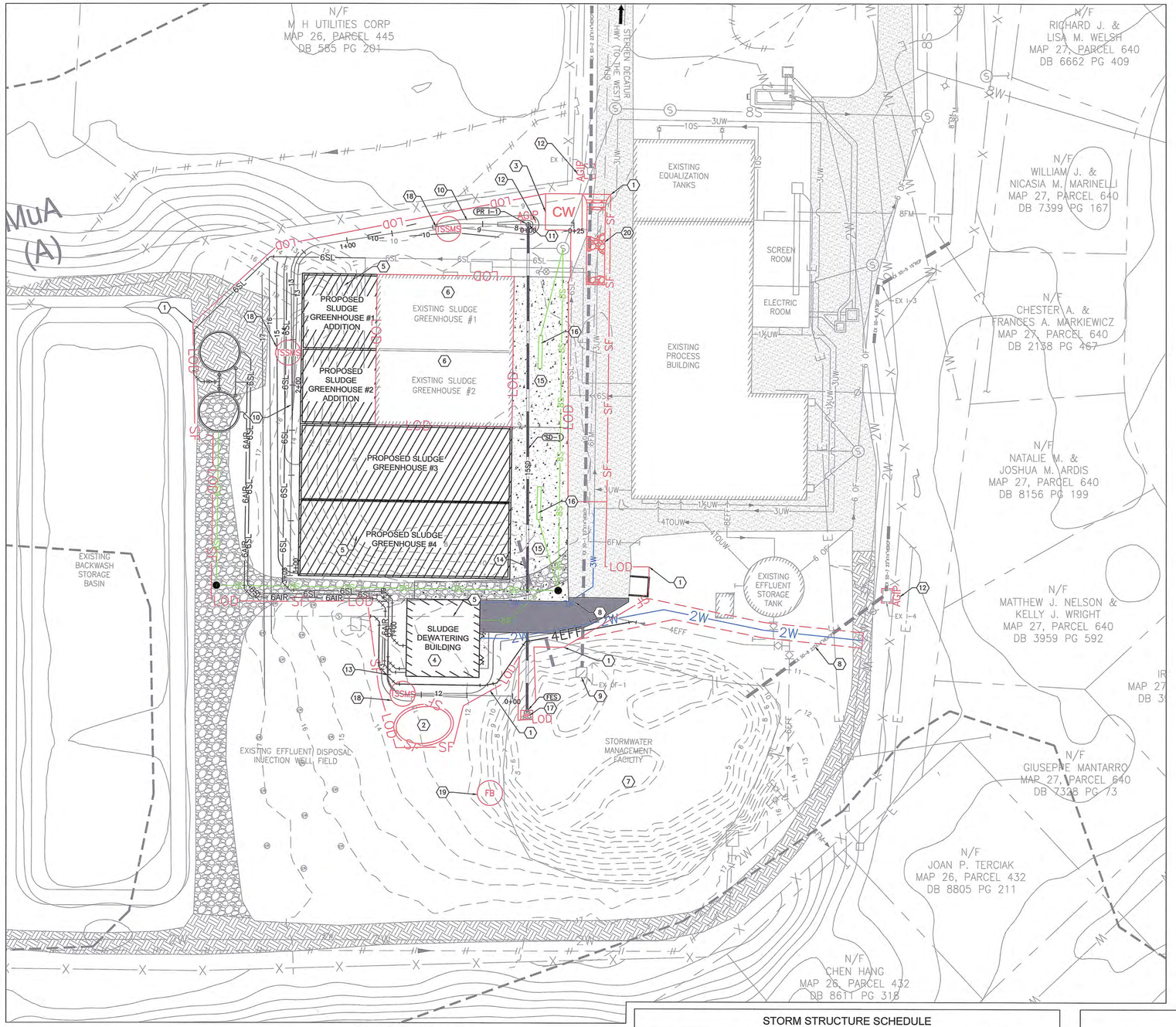
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GMB FILE	: 250196
DATE	: AUG 2026

SHEET NO.
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PLOT CODE
PDH-RED .006 INCHES (.15mm)
PDH-YELLOW .007 INCHES (.18mm)
PDH-GREEN .010 INCHES (.25mm)
PDH-CYAN .014 INCHES (.35mm)
PDH-BLUE .020 INCHES (.50mm)
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CONSTRUCTION NOTES

1. LIMITS OF SILT FENCE (TYPICAL). SEE DETAIL SHEET C1.3.
2. TOPSOIL STOCKPILE (TYPICAL). SEE DETAIL ON SHEETS C1.3.
3. CONCRETE WASHOUT. SEE DETAIL ON SHEET C1.4.
4. PROPOSED SLUDGE DEWATERING BUILDING.
5. EXISTING SWALE TO BE FILLED.
6. EXISTING SLUDGE GREENHOUSE TO REMAIN.
7. EXISTING STORMWATER MANAGEMENT FACILITY TO REMAIN.
8. EXISTING STORM DRAIN TO REMAIN
9. EXISTING STORMWATER MANAGEMENT FACILITY OUTFALL TO REMAIN.
10. INSTALL MDE M-8 GRASS SWALE ALONG PROPOSED GREENHOUSE AND GREENHOUSE ADDITIONS TO PROPOSED INLET "PR I-1". SEE SHEET C1.3 FOR FURTHER BMP DETAILS AND SHEET 2.0 FOR PROFILE. BOTTOM WIDTH = 2.00'. 3:1 (H:V) SIDE SLOPES.
11. INSTALL 15-INCH NYLOPLAST DRAIN BASIN WITH DOMED GRATE. SEE DETAILS ON SHEET C2.1.
12. INSTALL INLET PROTECTION. SEE DETAIL SHEET C1.3.
13. INSTALL V-BOTTOM GRASS CONVEYANCE SWALE WITH 3:1 (H:V) SIDE SLOPES. SEE PROFILE ON SHEET C2.0.
14. EXISTING STORM DRAIN TO BE REMOVED WHEN EXISTING SWALE IS FILLED.
15. INSTALL CONCRETE PADS. TO DRAIN TO SEWER DUE TO CONTAMINATION OF BIOSOLIDS.
16. TRENCH DRAIN TO OUTFALL TO SEWER MANHOLES. INSTALLED AS PART OF THE WWTP PLANS.
17. INSTALL RIPRAP OUTLET PROTECTION. INSTALLED OVER 600X MIRAFI FILTER CLOTH OR APPROVED EQUAL. SEE DETAIL ON SHEET C1.3.
18. INSTALL STABILIZATION MATTING SLOPE. SEE DETAIL ON SHEET C1.3.
19. INSTALL FILTER BAG. SEE DETAIL ON SHEET C1.3. TO BE INSTALLED OVER UNDISTURBED LAND AND LEFT IN ITS NATURAL STATE UNTIL REMOVAL OF BAG.
20. INSTALL STABILIZED CONSTRUCTION ENTRANCE. SEE DETAIL ON SHEET C1.3.

STORM STRUCTURE SCHEDULE

STRUCTURE	STRUCTURE TYPE (WIDTH) X (LENGTH)	RIM ELEVATION	NORTHING	EASTING	CONNECTED PIPES	DEPTH
EX I-1	48 X 48 INCH RECTANGULAR STRUCTURE	9.75'	245773.11	1853034.10	EX SD-1 INV. IN = 5.86 EX SD-2 INV. OUT = 5.80	4.28'
EX I-2	48 X 48 INCH RECTANGULAR STRUCTURE	9.52'	245912.71	1853074.10	EX SD-2 INV. IN = 5.30 EX SD-4 INV. IN = 5.15 EX SD-3 INV. OUT = 5.19	4.38'
EX I-3	48 X 48 INCH RECTANGULAR STRUCTURE	9.75'	245667.32	1853168.15	EX SD-5 INV. IN = 7.36 EX SD-6 INV. OUT = 7.36	2.58'
EX I-4	48 X 72 INCH RECTANGULAR STRUCTURE	9.75'	245499.24	1853126.20	EX SD-7 INV. IN = 7.17 EX SD-8 INV. OUT = 7.17	2.91'
EX OF-1	OUTFALL STRUCTURE	9.25'	245504.26	1852948.61	EX SD-1 INV. OUT = 6.44	3.14'
FES	FLARED END SECTION	N/A	245489.51	1852919.13	SD-1 INV. IN = 5.06	N/A
PR I-1	24IN NYLOPLAST DRAINAGE STRUCTURE	7.53'	245748.33	1852990.29	SD-1 INV. OUT = 5.67	1.97'

STORM PIPE SCHEDULE

PIPE NAME	SIZE	LENGTH	SLOPE	MATERIAL	DS STRUCTURE	DS INVERT	US STRUCTURE	US INVERT
EX SD-1	23"	282'	0.21%	HERCP	EX I-1	5.86'	EX OF-1	6.44'
EX SD-2	23"	145'	0.34%	HERCP	EX I-2	5.30'	EX I-1	5.80'
EX SD-3	15"	32'	0.29%	RCP	EX ES-1	5.10'	EX I-2	5.19'
EX SD-4	15"	29'	0.34%	RCP	EX I-2	5.15'	EX ES-2	5.25'
EX SD-5	15"	44'	0.09%	RCP	EX I-3	7.36'	EX ES-3	7.40'
EX SD-6	15"	34'	0.12%	RCP	EX ES-4	7.32'	EX I-3	7.36'
EX SD-7	23"	38'	0.13%	HERCP	EX I-4	7.17'	EX ES-5	7.22'
EX SD-8	23"	95'	0.18%	HERCP	EX ES-6	7.00'	EX I-4	7.17'
EX SD-9	15"	73'	0.21%	RCP	EX ES-8	7.37'	EX ES-7	7.52'
SD-1	15"	268'	0.23%	N12 HDPE	FES	5.06'	PR I-1	5.67'

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MYSTIC HARBOUR WWTP BIOSOLIDS
UPGRADE & BUILDING
REHABILITATION STORMWATER
MANAGEMENT PLANS

WEST OCEAN CITY, MARYLAND

STATE OF MARYLAND
CHRISTOPHER J. FREEMAN
21649
PROFESSIONAL ENGINEER
8/28/2026

PROPOSED
CONDITIONS

SCALE	: 1" = 30'
DESIGN BY	: JRS
DRAWN BY	: RFT
CHECKED BY	: CJP
GMB FILE	: 250196
DATE	: AUG 2026

SHEET NO.
C1.1A

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PLOT CODE
PEN1-RED 209 INCHES (.19mm)
PEN2-YELLOW 207 INCHES (.19mm)
PEN3-GREEN 070 INCHES (.22mm)
PEN4-BLUE 020 INCHES (.35mm)
PEN5-WHITE 207 INCHES (.70mm)
PEN7-WHITE 209 INCHES (1.00mm)

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STANDARD EROSION & SEDIMENT CONTROL NOTES

THE WATER MANAGEMENT ADMINISTRATION (MDE) REQUIRES THAT THESE NOTES, IN THEIR ENTIRETY, BE INCLUDED ON THE EROSION AND SEDIMENT CONTROL PLAN. IT IS RECOGNIZED THAT EVERY NOTE MAY NOT APPLY TO ALL PROJECTS. THE REQUIREMENT OF ANY INDIVIDUAL NOTE NOT APPLICABLE TO THE SUBJECT PROJECT IS NOT BINDING UPON THE APPLICANT OR THE APPLICANT'S CONTRACTOR.

1. THE CONTRACTOR SHALL NOTIFY THE MARYLAND DEPARTMENT OF ENVIRONMENT (MDE) BEFORE COMMENCING ANY LAND DISTURBING ACTIVITY AND SHALL BE REQUIRED TO HOLD A PRE-CONSTRUCTION MEETING BETWEEN PROJECT REPRESENTATIVES AND A REPRESENTATIVE OF THE MDE.

2. THE CONTRACTOR MUST NOTIFY THE MDE IN WRITING AND BY TELEPHONE AT THE FOLLOWING POINTS:
   A. THE REQUIRED PRE-CONSTRUCTION MEETING.
   B. FOLLOWING INSTALLATION OF SEDIMENT CONTROL MEASURES.
   C. DURING THE INSTALLATION OF SEDIMENT BASINS (TO BE CONVERTED INTO PERMANENT STORMWATER MANAGEMENT STRUCTURES) AT THE REQUIRED INSPECTION POINTS (SEE INSPECTION CHECKLIST ON PLAN). NOTIFICATION PRIOR TO COMMENCING CONSTRUCTION OF EACH STEP IS MANDATORY.
   D. PRIOR TO REMOVAL OR MODIFICATION OF ANY SEDIMENT CONTROL STRUCTURE(S).
   E. PRIOR TO REMOVAL OF ALL SEDIMENT CONTROL DEVICES.
   F. PRIOR TO FINAL ACCEPTANCE.

3. THE CONTRACTOR SHALL CONSTRUCT ALL EROSION AND SEDIMENT CONTROL MEASURES PER THE APPROVED PLAN AND CONSTRUCTION SEQUENCE AND SHALL HAVE THEM INSPECTED AND APPROVED BY MDE INSPECTOR PRIOR TO BEGINNING ANY OTHER LAND DISTURBANCES. MINOR SEDIMENT CONTROL DEVICE LOCATION ADJUSTMENTS MAY BE MADE IN THE FIELD WITH THE APPROVAL OF THE MDE INSPECTOR. THE CONTRACTOR SHALL ENSURE THAT ALL RUNOFF FROM DISTURBED AREAS IS DIRECTED TO THE SEDIMENT CONTROL DEVICES AND SHALL NOT REMOVE ANY EROSION OR SEDIMENT CONTROL MEASURE WITHOUT PRIOR PERMISSION FROM MDE INSPECTOR. THE CONTRACTOR MUST OBTAIN PRIOR AGENCY AND COUNTY SOIL CONSERVATION APPROVAL FOR CHANGES TO THE SEDIMENT CONTROL PLAN AND/OR SEQUENCE OF CONSTRUCTION

4. THE CONTRACTOR SHALL PROTECT ALL POINTS OF CONSTRUCTION INGRESS AND EGRESS TO PREVENT THE DEPOSITION OF MATERIALS ONTO PUBLIC ROADS. ALL MATERIALS DEPOSITED ONTO PUBLIC ROADS SHALL BE REMOVED IMMEDIATELY.

5. THE CONTRACTOR SHALL INSPECT DAILY AND MAINTAIN CONTINUOUSLY IN AN EFFECTIVE OPERATING CONDITION ALL EROSION AND SEDIMENT CONTROL MEASURES UNTIL SUCH TIMES AS THEY ARE REMOVED WITH PRIOR PERMISSION FROM MDE INSPECTOR AND AGENCY INSPECTOR.

6. ALL SEDIMENT BASINS, TRAP EMBANKMENTS AND SLOPES, PERIMETER DIKES, SWALES AND ALL DISTURBED SLOPES STEEPER OR EQUAL TO 3:1 SHALL BE STABILIZED WITH SOD OR SEED, OR OTHER APPROVED STABILIZATION MEASURES, AS SOON AS POSSIBLE BUT NO LATER THAN THREE (3) CALENDAR DAYS AFTER ESTABLISHMENT. ALL AREAS DISTURBED OUTSIDE OF THE PERIMETER SEDIMENT CONTROL SYSTEM MUST BE MINIMIZED. MAINTENANCE MUST BE PERFORMED AS NECESSARY TO ENSURE CONTINUED STABILIZATION.

7. THE CONTRACTOR SHALL APPLY SOD OR SEED, OR OTHER APPROVED STABILIZATION MEASURES TO ALL DISTURBED AREAS AND STOCKPILES WITHIN SEVEN (7) CALENDAR DAYS AFTER STRIPPING AND GRADING ACTIVITIES HAVE CEASED IN THE AREA. MAINTENANCE SHALL BE PERFORMED AS NECESSARY TO ENSURE CONTINUED STABILIZATION.

8. PRIOR TO REMOVAL OF SEDIMENT CONTROL MEASURES, THE CONTRACTOR SHALL STABILIZE AND HAVE ESTABLISHED PERMANENT STABILIZATION FOR ALL CONTRIBUTORY DISTURBED AREAS USING SOD OR AN APPROVED PERMANENT SEED MIXTURE WITH REQUIRED SOIL AMENDMENTS. WOOD FIBER MULCH MAY ONLY BE USED IN SEEDING SEASON WHERE THE SLOPE DOES NOT EXCEED 10% AND GRADING HAS BEEN DONE TO PROMOTE SHEET FLOW DRAINAGE. AREAS BROUGHT TO FINISHED GRADE DURING THE SEEDING SEASON SHALL BE PERMANENTLY STABILIZED AS SOON AS POSSIBLE, BUT NOT LATER THAN SEVEN (7) CALENDAR DAYS AFTER ESTABLISHMENT. WHEN PROPERTY IS BROUGHT TO FINISHED GRADE DURING THE MONTHS OF NOVEMBER THROUGH FEBRUARY, AND PERMANENT STABILIZATION IS FOUND TO BE IMPRACTICAL, TEMPORARY SEED SHALL BE APPLIED TO DISTURBED AREAS. THE FINAL PERMANENT STABILIZATION OF SUCH PROPERTY SHALL BE APPLIED BY MARCH 15 OR EARLIER IF GROUND AND WEATHER CONDITIONS ALLOW.

9. THE SITE'S APPROVAL LETTER, APPROVED EROSION AND SEDIMENT CONTROL PLANS, DAILY LOG BOOKS, AND TEST REPORTS SHALL BE AVAILABLE AT THE SITE FOR INSPECTION BY DULY AUTHORIZED OFFICIALS OF MDE.

10. SURFACE DRAINAGE FLOWS OVER UNSTABILIZED CUT AND FILL SLOPES SHALL BE CONTROLLED BY EITHER PREVENTING DRAINAGE FLOWS FROM TRAVERSING THE SLOPES OR BY INSTALLING PROTECTIVE DEVICES TO LOWER THE WATER DOWN SLOPE WITHOUT CAUSING EROSION. DIKES SHALL BE INSTALLED AND MAINTAINED AT THE TOP OF A CUT OR FILL SLOPE UNTIL THE SLOPE AND DRAINAGE AREA TO IT ARE FULLY STABILIZED, AT WHICH TIME THEY MUST BE REMOVED AND FINAL GRADING DONE TO PROMOTE SHEET FLOW DRAINAGE. PROTECTIVE METHODS MUST BE PROVIDED AT POINTS OF CONCENTRATED FLOWS WHERE EROSION IS LIKELY TO OCCUR.

11. PERMANENT SWALES OR OTHER POINTS OF CONCENTRATED WATER FLOW SHALL BE STABILIZED WITH SOD OR SEED WITH AN APPROVED EROSION CONTROL MATTING, RIP-RAP, OR BY OTHER APPROVED STABILIZED MEASURES.

12. TEMPORARY SEDIMENT CONTROL DEVICES MAY BE REMOVED, WITH PERMISSION OF THE MDE INSPECTOR AND AGENCY INSPECTORS, WITHIN THIRTY (30) CALENDAR DAYS FOLLOWING ESTABLISHMENT OF PERMANENT STABILIZATION IN ALL CONTRIBUTORY DRAINAGE AREAS. STORMWATER MANAGEMENT STRUCTURES USED TEMPORARILY FOR SEDIMENT CONTROL SHALL BE CONVERTED TO THE PERMANENT CONFIGURATION WITHIN THIS TIME PERIOD AS WELL.

13. NO PERMANENT CUT OR FILL SLOPE WITH A GRADIENT STEEPER THAN 3:1 WILL BE PERMITTED IN LAWN MAINTENANCE AREAS. A SLOPE GRADIENT OF UP TO 2:1 WILL BE PERMITTED IN NON-MAINTENANCE AREAS PROVIDED THAT THOSE AREAS ARE INDICATED ON THE EROSION AND SEDIMENT CONTROL PLAN WITH LOW-MAINTENANCE GROUND COVER SPECIFIED FOR PERMANENT STABILIZATION. SLOPE GRADIENT STEEPER THAN 2:1 WILL NOT BE PERMITTED WITH VEGETATIVE STABILIZATION.

14. FOR FINISHED GRADING, THE CONTRACTOR SHALL PROVIDE ADEQUATE GRADIENTS TO PREVENT WATER FROM PONDING FOR MORE THAN TWENTY FOUR (24) HOURS AFTER THE END OF A RAINFALL EVENT. DRAINAGE COURSES AND SWALE FLOW AREAS MAY TAKE AS LONG AS FORTY-EIGHT (48) HOURS AFTER THE END OF A RAINFALL EVENT TO DRAIN. AREAS DESIGNED TO HAVE STANDING WATER SHALL NOT BE REQUIRED TO MEET THIS REQUIREMENT.

15. SEDIMENT TRAPS OR BASINS ARE NOT PERMITTED WITHIN 20 FEET OF A FOUNDATION THAT EXISTS OR IS UNDER CONSTRUCTION. NO STRUCTURE MAY BE CONSTRUCTED WITHIN 20 FEET OF AN ACTIVE SEDIMENT TRAP OR BASIN.

16. THE MDE INSPECTOR HAS THE OPTION OF REQUIRING ADDITIONAL SAFETY OR SEDIMENT CONTROL MEASURES, IF DEEMED NECESSARY.

17. ALL TRAP DEPTH DIMENSIONS ARE RELATIVE TO THE OUTLET ELEVATION. ALL TRAPS MUST HAVE A STABLE OUTFALL. ALL TRAPS AND BASINS SHALL HAVE STABLE INFLOW POINTS.

18. VEGETATIVE STABILIZATION SHALL BE PERFORMED IN ACCORDANCE WITH THE STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL. REFER TO APPROPRIATE SPECIFICATIONS FOR TEMPORARY SEEDING, PERMANENT SEEDING, MULCHING, SODDING, AND GROUND COVERS.

19. SEDIMENT SHALL BE REMOVED AND THE TRAP OR BASIN RESTORED TO ITS ORIGINAL DIMENSIONS WHEN THE SEDIMENT HAS ACCUMULATED TO ONE QUARTER OF THE TOTAL DEPTH OF THE TRAP OR BASIN. TOTAL DEPTH SHALL BE MEASURED FROM THE TRAP OR BASIN BOTTOM TO THE CREST OF THE OUTLET.

20. SEDIMENT REMOVED FROM TRAPS (AND BASINS) SHALL BE PLACED AND STABILIZED IN APPROVED AREAS, BUT NOT WITHIN A FLOODPLAIN, WETLAND OR TREE-SAVE AREA. WHEN PUMPING SEDIMENT LADEN WATER, THE DISCHARGE MUST BE DIRECTED TO A SEDIMENT TRAPPING DEVICE PRIOR TO RELEASE FROM THE SITE. A SUMP PIT MAY BE USED IF SEDIMENT TRAPS THEMSELVES ARE BEING PUMPED OUT.

21. ALL WATER REMOVED FROM EXCAVATED AREAS SHALL BE PASSED THROUGH AN APPROVED DEWATERING PRACTICE OR PUMPED TO A SEDIMENT TRAP OR BASIN PRIOR TO DISCHARGE TO A FUNCTIONAL STORM DRAIN SYSTEM OR TO STABLE GROUND SURFACE.

22. SEDIMENT CONTROL FOR UTILITY CONSTRUCTION FOR AREAS OUTSIDE OF DESIGNED CONTROLS OR AS DIRECTED BY ENGINEER OR MDE INSPECTOR:
   A. CALL "MISS UTILITY" AT 1-800-257-7777 48 HOURS PRIOR TO THE START OF WORK.
   B. EXCAVATED TRENCH MATERIAL SHALL BE PLACED ON THE HIGH SIDE OF THE TRENCH.
   C. TRENCHES FOR UTILITY INSTALLATION SHALL BE BACKFILLED, COMPACTED, AND STABILIZED AT THE END OF EACH WORKING DAY. NO MORE TRENCH SHALL BE OPENED THAN CAN BE COMPLETED THE SAME DAY, UNLESS;
   D. TEMPORARY SILT FENCE SHALL BE PLACED IMMEDIATELY DOWNSTREAM OF ANY DISTURBED AREA INTENDED TO REMAIN DISTURBED FOR MORE THAN ONE DAY.

23. WHERE DEEMED APPROPRIATE BY THE ENGINEER OR INSPECTOR, SEDIMENT BASINS AND TRAPS MAY NEED TO BE SURROUNDED WITH AN APPROVED SAFETY FENCE. THE FENCE MUST CONFORM TO LOCAL ORDINANCES AND REGULATIONS. THE DEVELOPER OR OWNER SHALL CHECK WITH LOCAL BUILDING OFFICIALS ON APPLICABLE SAFETY REQUIREMENTS. WHERE SAFETY FENCE IS DEEMED APPROPRIATE AND LOCAL ORDINANCES DO NOT SPECIFY FENCING SIZE AND TYPES, THE FOLLOWING SHALL BE USED AS A MINIMUM STANDARD: THE SAFETY FENCE MUST BE MADE OF WELDED WIRE AND AT LEAST 42 INCHES HIGH, HAVE POSTS SPACED NO FARTHER APART THAN 8 FEET, HAVE MESH OPENINGS NO GREATER THAN 2 INCHES IN WIDTH AND 4 INCHES IN HEIGHT WITH A MINIMUM OF 14 GAUGE WIRE. SAFETY FENCE MUST BE MAINTAINED AND IN GOOD CONDITION AT ALL TIMES.

24. OFF-SITE SPOIL OR BORROW AREAS ON STATE OR FEDERAL PROPERTY MUST HAVE PRIOR APPROVAL BY COUNTY SOIL CONSERVATION AND OTHER APPLICABLE STATE, FEDERAL, AND LOCAL AGENCIES; OTHERWISE APPROVAL MUST BE GRANTED BY THE LOCAL AUTHORITIES. ALL WASTE AND BORROW AREAS OFF-SITE MUST BE PROTECTED BY SEDIMENT CONTROL MEASURES AND STABILIZED.

25. SITES WHERE INFILTRATION DEVICES ARE USED FOR THE CONTROL OF STORMWATER, EXTREME CARE MUST BE TAKEN TO PREVENT RUNOFF FROM UNSTABILIZED AREAS FROM ENTERING THE STRUCTURE DURING CONSTRUCTION. SEDIMENT CONTROL DEVICES PLACED IN INFILTRATION AREAS MUST HAVE BOTTOM ELEVATIONS AT LEAST TWO (2) FEET HIGHER THAN THE FINISH GRADE BOTTOM ELEVATION OF THE INFILTRATION PRACTICE. WHEN CONVERTING A SEDIMENT TRAP TO AN INFILTRATION DEVICE, ALL ACCUMULATED SEDIMENT MUST BE REMOVED AND DISPOSED OF PRIOR TO FINAL GRADING OF INFILTRATION DEVICE.

26. WHEN A STORM DRAIN SYSTEM OUTFALL IS DIRECTED TO A SEDIMENT TRAP OR SEDIMENT BASIN AND THE SYSTEM IS TO BE USED FOR TEMPORARILY CONVEYING SEDIMENT LADEN WATER, ALL STORM DRAIN INLETS IN NON-SUMP AREAS SHALL HAVE TEMPORARY ASPHALT BERMS CONSTRUCTED AT THE TIME OF BASE PAVING TO DIRECT GUTTER FLOW INTO THE INLETS TO AVOID SURCHARGING AND OVERFLOW OF INLETS IN SUMP AREAS.

27. FOLLOWING INITIAL SOIL DISTURBANCE OR REDISTURBANCE, DETAILS OF TEMPORARY OR PERMANENT STABILIZATION SHALL BE COMPLETED WITHIN 3 CALENDAR DAYS ON ALL SURFACES OF PERIMETER CONTROLS, DIKES, SWALES, DITCHES, PERIMETER SLOPES AND ALL SLOPES STEEPER THAN 3 HORIZONTAL TO 1 VERTICAL (3:1). WITHIN 7 DAYS FOLLOWING FINAL GRADING, ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT WILL BE PERMANENTLY STABILIZED BY SEEDING OR MULCH. PERMANENT MULCH CAN INCLUDE BUT IS NOT LIMITED TO STONE, GRAVEL, BLACKTOP, OR CONCRETE SURFACING. IF CONSTRUCTION IS TEMPORARILY STOPPED ON A PROJECT SITE FOR MORE THAN FOURTEEN DAYS, ALL DISTURBED AND GRADED AREAS WILL BE STABILIZED. THE REQUIREMENTS OF THIS SUBPARAGRAPH DO NOT APPLY TO THOSE AREAS WHICH ARE SHOWN ON THE PLAN AND ARE CURRENTLY BEING USED FOR MATERIAL STORAGE, OR FOR THOSE AREAS ON WHICH ACTUAL CONSTRUCTION ACTIVITIES ARE CURRENTLY BEING PERFORMED OR TO INTERIOR AREAS OF SURFACE MINE SITE WHERE STABILIZATION MATERIAL WOULD CONTAMINATE THE RECOVERABLE RESOURCE. MAINTENANCE SHALL BE PERFORMED AS NECESSARY TO ENSURE THE STABILIZED AREAS CONTINUOUSLY MEET THE APPROPRIATE REQUIREMENTS OF THE 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.

28. STRIPPED TOPSOIL WILL BE UTILIZED ON SITE, NO MATERIAL WILL BE IMPORTED.

29. SITE INFORMATION:
   A. TOTAL PARCEL AREA ±9.29 ACRES
   B. AREA DISTURBED ±0.99 ACRES (LOD AREA)
   B.A. A NOTICE OF INTENT (NOI) FOR STORMWATER DISCHARGE FROM CONSTRUCTION IN ACTIVITIES WILL BE FILED WITH MDE PRIOR TO COMMENCING CONSTRUCTION ACTIVITIES.
   C. IMPERVIOUS AREA ±0.82 ACRES
   D. TOTAL CUT ±228 CUBIC YARDS
   E. TOTAL FILL ±70 CUBIC YARDS
   F. NET ±158 CUBIC YARDS
   G. OFF-SITE WASTE/BORROW AREA LOCATION TO BE DETERMINED BY THE CONTRACTOR

STANDARD EROSION & SEDIMENT CONTROL NOTES CONT'D

30. IT HAS BEEN FIELD VERIFIED THAT THE FOLLOWING NATURAL RESOURCES ARE NOT PRESENT ON THE PROJECT SITE: TIDAL AND NONTIDAL WETLANDS, WETLANDS OF SPECIAL STATE CONCERN, WETLAND BUFFERS, STREAM BUFFERS, PERENNIAL STREAMS, FLOODPLAINS, FORESTS, FOREST BUFFERS, CRITICAL AREAS.

SEQUENCE OF CONSTRUCTION

GENERAL NOTES

1. CONTACT THE WORCESTER COUNTY DEPARTMENT OF ENVIRONMENTAL PROGRAMS AT 410-632-1220 TO SCHEDULE A PRE-CONSTRUCTION MEETING AT LEAST 48 HOURS PRIOR TO COMMENCING ANY SITE WORK. FAILURE TO DO SO MAY RESULT IN AN IMMEDIATE "STOP WORK ORDER".

2. ALL PERIMETER CONTROLS ARE TO BE INSPECTED AND REVIEW BY THE EROSION CONTROL REPRESENTATIVE PRIOR TO PROCEEDING WITH FURTHER SITE DISTURBANCE OR CONSTRUCTION.

3. THE CONTRACTOR SHALL AT ALL TIMES PROTECT AGAINST SEDIMENT OR DEBRIS LADEN RUNOFF OR WIND FROM LEAVING THE SITE. PERIMETER CONTROLS SHOULD BE CHECKED DAILY AND ADJUSTED AND/OR REPAIRED TO FULLY CONTAIN AND CONTROL SEDIMENTATION ON THE SITE. ACCUMULATED SEDIMENT SHALL BE REMOVED WHEN IT HAS REACHED HALF OF THE EFFECTIVE CAPACITY OF THE CONTROL. IN ADDITION, THE CONTRACTOR MAY NEED TO ADJUST OR REPAIR MEASURES IN TIMES OF ADVERSE WEATHER CONDITIONS, OR AS DIRECTED BY THE AGENCY CONSTRUCTION SITE REVIEWER.

4. EROSION AND SEDIMENT CONTROL DEVICES SHOULD BE REMOVED ONLY AFTER WORK IN AN AREA HAS BEEN COMPLETED AND STABILIZED.

5. GREAT CARE SHALL BE TAKEN TO PROTECT ANY ADJACENT WATERWAY DURING CONSTRUCTION OPERATIONS. COORDINATE ALL WATERWAY WORK SHALL BE COORDINATED WITH MDE INSPECTOR AND ERI CONSULTANTS. CONTACT ED LAUNAY.

6. ANY WORK WITHIN THE DITCH CHANNEL AND FLOOD PLAIN SHALL BE COORDINATED WITH MDE INSPECTOR.

7. THE CONTRACTOR SHALL ENSURE THAT ALL EXISTING UTILITIES, INCLUDING BUT NOT LIMITED TO OVERHEAD AND UNDERGROUND ELECTRIC, SANITARY SEWER WATER AND COMMUNICATION IS PROTECTED AND IN WORKING ORDER DURING CONSTRUCTION.

SITE WORK

8. INSTALL STABILIZED CONSTRUCTION ENTRANCE.

9. BEGIN CONSTRUCTION WITH MDE AUTHORIZATION. INSTALL SILT FENCE AS CAN BE SEEN ON SHEET C1.0A. THE CONTRACTOR SHALL APPLY SILT FENCE OR OTHER SEDIMENT CONTROL PRACTICES WHENEVER DEEMED NECESSARY.

10. CLEAR AND GRUB AS NECESSARY TO INSTALL PERIMETER CONTROLS PER PLAN SHEET C1.0A AND C1.1A.

11. STRIP TOPSOIL AND STOCKPILE. WRAP STOCKPILE WITH SILT FENCE PER MDE DETAIL ON SHEET C1.3.

12. INSTALL CONCRETE WASHOUT. SEE DETAIL ON SHEET C1.4.

13. BEGIN ROUGH GRADE OPERATIONS. AREAS WITH GREATER THAN 3H:1V SLOPE TO BE STABILIZED WITH EROSION CONTROL MATTING IMMEDIATELY.

14. INSTALL UTILITIES AND CONNECTIONS TO EXISTING PER PLAN.

15. INSTALL MDE M-8 GRASS SWALE (SWM-1) ALONG PROPOSED GREENHOUSE AND GREENHOUSE ADDITIONS TO PROPOSED INLET "PR I-1". SEE SHEET C1.3 FOR FURTHER BMP DETAILS. BOTTOM WIDTH = 2.00' 3:1 (H:V) SIDE SLOPES.

16. INSTALL 15-INCH ADS N12 HDPE STORM DRAIN. SEE DETAILS AND PROFILE ON SHEET C2.1.

17. INSTALL 15-INCH NYLOPLAST DRAIN BASIN WITH DOOMED GRATE. SEE DETAILS ON SHEET C2.1.

18. INSTALL WATER UTILITY WITH SAME DAY TRENCHING. ANY DISTURBED LAND IS TO BE STABILIZED BEFORE THE SITE IS CLOSED EACH DAY.

19. INSTALL UTILITIES AND CONNECTIONS TO EXISTING MAINS PER PLAN. INSTALL INLET PROTECTION AS STORM DRAIN INLETS ARE INSTALLED. DIRECT SEDIMENT LADEN WATERS TOWARD INLETS OR TEMPORARY SEDIMENT BASIN.

20. BEGIN AND COMPLETE ALL VERTICAL CONSTRUCTION FOR THE WASTEWATER TREATMENT COMPONENTS, SUCH AS SLUDGE DEWATERING BUILDINGS.

FINAL STABILIZATION

21. PERMANENTLY STABILIZE ALL REMAINING DISTURBED AREA. INSPECT AREA OF STEEP SLOPE TO ENSURE PROPER STABILIZATION. RESTABILIZE AS NECESSARY.

22. ONCE THE SITE HAS BEEN ADEQUATELY STABILIZED, REMOVE INLET PROTECTION DEVICES AND DISPOSE OF SEDIMENTS IN AN APPROVED MANNER. THE USE OF ROAD SWEEPERS IS RECOMMENDED. REMOVE ANY ACCUMULATED SEDIMENTS IN THE STORM DRAIN SYSTEM.

23. ENSURE THAT STOCKPILE TO REMAIN ON SITE IS PROPERLY STABILIZED.

24. CONDUCT FINAL CONSTRUCTION REVIEW WITH TOWN AND COUNTY INSPECTORS. PERFORM A FINAL WALK THROUGH THE SITE TO ENSURE ALL STABILIZATION REQUIREMENT ARE ADEQUATE AND THEN WITH THE APPROVAL OF THE AGENCY CONSTRUCTION SITE REVIEWER, REMOVE REMAINING SEDIMENT CONTROL DEVICES.

CONSTRUCTION START DATE: DECEMBER 2026 (TENTATIVE)
CONSTRUCTION END DATE: JUNE 2028 (TENTATIVE)

TEMPORARY STABILIZATION

DEFINITION

TO STABILIZE DISTURBED SOILS WITH VEGETATION FOR UP TO 6 MONTHS.

PURPOSE

TO USE FAST GROWING VEGETATION THAT PROVIDES COVER ON DISTURBED SOILS.

CONDITIONS WHERE PRACTICE APPLIES

EXPOSED SOILS WHERE GROUND COVER IS NEEDED FOR A PERIOD OF 6 MONTHS OR LESS. FOR LONGER DURATION OF TIME, PERMANENT STABILIZATION PRACTICES ARE REQUIRED.

CRITERIA

1. SELECT ONE OR MORE OF THE SPECIES OR SEED MIXTURES LISTED IN TABLE B.1 FOR THE APPROPRIATE PLANT HARDINESS ZONE (FROM FIGURE B.3), AND ENTER THEM IN THE TEMPORARY SEEDING SUMMARY BELOW ALONG WITH APPLICATION RATES, SEEDING DATES AND SEEDING DEPTHS. IF THIS SUMMARY IS NOT PUT ON THE PLAN AND COMPLETED, THEN TABLE B.1 PLUS FERTILIZER AND LIME RATES MUST BE PUT ON THE PLAN.

2. FOR SITES HAVING SOIL TESTS PERFORMED, USE AND SHOW THE RECOMMENDED RATES BY THE TESTING AGENCY. SOIL TESTS ARE NOT REQUIRED FOR TEMPORARY SEEDING.

3. WHEN STABILIZATION IS REQUIRED OUTSIDE OF A SEEDING SEASON, APPLY SEED AND MULCH OR STRAW MULCH ALONE AS PRESCRIBED IN SECTION B-4-3.A.1.B AND MAINTAIN UNTIL THE NEXT SEEDING SEASON.

TEMPORARY SEEDING SUMMARY
SEE TABLE

PERMANENT STABILIZATION

DEFINITION

TO STABILIZE DISTURBED SOILS WITH PERMANENT VEGETATION.

PURPOSE

TO USE LONG-LIVED 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 HARDINESS ZONE (FROM FIGURE B.3) AND BASED ON THE SITE CONDITION OR PURPOSE FOUND ON TABLE B.2. ENTER SELECTED MIXTURE(S), APPLICATION RATES, AND SEEDING DATES IN 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 ½ 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 .
   1. TURF GRASS MIXTURES
      a. AREAS WHERE TURF GRASS 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 B.22 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: 1½ TO 3 POUNDS PER 1000 SQUARE FEET.

         NOTES:
         SELECT TURF GRASS VARIETIES FROM THOSE LISTED IN THE MOST CURRENT UNIVERSITY OF MARYLAND PUBLICATION, AGRONOMY MEMO #77, "TURF GRASS 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.

      c. IDEAL TIMES OF SEEDING FOR TURF GRASS MIXTURES
         WESTERN MD: MARCH 15 TO JUNE 1, AUGUST 1 TO OCTOBER 1 (HARDINESS ZONES: 5B, 6A)
         CENTRAL MD: MARCH 1 TO MAY 15, AUGUST 15 TO OCTOBER 15 (HARDINESS ZONE: 6B)
         SOUTHERN MD, EASTERN SHORE: MARCH 1 TO MAY 15, AUGUST 15 TO OCTOBER 15 (HARDINESS ZONES: 7A, 7B)
      d. 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 1½ INCHES IN DIAMETER. THE RESULTING SEEDBED MUST BE IN SUCH CONDITION THAT FUTURE MOWING OF GRASSES WILL POSE NO DIFFICULTY.
      e. IF SOIL MOISTURE IS DEFICIENT, SUPPLY NEW SEEDINGS WITH ADEQUATE WATER FOR PLANT GROWTH (½ 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.

PERMANENT SEEDING SUMMARY
SEE TABLE

B. SOD: TO PROVIDE QUICK COVER ON DISTURBED AREAS (2:1 GRADE OR FLATTER).
   1. GENERAL SPECIFICATIONS
      a. CLASS OF TURF GRASS 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 ¾ INCH, PLUS OR MINUS ¼ 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 TRANSPLANTED 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 TRANSPLANTED WITHIN THIS PERIOD MUST BE APPROVED BY AN AGRONOMIST OR SOIL SCIENTIST PRIOR TO ITS INSTALLATION.
   1. 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 ½ 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.

DEWATERING PROCEDURE NOTES

1. WHENEVER GROUNDWATER IS ENCOUNTERED DURING CONSTRUCTION OR EXCAVATION OPERATIONS, DEWATERING PRACTICE SHALL BE APPLIED USING THE COUNTY SOIL CONSERVATION AND MDE APPROVED PROCEDURE AS SPECIFIED IN THE MOST CURRENT EROSION AND SEDIMENT CONTROL MANUAL.

2. A PORTABLE PUMP SHALL BE UTILIZED FOR DEWATERING ACTIVITY AS NECESSARY. USE FILTER BAGS AS REQUIRED.

3. NO SEDIMENT LADEN RUNOFF SHALL BE DISCHARGED OUTSIDE OF THE LIMIT OF DISTURBANCE.

4. DISPOSE OF ACCUMULATED SEDIMENTS DURING DEWATERING PROCEDURE IN AN APPROVED MANNER.

STANDARDS AND SPECIFICATIONS FOR SOIL PREPARATION, TOPSOILING, AND SOIL AMENDMENTS

DEFINITION

-THE PROCESS OF PREPARING THE SOILS TO SUSTAIN ADEQUATE VEGETATIVE STABILIZATION.

PURPOSE

-TO PROVIDE A SUITABLE SOIL MEDIUM FOR VEGETATIVE GROWTH.

CONDITIONS WHERE PRACTICE APPLIES

-WHERE VEGETATIVE STABILIZATION IS TO BE ESTABLISHED

CRITERIA

A. SOIL PREPARATION
   1. TEMPORARY STABILIZATION
      a. SEEDBED PREPARATION CONSISTS OF LOOSENING SOIL TO A DEPTH OF 3 TO 5 INCHES BY MEANS OF SUITABLE AGRICULTURAL OR CONSTRUCTION EQUIPMENT, SUCH AS DISC HARROWS OR CHISEL PLOWS OR RIPPERS MOUNTED ON CONSTRUCTION EQUIPMENT. AFTER THE SOIL IS LOOSENED, IT MUST NOT BE ROLLED OR DRAGGED SMOOTH BUT LEFT IN THE ROUGHENED CONDITION. SLOPES 3:1 OR FLATTER ARE TO BE TRACKED WITH RIDGES RUNNING PARALLEL TO THE CONTOUR OF THE SLOPE.
      b. APPLY FERTILIZER AND LIME AS PRESCRIBED ON THE PLANS.
      c. INCORPORATE LIME AND FERTILIZER INTO THE TOP 3 TO 5 INCHES OF SOIL BY DISKING OR OTHER SUITABLE MEANS.
   2. PERMANENT STABILIZATION
      a. A SOIL TEST IS REQUIRED FOR ANY EARTH DISTURBANCE OF 5 ACRES OR MORE. THE MINIMUM SOIL CONDITIONS REQUIRED FOR PERMANENT VEGETATIVE ESTABLISHMENTS ARE:

      i. SOIL PH BETWEEN 6.0 AND 7.0.
      ii. SOLUBLE SALTS LESS THAN 500 PARTS PER MILLION (ppm).
      iii. SOIL CONTAINS LESS THAN 40 PERCENT CLAY BUT ENOUGH FINE GRAINED MATERIAL (GREATER THAN 30 PERCENT SILT PLUS CLAY) TO PROVIDE THE CAPACITY TO HOLD A MODERATE AMOUNT OF MOISTURE. AN EXCEPTION: IF LOVEGRASS WILL BE PLANTED, THEN A SANDY SOIL (LESS THAN 30 PERCENT SILT PLUS CLAY) WOULD BE ACCEPTABLE.
      iv. SOIL CONTAINS 1.5 PERCENT MINIMUM ORGANIC MATTER BY WEIGHT.
      v. SOIL CONTAINS PORE SPACE TO PERMIT ADEQUATE ROOT PENETRATION.

      b. APPLICATION OF AMENDMENTS OR TOPSOIL IS REQUIRED IF ON-SITE SOILS DO NOT MEET THE ABOVE CONDITIONS.
      c. GRADED AREAS MUST BE MAINTAINED IN A TRUE AND EVEN GRADE AS SPECIFIED ON THE APPROVED PLAN, THEN SCARIFIED OR OTHERWISE LOOSENED TO A DEPTH OF 3 TO 5 INCHES.
      d. APPLY SOIL AMENDMENTS AS SPECIFIED ON THE APPROVED PLAN OR AS INDICATED BY THE RESULTS OF A SOIL TEST.
      e. MIX SOIL AMENDMENTS INTO THE TOP 3 TO 5 INCHES OF SOIL BY DISKING OR OTHER SUITABLE MEANS. RAKE LAWN AREAS TO SMOOTH THE SURFACE, REMOVE LARGE OBJECTS LIKE STONES AND BRANCHES, AND READY THE AREA FOR SEED APPLICATION. LOOSEN SURFACE SOIL BE DRAGGING WITH A HEAVY CHAIN OR OTHER EQUIPMENT TO ROUGHEN THE SURFACE WHERE SITE CONDITIONS WILL NOT PERMIT NORMAL SEEDBED PREPARATION. TRACK SLOPES 3:1 OR FLATTER WITH TRACKED EQUIPMENT LEAVING THE SOIL IN AN IRREGULAR CONDITION WITH RIDGES RUNNING PARALLEL TO THE CONTOUR OF THE SLOPE. LEAVE THE TOP 1 TO 3 INCHES OF SOIL LOOSE AND FRIABLE. SEEDBED LOOSENING MAY BE UNNECESSARY ON NEWLY DISTURBED AREAS.

B. TOPSOILING
   1. TOPSOIL IN PLACED OVER PREPARED SUBSOIL PRIOR TO ESTABLISHMENT OF PERMANENT VEGETATION. THE PURPOSE IS TO PROVIDE A SUITABLE SOIL MEDIUM FOR VEGETATIVE GROWTH. SOILS OF CONCERN HAVE A LOW MOISTURE CONTENT, LOW NUTRIENT LEVELS, LOW PH, MATERIALS TOXIC TO PLANTS, AND/OR UNACCEPTABLE SOIL GRADATION.
   2. TOPSOIL SALVAGED FROM AN EXISTING SITE MAY BE USED PROVIDED IT MEETS THE STANDARDS AS SET FORTH IN THE SPECIFICATION. TYPICALLY, THE DEPTH OF TOPSOIL TO BE SALVAGED FOR A GIVEN SOIL TYPE CAN BE FOUND IN THE REPRESENTATIVE SOIL PROFILE SECTION IN THE SOIL SURVEY PUBLISHED BY USDA-NRCS.
   3. TOPSOILING IS LIMITED TO AREAS HAVING 2:1 OR FLATTER SLOPED WHERE:
      a. THE TEXTURE OF THE EXPOSED SUBSOIL/PARENT MATERIAL IS NOT ADEQUATE TO PRODUCE VEGETATIVE GROWTH.
      b. THE SOIL MATERIAL IS SO SHALLOW THAT THE ROOTING ZONE IS NOT DEEP ENOUGH TO SUPPORT PLANTS OR FURNISH CONTINUING SUPPLIES OF MOISTURE AND PLANT NUTRIENTS.
      c. THE ORIGINAL SOIL TO BE VEGETATED CONTAINS MATERIALS TOXIC TO PLANT GROWTH.
      d. THE SOIL IS SO ACIDIC THAT TREATMENT WITH LIMESTONE IS NOT FEASIBLE.
   4. AREAS HAVING SLOPES STEEPER THAN 2:1 REQUIRE SPECIAL CONSIDERATION AND DESIGN.
   5. TOPSOIL SPECIFICATIONS: SOIL TO BE USED AS TOPSOIL MUST MEET THE FOLLOWING CRITERIA:
      a. TOPSOIL MUST BE A LOAM, SANDY LOAM, CLAY LOAM, SILT LOAM, SANDY CLAY LOAM, OR LOAMY SAND. OTHER SOILS MAY BE USED IF RECOMMENDED BY AN AGRONOMIST OR SOIL SCIENTIST AND APPROVED BY THE APPROPRIATE APPROVAL AUTHORITY.
      b. TOPSOIL MUST BE FREE OF NOXIOUS PLANTS OR PLANT PARTS SUCH AS BERMUDA GRASS, QUACK GRASS, JOHNSON GRASS, NUT SEDGE, POISON IVY, THISTLE, OR OTHERS AS SPECIFIED.
      c. TOPSOIL SUBSTITUTES OR AMENDMENTS, AS RECOMMENDED BY A QUALIFIED AGRONOMIST OR SOIL SCIENTIST AND APPROVED BY THE APPROPRIATE APPROVAL AUTHORITY, MAY BE USED IN LIEU OF NATURAL TOPSOIL.
   6. TOPSOIL APPLICATION
      a. EROSION AND SEDIMENT CONTROL PRACTICES MUST BE MAINTAINED WHEN APPLYING TOPSOIL.
      b. UNIFORMLY DISTRIBUTE TOPSOIL IN A 5 TO 8 INCH LAYER AND LIGHTLY COMPACT TO A MINIMUM THICKNESS OF 4 INCHES. SPREADING IS TO BE PERFORMED IN SUCH A MANNER THAT SODDING OR SEEDING CAN PROCEED WITH A MINIMUM OF ADDITIONAL SOIL PREPARATION AND TILLAGE. ANY IRREGULARITIES IN THE SURFACE RESULTING FROM TOPSOILING OR OTHER OPERATIONS MUST BE CORRECTED IN ORDER TO PREVENT THE FORMATION OF DEPRESSIONS OR WATER POCKETS.
      c. TOPSOIL MUST NOT BE PLACED IS THE TOPSOIL OR SUBSOIL IS IN A FROZEN OR MUDDY CONDITION, WHEN THE SUBSOIL IS EXCESSIVELY WET OR IN A CONDITION THAT MAY OTHERWISE BE DETRIMENTAL TO PROPER GRADING AND SEEDBED PREPARATION.

C. SOIL AMENDMENTS (FERTILIZER AND LIME SPECIFICATIONS)
   1. SOIL TESTS MUST BE PERFORMED TO DETERMINE THE EXACT RATIOS AND APPLICATION RATES FOR BOTH LIME AND FERTILIZER ON SITES HAVING DISTURBED AREAS OF 5 ACRES OR MORE. SOIL ANALYSIS MAY BE PERFORMED BY A RECOGNIZED PRIVATE LABORATORY. SOIL SAMPLES TAKEN FOR ENGINEERING PURPOSES MAY ALSO BE USED FOR CHEMICAL ANALYSES.
   2. FERTILIZERS MUST BE UNIFORM IN COMPOSITION, FREE FLOWING AND SUITABLE FOR ACCURATE APPLICATION BY APPROPRIATE EQUIPMENT. MANURE MAY BE SUBSTITUTED FOR FERTILIZER WITH PRIOR APPROVAL FROM THE APPROPRIATE APPROVAL AUTHORITY. FERTILIZERS MUST ALL BE DELIVERED TO THE SITE FULLY LABELED ACCORDING TO THE APPLICABLE LAWS AND MUST BEAR THE NAME, TRADE NAME, OR TRADEMARK AND WARRANTY OF THE PRODUCER.
   3. LIME MATERIALS MUST BE GROUND LIMESTONE (HYDRATED OR BURNT LIME MAY BE SUBSTITUTED EXCEPT WHEN HYDROSEEDING) WHICH CONTAINS AT LEAST 50 PERCENT TOTAL OXIDES (CALCIUM OXIDE PLUS MAGNESIUM OXIDE). LIMESTONE MUST BE GROUND TO SUCH FINENESS THAT AT LEAST 50 PERCENT WILL PASS THROUGH A #100 MESH SIEVE AND 98 TO 100 PERCENT WILL PASS THROUGH A #20 MESH SIEVE.
   4. LIME AND FERTILIZER ARE TO BE EVENLY DISTRIBUTED AND INCORPORATED INTO THE TOP 3 TO 5 INCHES OF SOIL BY DISKING OR OTHER SUITABLE MEANS.
   5. WHERE THE SUBSOIL IS EITHER HIGHLY ACIDIC COMPOSED OF HEAVY CLAYS, SPREAD GROUND LIMESTONE AT THE RATE OF 4 TO 8 TONS/ACRE (200-400 POUNDS PER 1,000 SQUARE FEET) PRIOR TO THE PLACEMENT OF TOPSOIL.

SOIL INFORMATION

SYMBOL	NAME	HYDROLOGIC SOIL GROUP
HuA	HURLOCK LOAMY SAND	D
MuA	MULLICA-BERRYLAND COMPLEX	D
UwB	URBAN LAND-UDORTHENTHS COMPLEX	D

SOIL CLASSIFICATION OBTAINED FROM NRCS-WEB SOIL SURVEY ON APRIL 14, 2026.

TEMPORARY SEEDING SUMMARY

HARDINESS ZONE (FROM FIGURE B.3): 7B SEED MIXTURE (FROM TABLE B.1):					FERTILIZER RATE (10-20-20)	LIME RATE
NO.	SPECIES	APPL. RATE (LBS/AC)	SEEDING DATES	SEEDING DEPTHS		
	ANNUAL RYEGRASS	40	2/15 TO 4/30 8/15 TO 11/30	0.5	436LBS/AC. 10LBS/1000SF	2 TONS/AC 90LBS/1000SF

PERMANENT SEEDING SUMMARY

HARDINESS ZONE (FROM FIGURE B.3): 7B SEED MIXTURE (FROM TABLE B.3): 1					FERTILIZER RATE (10-20-20)			LIME RATE
NO.	SPECIES	APPL. RATE (LBS/AC)	SEEDING DATES	SEEDING DEPTHS	N	P205	K20	
1	COASTAL PANIC GRASS	10	2/15 TO 4/30 5/1 TO 5/31	¼ TO ½	45LBS/AC 1LBS/1000SF	90LBS/AC 2LBS/1000SF	90LBS/AC 2LBS/1000SF	2 TONS/AC 90LBS/1000SF
	CREEPING RED FESCUE	15	2/15 TO 4/30 5/1 TO 5/31	¼ TO ½				
	PARTRIDGE PEA	4	2/15 TO 4/30 5/1 TO 5/31	¼ TO ½				

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MYSTIC HARBOUR WWTP BIOSOLIDS UPGRADE & BUILDING REHABILITATION STORMWATER MANAGEMENT PLANS

WEST OCEAN CITY, MARYLAND



8/28/2026

EROSION AND SEDIMENT CONTROL NOTES

SCALE	: NO SCALE
DESIGN BY	: JRS
DRAWN BY	: RFT
CHECKED BY	: CJP
GMB FILE	: 250196
DATE	: AUG 2026

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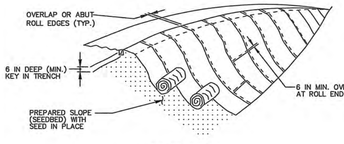
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G:\Projects\2025\250196 Mystic Harbour WWTP Biosolids UG Design\Drawings\Working Sets\Concept Plan\C1.2 EROSION AND SEDIMENT CONTROL NOTES.dwg, 8/27/2026, Fredy D. Hernandez-Mejia

PLOT CODE
PEN1-RED .006 INCHES (.15mm)
PEN2-YELLOW .007 INCHES (.18mm)
PEN3-GREEN .010 INCHES (.25mm)
PEN4-CYAN .014 INCHES (.35mm)
PEN5-BLUE .020 INCHES (.50mm)
PEN6-MAGENTA .027 INCHES (.70mm)
PEN7-WHITE .039 INCHES (1.00mm)

DETAIL B-4-6-B TEMPORARY SOIL STABILIZATION MATTING SLOPE APPLICATION

STANDARD SYMBOL: TSSMS – * lb/ft² (* INCLUDE SHEAR STRESS)



ISOMETRIC VIEW

CONSTRUCTION SPECIFICATIONS

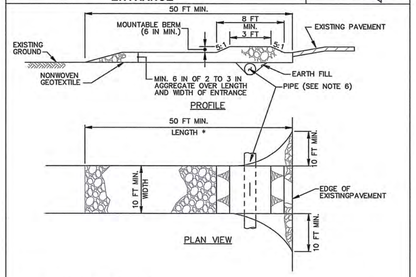
1. USE MATTING THAT HAS A DESIGN VALUE FOR SHEAR STRESS EQUAL TO OR HIGHER THAN THE SHEAR STRESS DESIGNATED ON APPROVED PLANS.
2. USE TEMPORARY SOIL STABILIZATION MATTING MADE OF DEGRADABLE (LASTS 6 MONTHS MINIMUM) NATURAL OR MAN-MADE FIBERS (MOSTLY ORGANIC). MAT MUST HAVE UNIFORM THICKNESS AND DISTRIBUTION OF FIBERS THROUGHOUT AND BE SMOLDER RESISTANT. CHEMICALS USED IN THE MAT MUST BE NON-LEACHING AND NON-TOXIC TO VEGETATION AND SEED GERMINATION AND NON-INJURIOUS TO THE SKIN. IF PRESENT, NETTING MUST BE EXTRUDED PLASTIC WITH A MAXIMUM MESH OPENING OF 2x2 INCHES AND SUFFICIENTLY BONDED OR SEWN ON 2 INCH CENTERS ALONG LONGITUDINAL AXIS OF THE MATERIAL TO PREVENT SEPARATION OF THE NET FROM THE PARENT MATERIAL.
3. SECURE MATTING USING STEEL STAPLES, WOOD STAKES, OR BIODEGRADABLE EQUIVALENT. STAPLES MUST BE "U" OR "T" SHAPED STEEL WIRE HAVING A MINIMUM GAUGE OF NO. 11 AND NO. 8 RESPECTIVELY. "U" SHAPED STAPLES MUST AVERAGE 1 TO 1½ INCHES WIDE AND BE A MINIMUM OF 6 INCHES LONG. "T" SHAPED STAPLES MUST HAVE A MINIMUM 8 INCH MAIN LEG, A MINIMUM 1 INCH SECONDARY LEG, AND A MINIMUM 4 INCH HEAD. WOOD STAKES MUST BE ROUGH-SAWN HARDWOOD, 12 TO 24 INCHES IN LENGTH, 1x3 INCH IN CROSS SECTION, AND WEDGE SHAPED AT THE BOTTOM.
4. PERFORM FINAL GRADING, TOPSOIL APPLICATION, SEEDBED PREPARATION, AND PERMANENT SEEDING IN ACCORDANCE WITH SPECIFICATIONS. PLACE MATTING WITHIN 48 HOURS OF COMPLETING SEEDING OPERATIONS UNLESS END OF WORKDAY STABILIZATION IS SPECIFIED ON THE APPROVED EROSION & SEDIMENT CONTROL PLAN.
5. UNROLL MATTING DOWNSLOPE. LAY MAT SMOOTHLY AND FIRMLY UPON THE SEEDED SURFACE. AVOID STRETCHING THE MATTING.
6. OVERLAP OR ABUT ROLL EDGES PER MANUFACTURER RECOMMENDATIONS. OVERLAP ROLL ENDS BY 6 INCHES (MINIMUM), WITH THE UPSLOPE MAT OVERLAPPING ON TOP OF THE DOWNSLOPE MAT.
7. KEY IN THE UPSLOPE END OF MAT 6 INCHES (MINIMUM) BY DIGGING A TRENCH, PLACING THE MATTING ROLL END IN THE TRENCH, STAPLING THE MAT IN PLACE, REPLACING THE EXCAVATED MATERIAL, AND TAMPING TO SECURE THE MAT END IN THE KEY.
8. STAPLE/STAKE MAT IN A STAGGERED PATTERN ON 4 FOOT (MAXIMUM) CENTERS THROUGHOUT AND 2 FOOT (MAXIMUM) CENTERS ALONG SEAMS, JOINTS, AND ROLL ENDS.
9. ESTABLISH AND MAINTAIN VEGETATION SO THAT REQUIREMENTS FOR ADEQUATE VEGETATIVE ESTABLISHMENT ARE CONTINUOUSLY MET IN ACCORDANCE WITH SECTION B-4 VEGETATIVE STABILIZATION.

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

DETAIL B-1 STABILIZED CONSTRUCTION ENTRANCE

STANDARD SYMBOL: SCE



CONSTRUCTION SPECIFICATIONS

1. PLACE STABILIZED CONSTRUCTION ENTRANCE IN ACCORDANCE WITH THE APPROVED PLAN. VEHICLES MUST TRAVEL OVER THE ENTIRE LENGTH OF THE SCE. USE MINIMUM LENGTH OF 50 FEET (*30 FEET FOR SINGLE RESIDENCE LOT). USE MINIMUM WIDTH OF 10 FEET. FLARE SCE 10 FEET MINIMUM AT THE EXISTING ROAD TO PROVIDE A TURNING RADIUS.
2. PIPE ALL SURFACE WATER FLOWING TO OR DIVERTED TOWARD THE SCE UNDER THE ENTRANCE, MAINTAINING POSITIVE DRAINAGE. PROTECT PIPE INSTALLED THROUGH THE SCE WITH A MOUNTABLE BERM WITH 5:1 SLOPES AND A MINIMUM OF 12 INCHES OF STONE OVER THE PIPE. PROVIDE PIPE AS SPECIFIED ON APPROVED PLAN. WHEN THE SCE IS LOCATED AT A HIGH SPOT AND HAS NO DRAINAGE TO CONVEY, A PIPE IS NOT NECESSARY. A MOUNTABLE BERM IS REQUIRED WHEN SCE IS NOT LOCATED AT A HIGH SPOT.
3. PREPARE SUBGRADE AND PLACE NONWOVEN GEOTEXTILE, AS SPECIFIED IN SECTION H-1 MATERIALS.
4. PLACE CRUSHED AGGREGATE (2 TO 3 INCHES IN SIZE) OR EQUIVALENT RECYCLED CONCRETE (WITHOUT REBAR) AT LEAST 6 INCHES DEEP OVER THE LENGTH AND WIDTH OF THE SCE.
5. MAINTAIN ENTRANCE IN A CONDITION THAT MINIMIZES TRACKING OF SEDIMENT. ADD STONE OR MAKE OTHER REPAIRS AS CONDITIONS DEMAND TO MAINTAIN CLEAN SURFACE, MOUNTABLE BERM, AND SPECIFIED DIMENSIONS. IMMEDIATELY REMOVE STONE AND/OR SEDIMENT SPILLED, DROPPED, OR TRACKED ONTO ADJACENT ROADWAY BY VACUUMING, SCRAPING, AND/OR SWEEPING. WASHING ROADWAY TO REMOVE MUD TRACKED ONTO PAVEMENT IS NOT ACCEPTABLE UNLESS WASH WATER IS DIRECTED TO AN APPROVED SEDIMENT CONTROL PRACTICE.

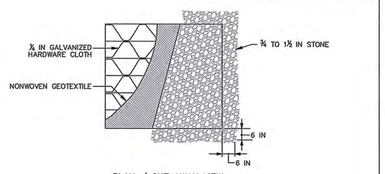
MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL E-9-2 AT-GRADE INLET PROTECTION

STANDARD SYMBOL: AGIP

MAXIMUM DRAINAGE AREA = 1 ACRE



CROSS SECTION

CONSTRUCTION SPECIFICATIONS

1. USE NONWOVEN GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS.
2. LIFT GRATE AND WRAP WITH NONWOVEN GEOTEXTILE TO COMPLETELY COVER ALL OPENINGS. SECURE WITH WIRE TIES AND SET GRATE BACK IN PLACE.
3. PLACE CLEAN ¾ TO 1½ INCH STONE OR EQUIVALENT RECYCLED CONCRETE 6 INCHES THICK ON THE GRATE.
4. 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.

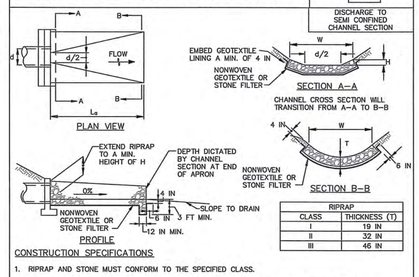
MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL D-4-1-A ROCK OUTLET PROTECTION I

STANDARD SYMBOL: ROP1

DISCHARGE TO SEMI CONFINED CHANNEL SECTION



RIPRAP	
CLASS	THICKNESS (T)
I	19 IN
II	32 IN
III	46 IN

CONSTRUCTION SPECIFICATIONS

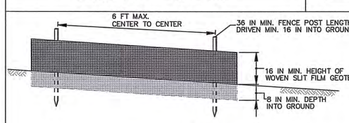
1. RIPRAP AND STONE MUST CONFORM TO THE SPECIFIED CLASS.
2. USE NONWOVEN GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS, AND PROTECT FROM PUNCTURING, CUTTING, OR TEARING. REPAIR ANY DAMAGE OTHER THAN AN OCCASIONAL SMALL HOLE BY PLACING ANOTHER PIECE OF GEOTEXTILE OVER THE DAMAGED PART OR BY COMPLETELY REPLACING THE GEOTEXTILE. PROVIDE A MINIMUM OF ONE FOOT OVERLAP FOR ALL REPAIRS AND FOR JOINING TWO PIECES OF GEOTEXTILE TOGETHER.
3. PREPARE THE SUBGRADE FOR GEOTEXTILE OR STONE FILTER (⅜ TO 1½ INCH STONE FOR 6 INCH MINIMUM DEPTH) AND RIPRAP TO THE REQUIRED LINES AND GRADES. COMPACT ANY FILL REQUIRED IN THE SUBGRADE TO A DENSITY OF APPROXIMATELY THAT OF THE SURROUNDING UNDISTURBED MATERIAL.
4. EXTEND GEOTEXTILE AT LEAST 6 INCHES BEYOND EDGES OF RIPRAP AND EMBED AT LEAST 4 INCHES AT SIDES OF THE RIPRAP.
5. CONSTRUCT RIPRAP OUTLET TO FULL COURSE THICKNESS IN ONE OPERATION AND IN SUCH A MANNER AS TO AVOID DISPLACEMENT OF UNDERLYING MATERIALS. PLACE STONE FOR RIPRAP OUTLET IN A MANNER THAT WILL ENSURE THAT IT IS REASONABLY HOMOGENOUS WITH THE SMALLER STONES AND SPALLS FILLING THE VOIDS BETWEEN THE LARGER STONES. PLACE RIPRAP IN A MANNER TO PREVENT DAMAGE TO THE STONE FILTER BLANKET OR GEOTEXTILE. HAND PLACE TO THE EXTENT NECESSARY.
6. WHERE NO ENDWALL IS USED, CONSTRUCT THE UPSTREAM END OF THE APRON SO THAT THE WIDTH IS TWO TIMES THE DIAMETER OF THE OUTLET PIPE, AND EXTEND THE STONE UNDER THE OUTLET BY A MINIMUM OF 18 INCHES.
7. CONSTRUCT APRON WITH 0% SLOPE ALONG ITS LENGTH AND WITHOUT OBSTRUCTIONS. PLACE STONE SO THAT IT BLENDS IN WITH EXISTING GROUND.
8. MAINTAIN LINE, GRADE, AND CROSS SECTION. KEEP OUTLET FREE OF EROSION. REMOVE ACCUMULATED SEDIMENT AND DEBRIS. AFTER HIGH FLOWS INSPECT FOR SCOUR AND DISLODGED RIPRAP. MAKE NECESSARY REPAIRS IMMEDIATELY.

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

DETAIL E-1 SILT FENCE

STANDARD SYMBOL: SF



1 OF 2

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

DETAIL E-1 SILT FENCE

STANDARD SYMBOL: SF

CONSTRUCTION SPECIFICATIONS

1. USE WOOD POSTS 1¾ X 1¾ ± 1/8 INCH (MINIMUM) SQUARE CUT OF SOUND QUALITY HARDWOOD. AS AN ALTERNATIVE TO WOODEN POST USE STANDARD "T" OR "U" SECTION STEEL POSTS WEIGHING NOT LESS THAN 1 POUND PER LINEAR FOOT.
2. USE 36 INCH MINIMUM POSTS DRIVEN 16 INCH MINIMUM INTO GROUND NO MORE THAN 6 FEET APART.
3. USE WOVEN SLIT FILM GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS AND FASTEN GEOTEXTILE SECURELY TO UPSLOPE SIDE OF FENCE POSTS WITH WIRE TIES OR STAPLES AT TOP AND MID-SECTION.
4. 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.
5. EMBED GEOTEXTILE A MINIMUM OF 8 INCHES VERTICALLY INTO THE GROUND. BACKFILL AND COMPACT THE SOIL ON BOTH SIDES OF FABRIC.
6. WHERE TWO SECTIONS OF GEOTEXTILE ADJOIN: OVERLAP, TWIST, AND STAPLE TO POST IN ACCORDANCE WITH THIS DETAIL.
7. EXTEND BOTH ENDS OF THE 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 SILT FENCE.
8. REMOVE ACCUMULATED SEDIMENT AND DEBRIS WHEN BULGES DEVELOP IN SILT FENCE OR WHEN SEDIMENT REACHES 25% OF FENCE HEIGHT. REPLACE GEOTEXTILE IF TORN. IF UNDERMINING OCCURS, REINSTALL FENCE.

2 OF 2

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

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

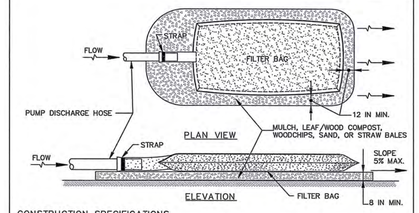
1. The stockpile location and all related sediment control practices must be clearly indicated on the erosion and sediment control plan.
2. The footprint of the stockpile must be sized to accommodate the anticipated volume of material and based on a side slope ratio no steeper than 2:1. Benching must 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.

DETAIL F-4 FILTER BAG

STANDARD SYMBOL: FB



CONSTRUCTION SPECIFICATIONS

1. TIGHTLY SEAL SLEEVE AROUND THE PUMP DISCHARGE HOSE WITH A STRAP OR SIMILAR DEVICE.
2. 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.
3. 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.
4. 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.
5. 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/FT²	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

6. 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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MYSTIC HARBOUR WWTP BIOSOLIDS UPGRADE & BUILDING REHABILITATION STORMWATER MANAGEMENT PLANS

WEST OCEAN CITY, MARYLAND

STATE OF MARYLAND — CHRISTOPHER J. PHILLIPS — 56492 — PROFESSIONAL ENGINEER

8/28/2026

EROSION AND SEDIMENT CONTROL DETAILS

SCALE	: NO SCALE
DESIGN BY	: JRS
DRAWN BY	: RFT
CHECKED BY	: CJP
GMB FILE	: 250196
DATE	: AUG 2026

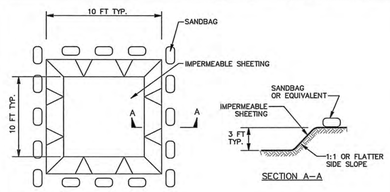
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PLOT CODE
PDW-BLUE 030 INCHES (.030mm)
PDW-GREEN 010 INCHES (.25mm)
PDW-HARDEN 007 INCHES (.18mm)
PDW-WHITE 030 INCHES (.030mm)
PDW-YELLOW 007 INCHES (.18mm)
PDW-RED 005 INCHES (.13mm)

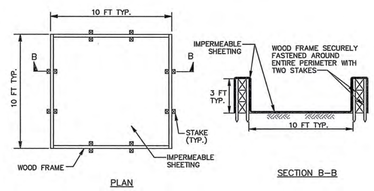
DETAIL H-6 ONSITE CONCRETE WASHOUT STRUCTURE

STANDARD SYMBOL: CWS



PLAN — SECTION A–A

EXCAVATED WASHOUT STRUCTURE



PLAN — SECTION B–B

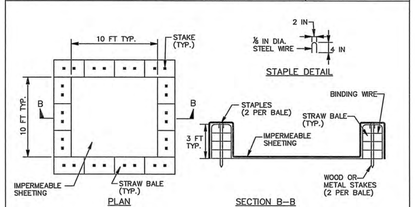
WASHOUT STRUCTURE WITH WOOD PLANKS

1 OF 2

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

DETAIL H-6 ONSITE CONCRETE WASHOUT STRUCTURE

STANDARD SYMBOL: CWS



PLAN

STAPLE DETAIL

SECTION B–B

NOTE: CAN BE TWO STACKED BALES OR PARTIALLY EXCAVATED TO REACH 3 FT DEPTH

WASHOUT STRUCTURE WITH STRAW BALES

CONSTRUCTION SPECIFICATIONS

1. LOCATE WASHOUT STRUCTURE A MINIMUM OF 50 FEET AWAY FROM OPEN CHANNELS, STORM DRAIN INLETS, SENSITIVE AREAS, WETLANDS, BUFFERS AND WATER COURSES AND AWAY FROM CONSTRUCTION TRAFFIC.
2. SIZE WASHOUT STRUCTURE FOR VOLUME NECESSARY TO CONTAIN WASH WATER AND SOLIDS AND MAINTAIN AT LEAST 4 INCHES OF FREEBOARD. TYPICAL DIMENSIONS ARE 10 FEET X 10 FEET X 3 FEET DEEP.
3. PREPARE SOIL BASE FREE OF ROCKS OR OTHER DEBRIS THAT MAY CAUSE TEARS OR HOLES IN THE LINER. FOR LINER, USE 10 MIL OR THICKER UV RESISTANT, IMPERMEABLE SHEETING, FREE OF HOLES AND TEARS OR OTHER DEFECTS THAT COMPROMISE IMPERMEABILITY OF THE MATERIAL.
4. PROVIDE A SIGN FOR THE WASHOUT IN CLOSE PROXIMITY TO THE FACILITY.
5. KEEP CONCRETE WASHOUT STRUCTURE WATER TIGHT. REPLACE IMPERMEABLE LINER IF DAMAGED (E.G., RIPPED OR PUNCTURED). EMPTY OR REPLACE WASHOUT STRUCTURE THAT IS 75 PERCENT FULL, AND DISPOSE OF ACCUMULATED MATERIAL PROPERLY. DO NOT REUSE PLASTIC LINER. WET–VACUUM STORED LIQUIDS THAT HAVE NOT EVAPORATED AND DISPOSE OF IN AN APPROVED MANNER. PRIOR TO FORECASTED RAINSTORMS, REMOVE LIQUIDS OR COVER STRUCTURE TO PREVENT OVERFLOWS. REMOVE HARDENED SOLIDS, WHOLE OR BROKEN UP, FOR DISPOSAL OR RECYCLING. MAINTAIN RUNOFF DIVERSION AROUND EXCAVATED WASHOUT STRUCTURE UNTIL STRUCTURE IS REMOVED.

2 OF 2

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

PLOT CODE

PEN1–RED	PEN2–YELLOW	PEN3–GREEN	PEN4–CYAN	PEN5–BLUE	PEN6–MAGENTA	PEN7–WHITE
.006 INCHES (.15mm)	.007 INCHES (.18mm)	.010 INCHES (.25mm)	.014 INCHES (.30mm)	.020 INCHES (.50mm)	.027 INCHES (.70mm)	.039 INCHES (1.00mm)

G:\Projects\2025\250196 Mystic Harbour WWTP Biosolids UG Design\Drawings\Working Sets\Concept Plan\C1-4 EROSION AND SEDIMENT CONTROL DETAILS.dwg, 8/27/2026, Fredy D. Hernandez-Mejia

PRINTS ISSUED FOR: REVIEW

NO.	REVISIONS	DATE

GMB
GEORGE, MILES & BUHR, LLC
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410-742-3115 FAX 410-548-5790
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MYSTIC HARBOUR WWTP BIOSOLIDS UPGRADE & BUILDING REHABILITATION STORMWATER MANAGEMENT PLANS

WEST OCEAN CITY, MARYLAND

STATE OF MARYLAND — STEPHEN J. WHITEFIELD — 54452 — PROFESSIONAL ENGINEER

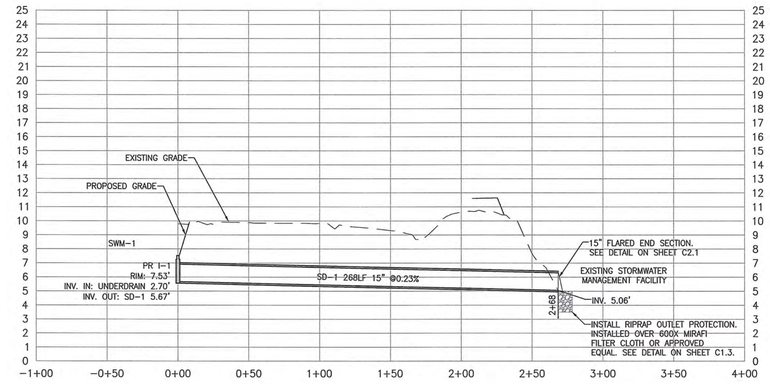
8/28/2026

EROSION AND SEDIMENT CONTROL DETAILS

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DRAWN BY	: RFT
CHECKED BY	: CJP
GMB FILE	: 250196
DATE	: AUG 2026

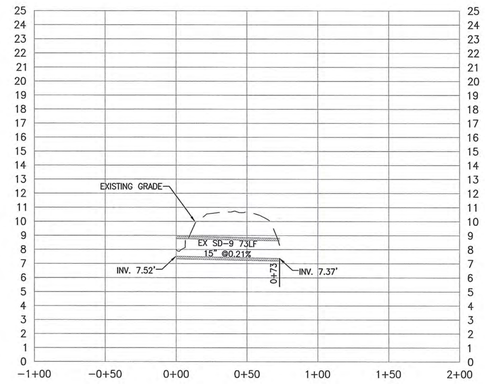
SHEET NO. C1.4

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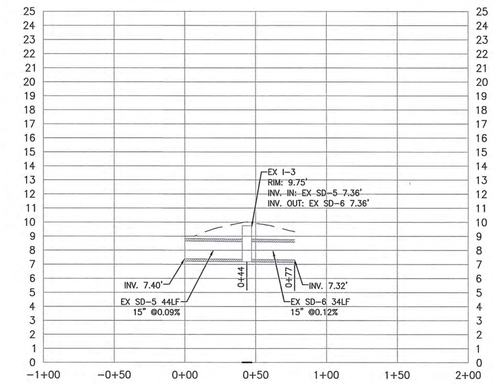
PROFILE OF PR I-1 TO PR ES-1

VERTICAL SCALE: 1"=5'
HORIZONTAL SCALE: 1"=50'



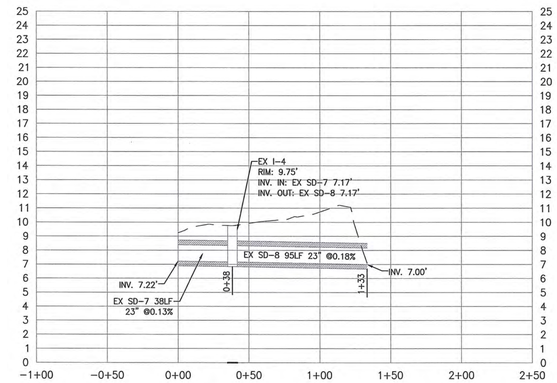
PROFILE OF EX ES-7 TO EX ES-8

VERTICAL SCALE: 1"=5'
HORIZONTAL SCALE: 1"=50'



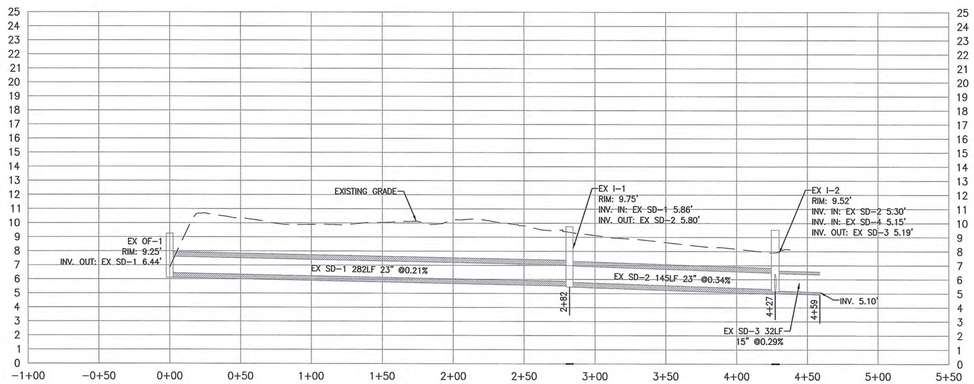
PROFILE OF EX ES-3 TO EX ES-4

VERTICAL SCALE: 1"=5'
HORIZONTAL SCALE: 1"=50'



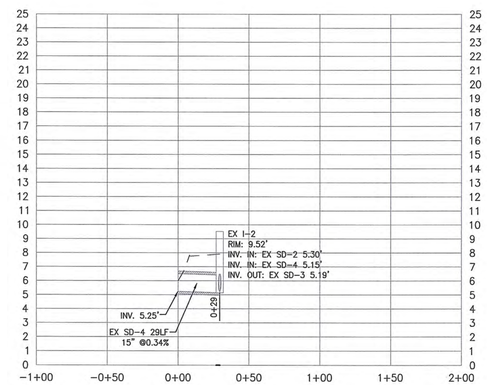
PROFILE OF EX ES-5 TO EX ES-6

VERTICAL SCALE: 1"=5'
HORIZONTAL SCALE: 1"=50'



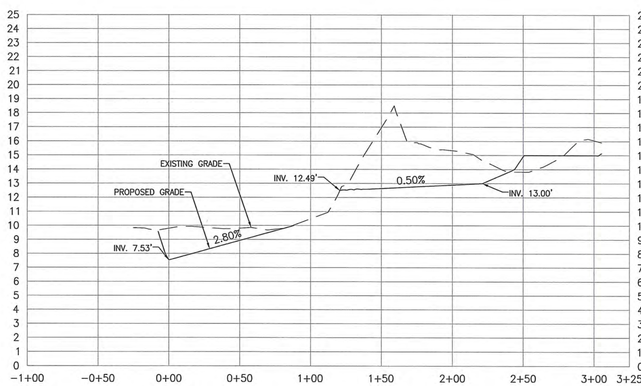
PROFILE OF EX OF-1 TO EX ES-1

VERTICAL SCALE: 1"=5'
HORIZONTAL SCALE: 1"=50'



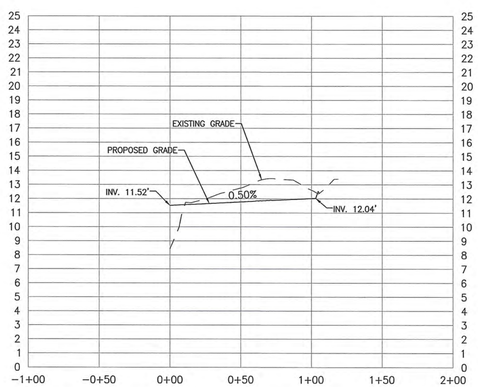
PROFILE OF EX ES-2 TO EX I-2

VERTICAL SCALE: 1"=5'
HORIZONTAL SCALE: 1"=50'



PROFILE OF PROPOSED M-8 GRASS SWALE (SWM-1)

VERTICAL SCALE: 1"=5'
HORIZONTAL SCALE: 1"=50'



PROFILE OF PROPOSED CONVEYANCE SWALE

VERTICAL SCALE: 1"=5'
HORIZONTAL SCALE: 1"=50'

PRINTS ISSUED FOR: REVIEW

NO.	REVISIONS	DATE

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MYSTIC HARBOUR WWTP BIOSOLIDS UPGRADE & BUILDING REHABILITATION STORMWATER MANAGEMENT PLANS

TOWN OR COUNTY, STATE

STATE OF MARYLAND · CHRISTOPHER J. PETTER · 26491 · PROFESSIONAL ENGINEER

8/28/2026

STORMWATER PROFILES

SCALE	: 1" = 50'
DESIGN BY	: JRS
DRAWN BY	: RFT
CHECKED BY	: CJP
GMB FILE	: 250196
DATE	: AUG 2026

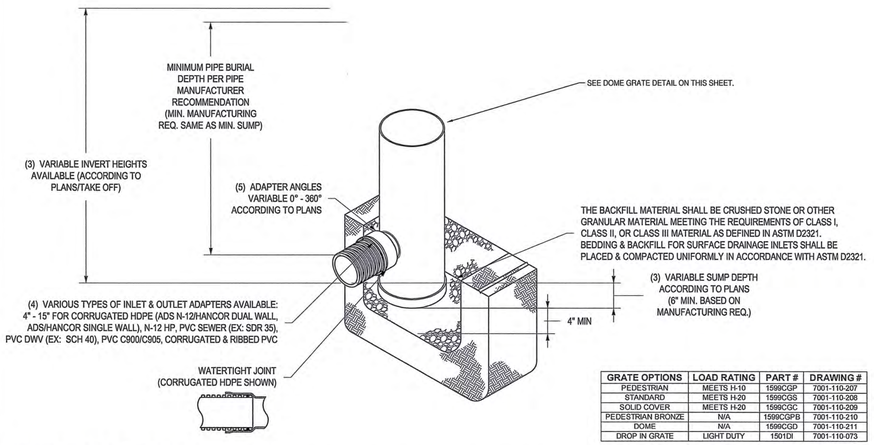
SHEET NO. C2.0

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PLOT CODE
PEN1-RED .006 INCHES (.15mm)
PEN2-YELLOW .007 INCHES (.18mm)
PEN3-GREEN .010 INCHES (.25mm)
PEN4-BLUE .014 INCHES (.35mm)
PEN5-MAGENTA .027 INCHES (.70mm)
PEN6-WHITE .039 INCHES (1.00mm)

G:\Projects\2025\250196 Mystic Harbour WWTP Biosolids UG Design\Drawings\Working Set\Concept Plan\C2.0 Stormwater Profiles.dwg, 8/27/2026, Fredy D. Hernandez-Mejia

NYLOPLAST 15" DRAIN BASIN: 2815AG _ _ X



GRATE OPTIONS	LOAD RATING	PART #	DRAWING #
PEDESTRIAN	MEETS H-10	1599CGP	7001-110-207
STANDARD	MEETS H-20	1599CGS	7001-110-208
SOLID COVER	MEETS H-20	1599CGC	7001-110-209
PEDESTRIAN BRONZE	N/A	1599CGPB	7001-110-210
DOME	N/A	1599CGD	7001-110-211
DROP IN GRATE	LIGHT DUTY	1501DI	7001-110-073

1 - GRATES/SOLID COVER SHALL BE DUCTILE IRON PER ASTM A536 GRADE 70-50-05, WITH THE EXCEPTION OF THE BRONZE GRATE.
2 - FRAMES SHALL BE DUCTILE IRON PER ASTM A536 GRADE 70-50-05
3 - DRAIN BASIN TO BE CUSTOM MANUFACTURED ACCORDING TO PLAN DETAILS. RISERS ARE NEEDED FOR BASINS OVER 84" DUE TO SHIPPING RESTRICTIONS. SEE DRAWING NO. 7001-110-055
4 - DRAINAGE CONNECTION STUB JOINT TIGHTNESS SHALL CONFORM TO ASTM D3212 FOR CORRUGATED HDPE (ADS N-12/HANCOR DUAL WALL), N-12 HP, & PVC SEWER.
5 - ADAPTERS CAN BE MOUNTED ON ANY ANGLE 0° TO 360°. TO DETERMINE MINIMUM ANGLE BETWEEN ADAPTERS SEE DRAWING NO. 7001-110-012.

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DRAWN BY	EBC	MATERIAL	
DATE	03-30-06		
REVISED BY	NMH	PROJECT NO./NAME	
DATE	03-14-16		
DWG SIZE	A	SCALE 1:25	SHEET 1 OF 1

ADS Nyloplast
3130 VERONA AVE
BUFORD, GA 30518
PHN (770) 932-2443
FAX (770) 932-2490
www.nyloplast-us.com

TITLE: 15 IN DRAIN BASIN QUICK SPEC INSTALLATION DETAIL

DWG NO. 7001-110-190 REV E

ADS, Inc. Drainage Handbook *Specifications ♦ 1-37*

ADS FLARED END SECTION SPECIFICATION

Scope
This specification describes 12- through 36-inch (300 to 900mm) ADS Flared End Sections for use in culvert and drainage outlet applications.

Requirements
The ADS Flared End Section shall be high density polyethylene meeting ASTM D3350 minimum cell classification 213320C; contact manufacturer for additional cell classification information. When provided, the metal threaded fastening rod shall be stainless steel.

Installation
Installation shall be in accordance with ADS installation instructions and with those issued by state or local authorities. Contact your local ADS representative or visit www.ads-pipe.com for the latest installation instructions.

	PIPE DIAMETER, in (mm)					
Diameter in (mm)	12 (300)	15 (375)	18 (450)	24 (600)	30 (750)	36 (900)
A in (mm)	6.5 (165)	6.5 (165)	7.5 (191)	7.5 (191)	7.5 (191)	7.5 (191)
B (max) in (mm)	10.0 (254)	10.0 (254)	15.0 (381)	18.0 (475)	22.0 (559)	25.0 (635)
H in (mm)	6.5 (165)	6.5 (165)	6.5 (165)	8.5 (165)	8.6 (218)	8.6 (218)
L in (mm)	25.0 (635)	25.0 (635)	32.0 (813)	36.0 (914)	58.0 (1473)	58.0 (1473)
W in (mm)	29.0 (737)	29.0 (737)	35.0 (889)	45.0 (1143)	63.0 (1600)	63.0 (1600)

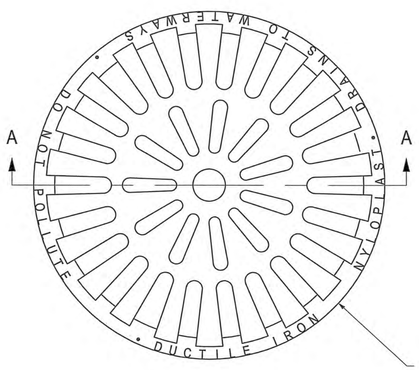
*Product detail may differ slightly from actual product appearance

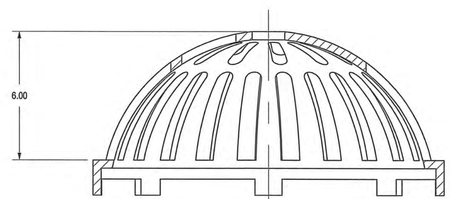


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1599CGD

APPROX. DRAIN AREA = 122.07 SQ IN
APPROX. WEIGHT = 26.50 LBS





SECTION A-A

DIMENSIONS ARE FOR REFERENCE ONLY
ACTUAL DIMENSIONS MAY VARY
DIMENSIONS ARE IN INCHES
QUALITY: MATERIALS SHALL CONFORM TO ASTM A536 GRADE 70-50-05
PAINT: CASTINGS ARE FURNISHED WITH A BLACK PAINT
LOCKING DEVICE AVAILABLE UPON REQUEST

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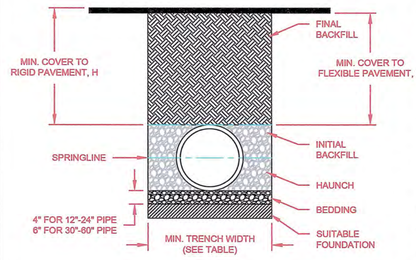
DRAWN BY	EBC	MATERIAL	DUCTILE IRON
DATE	03-07-06		
REVISED BY	CCA	PROJECT NO./NAME	
DATE	08-30-13		
DWG SIZE	A	SCALE 1:4	SHEET 1 OF 1

ADS Nyloplast
3130 VERONA AVE
BUFORD, GA 30518
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FAX (770) 932-2490
www.nyloplast-us.com

TITLE: 15 IN DOME GRATE

DWG NO. 7001-110-211 REV E

RECOMMENDED MINIMUM TRENCH WIDTHS



PIPE DIAM.	MIN. TRENCH WIDTH
4" (100mm)	21" (533mm)
6" (150mm)	23" (584mm)
8" (200mm)	26" (660mm)
10" (250mm)	28" (711mm)
12" (300mm)	30" (762mm)
15" (375mm)	34" (864mm)
18" (450mm)	39" (991mm)
24" (600mm)	48" (1219mm)
30" (750mm)	56" (1422mm)
36" (900mm)	64" (1626mm)
42" (1050mm)	72" (1829mm)
48" (1200mm)	80" (2032mm)
60" (1500mm)	96" (2438mm)

MINIMUM RECOMMENDED COVER BASED ON VEHICLE LOADING CONDITIONS**

PIPE DIAM.	SURFACE LIVE LOADING CONDITION: H-25	SURFACE LIVE LOADING CONDITION: HEAVY CONSTRUCTION (75T AXLE LAOD) *
12" - 48" (300mm - 1200mm)	12" (305mm)	48" (1219mm)
60" (1500mm)	24" (610mm)	60" (1524mm)

* VEHICLES IN EXCESS OF 75T MAY REQUIRE ADDITIONAL COVER
**SEE BACKFILL REQUIREMENTS IN NOTE 6.

MAXIMUM RECOMMENDED COVER BASED ON VECHICLE LOADING CONDITIONS

PIPE DIAM.	CLASS I		CLASS II		CLASS III
	COMPACTED	DUMPED	95%	90%	95%
4" (100mm)	37 (11.3m)	18 (5.5m)	25 (7.6m)	18 (5.5m)	18 (5.5m)
6" (150mm)	44 (13.4m)	20 (6.1m)	29 (8.8m)	20 (6.1m)	21 (6.4m)
8" (200mm)	32 (9.8m)	15 (4.6m)	22 (6.7m)	15 (4.6m)	16 (4.9m)
10" (250mm)	38 (11.6m)	18 (5.5m)	26 (7.9m)	18 (5.5m)	18 (5.5m)
12" (300mm)	35 (10.7m)	17 (5.2m)	24 (7.3m)	17 (5.2m)	17 (5.2m)
15" (375mm)	38 (11.6m)	17 (5.2m)	25 (7.6m)	17 (5.2m)	18 (5.5m)
18" (450mm)	36 (11.0m)	17 (5.2m)	24 (7.3m)	17 (5.2m)	17 (5.2m)
24" (600mm)	28 (8.5m)	13 (4.0m)	20 (6.1m)	13 (4.0m)	14 (4.3m)
30" (750mm)	28 (8.5m)	13 (4.0m)	20 (6.1m)	13 (4.0m)	14 (4.3m)
36" (900mm)	26 (7.9m)	12 (3.7m)	18 (5.5m)	13 (4.0m)	13 (4.0m)
42" (1050mm)	23 (7.0m)	11 (3.4m)	16 (4.9m)	11 (3.4m)	11 (3.4m)
48" (1200mm)	25 (7.6m)	11 (3.4m)	17 (5.2m)	11 (3.4m)	12 (3.7m)
60" (1500mm)	25 (7.6m)	11 (3.4m)	17 (5.2m)	11 (3.4m)	12 (3.7m)

FILL HEIGHT TABLE GENERATED USING AASHTO SECTION 12, LOAD RESISTANCE FACTOR DESIGN (LRFD) PROCEDURE WITH THE FOLLOWING ASSUMPTIONS:
NO HYDROSTATIC PRESSURE,
UNIT WEIGHT OF SOIL (Ys) = 120 PCF

NOTES:

1. ALL PIPE SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH ASTM D2321, "STANDARD PRACTICE FOR UNDERGROUND INSTALLATION OF THERMOPLASTIC PIPE FOR SEWERS AND OTHER GRAVITY FLOW APPLICATIONS", LATEST ADDITION

2. MEASURES SHOULD BE TAKEN TO PREVENT MIGRATION OF NATIVE FINES INTO BACKFILL MATERIAL, WHEN REQUIRED.

3. FOUNDATION: WHERE THE TRENCH BOTTOM IS UNSTABLE, THE CONTRACTOR SHALL EXCAVATE TO A DEPTH REQUIRED BY THE ENGINEER AND REPLACE WITH SUITABLE MATERIAL AS SPECIFIED BY THE ENGINEER. AS AN ALTERNATIVE AND AT THE DISCRETION OF THE DESIGN ENGINEER, THE TRENCH BOTTOM MAY BE STABILIZED USING A GEOTEXTILE MATERIAL.

4. BEDDING: SUITABLE MATERIAL SHALL BE CLASS I, II OR III. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION FOR MATERIAL SPECIFICATION TO ENGINEER. UNLESS OTHERWISE NOTED BY THE ENGINEER, MINIMUM BEDDING THICKNESS SHALL BE 4" (100mm) FOR 4"-24" (100mm-600mm); 6" (150mm) FOR 30"-60" (750mm-1500mm).

5. INITIAL BACKFILL: SUITABLE MATERIAL SHALL BE CLASS I, II OR III IN THE PIPE ZONE EXTENDING TO THE CROWN OF PIPE. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION FOR MATERIAL SPECIFICATION TO ENGINEER. MATERIAL SHALL BE INSTALLED AS REQUIRED IN ASTM D2321, LATEST EDITION.

6. MINIMUM COVER: MINIMUM COVER, H, IN NON-TRAFFIC APPLICATIONS (GRASS OR LANDSCAPE AREAS) IS 12" FROM THE TOP OF PIPE TO GROUND SURFACE. ADDITIONAL COVER MAY BE REQUIRED TO PREVENT FLOTATION. FOR TRAFFIC APPLICATIONS, MINIMUM COVER, H, IS 12" UP TO 48" DIAMETER PIPE AND 24" OF COVER FOR 60" DIAMETER PIPE, MEASURED FROM TOP OF PIPE TO BOTTOM OF FLEXIBLE PAVEMENT OR TO TOP OF RIGID PAVEMENT. FOR TRAFFIC APPLICATIONS WITH LESS THAN FOUR FEET OF COVER, EMBEDMENT OF THE PIPE SHALL BE USING ONLY A CLASS I OR CLASS II BACKFILL.

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REV.	DESCRIPTION	BY	MM/DD/YY	CHK'D
6	INITIAL BACKFILL	JAB	04/02/20	

TRENCH INSTALLATION DETAIL (N-12 PER AASHTO)
DRAWING NUMBER: STD-101

ADS Advanced Drainage Systems, Inc.
4640 TRUEMAN BLVD
HILLIARD, OHIO 43026

DRAWN BY	TJR
DATE	12/29/16
CHK'D BY	
SCALE	NTS
SHEET	1 OF 1

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SALISBURY, MARYLAND 21801
410-742-3115, FAX 410-548-5790
www.gmbnet.com

MYSTIC HARBOUR WWTP BIOSOLIDS UPGRADE & BUILDING REHABILITATION STORMWATER MANAGEMENT PLANS

WEST OCEAN CITY, MARYLAND

STATE OF MARYLAND — CHRISTOPHER J. PHILLIPS — 56493 — PROFESSIONAL ENGINEER
8/28/2026

STORMWATER DETAILS

SCALE	: NO SCALE
DESIGN BY	: JRS
DRAWN BY	: RFT
CHECKED BY	: CJP
GMB FILE	: 250196
DATE	: AUG 2026

SHEET NO. C2.1

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PLOT CODE
PEN1=RED .004 INCHES (.1mm)
PEN2=YELLOW .007 INCHES (.18mm)
PEN3=GREEN .010 INCHES (.25mm)
PEN4=CYAN .014 INCHES (.35mm)
PEN5=BLUE .020 INCHES (.50mm)
PEN6=MAGENTA .028 INCHES (.70mm)
PEN7=WHITE .039 INCHES (1.00mm)

G:\Projects\2025\250196 Mystic Harbour WWTP Biosolids UG Design\Drawings\Working Sets\Concept Plan\C2.1 STORMWATER DETAILS.dwg, 8/27/2026, Fredy D. Hernandez-Mejia

CONSTRUCTION NOTES

1. CONNECT TO EXISTING SLUDGE FEED PIPE.
2. CONNECT NEW 2–INCH POTABLE WATER TO EXISTING 2–INCH POTABLE WATER WITH 2–INCH TAPPING TEE AND VALVE.
3. CONNECT NEW 3–INCH NON–POTABLE/UTILITY WATER TO EXISTING 3–INCH NON–POTABLE/UTILITY WATER.
4. RE–ROUTE EXISTING 4–INCH CLEAN WATER EFFLUENT AROUND SLUDGE DEWATERING BUILDING AS SHOWN. CONTRACTOR SHALL PROVIDE ALL FITTINGS NECESSARY TO .COMPLETE THE TIE–IN.
5. CONTRACTOR TO CLEAR AND GRUB SITE AS NECESSARY TO CONSTRUCT PROPOSED IMPROVEMENTS.
6. PROVIDE MOW STRIP AROUND FULL PERIMETER OF STRUCTURE. SEE DETAIL SHEET C3.2.
7. FURNISH AND INSTALL BITUMINOUS PAVEMENT. SEE DETAIL SHEET C3.0.
8. MULCH BIN TO BE 10'x10' WITH 6–FOOT TALL SIDES. TO BE CONSTRUCTED FROM 2'x2'x6' CONCRETE BARRIER WALL BLOCK.
9. MOUNTABLE CURB. SEE DETAIL SHEET C3.0.
10. CONCRETE CURB. SEE STRUCTURAL DETAILS.

EXISTING

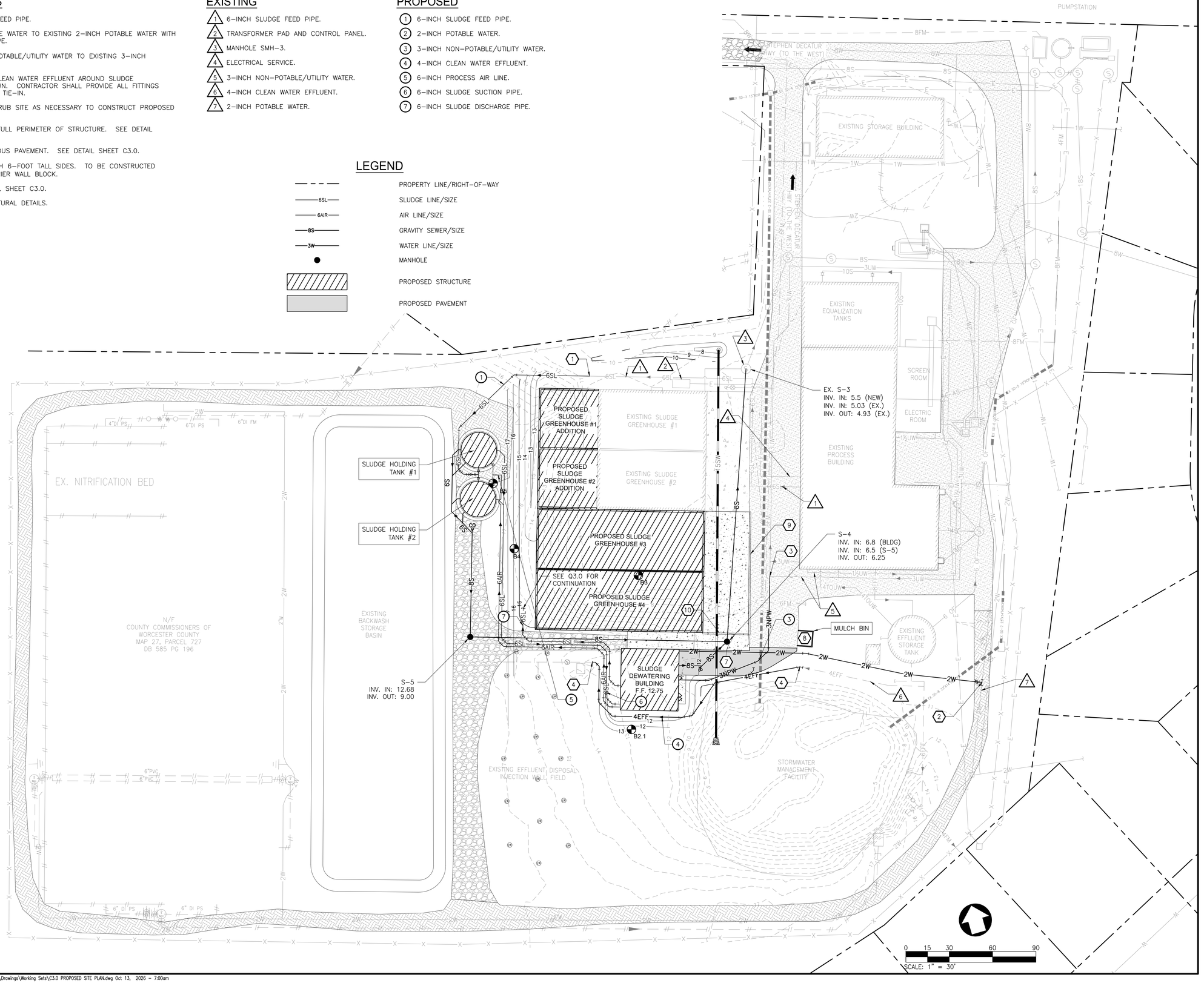
1. 6–INCH SLUDGE FEED PIPE.
2. TRANSFORMER PAD AND CONTROL PANEL.
3. MANHOLE SMH–3.
4. ELECTRICAL SERVICE.
5. 3–INCH NON–POTABLE/UTILITY WATER.
6. 4–INCH CLEAN WATER EFFLUENT.
7. 2–INCH POTABLE WATER.

PROPOSED

1. 6–INCH SLUDGE FEED PIPE.
2. 2–INCH POTABLE WATER.
3. 3–INCH NON–POTABLE/UTILITY WATER.
4. 4–INCH CLEAN WATER EFFLUENT.
5. 6–INCH PROCESS AIR LINE.
6. 6–INCH SLUDGE SUCTION PIPE.
7. 6–INCH SLUDGE DISCHARGE PIPE.

LEGEND

- PROPERTY LINE/RIGHT–OF–WAY
- 6SL — SLUDGE LINE/SIZE
- 6AIR — AIR LINE/SIZE
- 8S — GRAVITY SEWER/SIZE
- 3W — WATER LINE/SIZE
- MANHOLE
- PROPOSED STRUCTURE
- PROPOSED PAVEMENT



PLOT CODE
PEN1–RED 005 INCHES (.13mm)
PEN2–YELLOW 007 INCHES (.18mm)
PEN3–GREEN 010 INCHES (.25mm)
PEN4–CYAN 014 INCHES (.35mm)
PEN5–BLUE 020 INCHES (.50mm)
PEN6–MAGENTA 027 INCHES (.70mm)
PEN7–WHITE 039 INCHES (1.00mm)

G:\Projects\2025\250196 Mystic Harbour WWTP Biosolids UG Design\Drawings\Working Sets\C3.0 PROPOSED SITE PLAN.dwg Oct 13, 2026 – 7:00am

PRINTS ISSUED FOR:
90% SUBMISSION

NO.	REVISIONS	DATE
1	ISSUED FOR PERMIT	8/12/26

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ARCHITECTS & ENGINEERS
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SALISBURY, MARYLAND 21801
410–742–3115, FAX 410–548–5790
www.gmbnet.com

MYSTIC HARBOUR WWTP BIOSOLIDS UPGRADE & BUILDING REHABILITATION

WORCESTER COUNTY, MARYLAND

STATE OF MARYLAND
CHRISTOPHER BRIAN DEMSTER
No. 26278
PROFESSIONAL ENGINEER
8/12/26

PROPOSED SITE PLAN

SCALE	: AS NOTED
DESIGN BY	: JTH
DRAWN BY	: MMD
CHECKED BY	: CBD
GMB FILE	: 250196
DATE	: OCT 2026

SHEET NO.
C3.0

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0 10 20 40 60

SCALE: 1" = 20'

N/F
M H UTILITIES CORP.
MAP 26, PARCEL 445
DB 585 PG 201

STEPHEN DECATUR HWY (TO THE WEST)

EXISTING EQUALIZATION TANKS

SCREEN ROOM

ELECTRIC ROOM

EXISTING PROCESS BUILDING

EXISTING EFFLUENT STORAGE TANK

PROPOSED SLUDGE GREENHOUSE #1 ADDITION

PROPOSED SLUDGE GREENHOUSE #2 ADDITION

PROPOSED SLUDGE GREENHOUSE #3

PROPOSED SLUDGE GREENHOUSE #4

EXISTING SLUDGE GREENHOUSE #1

EXISTING SLUDGE GREENHOUSE #2

SLUDGE DEWATERING BUILDING F.F. 12.75

TRIFICATION BED

4"DI PS

6"DI PS

6"DI FM

N/F
COUNTY COMMISSIONERS OF
WORCESTER COUNTY
MAP 27, PARCEL 727
DB 585 PG 196

EXISTING BACKWASH STORAGE BASIN

EXISTING EFFLUENT DISPOSAL INJECTION WELL FIELD

STORMWATER MANAGEMENT FACILITY

6"PVC

6"PVC

PLOT CODE
PEN1-RED 256 INCHES (25mm)
PEN2-YELLOW 207 INCHES (18mm)
PEN3-GREEN 410 INCHES (25mm)
PEN4-CYAN 274 INCHES (25mm)
PEN5-BLUE 207 INCHES (18mm)
PEN6-MAGENTA 157 INCHES (25mm)
PEN7-WHITE 039 INCHES (03mm)

G:\Projects\2025\250196 Mystic Harbour WWTP Biosolids UC Design\Drawings\Working Sets\C3.0 PROPOSED SITE PLAN.dwg, 10/13/2026 6:59:59 AM, ansd,
2W=1.7+PSP.ctb

G:\Projects\2025\250196 Mystic Harbour WWTP Biosolids UC Design\Drawings\Working Sets\C3.0 PROPOSED SITE PLAN.dwg Oct 13, 2026 - 7:00am

PRINTS ISSUED FOR:
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1	ISSUED FOR PERMIT	8/12/26

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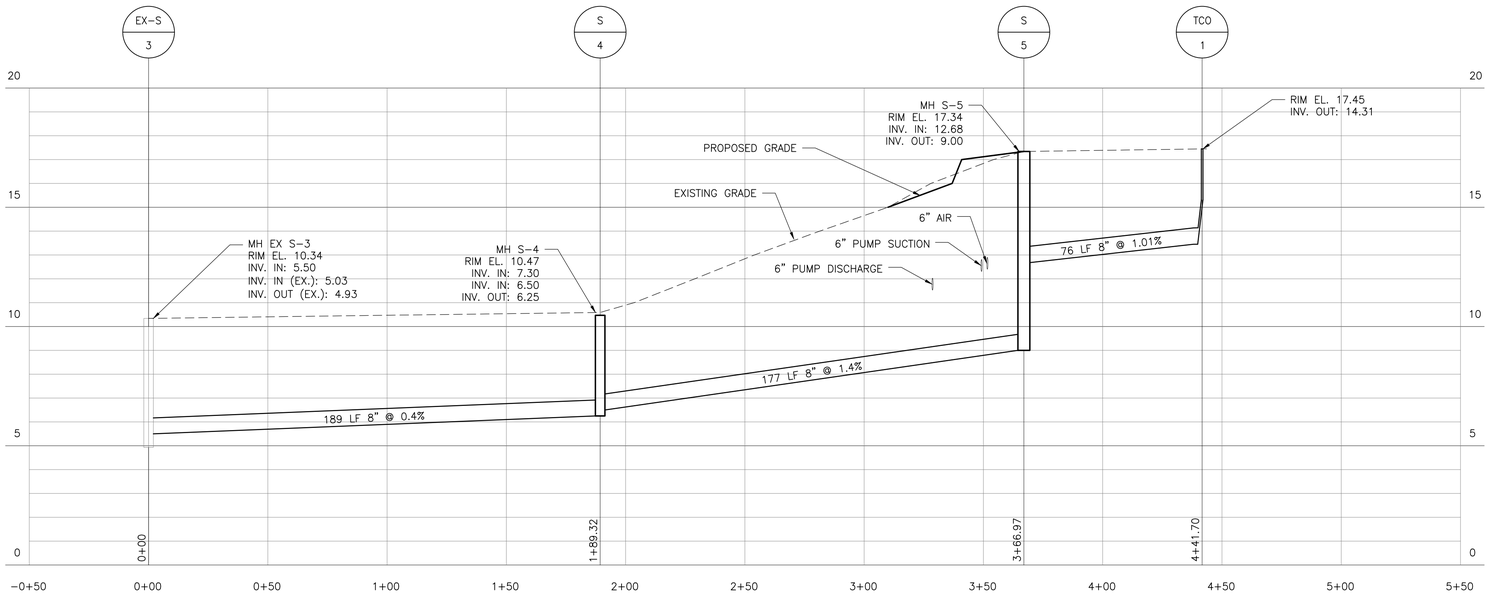
WORCESTER COUNTY, MARYLAND

STATE OF MARYLAND
JOHN REGINALD SCHNEIDER
PROFESSIONAL ENGINEER
12/26

GRADING PLAN

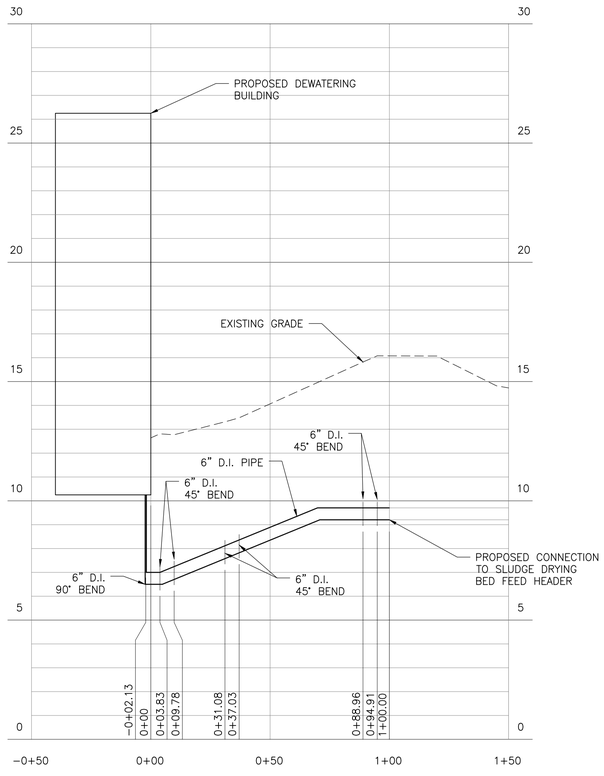
SCALE : AS NOTED	SHEET NO.
DESIGN BY : DLB	C3.1
DRAWN BY : DLB	
CHECKED BY : JRS	
GMB FILE : 250196	
DATE : OCT 2026	

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8" PVC SDR 35 SANITARY SEWER - TC0-1 TO EX S-3

HORIZONTAL SCALE: 1"=30'
VERTICAL SCALE: 1"=3'



6" D.I. SLUDGE PUMP DISCHARGE

HORIZONTAL SCALE: 1"=30'
VERTICAL SCALE: 1"=3'

GENERAL NOTES

1. CONTRACTOR SHALL NOT CREATE HIGH POINTS IN FORCE MAIN.

VERTICAL SCALE: 1" = 3'

HORIZONTAL SCALE: 1" = 30'

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CHRISTOPHER BRIAN DIBBLEE
PROFESSIONAL ENGINEER
No. 26278
12/12/26

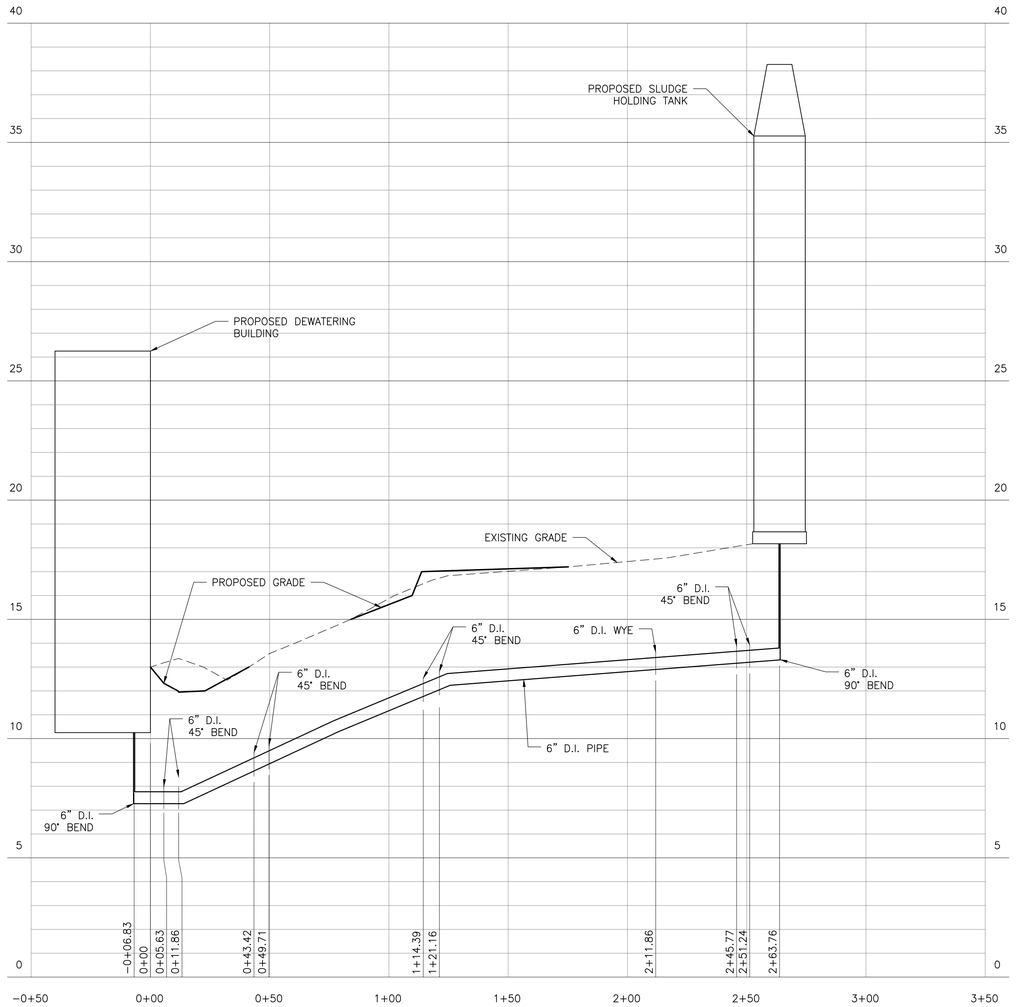
PIPE PROFILES

SCALE	: AS NOTED
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DRAWN BY	: MMD
CHECKED BY	: CBD
GMB FILE	: 250196
DATE	: OCT 2026

SHEET NO.
C4.0

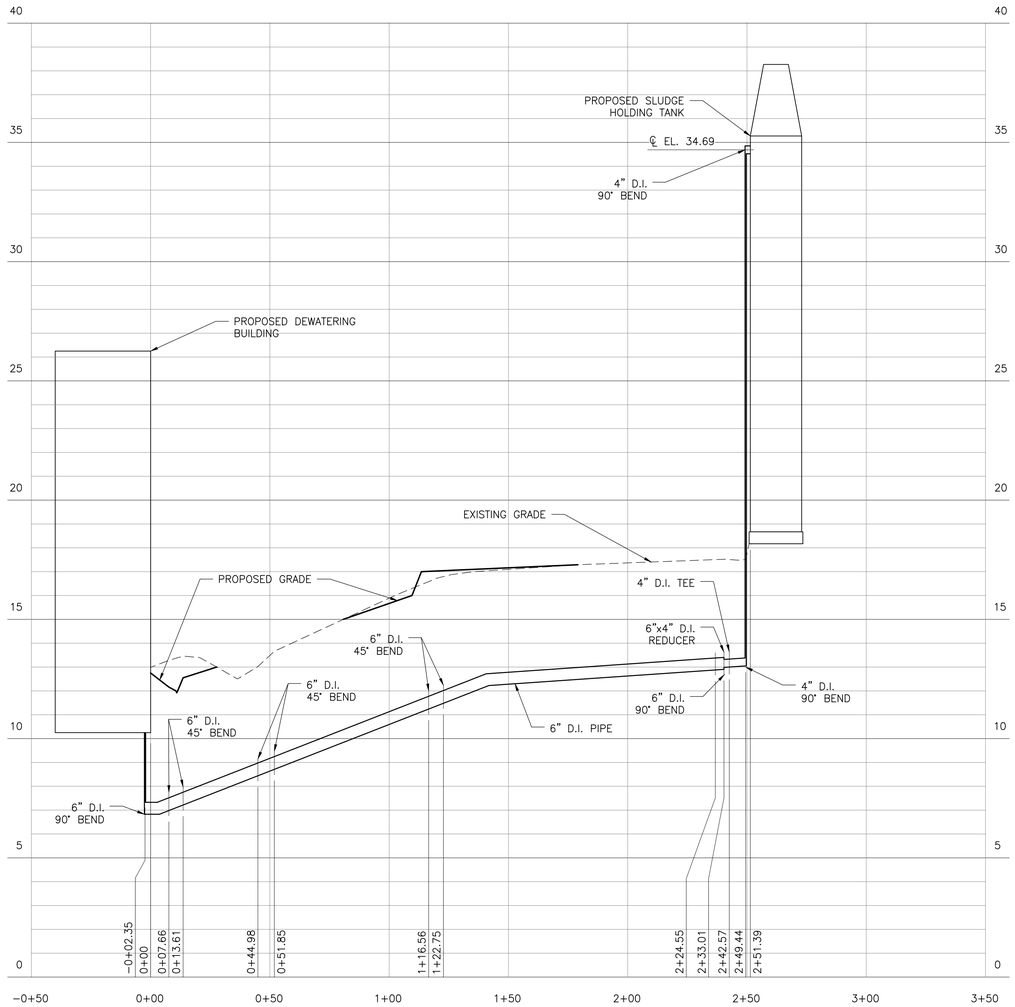
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PLOT CODE
PEN1-RED 006 INCHES (.15mm)
PEN2-YELLOW 007 INCHES (.18mm)
PEN3-GREEN 010 INCHES (.25mm)
PEN4-CYAN 014 INCHES (.35mm)
PEN5-BLUE 020 INCHES (.50mm)
PEN6-MAGENTA 027 INCHES (.70mm)
PEN7-WHITE 039 INCHES (1.00mm)



6" D.I. SLUDGE PUMP SUCTION

HORIZONTAL SCALE: 1"=30'
VERTICAL SCALE: 1"=3'



6" D.I. AIR PIPING

HORIZONTAL SCALE: 1"=30'
VERTICAL SCALE: 1"=3'

GENERAL NOTES

1. CONTRACTOR SHALL NOT CREATE HIGH POINTS IN FORCE MAIN.

0 3 6 9
VERTICAL SCALE: 1" = 3'

0 15 30 60 90
HORIZONTAL SCALE: 1" = 30'

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90% SUBMISSION

NO.	REVISIONS	DATE
1	ISSUED FOR PERMIT	8/12/26

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MYSTIC HARBOUR WWTP BIOSOLIDS UPGRADE & BUILDING REHABILITATION

WORCESTER COUNTY, MARYLAND

STATE OF MARYLAND — CHRISTOPHER BRIAN DUBBS — 26278 — PROFESSIONAL ENGINEER — 8/12/26

PIPE PROFILES

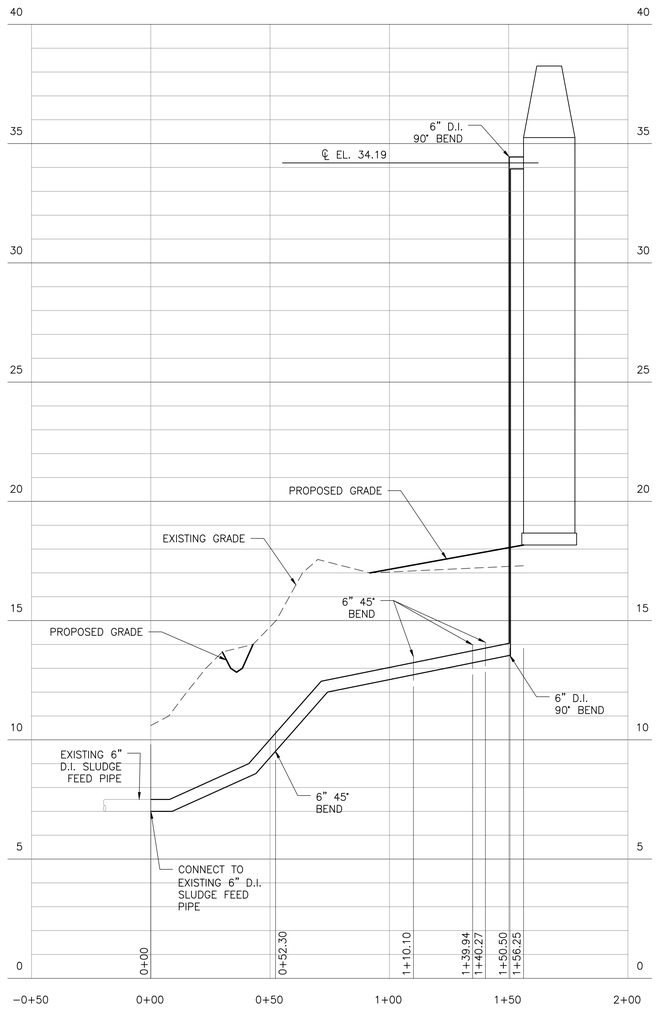
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DESIGN BY	: JTH
DRAWN BY	: MMD
CHECKED BY	: CBD
GMB FILE	: 250196
DATE	: OCT 2026

SHEET NO.
C4.1

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PLOT CODE
STEN-WHITE .009 INCHES (.230mm)
STEN-MAGENTA .007 INCHES (.175mm)
STEN-BLUE .020 INCHES (.500mm)
STEN-CYAN .014 INCHES (.350mm)
STEN-GREEN .010 INCHES (.250mm)
STEN-YELLOW .007 INCHES (.180mm)
STEN-RED .006 INCHES (.150mm)

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6" D.I. SLUDGE FEED TO STORAGE TANKS

HORIZONTAL SCALE: 1"=30'
VERTICAL SCALE: 1"=3'

GENERAL NOTES

1. CONTRACTOR SHALL NOT CREATE HIGH POINTS IN FORCE MAIN.

0 3 6 9
VERTICAL SCALE: 1" = 3'

0 15 30 60 90
HORIZONTAL SCALE: 1" = 30'

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WORCESTER COUNTY, MARYLAND

STATE OF MARYLAND
CHRISTOPHER BRIAN DUBBS
No. 26278
PROFESSIONAL ENGINEER
12/24

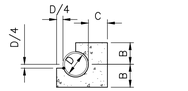
PIPE PROFILES

SCALE : AS NOTED	SHEET NO.
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DATE : OCT 2026	

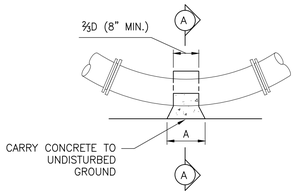
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PLOT CODE
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PEN2-YELLOW 007 INCHES (0.18mm)
PEN3-GREEN 010 INCHES (0.25mm)
PEN4-CYAN 014 INCHES (0.35mm)
PEN5-BLUE 020 INCHES (0.50mm)
PEN6-MAGENTA 027 INCHES (0.70mm)
PEN7-WHITE 039 INCHES (1.00mm)

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DWG To PDF.pc3



SECTION A–A



PLAN

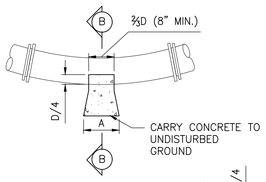
BUTTRESS FOR HORIZONTAL BENDS			
BEND		D	
		6" AND LESS	8" AND ABOVE
11¼°	A	6"	1'–0"
	B	7"	10"
	C	7"	8"
22½°	A	9"	1'–9"
	B	7"	10"
	C	8"	11"
45°	A	1'–3"	2'–6"
	B	7"	11"
	C	8"	11"
90°	A	2'–0"	3'–6"
	B	6"	1'–3"
	C	1'–10"	1'–7"

NOTES:

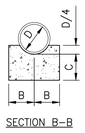
1. ALL CONCRETE TO HAVE A MINIMUM COMPRESSION STRENGTH OF 3000 PSI.
2. BUTTRESS DIMENSIONS GIVEN ARE MINIMUM DIMENSIONS BASED UPON 3000 PSI SOIL BEARING CAPACITY AND 150 PSI INTERNAL PIPE PRESSURE.
3. ALL CONCRETE SHALL BE CARRIED TO UNDISTURBED EARTH.
4. NO DRY MIX TO BE USED.

BUTTRESS DETAILS FOR HORIZONTAL BENDS

NO SCALE



ELEVATION



SECTION B–B

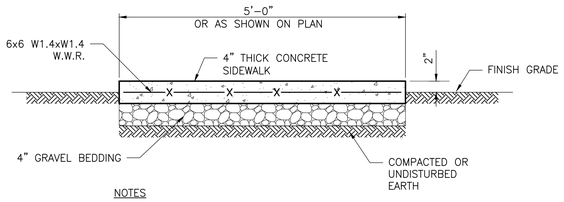
BUTTRESS FOR VERTICAL BENDS			
BEND		D	
		6" AND LESS	8" AND ABOVE
11¼°	A	6"	1'–0"
	B	7"	10"
	C	7"	8"
22½°	A	9"	1'–9"
	B	7"	10"
	C	7"	8"
45°	A	1'–3"	2'–6"
	B	7"	11"
	C	7"	11"
90°	A	2'–0"	3'–3"
	B	11"	1'–3"
	C	11"	1'–3"

NOTES:

1. ALL CONCRETE TO HAVE A MINIMUM COMPRESSION STRENGTH OF 3000 PSI.
2. BUTTRESS DIMENSIONS GIVEN ARE MINIMUM DIMENSIONS BASED UPON 3000 PSI SOIL BEARING CAPACITY AND 150 PSI INTERNAL PIPE PRESSURE.
3. ALL CONCRETE SHALL BE CARRIED TO UNDISTURBED EARTH.
4. NO DRY MIX TO BE USED.

BUTTRESS DETAILS FOR VERTICAL BENDS

NO SCALE

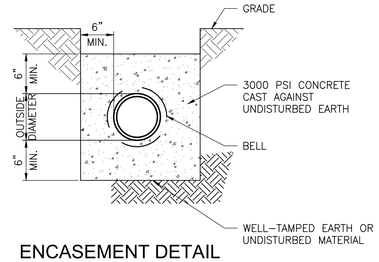


NOTES

1. PROVIDE EXPANSION JOINTS AT INTERVALS NOT GREATER THAN 20 FEET.
2. WHEN JOINING NEW SIDEWALK WITH EXISTING SIDEWALK, MATCH EXISTING SIDEWALK ELEVATION. SAWCUT EXISTING SIDEWALK AND PROVIDE EXPANSION JOINT BETWEEN NEW AND EXISTING SIDEWALK.

CONCRETE SIDEWALK DETAIL

NO SCALE

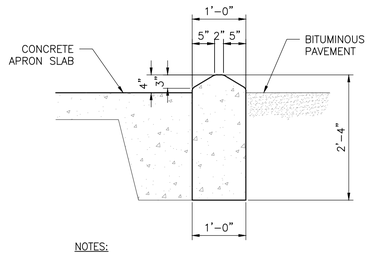


ENCASEMENT DETAIL

NO SCALE

NOTES

1. ENCASEMENT SHALL BE A MINIMUM OF 10–FEET IN LENGTH IN EACH DIRECTION, OR AS DIRECTED BY THE ENGINEER.
2. CROSSINGS SHALL BE ARRANGED SUCH THAT THE SEWER JOINTS WILL BE EQUAL DISTANCE AND AS FAR AS POSSIBLE FROM THE WATER MAIN JOINTS.

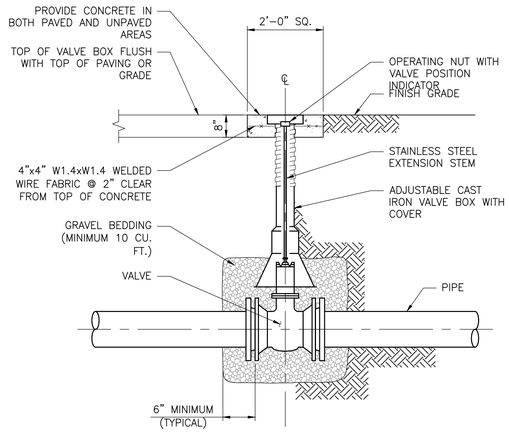


NOTES:

1. 4000 PSI CONCRETE.
2. PROVIDE ½" EXPANSION JOINT BETWEEN CURB AND PAVEMENT AND BETWEEN CURB AND CONCRETE APRON SLAB.

MOUNTABLE CURB DETAIL

SCALE: ¾" = 1'–0"

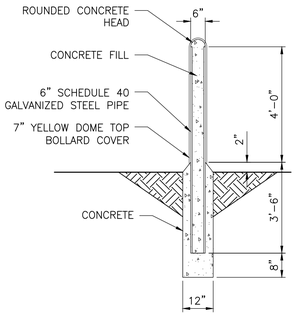


VALVE BOX DETAIL

NO SCALE

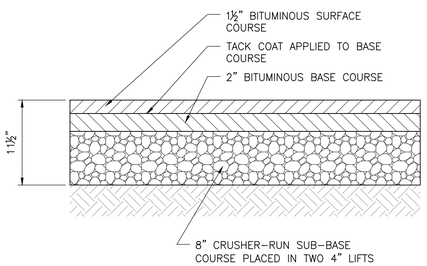
NOTES:

1. ALL VALVES TO BE SET IN TRUE PLUMB POSITION.
2. ALL VALVES TO HAVE 2" OPERATING NUT.



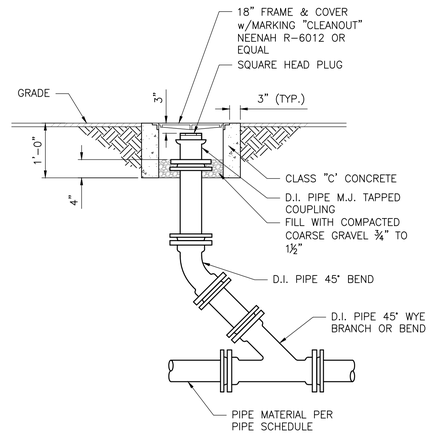
PIPE BOLLARD DETAIL

NO SCALE



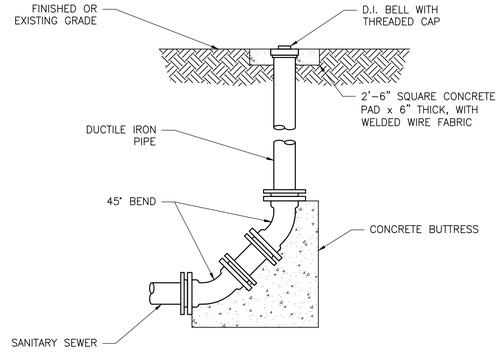
BITUMINOUS PAVEMENT DETAIL

NO SCALE



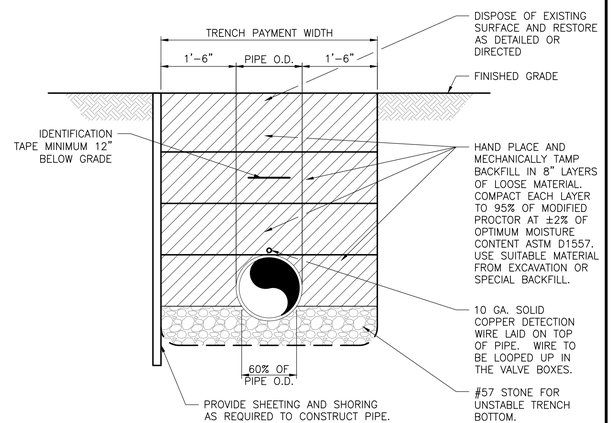
TYPICAL CLEANOUT DETAIL

NO SCALE



TERMINAL CLEANOUT DETAIL

NO SCALE



PIPE BEDDING AND BACKFILL

NO SCALE

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NO.	REVISIONS	DATE
1	ISSUED FOR PERMIT	8/12/26

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WORCESTER COUNTY, MARYLAND

STATE OF MARYLAND
CHRISTOPHER BRIAN CARROLL
No. 26278
PROFESSIONAL ENGINEER
12/15/26

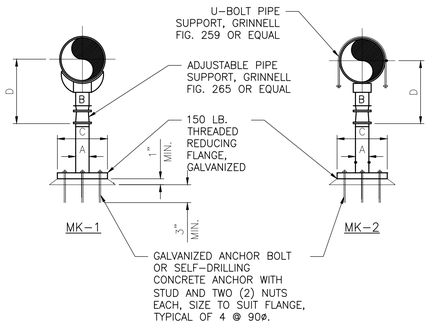
SITE AND UTILITY DETAILS

SCALE	: AS NOTED
DESIGN BY	: JTH
DRAWN BY	: MMD
CHECKED BY	: CBD
GMB FILE	: 250196
DATE	: OCT 2026

SHEET NO.
C5.0

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PLOT CODE
PEN1–WHITE 100 INCHES (100mm)
PEN2–MAGENTA 020 INCHES (10mm)
PEN3–BLUE 020 INCHES (10mm)
PEN4–CYAN 014 INCHES (35mm)
PEN5–GREEN 010 INCHES (25mm)
PEN6–YELLOW 007 INCHES (18mm)
PEN7–RED 006 INCHES (15mm)

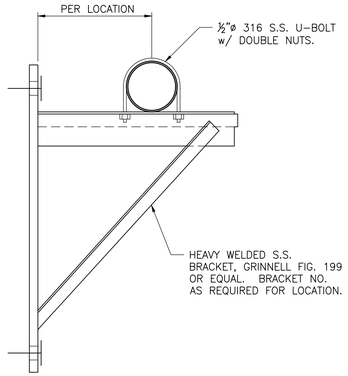


ADJUSTABLE PIPE SUPPORT DETAIL

NO SCALE

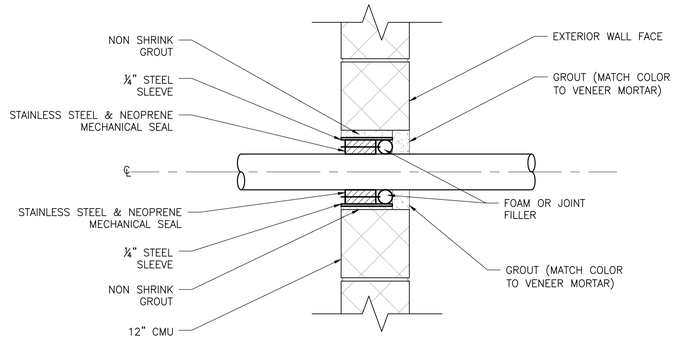
ADJUSTABLE PIPE SUPPORT					
PIPE SIZE	A	B	C	D (MINIMUM)	E (MINIMUM)
2½	2½	1½	9	8	11½
3	2½	1½	9	8¼	11¾
3½	2½	1½	9	8½	12
4	3	2½	9	10½	14
6	3	2½	9	11⅜	15¼
8	3	2½	9	13⅜	16½
10	3	2½	9	14⅜	18¼
12	3	2½	9	15⅜	19¾
14	4	3	11	18⅞	20¾
16	4	3	11	19⅞	22¼
18	6	3½	13½	21¼	24
20	6	3½	13½	23¼	25½
24	6	4	13½	26½	28¼
30	6	4	13½	29⅝	31½
32	6	4	13½	30⅝	32¾
36	6	4	13½	32⅝	34¾

* SEE MANUFACTURER'S RECOMMENDATIONS



METAL PIPE HANGER DETAIL

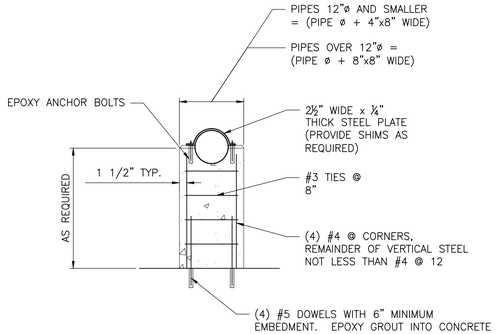
NO SCALE



NOTE: CUT CMU AND BRICK AS REQUIRED AROUND PIPE SLEEVE.

ABOVE GRADE CMU WALL PENATRATION

NO SCALE

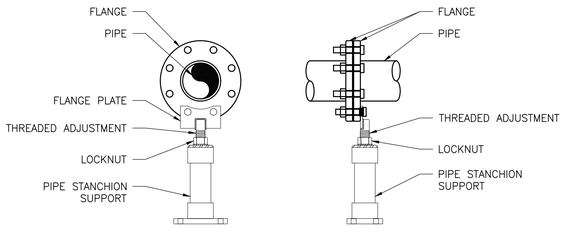


CONCRETE PIPE SUPPORT DETAIL

NO SCALE

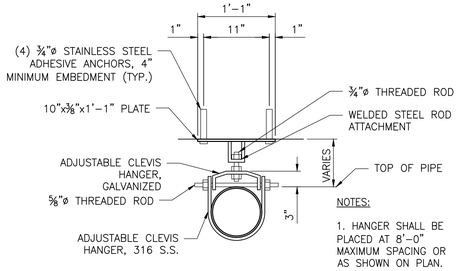
NOTES:

1. ALL CONCRETE TO HAVE MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI.
2. FOR USE ONLY WHEN CONDITIONS DO NOT PERMIT USE OF STANCHION SUPPORT OR WHERE SHOWN ON CONTRACT DRAWINGS.



FLANGE PIPE SUPPORT DETAIL

NO SCALE

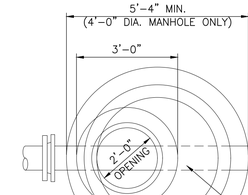


NOTES:

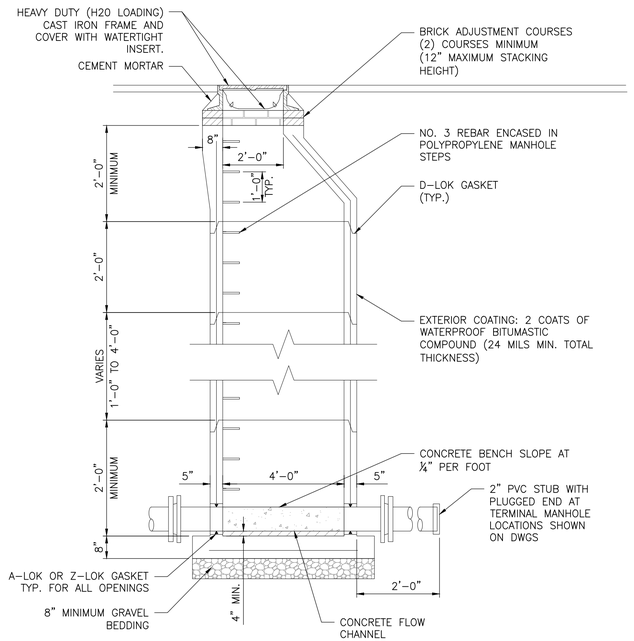
1. HANGER SHALL BE PLACED AT 8'–0" MAXIMUM SPACING OR AS SHOWN ON PLAN.

CONCRETE CEILING PIPE HANGER DETAIL

NO SCALE



PLAN



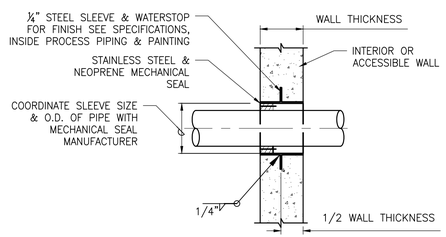
SECTION

NOTES:

1. MANHOLE TO CONFORM TO ASTM C–478, LATEST REVISION.

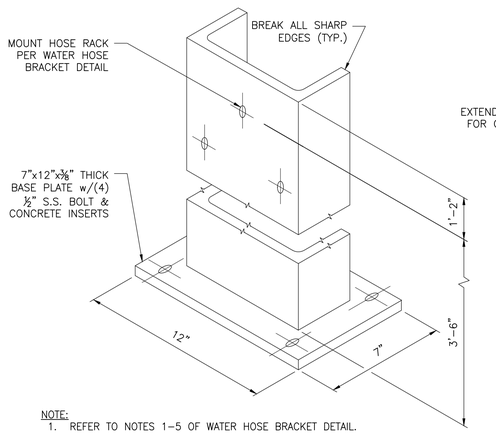
PRECAST CONCRETE MANHOLE

NO SCALE



TYPICAL WALL AND FLOOR SLEEVE DETAIL

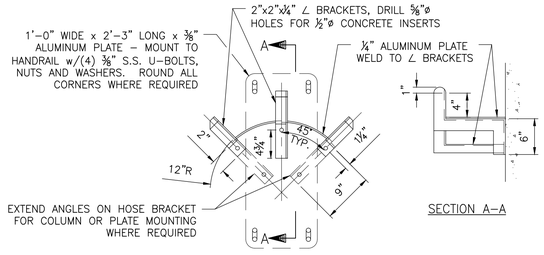
NO SCALE



NOTE:
1. REFER TO NOTES 1–5 OF WATER HOSE BRACKET DETAIL.
2. WELD BASE TO 10" X4' LONG ALUMINUM CHANNEL SET IN 1" GROUT BED.

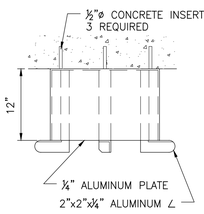
MOUNTING STAND (HOSE BRACKET) DETAIL

NO SCALE



FRONT VIEW

SECTION A–A



NOTES:

1. MATERIALS: ANGLES AND PLATE, 6061–T6 ALUMINUM.
2. FINISH: SEE SPECIFICATIONS, MISCELLANEOUS METALS.
3. PAINT ALUMINUM IN CONTACT WITH CONCRETE PER SPECIFICATIONS, PAINTING
4. ALL FASTENERS TO BE STAINLESS STEEL.
5. ALL WELDED CONSTRUCTION.

WATER HOSE BRACKET DETAIL

NO SCALE

PRINTS ISSUED FOR:
90% SUBMISSION

NO.	REVISIONS	DATE
1	ISSUED FOR PERMIT	8/12/26

PROFESSIONAL CERTIFICATION.
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 26278, EXPIRATION DATE: JUNE 21, 2027.

GMB
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SALISBURY, MARYLAND 21801
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MYSTIC HARBOUR WWTP BIOSOLIDS UPGRADE & BUILDING REHABILITATION

WORCESTER COUNTY, MARYLAND

STATE OF MARYLAND
STEPHEN BRIAN DEMSKI
No. 26278
PROFESSIONAL ENGINEER
8/12/26

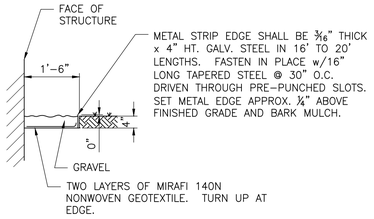
SITE AND UTILITY DETAILS

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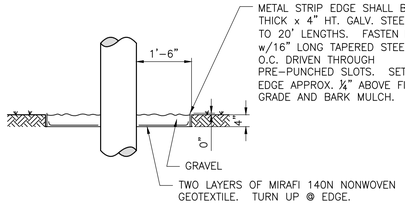
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PLOT CODE
PEN1–RED 200 INCHES/ SEC (5mm)
PEN2–YELLOW 100 INCHES/ SEC (4mm)
PEN3–GREEN 070 INCHES/ SEC (3mm)
PEN4–CYAN 014 INCHES/ SEC (2mm)
PEN5–BLUE 020 INCHES/ SEC (1mm)
PEN6–MAGENTA 020 INCHES/ SEC (1mm)
PEN7–WHITE 009 INCHES/ SEC (1mm)



MOWING STRIP DETAIL AT A STRUCTURE

NO SCALE

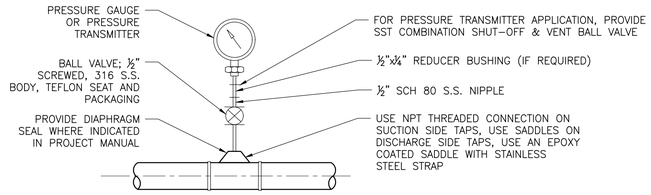


MOWING STRIP DETAIL AT A PIPE

NO SCALE

NOTES:

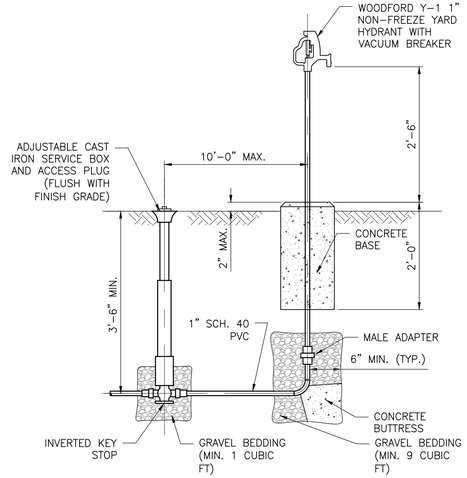
ALL NEW STRUCTURES AND PIPES SHALL HAVE A MOWING STRIP AROUND ENTIRE PERIMETER EXCEPT WHERE WALKS, PAVEMENT OR CONCRETE PADS INTERSECT THE STRUCTURE OR PIPE.



NOTE:
ENSURE OBSTRUCTIONS DO NOT IMPEDE GAUGE REPLACEMENT. PROVIDE ADDITIONAL FITTINGS AS REQUIRED.

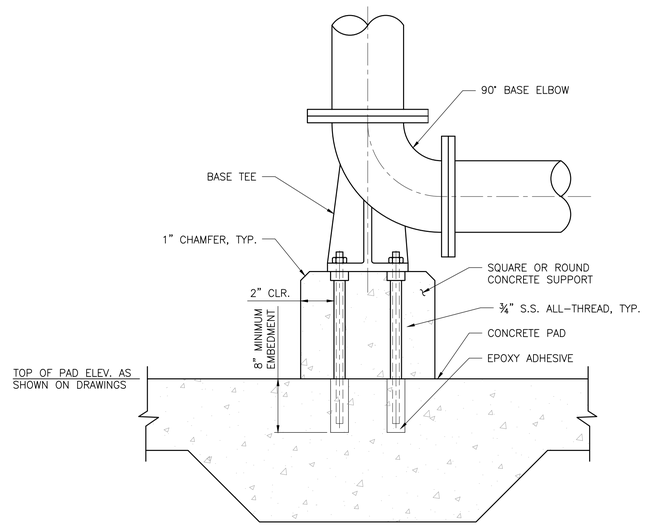
PRESSURE GAUGE OR TRANSMITTER DETAIL

NO SCALE



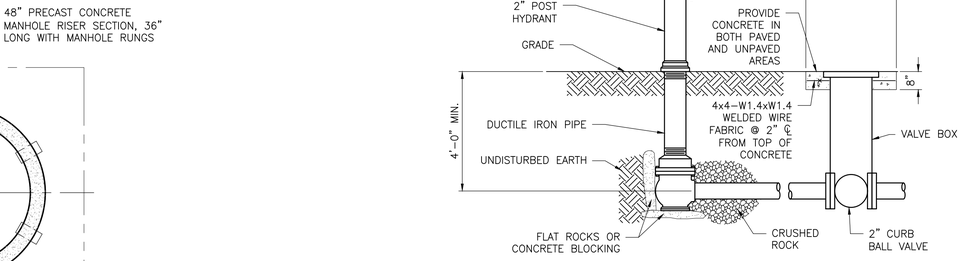
YARD HYDRANT DETAIL

NO SCALE



BASE FITTING CONCRETE SUPPORT

NO SCALE

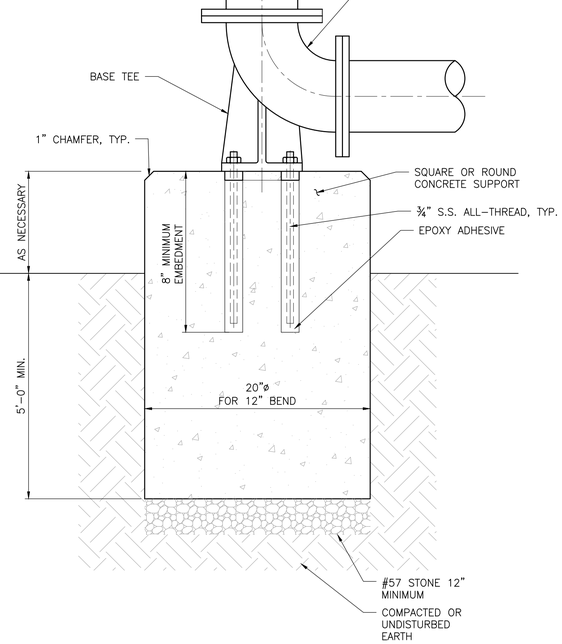


POST HYDRANT

NO SCALE

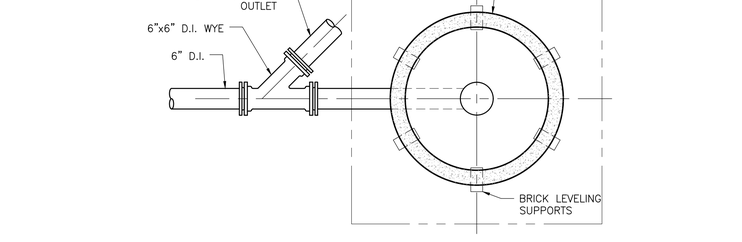
NOTES:

1. HYDRANTS SHALL BE SET IN 4 CUBIC FEET OF CRUSHED STONE TO ALLOW FOR PROPER DRAINAGE OF THE HYDRANT.
2. ALL VALVES AND HYDRANTS TO BE SET IN TRUE PLUMB POSITION.

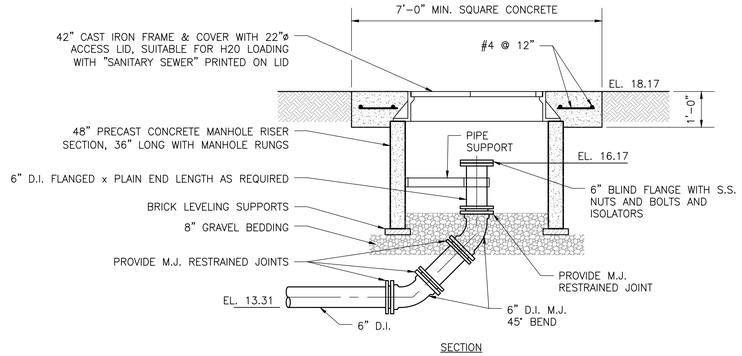


BASE FITTING CONCRETE SUPPORT (EXTERIOR AT GRADE)

NO SCALE



PLAN



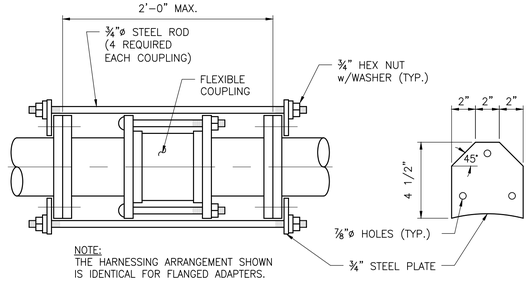
SECTION

PIG LAUNCHING PIT

SCALE: ½" = 1'-0"

NOTES

1. ALL BURIED JOINTS SHALL BE RESTRAINED.



NOTE:
THE HARNESSING ARRANGEMENT SHOWN IS IDENTICAL FOR FLANGED ADAPTERS.

HARNESSED FLEXIBLE COUPLING DETAIL

NO SCALE

PRINTS ISSUED FOR:
90% SUBMISSION

NO.	REVISIONS	DATE
1	ISSUED FOR PERMIT	8/12/26

PROFESSIONAL CERTIFICATION.
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 26278, EXPIRATION DATE: JUNE 21, 2027.

GMB
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206 WEST MAIN STREET
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MYSTIC HARBOUR WWTP BIOSOLIDS UPGRADE & BUILDING REHABILITATION

WORCESTER COUNTY, MARYLAND

STATE OF MARYLAND
CHRISTOPHER BRIAN CRISP
No. 26278
PROFESSIONAL ENGINEER
8/12/26

SITE AND UTILITY DETAILS

SCALE	: AS NOTED
DESIGN BY	: JTH
DRAWN BY	: MMD
CHECKED BY	: CBD
GMB FILE	: 250196
DATE	: OCT 2026

SHEET NO.
C5.2

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PLOT CODE
PEN1-WHITE 039 INCHES (1.00mm)
PEN2-MAGENTA 007 INCHES (.18mm)
PEN3-BLUE 009 INCHES (.23mm)
PEN4-CYAN 014 INCHES (.35mm)
PEN5-GREEN 011 INCHES (.28mm)
PEN6-YELLOW 007 INCHES (.18mm)
PEN7-RED 005 INCHES (.13mm)

G:\Projects\2025\250196 Mystic Harbour WWTP Biosolids UG Design\Drawings\Working Sets\C4.0 PIPE PROFILES.dwg 10/13/2026 7:08:46 AM mmd

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GOVERNING CODES

THE FOLLOWING CODES AND STANDARDS, INCLUDING ALL SPECIFICATIONS REFERENCED WITHIN, SHALL APPLY TO THE DESIGN, CONSTRUCTION, QUALITY CONTROL AND SAFETY OF ALL WORK PERFORMED ON THE PROJECT. USE THE LATEST EDITIONS UNLESS NOTED OTHERWISE.

A. "INTERNATIONAL BUILDING CODE", INTERNATIONAL CODE COUNCIL, INC., 2021
B. "MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES" (ANSI/ASCE 7), AMERICAN SOCIETY OF CIVIL ENGINEERS.
C. "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE, ACI 318", AMERICAN CONCRETE INSTITUTE.
D. "ACI MANUAL OF CONCRETE PRACTICE – PARTS 1 THROUGH 5"
E. "MANUAL OF STANDARD PRACTICE", CONCRETE REINFORCING STEEL INSTITUTE.
F. "BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES (ACI 530/ASCE 5/TMS 402) & SPECIFICATIONS FOR MASONRY STRUCTURES (ACI 530.1/ASCE 6/TMS 602)."
G. "NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION 2012, AMERICAN FOREST & PAPER ASSOCIATION.

DESIGN LOADS

	LIVE LOADS	DEAD LOADS	TOTAL
ROOF (EX. DRIFT)	30 PSF	15 PSF (BOTTOM CHORD) 10 PSF (TOP CHORD)	55 PSF
FLOORS, MEZZANINE, AND WALKWAYS	100 PSF	15 PSF	115 PSF
STAIRS	100 PSF	15 PSF	115 PSF

WIND LOAD BASED ON 127 MPH BASIC WIND SPEED EXPOSURE C, ENCLOSED
SNOW LOAD BASED ON 25 PSF GROUND SNOW LOAD

THE STRUCTURAL INTEGRITY OF THE BUILDING IS DEPENDANT UPON COMPLETION ACCORDING TO PLANS AND SPECIFICATIONS. THE STRUCTURAL ENGINEER ASSUMES NO LIABILITY FOR THE STRUCTURE DURING CONSTRUCTION. THE METHOD OF CONSTRUCTION AND SEQUENCE OF OPERATIONS IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL SUPPLY ANY NECESSARY SHORING, BRACING, GUYS, ETC., TO PROPERLY BRACE THE STRUCTURE AGAINST WIND, DEAD AND LIVE LOADS UNTIL THE BUILDING IS COMPLETED ACCORDING TO THE PLANS AND SPECIFICATIONS. CONTRACTOR SHALL NOT PLACE BACK FILL AGAINST BASEMENT WALLS UNTIL THE FLOOR SYSTEM IS COMPLETELY INSTALLED OR CONTRACTOR HAS PROVIDED ADEQUATE SHORING AND BRACING. ANY QUESTIONS REGARDING TEMPORARY SHORING REQUIREMENTS SHOULD BE FORWARDED TO THE STRUCTURAL ENGINEER FOR REVIEW. MECHANICAL UNITS AND ANY OTHER EQUIPMENT SUPPORTED BY THE STRUCTURE WITH WEIGHTS IN EXCESS OF 200 LBS. SHALL BE BROUGHT TO THE ATTENTION OF THE STRUCTURAL ENGINEER PRIOR TO INSTALLATION.

CAST–IN–PLACE CONCRETE

ALL CONCRETE SHALL BE MADE IN ACCORDANCE WITH DESIGN MIXES WHICH ARE TO BE APPROVED BY THE ARCHITECT OR ENGINEER PRIOR TO CASTING ANY CONCRETE. MIXES SHALL BE IN ACCORDANCE WITH THE AMERICAN CONCRETE INSTITUTION ACI 318. ALL PLAIN CONCRETE TO CONFORM TO ACI 318.1. MIXES SHALL HAVE A MINIMUM CEMENT CONTENT OF 520 LB. PER CUBIC YD., MAXIMUM WATER/CEMENT RATIO OF 0.53 FOR INTERIOR CONCRETE PROTECTED FROM FREEZING AND 0.45 FOR ALL EXTERIOR EXPOSED CONCRETE.

MINIMUM SPECIFIED COMPRESSIVE STRENGTH f'c @ 28 DAYS.

LOCATION	MIN. COMP. (F'C)	SLUMP (IN.)
BUILDING FOOTINGS	3000 PSI	6" +/– 1"
FLOOR, TANK, AND OTHER CONCRETE	4000 PSI	4" +/– 1"
MASONRY GROUT WITH PEA GRAVEL	3000 PSI	SEE NOTES BELOW

NOTES (1) CONCRETE SUBJECTED TO FREEZE AND THAW DURING CONSTRUCTION SHALL BE AIR–ENTRAINED.

CONCRETE MATERIALS SHALL CONFORM TO ASTM CI50, TYPE I FOR PORTLAND CEMENT AND ASTM C33 FOR AGGREGATES. WATER–REDUCING ADMIXTURES SHALL CONFORM TO ASTM C494, TYPE A (FREE OF CALCIUM CHLORIDES), AIR–ENTRAINING ADMIXTURES SHALL CONFORM TO ASTM C260, AND HIGH–RANGE WATER REDUCERS (SUPER–PLASTICIZERS) SHALL CONFORM TO ASTM C494, TYPE F. FLY ASH SHALL COMPLY WITH ASTM C619 FOR CLASS F AND SHALL NOT BE PROPORTIONED IN MIXES WITH MORE THAN 20% CEMENT BY WEIGHT. LIQUID–MEMBRANE CURING COMPOUNDS SHALL BE HIGH–SOLIDS, WATER AND ACRYLIC–BASED, COMPLYING WITH ASTM C309 AS TESTED UNDER ASTM C156.

ALL CONCRETE TO BE PLACED IN THE CELLS OF CONCRETE MASONRY UNITS (CMU BLOCK FILL), OR IN THE VOIDS OF BRICK MASONRY CONSTRUCTION, SHALL CONTAIN PEA GRAVEL (3/8–INCH DIAMETER STONE) IN LIEU OF COARSE AGGREGATE. THE CONCRETE MIX SHALL CONTAIN A HIGH–RANGE WATER REDUCER (SUPERPLASTICIZER). SLUMP OF THE CONCRETE SHALL BE A MINIMUM OF 6–INCHES AND A MAXIMUM OF 9–INCHES. SEE THE PROJECT SPECIFICATIONS.

ADDITION OF WATER TO THE CONCRETE AT THE JOB SITE FOR THE PURPOSE OF INCREASING THE SLUMP OR FOR RETEMPERING THE CONCRETE WHICH HAS BEGUN TO SET IS STRICTLY PROHIBITED.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR FURNISHING AND INSTALLING ANCHOR BOLTS, CLIPS, INSERTS, CONNECTION PLATES, SLEEVES, SLOTS AND OTHER REQUIRED ITEMS IN ACCORDANCE WITH THE CONTRACT DRAWINGS, AND IN COOPERATION WITH OTHER TRADES PRIOR TO PLACING CONCRETE.

REINFORCING STEEL SHALL BE HIGH STRENGTH NEW BILLET STEEL CONFORMING TO ASTM A–615, GRADE 60 (60,000 PSI). WELDED WIRE FABRIC (WWF) SHALL CONFORM TO ASTM A–185. ALL REINFORCING SHALL BE DETAILED, FABRICATED, AND PLACED IN ACCORDANCE WITH ACI'S MANUAL OF STANDARD PRACTICE FOR DETAILING CONCRETE STRUCTURES, (ACI–315). DETAILS OF REINFORCEMENT SHALL CONFORM TO ACI 318, ACI 315, AND CRSI STANDARDS.

ALL REINFORCING STEEL (INCLUDING WELDED WIRE FABRIC) SHALL BE SECURELY TIED AND ANCHORED IN PLACE TO PREVENT DISLOCATION DURING THE PLACING OPERATION.

REINFORCING STEEL SHALL BE CLEAN OF MUD, DEBRIS, LOOSE RUST, CEMENT, GROUT, OR ANY OTHER MATERIAL WHICH MAY INHIBIT THE BOND BETWEEN THE STEEL AND CONCRETE.

PROVIDE THE MINIMUM CLEARANCES (COVER) FOR REINFORCEMENT AS FOLLOWS:

FOOTINGS AND OTHER CONCRETE POURED AGAINST EARTH –	3"
FORMED CONCRETE EXPOSED TO EARTH –	2"
FORMED CONCRETE NOT EXPOSED TO WEATHER OR EARTH –	1½"
SLABS ON GROUND, UNLESS OTHERWISE NOTED –	1½" FROM TOP OF SLAB

FOUNDATION

ALL FOUNDATIONS, SUBGRADES, AND STRUCTURES SHALL BE INSTALLED BASED ON THE REQUIREMENTS AND RECOMMENDATIONS IN THE SOILS REPORT PROVIDED BY HILLIS–CARNES ENGINEERING ASSOCIATES, INC. PROJECT NUMBER SAL260009A DATED FEBRUARY 13, 2026.

ALL CONCRETE FOR FOOTINGS SHALL BE CAST ON THE SAME DAY THAT THE EXCAVATIONS ARE MADE TO THE FINAL GRADE.

THE TOP OF ALL EXTERIOR FOOTINGS SHALL BE PLACED A MINIMUM OF 2'–0" BELOW FINISH GRADE, UNLESS NOTED OTHERWISE.

THE CONTRACTOR SHALL VERIFY THE BEARING CAPACITY OF THE SOILS IN THE FOOTING EXCAVATION PRIOR TO CASTING ANY FOOTINGS. WRITTEN VERIFICATION SHALL BE SUBMITTED TO THE ARCHITECT AND ENGINEER.

UNLESS NOTED OTHERWISE IN GEOTECH REPORT, PLACE FOOTINGS ON FIRM, DRY, NON–FROZEN SUBGRADE. REMOVE SOFT SOILS ENCOUNTERED DURING EXCAVATION. BACKFILL EXCAVATIONS AND AREAS REQUIRING STRUCTURAL FILL WITH CLEAN, MOIST, GRANULAR SELECT BORROW (TYPE "G", GRADE V OR BETTER IN ACCORDANCE WITH DELDOT STD. SPECS). ALL BACKFILL SHALL BE PLACED IN LIFTS NOT TO EXCEED 8–INCHES IN LOOSE THICKNESS. PROPER EQUIPMENT SHALL BE SELECTED AND USED FOR COMPACTION ACCORDING TO THE TYPE A BACKFILL MATERIAL USED. COMPACTION RATIO SHALL BE 95% MINIMUM.

ANCHOR STRAPS SHALL BE INSTALLED AS PER THE MANUFACTURER'S RECOMMENDATIONS 12" FROM CORNERS AND AT INTERVALS OF NOT MORE THAN FOUR FEET. STRAPS SHALL BE A MINIMUM OF 14–GAUGE ZINC COATED.

ALL FRAMING SHALL BE A MINIMUM OF 8" ABOVE GRADE AND ALL WOOD SIDING SHALL BE 6" ABOVE GRADE.

SOILS, FOOTINGS, FOUNDATION WALLS AND SLABS SHALL NOT BE PLACED ON OR IN MARINE CLAY, PEAT OR OTHER ORGANIC MATERIALS.

FOOTING EXCAVATION SHALL BE INSPECTED BY THE BUILDING OFFICIAL PRIOR TO POURING CONCRETE.

REFER TO THE SPECIFICATIONS AND SOILS REPORT FOR THE SITE PREPARATION REQUIREMENTS.

U.N.O. ANCHOR BOLTS SHALL BE MAX. 12" FROM PLATE ENDS, MINIMUM OF (2) PER PLATE SECTION.

FRAMING NOTES

FRAMING SHALL BE:
FRAMING NOTED AS P.T. SHALL BE PRESSURE TREATED SOUTHERN PINE #2 OR BETTER, TREATED WITH COPPER AZOLE 0.15 PCF

ALL EXTERIOR POSTS TO BE PRESSURE TREATED 6X6 SP NO.1 GRADE (U.N.O.) TREATED WITH CCA TO 0.4 PCF.

ALL OTHER FRAMING SHALL BE SOUTHERN PINE M–12 GRADE SUCH AS WEYERHAEUSER FRAMER SERIES U.N.O.

LVL SHALL BE MICROLLAM LVL 2.0E AS MANUFACTURED BY TRUSJOIST OR APPROVED EQUIVALENT

NAIL IN ACCORDANCE WITH RECOMMENDED WOOD FASTENING SCHEDULE IN APPLICABLE BUILDING CODE (LATEST EDITION/HIGH WIND REGION). PROVIDE BLOCKING, BRIDGING AND BRACING PER SAME CODE. AT A MIN., PROVIDE BRIDGING AT EACH END OF THE JOIST, AND ONE ROW OF SOLID BRIDGING BELOW ALL INTERIOR BEARING PARTITIONS.

FASTENERS: JOIST HANGERS, HURRICANE ANCHORS, POST BASES AND OTHER FRAMING ANCHORS ARE TO BE AS MANUFACTURED BY SIMPSON STONG–TIE, U.S.P., OR EQUAL, AND ARE TO BE USED IN STRICT ACCORDANCE WITH MANUFACTURER'S WRITTEN SPECIFICATIONS. ALL FASTENERS TO BE 16 GA. MIN. UNLESS NOTED OTHERWISE. PROVIDE GALV. FINISH UNLESS NOTED OTHERWISE. JOIST HANGERS SHALL BE MIN. 16 GA. WITH SIZE AND PROFILE TO SUIT APPLICATION (U.N.O.). PROVIDE JOIST HANGERS FOR ALL FLUSH FRAMED JOISTS. ALL HANGERS, STRAPS AND FASTENERS BELOW THE FIRST FLOOR LEVEL SHALL BE Z–MAX COATED, U.N.O.'

NO STRUCTURAL MEMBER SHALL BE OMITTED, NOTCHED, CUT, BLOCKED OUT OR RELOCATED WITHOUT PRIOR APPROVAL BY THE DESIGNER OR THE STRUCTURAL ENGINEER. DO NOT ALTER SIZES OF MEMBERS NOTED WITHOUT APPROVAL OF BOTH.

CUTTING OF WOOD BEAMS, JOISTS AND RAFTERS SHALL BE LIMITED TO CUTS AND BORED HOLES NOT DEEPER THAN ONE–SIXTH THE DEPTH OF THE MEMBER AND SHALL NOT BE LOCATED IN THE MIDDLE ONE–THIRD OF THE SPAN. NOTCHES LOCATED CLOSER TO SUPPORTS THAN THREE TIMES THE DEPTH OF THE MEMBER SHALL NOT EXCEED ONE–FIFTH THE DEPTH. HOLES BORED OR CUT INTO JOISTS SHALL NOT BE CLOSER THAN TWO INCHES TO THE TOP OR BOTTOM OF THE JOIST AND THE DIAMETER OF THE HOLE SHALL NOT EXCEED ONE–THIRD OF THE DEPTH OF THE JOIST.

ALL MULTI–PLY LVL AND PSL BEAMS SHALL BE BOLTED PER MANUFACTURERS RECOMMENDATIONS.

THE NUMBER OF WALL STUDS AT BEARING POINTS OF 2X MEMBER BEAMS SHALL EXCEED THE NUMBER OF MEMBERS IN THE BEAM BY ONE. THE CENTERLINE OF THE BEAM SHALL BE THE CENTERLINE OF THE SUPPORTING WALL STUDS. (UNLESS NOTED OTHERWISE ON PLAN) ALL MICRO–LAM BEAMS SHALL HAVE 3 STUDS (MIN. & EXCEED WIDTH OF BEAM). CONTINUE THESE STUDS TO THE FOUNDATION WITH INTERMEDIATE SUPPORTS THROUGH FLOOR, BETWEEN LOWER WALL TOP PLATE & UPPER WALL BOTTOM PLATE.

PROVIDE DOUBLE JOIST UNDER ALL PARTITIONS PARALLEL TO JOIST SPAN AND AROUND ALL FLOOR AND ROOF OPENINGS. SPACE & BLOCK IF PARTITIONS ABOVE IS A PLUMBING WALL. PROVIDE SOLID BLOCKING AT 12" O.C. BETWEEN JOISTS UNDER PARTITIONS ABOVE) WHICH ARE PARALLEL TO THE JOISTS BUT NOT DIRECTLY OVER THE JOISTS. BLOCKING SHALL BE NOT LESS THAN 2" IN. THICKNESS & SHALL MATCH THE DEPTH OF THE JOISTS. TRUSSES MAY USE TRUSS BLOCKS.

AP SHEATHING 2'–0" ABOVE & BELOW THE WALL/FLOOR INTERFACE.

U.N.O. NAIL ALL SHEATHING PANEL EDGES WITH 8d NAILS AT 4" O.C. AND INTERMEDIATE STUDS WITH 8d NAILS AT 6" O.C. BLOCK ALL UNSUPPORTED EDGES.

BRICK AND CONCRETE MASONRY

MATERIALS

HOLLOW CMU:	NORMAL WEIGHT: ASTM C–90–85, GRADE N, Fm= 1500 PSI
SOLID CMU:	NORMAL WEIGHT: ASTM C–145–85, GRADE N
CONCRETE MASONARY LINTEL:	NORMAL WEIGHT: ASTM C90–85, ASSEMBLY Fm= 2500 PSI
MORTAR:	ASTM C270 PROJECTION SPECIFICATION MORTARS SHALL CONSIST OF TYPE 1 PORTLAND CEMENTS, TYPE M HYDRATED LIME & APPROVED AGGREGATE, 2500 psi MINIMUM AVERAGE COMPRESSIVE STRENGTH OF 2–INCH CUBES AT 29 DAYS.

ALL MASONRY WORK SHALL CONFORM TO THE APPLICABLE REQUIREMENTS OF BIA AND NCMA SPECIFICATION FOR CONCRETE MASONRY CONSTRUCTION (ACI 513.1).

REINFORCED MASONRY WALLS SHALL HAVE ALL HOLLOW CELLS FILLED WITH CONCRETE GROUT. CONCRETE MAY BE PLACED IN MAXIMUM VERTICAL LIFTS NOT TO EXCEED 4–FEET. ROUGHEN ALL SURFACES OF CONCRETE FILL WHICH ARE TO RECEIVE ADDITIONAL LIFTS ABOVE.

GROUT ALL CELLS SOLID BELOW GRADE

REINFORCING STEEL

REINFORCING BARS SHALL BE DEFORMED BILLET STEEL CONFORMING TO ASTM A615, GRADE 60, EXCEPT THAT COLUMN AND PIER TIES MAY CONFORM TO ASTM A615, GRADE 40. ALL WELDED WIRE FABRIC SHALL CONFORM TO ASTM A–185. REINFORCING BAR MATS SHALL ALSO CONFORM TO ASTM A184. BARS SHALL BE BRANDED BY THE MANUFACTURER WITH BAR SIZE AND GRADE OF STEEL AND
CERTIFIED MILL REPORTS SHALL BE SUBMITTED FOR RECORD. REINFORCING STEEL SHALL BE DETAILED IN ACCORDANCE WITH THE ACI "MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES", LATEST EDITION.

PROVIDE CORNER BARS AT JUNCTIONS OF CONCRETE WALLS, GRADE BEAMS AND WALL FOOTINGS AND LAP WITH WALL REINFORCING AS SHOWN IN TYPICAL DETAILS. SIZE AND SPACING OF CORNER BARS TO BE SAME AS HORIZONTAL WALL REINFORCING, UNLESS SHOWN OTHERWISE. WHERE CONTINUOUS BARS ARE CALLED FOR, THEY SHALL RUN CONTINUOUSLY AROUND CORNERS AND LAPPED AS NECESSARY. PROVIDE STANDARD HOOKS AT DISCONTINUOUS ENDS. TENSION AND COMPRESSION LAP SPLICES SHALL NOT BE LESS THAN THE SPLICE LENGTHS AS GIVEN IN ACI–318. GENERALLY LAP TOP BARS AT MID SPAN AND BOTTOM BARS AT SUPPORTS. PROVIDE PLACING ACCESSORIES IN ACCORDANCE WITH ACI RECOMMENDATIONS.

CONCRETE PROTECTION FOR REINFORCEMENT

WELDED WIRE REINFORCING SHALL BE SUPPORTED ON HIGH CHAIRS SO THAT THE FABRIC IS POSITIONED IN THE TOP THIRD OF THE SLAB THICKNESS, BUT NOT MORE THAT 1–1/2 INCHES BELOW THE TOP SURFACE. LAP ONE FULL MESH PLUS TWO–INCHES AT SPLICES IN EACH DIRECTION. PLACE CONCRETE OVER VAPOR BARRIER AND 4 INCHES MINIMUM OR COURSE AGGREGATE OR AS RECOMMENDED BY SOILS ENGINEER. THE AGGREGATE LAYER SHALL BE PLACED OVER FIRM NATURAL SUBGRADE OR ON COMPACTED AND CONTROLLED FILL. FILL UNDER SLABS SHALL BE COMPACTED IN 8 INCH LAYERS TO 95% MAX. DENSITY. USE AIR–ENTRAINED AT ALL EXTERIOR SLABS. PROVIDE CONTROL AND CONSTRUCTION JOINTS PRIOR TO PLACING CONCRETE.

PROVIDE 2'–6" X 2'–6" CORNER BARS TO MATCH ALL HORIZONTAL REINFORCING IN WALLS AND FOOTINGS. ALL LAPS SHALL BE A MINIMUM OF 36 BAR DIAMETERS. PROVIDE DOWELS BETWEEN ALL FOOTINGS, WALLS AND PIERS TO MATCH SIZE AND SPACING OF VERTICAL REINFORCING.

FABRICATED WOOD TRUSSES

TRUSSES SHALL BE DESIGNED IN ACCORDANCE WITH THESE SPECIFICATIONS AND WHERE ANY APPLICABLE DESIGN FEATURE IS NOT SPECIFIED HEREIN, DESIGN SHALL BE IN ACCORDANCE WITH APPLICABLE PROVISIONS OF LATEST EDITION OF NATIONAL DESIGN SPECIFICATIONS FOR WOOD CONSTRUCTION (NDS) AMERICAN FOREST AND PAPER ASSOCIATION (AFPA), AND DESIGN SPECIFICATIONS FOR METAL PLATE CONNECTED WOOD TRUSSES (ANSI/TPI 1), TRUSS PLATE INSTITUTE (TPI), AND CODES OF JURISDICTION. FABRICATE, SUPPLY AND ERECT WOOD TRUSSES AS SHOWN ON THE DRAWINGS AND AS SPECIFIED. WORK SHALL INCLUDE ALL ANCHORAGE, BLOCKING, CURBING, MISCELLANEOUS FRAMING AND BRACING.

MANUFACTURER SHALL SUBMIT 3 COPIES OF TRUSS DESIGN DRAWINGS BEARING SEAL OF PROFESSIONAL ENGINEER FOR APPROVAL PRIOR TO ERECTION AND ENGINEERING FRAMING PLANS FOR ALL FLAT CHORD TRUSSES.

LUMBER USED FOR TRUSS MEMBERS SHALL BE IDENTIFIED BY GRADE MARK OF A LUMBER INSPECTION AGENCY, AND SHALL BE AS SHOWN ON DESIGN DRAWINGS. TRUSSES SHALL BE HANDLED DURING FABRICATION, DELIVERY AND AT JOBSITE SO AS NOT TO BE SUBJECTED TO EXCESSIVE BENDING. TRUSSES SHALL BE UNLOADED ON SMOOTH GROUND TO AVOID LATERAL STRAIN. TRUSSES SHALL BE PROTECTED FROM DAMAGE THAT MIGHT RESULT FROM ON–SITE ACTIVITIES AND ENVIRONMENTAL CONDITIONS. PREVENT TOPPLING WHEN BANDING IS REMOVED.

HANDLE DURING INSTALLATION IN ACCORDANCE WITH HANDLING, INSTALLING AND BRACING WOOD TRUSSES (HIB–91), TPI, AND ANSI/TPI 1–1995. INSTALLATION SHALL BE CONSISTENT WITH GOOD WORKMANSHIP AND GOOD BUILDING PRACTICES. TRUSSES SHALL BE SET AND SECURED LEVEL AND PLUMB, AND IN CORRECT LOCATION. TRUSSES SHALL BE HELD IN CORRECT ALIGNMENT UNTIL SPECIFIED PERMANENT BRACING IS INSTALLED. CUTTING AND ALTERING OF TRUSSES IS NOT PERMITTED. CONCENTRATED LOADS (FULL BUNDLES OF DECKING) SHALL NOT BE PLACED ATOP TRUSSES UNTIL ALL SPECIFIED BRACING HAS BEEN INSTALLED AND DECKING IS PERMANENTLY NAILED IN PLACE. ERECTION BRACING IS ALWAYS REQUIRED. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING AND FURNISHING THE MATERIALS USED FOR INSTALLATION AND PERMANENT BRACING.

STRUCTURAL ENGINEER OF RECORD SHALL APPROVE SHOP DRAWINGS PRIOR TO SUBMITTAL TO BUILDING OFFICIAL. BUILDING OFFICIAL SHALL APPROVE SHOP DRAWING PRIOR TO INSTALLATION.

ALL ROOF TRUSSES SHALL BE ATTACHED TO PERPENDICULAR NON–LOAD BEARING WALLS WITH TRUSS CLIPS. CEILING GWB SHALL BE ATTACHED TO BLOCKING ON THE WALL AND NOT TO THE TRUSS FOR A DISTANCE OF 18" FROM THE WALL.

ALL FLOOR TRUSSES ON THE LOWEST FLOOR W/ TRUSSES SHALL BE ATTACHED TO PREPINDICULAR NON–LOAD BEARING WALLS WITH TRUSS CLIPS. CEILING GWB SHALL BE ATTACHED TO BLOCKING ON THE WALL AND NOT TO THE TRUSS FOR A DISTANCE OF 18" FROM THE WALL.

MISCELLANEOUS ITEMS

THE CONTRACTOR IS SOLELY RESPONSIBLE FOR ALL SAFETY REGULATIONS, PROGRAMS AND PRECAUTIONS RELATED TO ALL WORK ON THIS PROJECT AND FOR THE PROTECTION OF PERSONS AND PROPERTY EITHER ON OR ADJACENT TO THE PROJECT AND SHALL PROTECT SAME AGAINST INJURY, DAMAGE OR LOSS.

THE CONTRACTOR IS RESPONSIBLE FOR LIMITING THE AMOUNT OF CONSTRUCTION LOAD IMPOSED ON THE STRUCTURE. SUCH LOADS SHALL NOT EXCEED THE CAPACITY OF THE STRUCTURE AT ANY TIME.

THE STRUCTURE IS DESIGNED TO FUNCTION AS A UNIT UPON COMPLETION, AND ANY TEMPORARY BRACING OR SUPPORT REQUIRED TO ACCOMMODATE THE CONTRACTOR'S MEANS AND METHODS ARE THE RESPONSIBILITY OF THE CONTRACTOR.

THE CONTRACTOR IS TO VERIFY ALL OPENING SIZES AND LOCATIONS WITH THE REQUIREMENTS OF OTHER TRADES PRIOR TO FABRICATION AND ERECTION.

STRUCTURAL DRAWINGS SHALL BE USED IN CONJUNCTION WITH THE ARCHITECTURAL, MECHANICAL, ELECTRICAL AND PLUMBING DRAWINGS, AND THE CONTRACTOR SHALL BE RESPONSIBLE FOR SEEING THAT THE WORK OF ALL TRADES IS COORDINATED WITH ADJACENT WORK.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR DESIGNING, FURNISHING, ERECTING AND REMOVING ANY TEMPORARY SHORING AND BRACING DURING CONSTRUCTION

THE ARCHITECT AND ENGINEER SHALL BE NOTIFIED AT THE PROPER TIME WHEN ALL ITEMS ARE READY FOR OBSERVATION. SUFFICIENT NOTICE SHALL BE GIVEN BY THE CONTRACTOR TO ALLOW FOR SCHEDULING OF OBSERVATIONS.

SAFETY REGULATIONS SHALL BE STRICTLY FOLLOWED BY THE CONTRACTOR OR SUBCONTRACTOR DURING ALL TIMES OF WORK ON THIS PROJECT. THE ARCHITECT OR ENGINEER SHALL NOT HAVE CONTROL OR CHARGE OF, AND SHALL NOT BE RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES, FOR SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE WORK, FOR ACTS OF OMISSIONS OF THE CONTRACTOR, SUBCONTRACTORS, OR ANY OTHER PERSONS PERFORMING ANY OF THE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.

ALL SPECIALTY BOLTS, INCLUDING EXPANSION TYPE AND EPOXY TYPE ANCHORS SHALL BE INSTALLED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S PRINTED INSTRUCTIONS.

THE CONTRACTOR SHALL PROTECT FROM DAMAGES EXISTING BUILDING(S), OWNER EQUIPMENT, ROADS, WALKS AND UTILITIES. THE CONTRACTOR SHALL MAINTAIN THESE DURING THE COURSE OF THE WORK, AND SHALL REPAIR ALL DAMAGES AT NO ADDITIONAL EXPENSE TO THE OWNER.

IN AREAS WHERE THE DRAWINGS DO NOT ADDRESS METHODOLOGY, THE CONTRACTOR SHALL BE BOUND TO PERFORM IN STRICT COMPLIANCE WITH MANUFACTURER'S SPECIFICATIONS AND/OR RECOMMENDATIONS.

ON–SITE VERIFICATION OF ALL DIMENSIONS AND CONDITIONS SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR AND HIS SUBCONTRACTORS. NOTED DIMENSIONS SHALL TAKE PRECEDENCE OVER SCALE.

THE GENERAL NOTES AND TYPICAL DETAILS APPLY THROUGHOUT THE JOB UNLESS OTHERWISE NOTED OR SHOWN.

THE CONTRACTOR SHALL COMPARE AND COORDINATE ALL DRAWINGS. IF A DISCREPANCY EXISTS, HE SHALL PROMPTLY REPORT IT FOR PROPER ADJUSTMENT BEFORE PROCEEDING WITH THE WORK.

IN THE EVENT THAT CERTAIN FEATURES OF THE CONSTRUCTION ARE NOT FULLY SHOWN ON THE DRAWINGS, THEIR CONSTRUCTION SHALL BE OF THE SAME CHARACTER AS SIMILAR CONDITIONS THAT ARE SHOWN OR NOTED.

THESE PLANS ARE SUBJECT TO MODIFICATIONS AS NECESSARY TO MEET CODE REQUIREMENTS OR TO FACILITATE MECHANICAL, PLUMBING INSTALLATIONS OR TO INCORPORATE DESIGN IMPROVEMENTS.

SHOP DRAWINGS

THE GENERAL CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR ALL STRUCTURAL ELEMENTS SHOWN ON THE CONTRACT DOCUMENTS FOR APPROVAL. THE STRUCTURAL ENGINEER WILL NOT BE RESPONSIBLE FOR THE STRUCTURAL CERTIFICATION AND DESIGN OF THE PROJECT IF THE GENERAL CONTRACTOR FAILS TO OBTAIN APPROVAL OF THE SHOP DRAWINGS. THE GENERAL CONTRACTOR SHALL INFORM THE STRUCTURAL ENGINEER IN WRITING CONCERNING DEVIATIONS AND/OR OMISSIONS FROM THE CONTRACT DOCUMENTS AT THE TIME OF SHOP DRAWING SUBMISSION. THE GENERAL CONTRACTOR SHALL REVIEW ALL SHOP DRAWINGS AND SHALL MAKE ALL CORRECTIONS HE DEEMS NECESSARY BEFORE SUBMISSION. THE GENERAL CONTRACTOR SHALL STATE ON THE SHOP DRAWINGS THAT CONTRACT DOCUMENT REQUIREMENTS HAVE BEEN MET AND THAT ALL DIMENSIONS, CONDITIONS AND QUANTITIES HAVE BEEN REVIEWED AND VERIFIED AS SHOWN AND/OR CORRECTED ON THE SHOP DRAWINGS.

PLOT CODE
PEN7–WHITE .039 INCHES (1.00mm)
PEN6–MAGENTA .027 INCHES (.70mm)
PEN5–BLUE .020 INCHES (.50mm)
PEN4–CYAN .014 INCHES (.35mm)
PEN3–GREEN .010 INCHES (.25mm)
PEN2–YELLOW .007 INCHES (.18mm)
PEN1–RED .006 INCHES (.15mm)

CONDITION CASES

BAR SIZE	TOP BARS		OTHER BARS	
	CASE 1	CASE 2	CASE 1	CASE 2
#3	28"	42"	22"	32"
#4	37"	56"	29"	43"
#5	47"	70"	36"	54"
#6	56"	84"	43"	65"
#7	81"	122"	63"	94"
#8	93"	139"	72"	107"
#9	105"	157"	81"	121"
#10	118"	177"	91"	136"

CLASS "B" LAP SPLICES (f'c=3000 psi)

NON EPOXY COATED

TOP BARS ARE HORIZONTAL BARS WITH MORE THAN 12 INCHES OF CONCRETE CAST BELOW THE SPLICE.

CASE 1 – OTHER CASES
CASE 2 – COLUMNS & BEAMS:
COVER < BAR DIA. OR
CENTER TO CENTER SPACING < 2 BAR DIA.
ALL OTHER ELEMENTS:
COVER < BAR DIA. OR
CENTER TO CENTER SPACING < 3 BAR DIA.

CONDITION CASES

BAR SIZE	TOP BARS		OTHER BARS	
	CASE 1	CASE 2	CASE 1	CASE 2
#3	24"	36"	19"	28"
#4	32"	48"	25"	37"
#5	40"	60"	31"	46"
#6	48"	72"	37"	56"
#7	70"	105"	54"	81"
#8	80"	120"	62"	93"
#9	90"	135"	69"	104"
#10	100"	150"	77"	116"

CLASS "B" LAP SPLICES (f'c=4000 psi)

NON EPOXY COATED

TOP BARS ARE HORIZONTAL BARS WITH MORE THAN 12 INCHES OF CONCRETE CAST BELOW THE SPLICE.

CASE 1 – OTHER CASES
CASE 2 – COLUMNS & BEAMS:
COVER < BAR DIA. OR
CENTER TO CENTER SPACING < 2 BAR DIA.
ALL OTHER ELEMENTS:
COVER < BAR DIA. OR
CENTER TO CENTER SPACING < 3 BAR DIA.

ABBREVIATION LEGEND:

℄	CENTERLINE	H.C.	HOLLOW CORE
		HF	HEM–FIR
ø	DIAMETER	HORIZ.	HORIZONTAL
A.F.F.	ABOVE FINISH FLOOR	I.D.	INSIDE DIAMETER
ALUM.	ALUMINUM	I.F.	INSIDE FACE
APPROX.	APPROXIMATE	INT.	INTERIOR
ARCH.	ARCHITECTURAL	JNT.	JOINT
BLDG.	BUILDING	J.T.	JACK TRUSS
BLK.	BLOCKING	L.W.	LONG WAY
BM.	BEAM	MAX.	MAXIMUM
C.A.	COLUMN ABOVE	N/A	NOT APPLICABLE
CHAM.	CHAMFER	N.T.S.	NOT TO SCALE
CLG.	CEILING	O.C.	ON CENTER
COL.	COLUMN	O.F.	OUTSIDE FACE
CONC.	CONCRETE	O.D.	OUTSIDE DIAMETER
CMU	CONCRETE MASONRY UNIT	OPP.	OPPOSITE
CNST. JNT.	CONSTRUCTION JOINT	PLYWD.	PLYWOOD
CONT.	CONTINUOUS	P.T.	PRESSURE TREATED (WOOD)
CTR.	CENTER	P.T.	POST–TENSIONED (CONCRETE)
C.T.	CORNER TRUSS	RAD. OR R.	RADIUS
C.J.	CONTROL JOINT	REINF. ⌀	REINFORCED
DBL.	DOUBLE	R.O.	ROUGH OPENING
DIA.	DIAMETER	SCHED.	SCHEDULE
DIM.	DIMENSION	SHT.	SHEET
DWG.	DRAWING	SPF	SPRUCE–PINE–FIR
EA.	EACH	SQ. OR	SQUARE
E.E.	EACH END	STD.	STANDARD
EL.	ELEVATION	STL.	STEEL
EOR	ENGINEER OF RECORD	STRUCT.	STRUCTURAL
EQ.	EQUAL	S.W.	SHORT WAY
EXIST.	EXISTING	SYP	SOUTHER YELLOW PINE
EXP.	EXPANSION	T&B	TOP & BOTTOM
EXT.	EXTERIOR	T&G	TONGUE & GROOVE
E.W.	EACH WAY	T.O.C.	TOP OF CURB
FDN.	FOUNDATION	T.O.B.	TOP OF BEAM
FLR.	FLOOR	T.O.F.	TOP OF FOOTING
F.O.C.	FACE OF CONCRETE	T.O.P.	TOP OF PLATE
F.O.F.	FACE OF FINISH	T.O.S.	TOP OF STEEL OR SLAB
F.O.S.	FACE OF STUDS	T.O.W.	TOP OF WALL
FTG.	FOOTING	TYP.	TYPICAL
GA.	GAUGE	U.N.O.	UNLESS NOTED OTHERWISE
GALV.	GALVANIZED	VERT.	VERTICAL
GR.	GRADE	V.I.F.	VERIFY IN FIELD
GWB	GYPSUM WALL BOARD	w/	WITH
G.T.	GIRDER TRUSS	WD.	WOOD
		W/O	WITHOUT
		W.W.R.	WELDED WIRE REINFORCEMENT
		(symbol)	TRUSSES w/ VARIABLE LENGTHS OR RAFTERS

PRINTS ISSUED FOR:
90% SUBMISSION

NO.	REVISIONS	DATE
1	ISSUED FOR PERMIT	8/12/26

PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 22748, EXPIRATION DATE: JUNE 21, 2026.

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MYSTIC HARBOUR WWTP
BIOSOLIDS UPGRADE &
BUILDING REHABILITATION

WORCESTER COUNTY, MARYLAND



STRUCTURAL NOTES

		SHEET NO.
SCALE	: AS NOTED	S0.1
DESIGN BY	: ARM	
DRAWN BY	: TFVT	
CHECKED BY	: ARM	
GMB FILE	: 250196	
DATE	: OCT 2026	

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Typical _x4 L-Brace Nailed To 2x_ Verticals W/10d Nails spaced 6" o.c.

Vertical Stud

SECTION B-B

Vertical Stud

(4) - 16d Nails

DIAGONAL BRACE

16d Nails Spaced 6" o.c.

(2) - 10d Nails into 2x6

2x8 Stud or 2x4 No.2 of better

Typical Horizontal Brace Nailed To 2x_ Verticals w/(4)-10d Nails

2x4 Stud

SECTION A-A

DIAGONAL BRACE 4'-0" O.C. MAX

TRUSS GEOMETRY AND CONDITIONS SHOWN ARE FOR ILLUSTRATION ONLY.

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Varies to Common Truss

SEE INDIVIDUAL MITEK ENGINEERING DRAWINGS FOR DESIGN CRITERIA

3x4 =

★ - Diagonal Bracing Refer to Section A-A

★★ - L-Bracing Refer to Section B-B

PROVIDE 2x4 BLOCKING BETWEEN THE FIRST TWO TRUSSES AS NOTED. TOENAIL BLOCKING TO TRUSSES WITH (2) - 10d NAILS AT EACH END. ATTACH DIAGONAL BRACE TO BLOCKING WITH (5) - 10d NAILS.

(4) - 8d (0.131" X 2.5") NAILS MINIMUM, PLYWOOD SHEATHING TO 2x4 STD SPF BLOCK

Roof Sheathing

24" Max

1'-3" Max

(2) - 10d NAILS

(2) - 10d NAILS

Trusses @ 24" o.c.

Diag. Brace at 1/3 points if needed

2x6 DIAGONAL BRACE SPACED 48" O.C. ATTACHED TO VERTICAL WITH (4) -16d NAILS AND ATTACHED TO BLOCKING WITH (5) - 10d NAILS.

HORIZONTAL BRACE (SEE SECTION A-A)

End Wall

NOTE:
1. MINIMUM GRADE OF #2 MATERIAL IN THE TOP AND BOTTOM CHORDS.
2. CONNECTION BETWEEN BOTTOM CHORD OF GABLE END TRUSS AND WALL TO BE PROVIDED BY PROJECT ENGINEER OR ARCHITECT.
3. BRACING SHOWN IS FOR INDIVIDUAL TRUSS ONLY. CONSULT BLDG. ARCHITECT OR ENGINEER FOR TEMPORARY AND PERMANENT BRACING OF ROOF SYSTEM.
4. L" BRACES SPECIFIED ARE TO BE FULL LENGTH. GRADES: 1x4 SRB OR 2x4 STUD OR BETTER WITH ONE ROW OF 10d NAILS SPACED 6" O.C.
5. DIAGONAL BRACE TO BE APPROXIMATELY 45 DEGREES TO ROOF DIAPHRAM AT 4'-0" O.C.
6. CONSTRUCT HORIZONTAL BRACE CONNECTING A 2x6 STUD AND A 2x4 STUD AS SHOWN WITH 16d NAILS SPACED 6" O.C. HORIZONTAL BRACE TO BE LOCATED AT THE MIDSPAN OF THE LONGEST STUD. ATTACH TO VERTICAL STUDS WITH (4) 10d NAILS THROUGH 2x4. (REFER TO SECTION A-A)
7. GABLE STUD DEFLECTION MEETS OR EXCEEDS L/240.
8. THIS DETAIL DOES NOT APPLY TO STRUCTURAL GABLES.
9. DO NOT USE FLAT BOTTOM CHORD GABLES NEXT TO SCISSOR TYPE TRUSSES.
10. SOUTHERN PINE LUMBER DESIGN VALUES ARE THOSE EFFECTIVE 05-01-13 BY SPIB/ALSC.
11. NAILS DESIGNATED 10d ARE (0.131" X 3") AND NAILS DESIGNATED 16d ARE (0.131" X 3.5")

Minimum Stud Size Species and Grade	Stud Spacing	Without Brace	1x4 L-Brace	2x4 L-Brace	DIAGONAL BRACE	2 DIAGONAL BRACES AT 1/3 POINTS
		Maximum Stud Length				
2x4 SP No. 3 / Stud	12" O.C.	4-9-12	5-9-6	8-2-2	9-7-7	14-5-3
2x4 SP No. 3 / Stud	16" O.C.	4-4-7	5-0-2	7-0-16	8-8-14	13-1-5
2x4 SP No. 3 / Stud	24" O.C.	3-9-13	4-1-1	5-9-6	7-7-10	11-5-7

✳ Diagonal braces over 6'-3" require a 2x4 T-Brace attached to one edge. Diagonal braces over 12'-6" require 2x4 I-braces attached to both edges. Fasten T and I braces to narrow edge of diagonal brace with 10d nails 8" o.c., with 3" minimum end distance. Brace must cover 90% of diagonal length.

MAX MEAN ROOF HEIGHT = 30 FEET
CATEGORY II BUILDING
EXPOSURE B or C
ASCE 7-98, ASCE 7-02, ASCE 7-05 100 MPH
ASCE 7-10, ASCE 7-16 125 MPH
DURATION OF LOAD INCREASE : 1.60

STUD DESIGN IS BASED ON COMPONENTS AND CLADDING.
CONNECTION OF BRACING IS BASED ON MWFRS.

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ALTERNATE DIAGONAL BRACING TO THE BOTTOM CHORD

Trusses @ 24" o.c.

HORIZONTAL BRACE (SEE SECTION A-A)

2x6 DIAGONAL BRACE SPACED 48" O.C. ATTACHED TO VERTICAL WITH (4) -16d (0.131" X 3.5") NAILS AND ATTACHED TO BLOCKING WITH (5) - 10d (0.131" X 3") NAILS.

Roof Sheathing

1'-3" Max

IT IS THE RESPONSIBILITY OF THE BLDG DESIGNER OR THE PROJECT ENGINEER/ARCHITECT TO DESIGN THE CEILING DIAPHRAGM AND ITS ATTACHMENT TO THE TRUSSES TO RESIST ALL OUT OF PLANE LOADS THAT MAY RESULT FROM THE BRACING OF THE GABLE ENDS

NAIL DIAGONAL BRACE TO PURLIN WITH TWO 16d (3.5"x0.131") NAILS

2X 4 PURLIN FASTENED TO FOUR TRUSSES WITH TWO 16d (0.131" X 3.5") NAILS EACH. FASTEN PURLIN TO BLOCKING W/ TWO 16d (0.131" X 3.5") NAILS (MIN)

PROVIDE 2x4 BLOCKING BETWEEN THE TRUSSES SUPPORTING THE BRACE AND THE TWO TRUSSES ON EITHER SIDE AS NOTED. TOENAIL BLOCKING TO TRUSSES WITH (2) - 10d (0.131" X 3") NAILS

EACH END. ATTACH DIAGONAL BRACE TO BLOCKING WITH (5) - 10d (0.131" X 3") NAILS.

Diag. Brace at 1/3 points if needed

End Wall

CEILING SHEATHING

BRACING REQUIREMENTS FOR STRUCTURAL GABLE TRUSSES

STRUCTURAL GABLE TRUSSES MAY BE BRACED AS NOTED:
METHOD 1 : ATTACH A MATING GABLE TRUSS TO THE INSIDE FACE OF THE STRUCTURAL GABLE AND FASTEN PER THE FOLLOWING NAILING SCHEDULE.
METHOD 2 : ATTACH 2X _ SCABS TO THE FACE OF EACH VERTICAL MEMBER ON THE STRUCTURAL GABLE PER THE FOLLOWING NAILING SCHEDULE. SCABS ARE TO BE OF THE SAME SIZE, GRADE AND SPECIES AS THE TRUSS VERTICALS

NAILING SCHEDULE:
- FOR WIND SPEEDS 120 MPH (ASCE 7-98, 02 ,05), 150 MPH (ASCE 7-10, 16) OR LESS, NAIL ALL MEMBERS WITH ONE ROW OF 10d (0.131" X 3") NAILS SPACED 6" O.C.
- FOR WIND SPEEDS 120-150 MPH (ASCE 7-98, 02, 05), 150-190 MPH (ASCE 7-10, 16) NAIL ALL MEMBERS WITH TWO ROWS OF 10d (0.131" X 3") NAILS SPACED 6" O.C. (2X 4 STUDS MINIMUM)

STRUCTURAL GABLE TRUSS

SCAB ALONG VERTICAL

INLAYED STUB

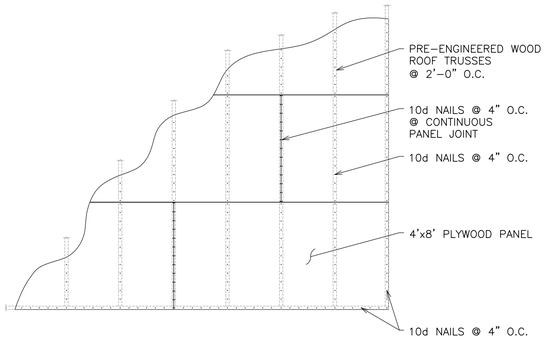
MAXIMUM STUD LENGTHS ARE LISTED ON PAGE 1. ALL BRACING METHODS SHOWN ON PAGE 1 ARE VALID AND ARE TO BE FASTENED TO THE SCABS OR VERTICAL STUDS OF THE STANDARD GABLE TRUSS ON THE INTERIOR SIDE OF THE STRUCTURE.

STRUCTURAL GABLE TRUSS

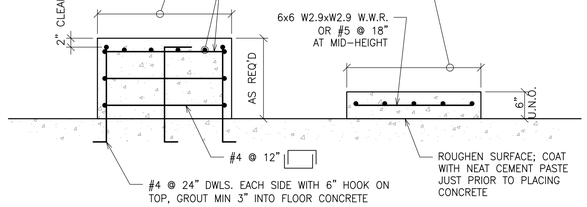
AN ADEQUATE DIAPHRAGM OR OTHER METHOD OF BRACING MUST BE PRESENT TO PROVIDE FULL LATERAL SUPPORT OF THE BOTTOM CHORD TO RESIST ALL OUT OF PLANE LOADS. THE BRACING SHOWN IN THIS DETAIL IS FOR THE VERTICAL/STUDS ONLY.

NOTE : THIS DETAIL IS TO BE USED ONLY FOR STRUCTURAL GABLES WITH INLAYED STUDS. TRUSSES WITHOUT INLAYED STUDS ARE NOT ADDRESSED HERE.

STANDARD GABLE TRUSS



ROOF SHEATHING ATTACHMENT DETAIL
SCALE: ⅜" = 1'-0"



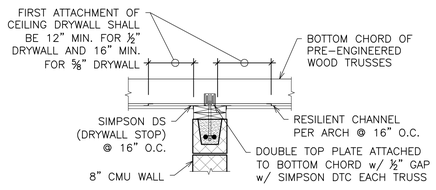
TYP. EQUIPMENT PAD

TYP. HOUSE KEEPING PAD (USE WHERE NOTED ON DWGS.)

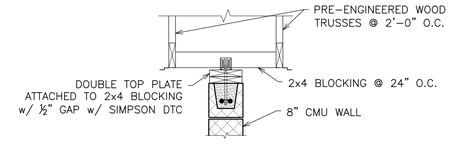
REINFORCEMENT DETAILS FOR HOUSEKEEPING/EQUIPMENT PADS
N.T.S.

NOTE
SEE TYPICAL MASONRY LINTEL & TYP. REINF. LAP SPLICE DETAILS.

REBAR DETAIL @ MASONRY OPENINGS
N.T.S.

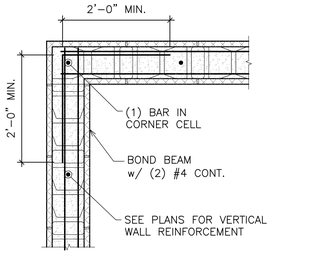


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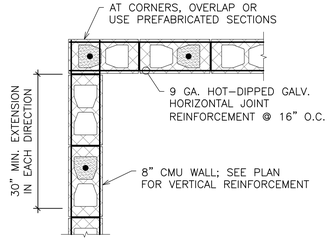


PARALLEL

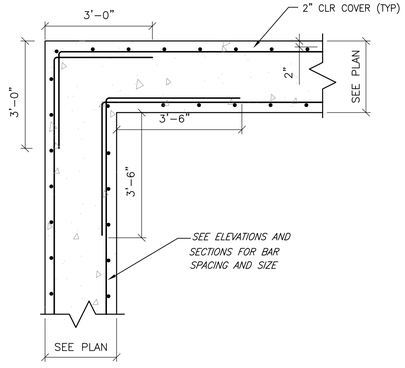
TRUSS ATTACHMENT DETAIL @ NON-LOAD BEARING INTERIOR WALLS
SCALE: ¾" = 1'-0"



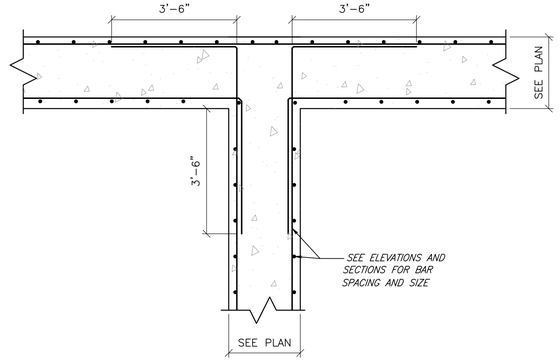
CORNER DETAIL @ BOND BEAM
N.T.S.



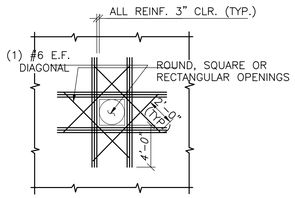
CORNER DETAIL FOR HORIZ. JOINT REINFORCEMENT
N.T.S.



TYPICAL WALL REINFORCEMENT DETAIL @ CORNER
SCALE: ½" = 1'-0"

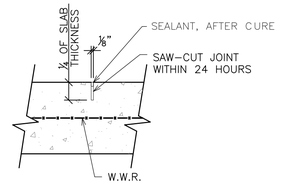


TYPICAL WALL REINFORCEMENT DETAIL @ INTERSECTION
SCALE: ½" = 1'-0"



NOTE:
1. PROVIDE ADDITIONAL REINFORCING, (MINIMUM OF ONE-HALF THE NUMBER OF PRINCIPLE REINFORCING, BARS BEING INTERRUPTED BY THE OPENING AT EACH FACE ON EACH SIDE.
2. FOR OPENINGS LESS THAN 12" DIA., NO ADDITIONAL REINFORCING IS REQUIRED PROVIDED, NO REINFORCING IS INTERRUPTED BY THE OPENING.

REBAR OPENING DETAIL
N.T.S.



NOTE:
SAW-CUTTING SHALL BE DONE AS SOON AS POSSIBLE AFTER POURING CONCRETE. WHEN CONCRETE HAS HARDENED SUFFICIENTLY TO ALLOW CUTTING, APPLY JOINT SEALANT.

SAW-CUT CONTROL JOINT DETAIL
N.T.S.

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MYSTIC HARBOUR WWTP
BIOSOLIDS UPGRADE & BUILDING REHABILITATION
WORCESTER COUNTY, MARYLAND

STATE OF MARYLAND
ALGIA REGINALD MANN
No. 22748
PROFESSIONAL ENGINEER

TYPICAL DETAILS

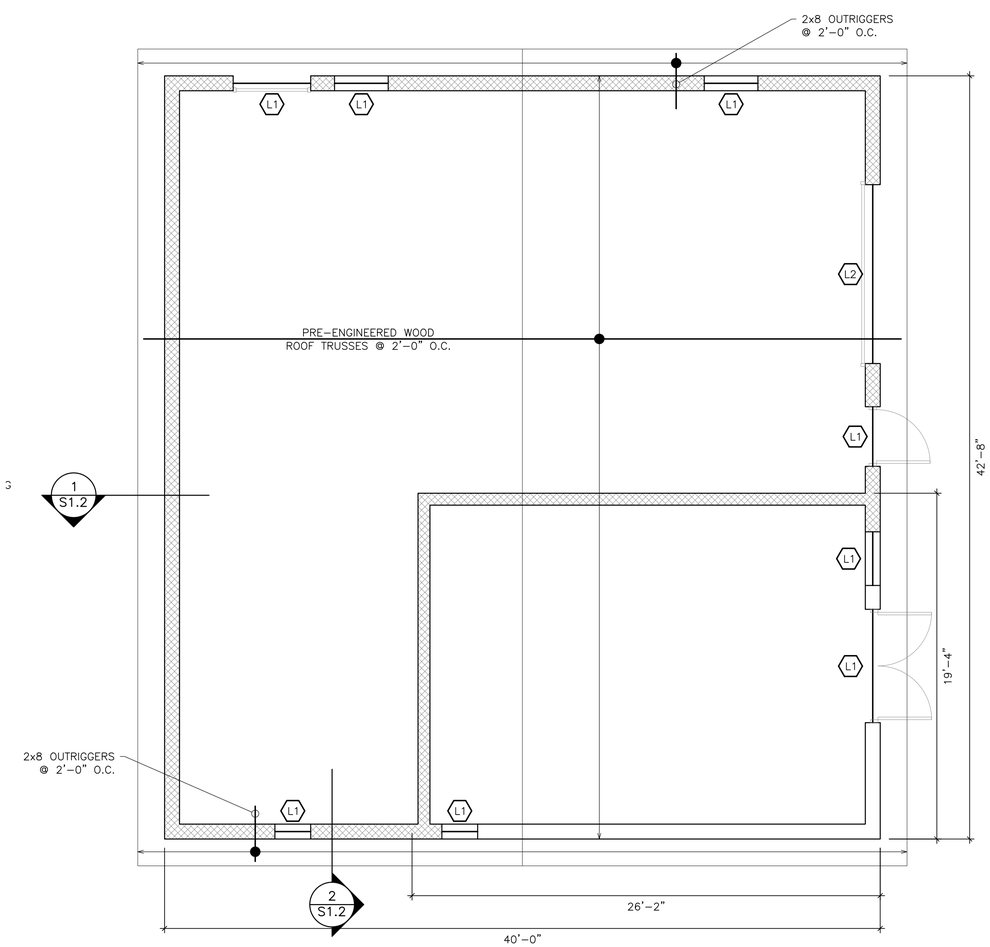
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DRAWN BY	: TFVT
CHECKED BY	: ARM
GMB FILE	: 250196
DATE	: OCT 2026

SHEET NO.
S0.2

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PLOT CODE
PEN1-WHITE 100 INCHES (100mm)
PEN4-MAGENTA 020 INCHES (50mm)
PEN5-BLUE 020 INCHES (50mm)
PEN6-CYAN 014 INCHES (35mm)
PEN3-GREEN 010 INCHES (25mm)
PEN2-YELLOW 007 INCHES (18mm)
PEN1-RED 006 INCHES (15mm)

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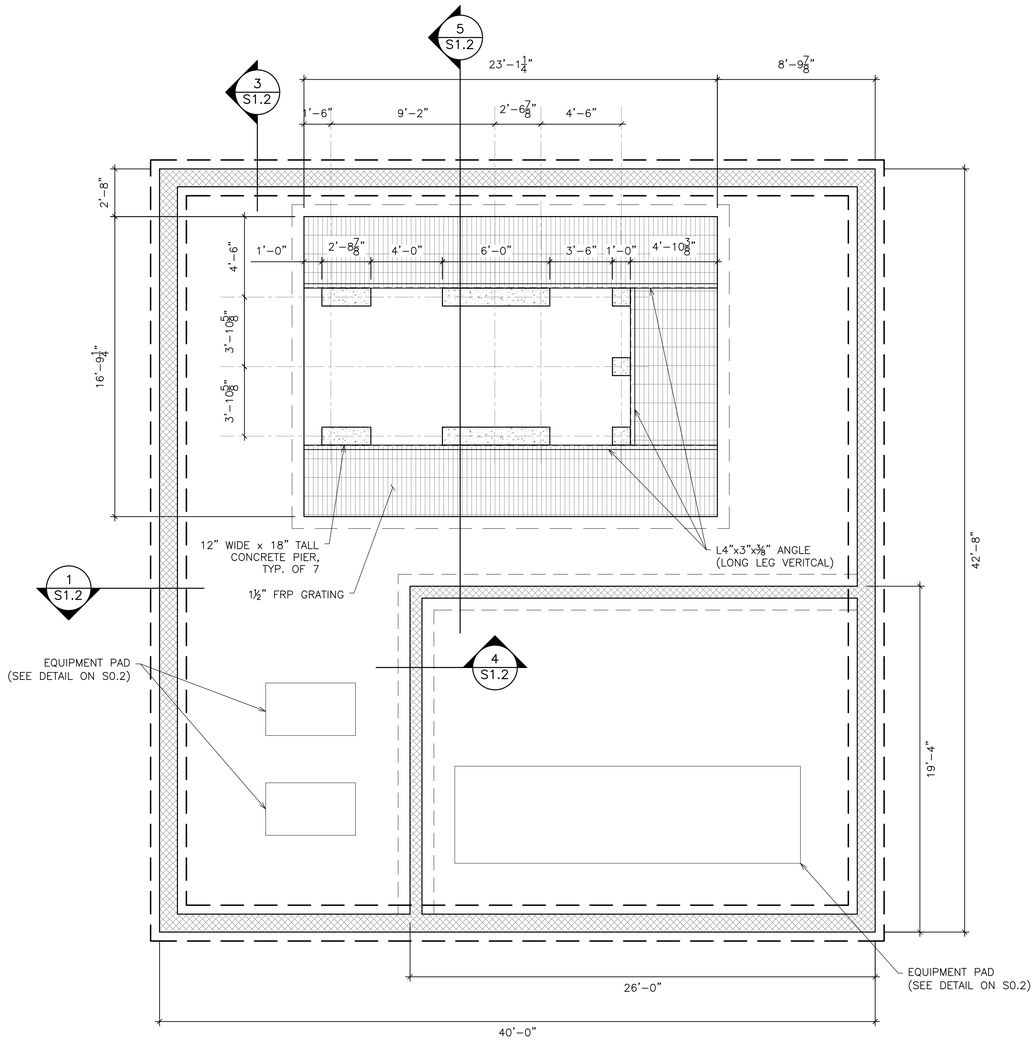
SLUDGE DEWATERING BUILDING ROOF FRAMING PLAN

SCALE: ¼" = 1'-0"

LEGEND:

L1 (1) 4x8 PRECAST CONCRETE LINTEL AND (1) 6x8 PRECAST CONCRETE LINTEL

L2 (1) 10"x8" PRECAST U-LINTEL w/ (2) #5 TOP AND BOTTOM; VERTICAL REINFORCING TO EXTEND INTO BOND BEAM ABOVE



SLUDGE DEWATERING BUILDING FOUNDATION PLAN

SCALE: ¼" = 1'-0"

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MYSTIC HARBOUR WWTP BIOSOLIDS UPGRADE & BUILDING REHABILITATION

WORCESTER COUNTY, MARYLAND

STATE OF MARYLAND
ALAN REGINALD MANNER
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SLUDGE DEWATERING BUILDING PLANS

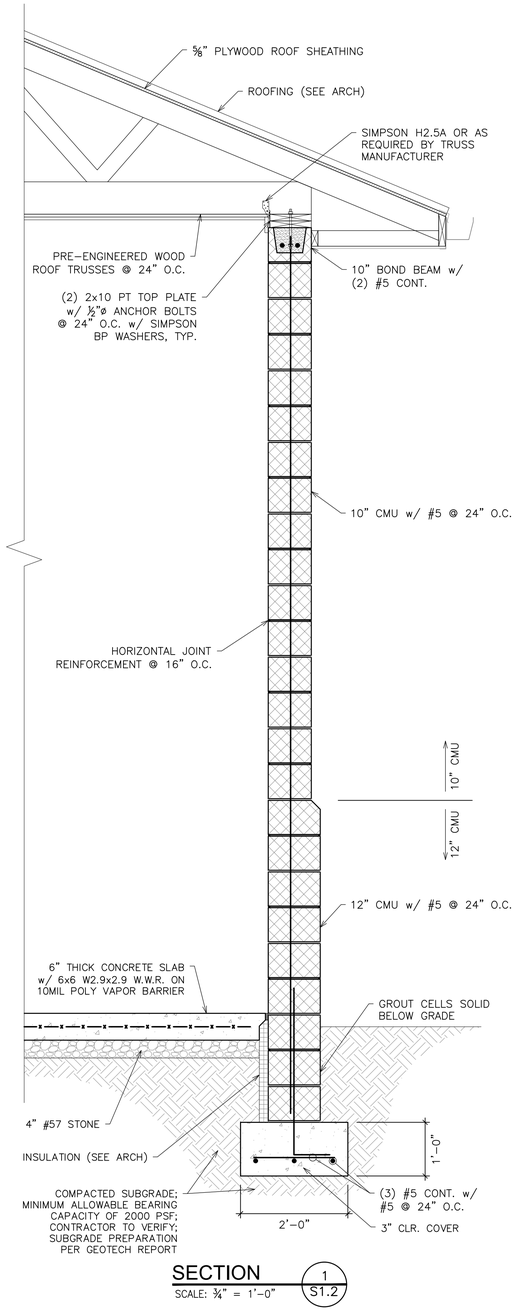
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DRAWN BY	: TFVT
CHECKED BY	: ARM
GMB FILE	: 250196
DATE	: OCT 2026

SHEET NO.
S1.1

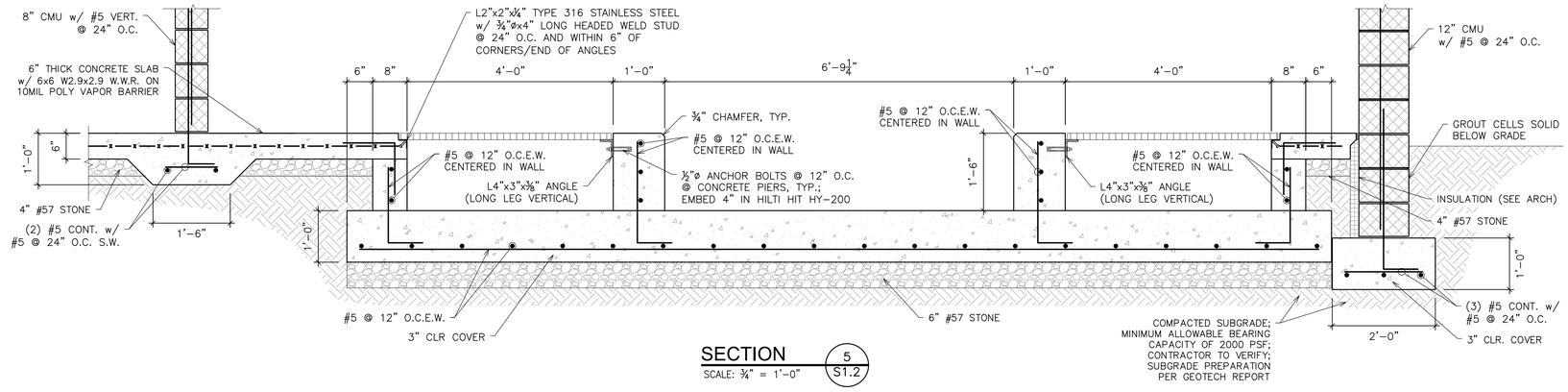
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PEN3-GREEN .010 INCHES (.25mm)
PEN4-CYAN .014 INCHES (.35mm)
PEN5-BLUE .020 INCHES (.50mm)
PEN6-MAGENTA .027 INCHES (.70mm)
PEN7-WHITE .031 INCHES (.80mm)

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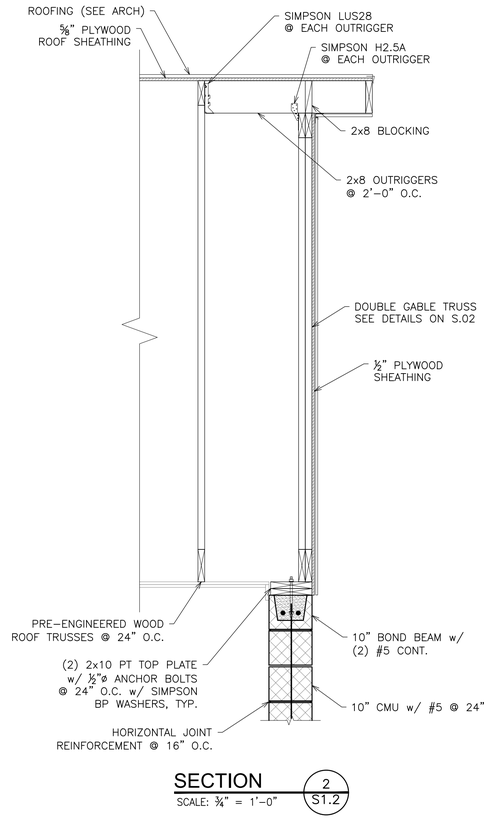
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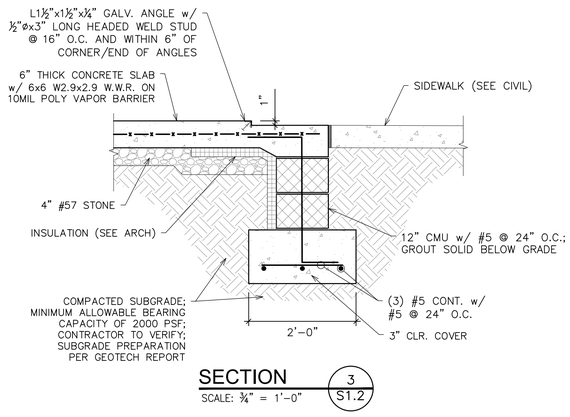
SECTION 1 S1.2
SCALE: ¾" = 1'-0"



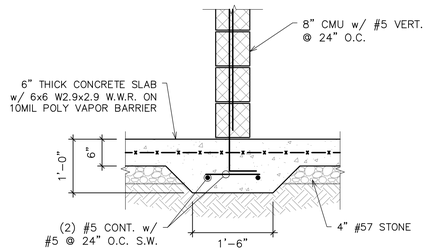
SECTION 5 S1.2
SCALE: ¾" = 1'-0"



SECTION 2 S1.2
SCALE: ¾" = 1'-0"



SECTION 3 S1.2
SCALE: ¾" = 1'-0"



SECTION 4 S1.2
SCALE: ¾" = 1'-0"

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MYSTIC HARBOUR WWTP BIOSOLIDS UPGRADE & BUILDING REHABILITATION

WORCESTER COUNTY, MARYLAND

STATE OF MARYLAND
ALGA REGINALD MINNER
No. 22748
PROFESSIONAL ENGINEER

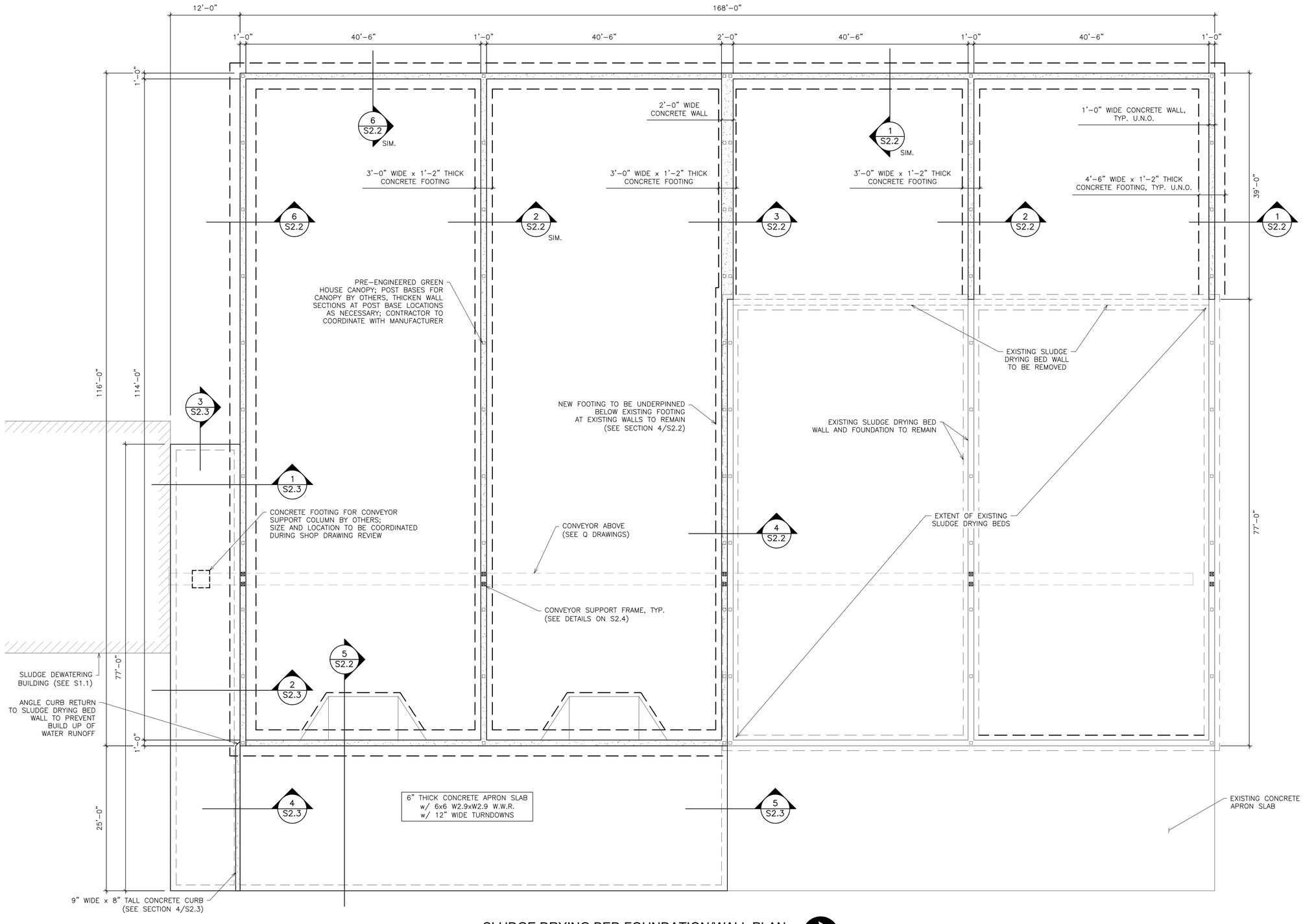
SLUDGE DEWATERING BUILDING SECTIONS

SCALE : AS NOTED	SHEET NO.
DESIGN BY : ARM	S1.2
DRAWN BY : TFVT	
CHECKED BY : ARM	
GMB FILE : 250196	
DATE : OCT 2026	

PLOT CODE
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PEN2-MAGENTA 002 INCHES (.05mm)
PEN3-BLUE 003 INCHES (.08mm)
PEN4-CYAN 004 INCHES (.10mm)
PEN5-GREEN 010 INCHES (.25mm)
PEN6-YELLOW 007 INCHES (.18mm)
PEN7-RED 006 INCHES (.15mm)

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SLUDGE DRYING BED FOUNDATION/WALL PLAN

SCALE: ⅛" = 1'-0"

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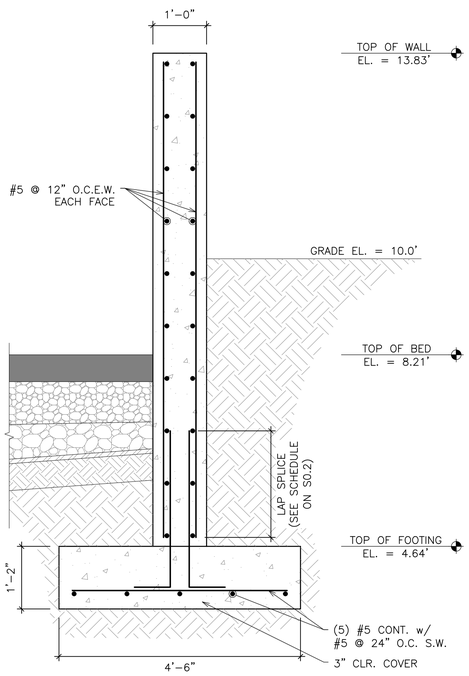
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ALICIA REGINALD MARINER
No. 22748
PROFESSIONAL ENGINEER

SLUDGE DRYING BED FOUNDATION AND WALL PLAN

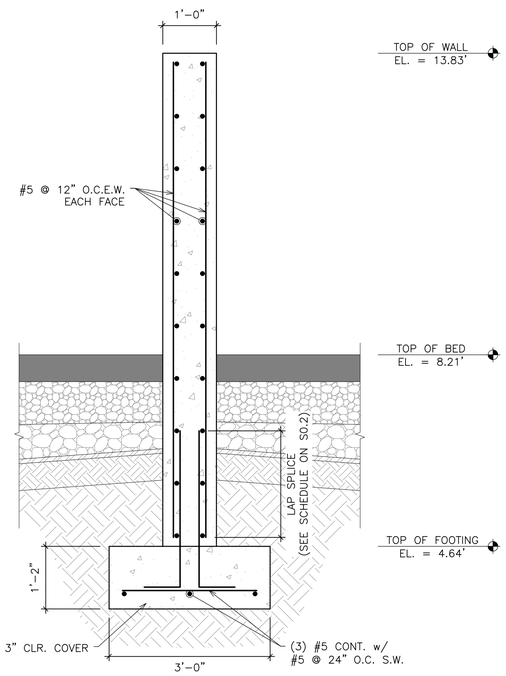
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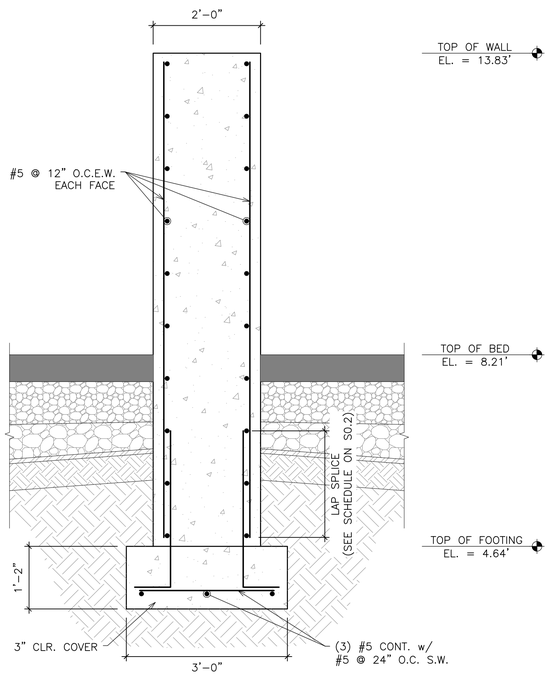
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PENT-RED 006 INCHES (.14mm)



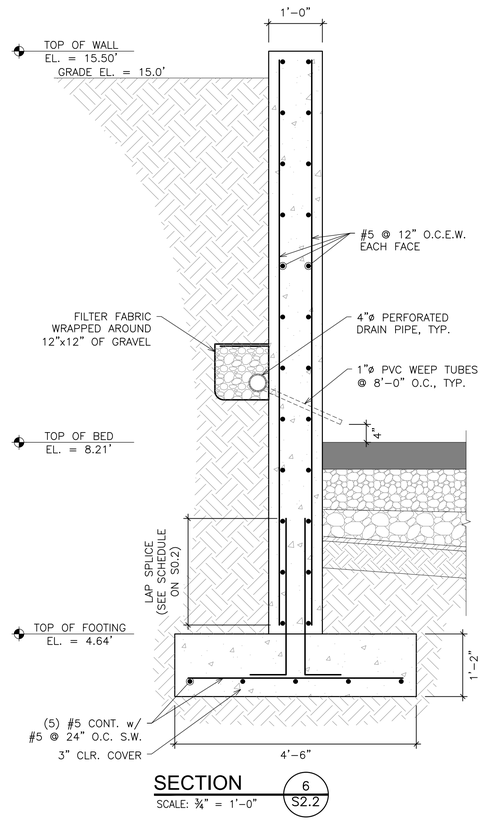
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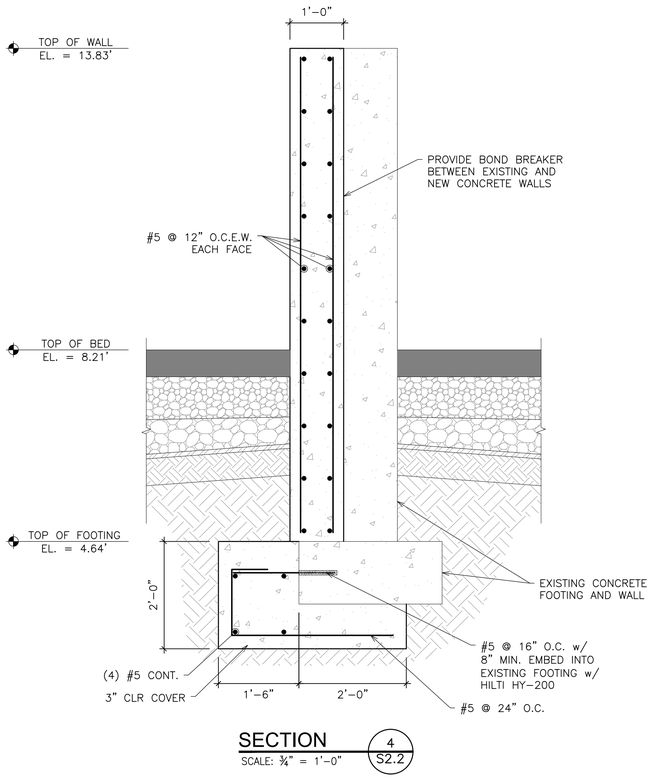
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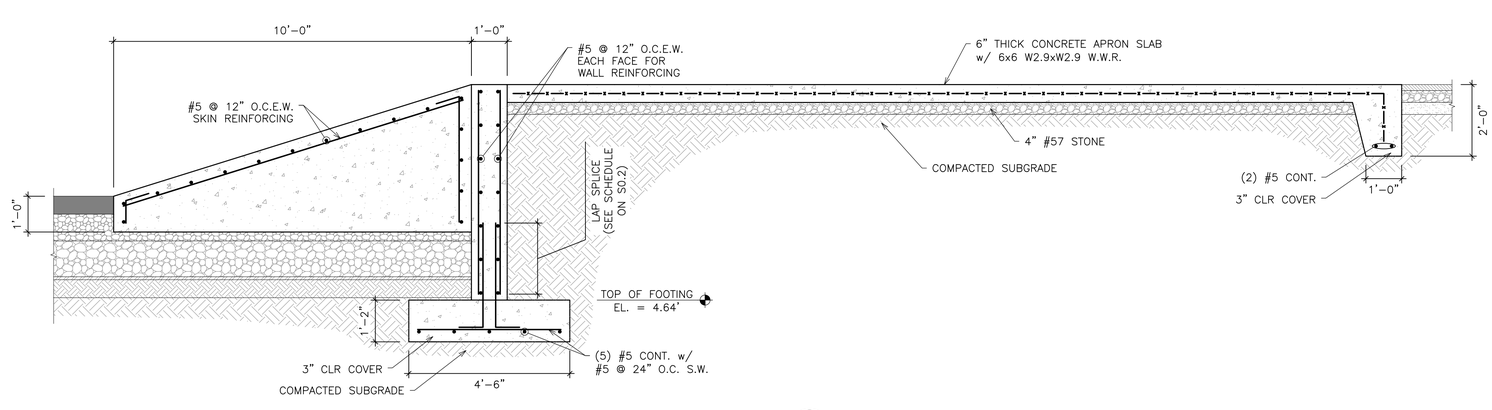
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SCALE: ¾" = 1'-0"



SECTION 6 S2.2
SCALE: ¾" = 1'-0"



SECTION 4 S2.2
SCALE: ¾" = 1'-0"



SECTION 5 S2.2
SCALE: ½" = 1'-0"

PLOT CODE
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PEN5-BLUE 020 INCHES (.50mm)
PEN6-MAGENTA 027 INCHES (.70mm)
PEN7-WHITE 039 INCHES (1.00mm)

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MYSTIC HARBOUR WWTP BIOSOLIDS UPGRADE & BUILDING REHABILITATION

WORCESTER COUNTY, MARYLAND

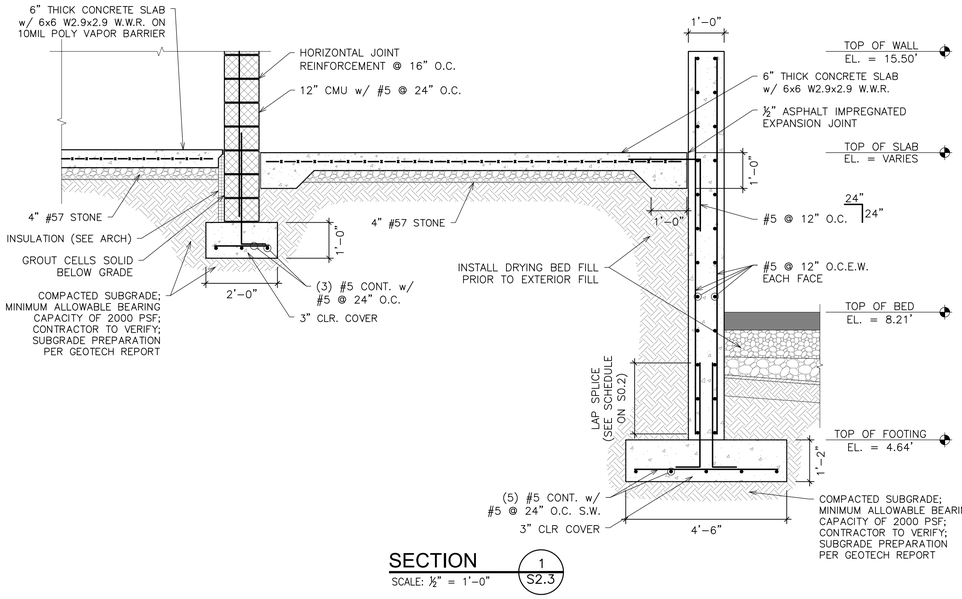
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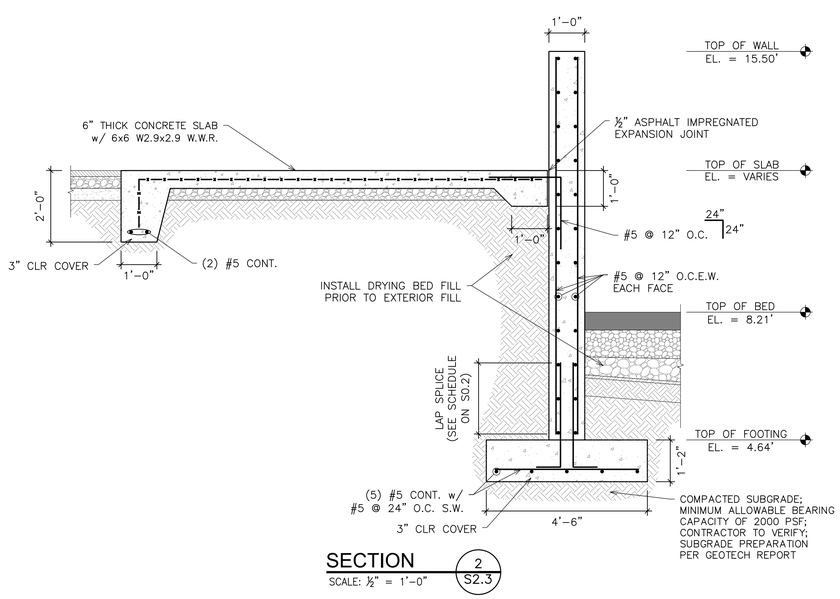
SLUDGE DRYING BED SECTIONS AND DETAILS

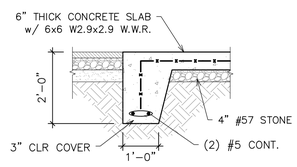
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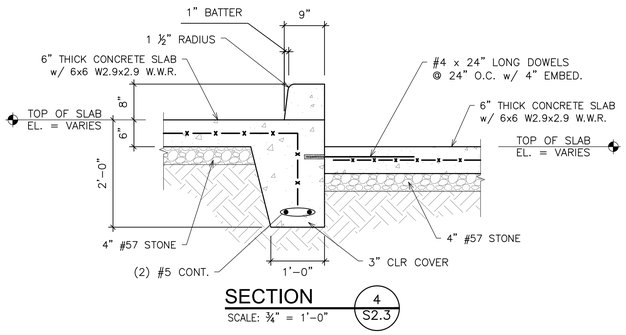
SHEET NO.
S2.2

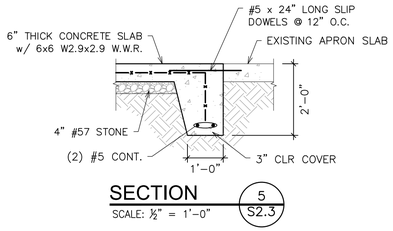
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NO.	REVISIONS	DATE
1	ISSUED FOR PERMIT	8/12/26

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SALISBURY, MARYLAND 21801
410-742-3115, FAX 410-548-5790
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MYSTIC HARBOUR WWTP BIOSOLIDS UPGRADE & BUILDING REHABILITATION

WORCESTER COUNTY, MARYLAND

STATE OF MARYLAND
ALEXANDRA REGINALD MAINER
No. 22748
PROFESSIONAL ENGINEER

SLUDGE DRYING BED SECTIONS AND DETAILS

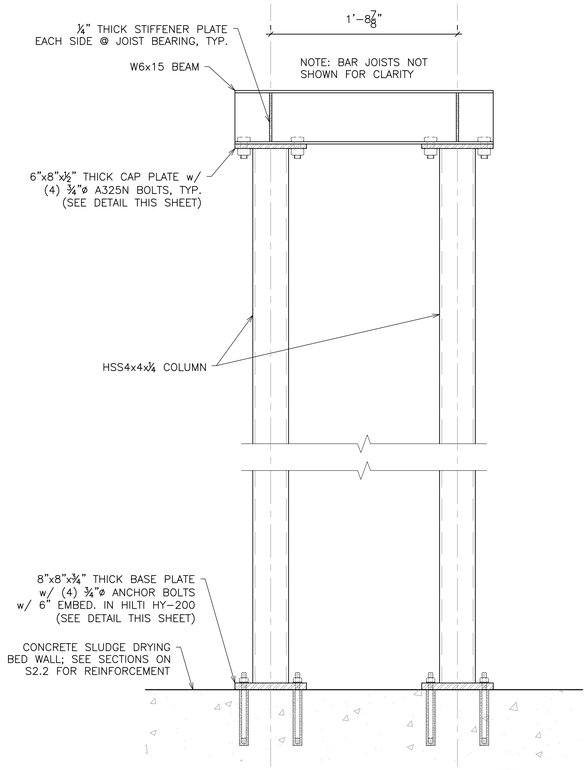
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DESIGN BY	: VALUE
DRAWN BY	: VALUE
CHECKED BY	: VALUE
GMB FILE	: 250196
DATE	: OCT 2026

SHEET NO.
S2.3

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PLOT CODE
PEN1-RED 006 INCHES (.15mm)
PEN2-YELLOW 007 INCHES (.18mm)
PEN3-GREEN 010 INCHES (.25mm)
PEN4-CYAN 014 INCHES (.35mm)
PEN5-BLUE 020 INCHES (.50mm)
PEN6-MAGENTA 027 INCHES (.70mm)
PEN7-WHITE 039 INCHES (1.00mm)

G:\Projects\2025\250196 Mystic Harbour WWTP Biosolids UG Design\Drawings\Structural\Current\S2.2 EXISTING SLUDGE DRYING BED MODIFICATIONS.dwg Nov 02, 2026 - 1:25pm



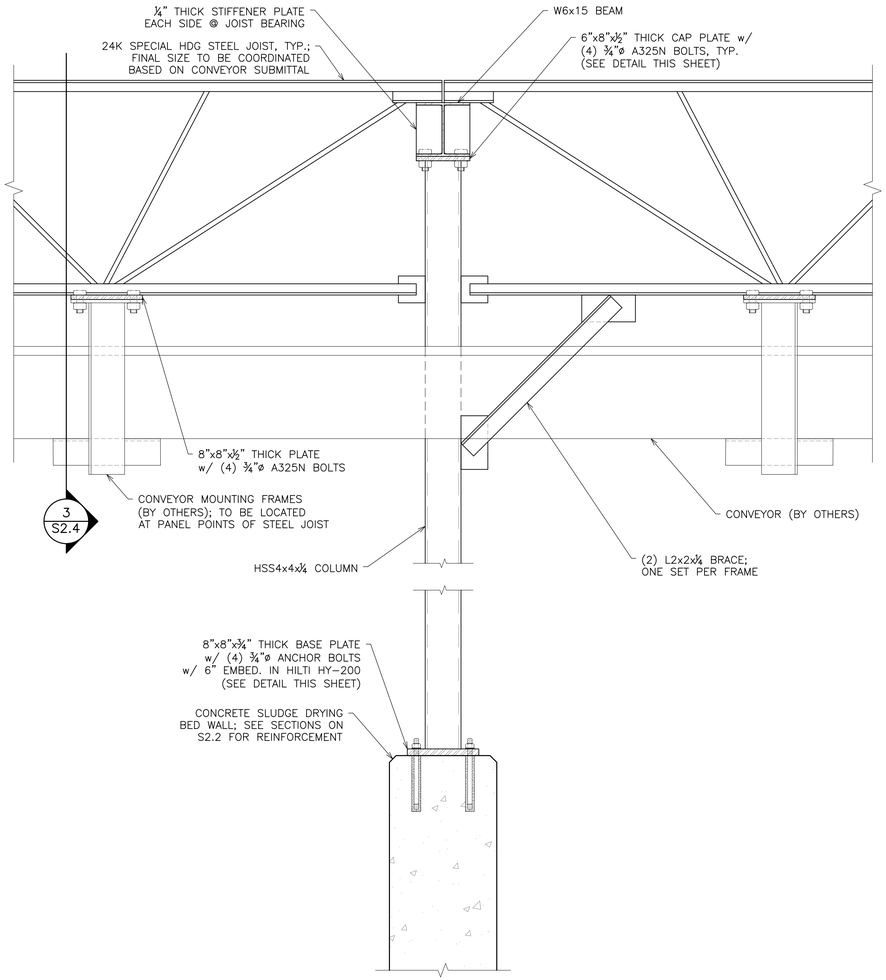
CONVEYOR SUPPORT FRAME ELEVATION

SCALE: 1½" = 1'-0"

1 / S2.4

NOTES:

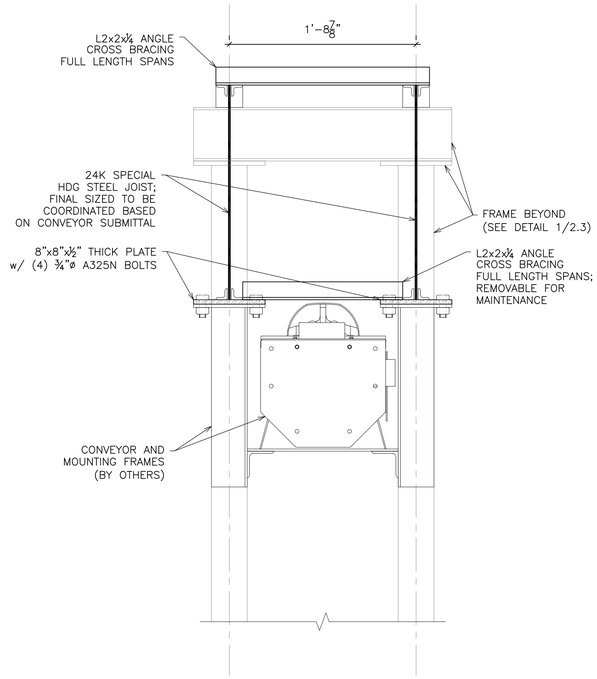
1. ALL STEEL TO BE HOT DIP GALVANIZED AFTER FABRICATION. ALL HARDWARE TO BE HOT DIP GALVANIZED.



CONVEYOR SUPPORT FRAME SECTION

SCALE: 1½" = 1'-0"

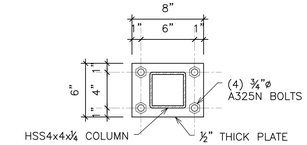
2 / S2.4



SECTION @ MOUNTING FRAME

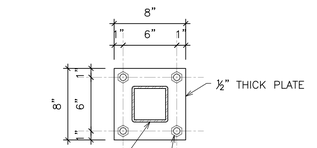
SCALE: 1½" = 1'-0"

3 / S2.4



CAP PLATE DETAIL

SCALE: 1½" = 1'-0"



BASE PLATE DETAIL

SCALE: 1½" = 1'-0"

PLOT CODE
PEN1-WHITE 039 INCHES (1.00mm)
PEN4-MAGENTA 027 INCHES (.70mm)
PEN5-BLUE 020 INCHES (.50mm)
PEN14-CYAN 014 INCHES (.35mm)
PEN3-GREEN 010 INCHES (.25mm)
PEN2-YELLOW 007 INCHES (.18mm)
PEN1-RED 006 INCHES (.15mm)

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NO.	REVISIONS	DATE
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MYSTIC HARBOUR WWTP
BIOSOLIDS UPGRADE &
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WORCESTER COUNTY, MARYLAND

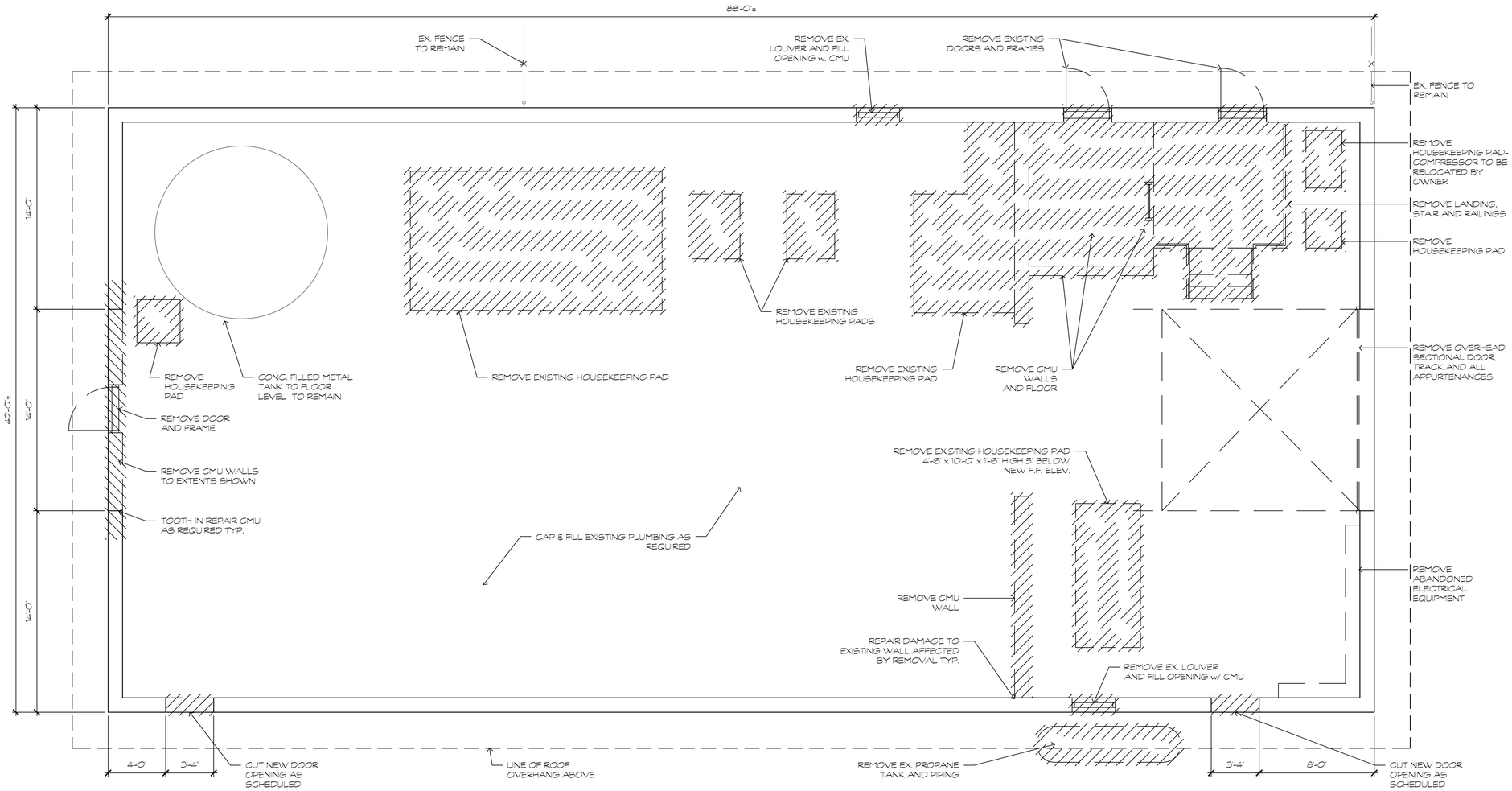


CONVEYOR SUPPORT SECTIONS AND DETAILS

SCALE : AS NOTED	SHEET NO.
DESIGN BY : VALUE	S2.4
DRAWN BY : VALUE	
CHECKED BY : VALUE	
GMB FILE : 250196	
DATE : OCT 2026	

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LEGEND:

EXISTING WALL TO REMAIN

EXISTING CONSTRUCTION TO BE REMOVED

1 DEMOLITION FLOOR PLAN

1/4" = 1'-0"

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MYSTIC HARBOUR WWTP BIOSOLIDS UPGRADE & BUILDING REHABILITATION

WORCESTER COUNTY, MARYLAND

STATE OF MARYLAND · MEGHAN H. HELFRICH · 26278 · REGISTERED PROFESSIONAL ENGINEER

DEMOLITION PLAN - STORAGE BUILDING

SCALE : AS NOTED	SHEET NO.
DESIGN BY : MHH	A1.0
DRAWN BY : AJB	
CHECKED BY : MHH	
GMB FILE : 250196	
DATE : SEPT 2026	

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g:\Projects\2025\250196 mystic harbour wwtp biosolids ug design\Drawings\working sets\A1.0 DEMOLITION PLAN.dwg, 9/10/2026 8:44 AM, Lee K. Whaley
PLOT CODE
PEN1-RED 206 INCHES (15mm)
PEN2-YELLOW 207 INCHES (15mm)
PEN3-GREEN 210 INCHES (20mm)
PEN4-CYAN 214 INCHES (15mm)
PEN5-BLUE 220 INCHES (15mm)
PEN6-MAGENTA 157 INCHES (10mm)
PEN7-WHITE 239 INCHES (100mm)

G:\Projects\2025\250196 mystic harbour wwtp biosolids ug design\Drawings\working sets\A1.0 DEMOLITION PLAN.dwg Sep 10, 2026 - 8:44am

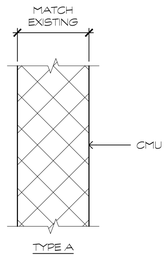
LEGEND:

EXISTING WALL TO REMAIN

NEW WALL/INFILL

WALL TYPES:

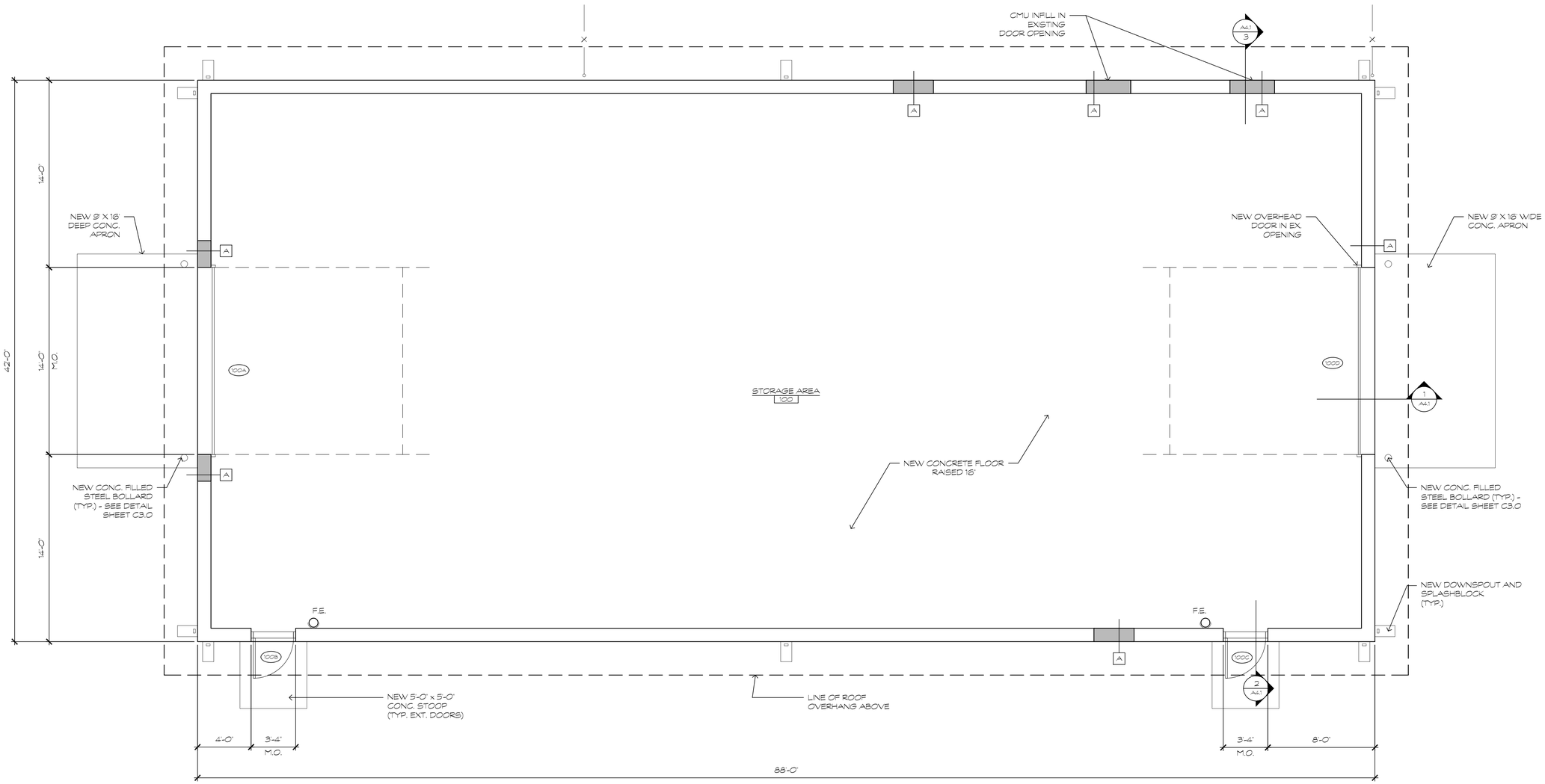
1-1/2" = 1'-0"



Mystic Harbour Storage Building - Code Review
International Building Code 2021
NFPA 101 - Life Safety Code 2021
International Existing Building Code 2021

GMB ARCHITECTS / ENGINEERS

TOPIC	DESCRIPTION	CODE REFERENCE
OCCUPANCY GROUP	STORAGE (S-1) LEVEL 2 ALTERATION (SPACE RECONFIGURATION LESS THAN 50%) STORAGE THE OCCUPANT LOAD HAS NOT BEEN INCREASE BY 20%, THEREFORE NO PLUMBING CHANGES ARE REQUIRED.	IBC SECT. 311.2 IEBC CHAPTER 8 NFPA 6.1.13 IEBC SECT. 809
CONSTRUCTION CLASSIFICATION	TYPE V-B, NONSPRINKLERED	IBC SECT. 602.5
AREAS	MAX. ALLOWABLE AREA: 9,000 S.F. FLOOR AREA: 3,696 S.F.	IBC TABLE 506.2
FIRE RESISTANCE BLDG. ELEMENTS	0 HOURS	IBC TABLE 601
FIRE RESISTANCE EXTERIOR WALLS BASED ON DISTANCE	0 HOURS GREATER THAN 30 FEET	IBC TABLE 705.5
WALL AND CEILING FINISH	BUILDING EXIT ENCLOSURE CLASS B ROOMS CLASS C	IBC TABLE 803.13 NFPA 38.3.3.2
OCCUPANT LOAD	(S-1) WAREHOUSE: 3696 SF/500 7 OCC.	IBC TABLE 1004.5 NFPA TABLE 7.3.1.2
MAX. TRAVEL DISTANCE	S-1 (NONSPRINKLERED) = 200 FEET	IBC TABLE 1017.2
DRAFT STOPPING	DRAFT STOPPING SHALL BE INSTALLED TO SUBDIVIDE ATTIC SPACES INTO HORIZONTAL AREAS LESS THAN 3,000 SF	IBC SECT. 718.4



1 FLOOR PLAN

1/4" = 1'-0"

PRINTS ISSUED FOR: 90% SUBMISSION

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1	ISSUED FOR PERMIT	8/12/26

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MYSTIC HARBOUR WWTP BIOSOLIDS UPGRADE & BUILDING REHABILITATION

WORCESTER COUNTY, MARYLAND

STATE OF MARYLAND
BENJAMIN H. HELFRICH
18453
ARCHITECT

FLOOR PLAN - STORAGE BUILDING

SCALE	: AS NOTED
DESIGN BY	: MHH
DRAWN BY	: AJB
CHECKED BY	: MHH
GMB FILE	: 250196
DATE	: SEPT 2026

SHEET NO. A1.1

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PLOT CODE
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PEN2-YELLOW 007 INCHES (.10mm)
PEN3-GREEN 010 INCHES (.25mm)
PEN4-CYAN 014 INCHES (.35mm)
PEN5-BLUE 020 INCHES (.50mm)
PEN6-MAGENTA 007 INCHES (.10mm)
PEN7-WHITE 039 INCHES (1.00mm)

G:\Projects\2025\250196 mystic harbour wwtp biosolids ug design\Drawings\working sets\A1.1 FLOOR PLAN.dwg Sep 10, 2026 - 8:44am

NOTES:

1. USE TYPICAL AND STANDARD DOWNSPOUT SIZES TO EXCEED AREA REQUIREMENTS.
2. THE WORST CASE (LARGEST DOWNSPOUT SIZE) REQUIRED FOR 100 YEAR STORMS IS BASIS FOR ALL DOWNSPOUT AND GUTTER SIZES.
3. DOWNSPOUT SIZES SHALL MATCH THROUGHOUT.
4. CONTRACTOR SHALL CALCULATE AND CERTIFY FINAL ROOF DRAINAGE DESIGN INCLUDING EXPANSION JOINTS AND OTHER OPERATIONAL FEATURES.

ROOF AREA CALCULATIONS:

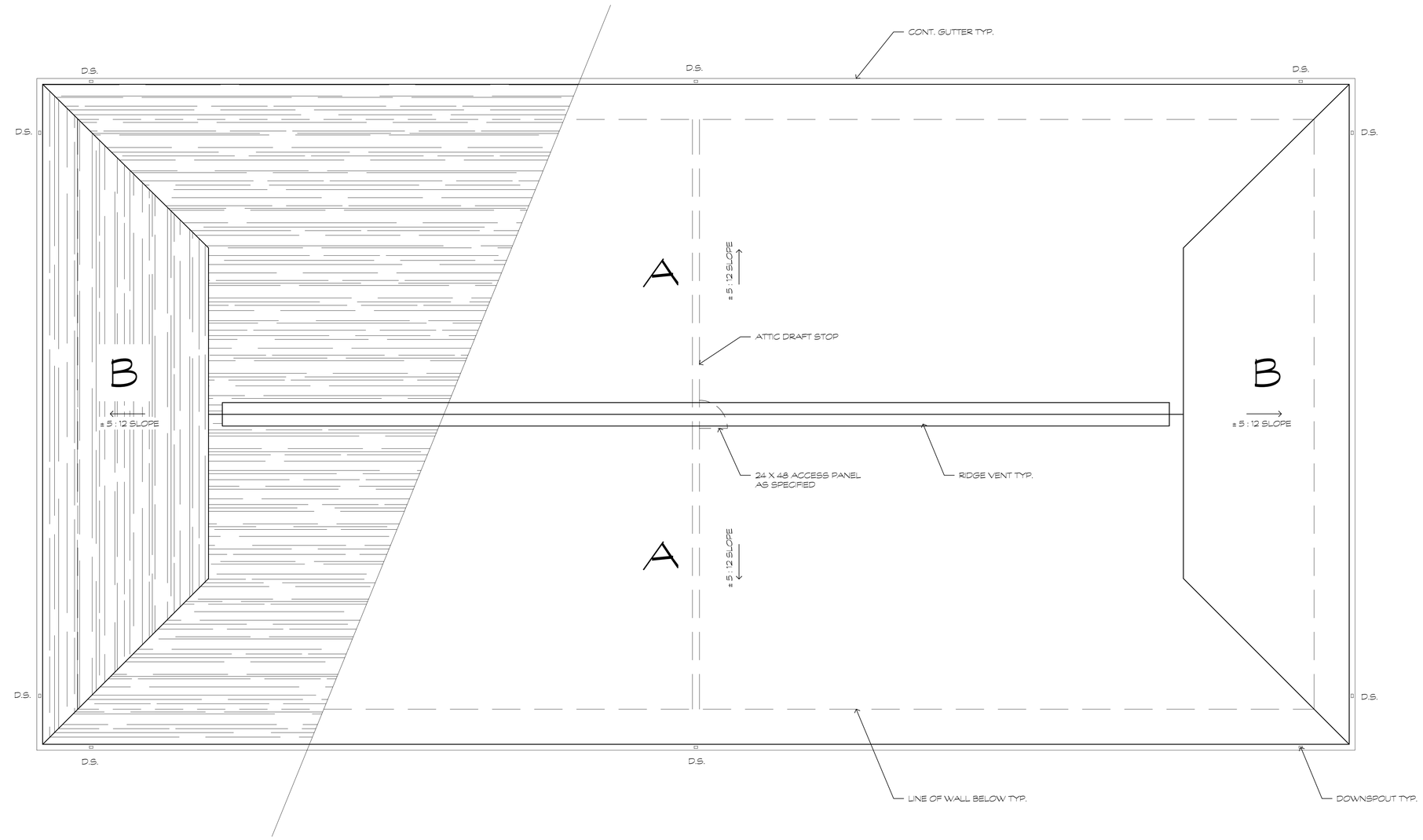
BASED ON SMACNA MINIMUM GUIDELINES

AREA A:

1. 1763 SQ. FT. X 1.0833 (5:12 ROOF PITCH FACTOR, PER SMACNA TABLE 1-1) = 1910 TOTAL SQ. FT.
2. SERVED BY 3 DOWNSPOUT, EACH SERVING 636.67 SQ. FT.
3. THEREFORE, 636.67 / 120 (RAINFALL FOR 100 YEAR STORM) = 5.3" MIN. AREA REQD.

AREA B:

1. 416 SQ. FT. X 1.0833 (5:12 ROOF PITCH FACTOR, PER SMACNA TABLE 1-1) = 451 TOTAL SQ. FT.
2. SERVED BY 2 DOWNSPOUTS, EACH SERVING 225.5 SQ. FT.
3. THEREFORE, 225.5 / 120 (RAINFALL FOR 100 YEAR STORM) = 1.88" MIN. AREA REQD.



1 ROOF PLAN
1/4" = 1'-0"

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MYSTIC HARBOUR WWTP
BIOSOLIDS UPGRADE &
BUILDING REHABILITATION
WORCESTER COUNTY, MARYLAND

STATE OF MARYLAND
JOHNSON H. HELPRICH
REGISTERED
18431
ARCHITECT

ROOF PLAN -
STORAGE BUILDING

SCALE	: AS NOTED
DESIGN BY	: MHH
DRAWN BY	: AJB
CHECKED BY	: MHH
GMB FILE	: 250196
DATE	: SEPT 2026

SHEET NO.
A1.2

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PLOT CODE
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PEN2-YELLOW 007 INCHES (.18mm)
PEN3-GREEN 010 INCHES (.25mm)
PEN4-CYAN 014 INCHES (.35mm)
PEN5-BLUE 020 INCHES (.50mm)
PEN6-MAGENTA 027 INCHES (.70mm)
PEN7-WHITE 039 INCHES (1.00mm)

COMcheck Software Version COMcheckWeb
Envelope Compliance Certificate

Project Information

Energy Code:	2021 IECC
Project Title:	Mystic Harbour Dewatering Building
Location:	West Ocean City, Maryland
Climate Zone:	4a
Project Type:	New Construction

Construction Site:
Maryland

Owner/Agent:
Worcester County
1 West Market St
Snow Hill, Maryland 21863
4106325623

Designer/Contractor:
Morgan Helfrich
George, Miles & Buhr, LLC
206 W Main Street
Salisbury, Maryland 21801
4107423115
mhelfrich@gmbnet.com

Additional Efficiency Package(s)

Credits: 10.0 Required 11.0 Proposed
Dedicated outdoor air, 5.0 credit
Reduced air infiltration, 6.0 credit

Building Area	Floor Area
1-Warehouse : Nonresidential	1707

Envelope Assemblies

Assembly	Gross Area or Perimeter	Cavity R-Value	Cont. R-Value	Proposed U-Factor	Budget U-Factor(a)
Roof: Attic Roof, Wood Joists, [Bldg. Use 1 - Warehouse]	2010	49.0	0.0	0.021	0.021
Floor: Unheated Slab-On-Grade, Vertical 2 ft., [Bldg. Use 1 - Warehouse] (b)	1707	---	10.0	0.540	0.520
NORTH					
Ext. Wall: Concrete Block, 12in., Partially Grouted, Cells Ins., Light Density, Furring: None, [Bldg. Use 1 - Warehouse]	171	---	6.9	0.087	0.104
Ext. Wall: Concrete Block, 10in., Partially Grouted, Cells Ins., Light Density, Furring: None, [Bldg. Use 1 - Warehouse]	614	---	5.7	0.101	0.104
Door: Insulated Metal, Garage door 14% glazing, [Bldg. Use 1 - Warehouse]	48	---	---	0.125	0.310
EAST					
Ext. Wall: Concrete Block, 12in., Partially Grouted, Cells Ins., Light Density, Furring: None, [Bldg. Use 1 - Warehouse]	171	---	6.9	0.087	0.104
Ext. Wall: Concrete Block, 10in., Partially Grouted, Cells Ins., Light Density, Furring: None, [Bldg. Use 1 - Warehouse]	437	---	5.7	0.101	0.104
Door: Insulated Metal, Garage door 14% glazing, [Bldg. Use 1 - Warehouse]	100	---	---	0.125	0.310
Door: Insulated Metal, Swinging, [Bldg. Use 1 - Warehouse]	21	---	---	0.480	0.370
Door: Insulated Metal, Swinging, [Bldg. Use 1 - Warehouse]	42	---	---	0.480	0.370
SOUTH					
Ext. Wall: Concrete Block, 12in., Partially Grouted, Cells Ins., Light Density, Furring: None, [Bldg. Use 1 - Warehouse]	171	---	6.9	0.087	0.104
Ext. Wall: Concrete Block, 10in., Partially Grouted, Cells Ins., Light Density, Furring: None, [Bldg. Use 1 - Warehouse]	614	---	5.7	0.101	0.104

Assembly	Gross Area or Perimeter	Cavity R-Value	Cont. R-Value	Proposed U-Factor	Budget U-Factor(a)
Door: Insulated Metal, Swinging, [Bldg. Use 1 - Warehouse]	21	---	---	0.480	0.370
WEST					
Ext. Wall: Concrete Block, 12in., Partially Grouted, Cells Ins., Light Density, Furring: None, [Bldg. Use 1 - Warehouse]	171	---	6.9	0.087	0.104
Ext. Wall: Concrete Block, 10in., Partially Grouted, Cells Ins., Light Density, Furring: None, [Bldg. Use 1 - Warehouse]	437	---	5.7	0.101	0.104

(a) Budget U-factors are used for software baseline calculations ONLY, and are not code requirements.
(b) Slab-On-Grade proposed and budget U-factors shown in table are F-factors.

Project Notes

Envelope PASSES: Design 0.2% better than code

Envelope Compliance Statement

Compliance Statement: The proposed envelope design represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed envelope systems have been designed to meet the 2021 IECC requirements in COM*check* Version COMcheckWeb and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

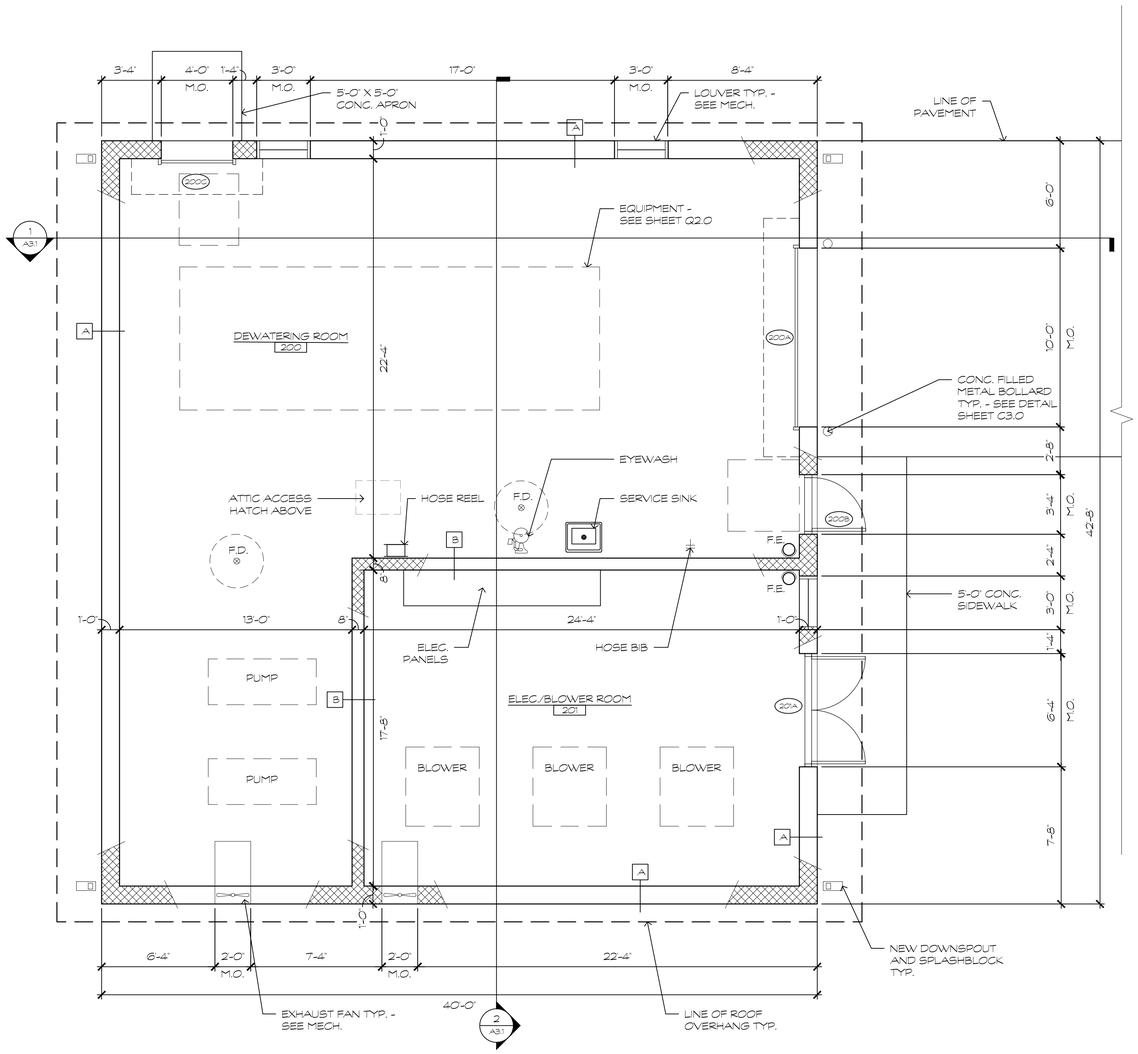
Morgan H. Helfrich, AIA — Name - Title
Signature
07-20-2026 — Date

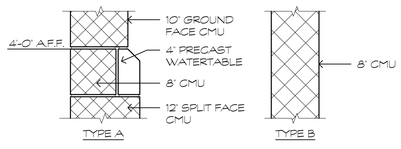
This report identifies proposed Construction Documentation Design only, GMB - Architects & Engineers is not liable for construction or any deviations from this design.

Mystic Harbour Dewatering Building - Code Review
International Building Code 2021
NFPA 101 - Life Safety Code 2024

GMB ARCHITECTS/ENGINEERS

TOPIC	DESCRIPTION	CODE REFERENCE
OCCUPANCY GROUP	FACTORY (F-1) SPECIAL PURPOSE INDUSTRIAL	IBC SECT. 306.2 NFPA 40.1.2.1.2
CONSTRUCTION CLASSIFICATION	TYPE V-B, COMBUSTIBLE, UNPROTECTED, NON-SPRINKLERED	IBC SECT. 602.5
AREAS	MAX. ALLOWABLE AREA: 8,500 S.F. FLOOR AREA: 1,707 S.F.	IBC TABLE 506.2
FIRE RESISTANCE BLDG. ELEMENTS	0 HOURS	IBC TABLE 601
FIRE RESISTANCE EXTERIOR WALLS BASED ON DISTANCE	F-1: 10 FEET TO 30 FEET = NO RATING REQUIRED	IBC TABLE 705.5
INTERIOR FINISHES	F-1 NON-SPRINKLERED = EXIT ENCLOSURES: B, CORRIDORS: C, ROOMS-C WALLS AND CEILINGS: CLASS A, B OR C	IBC TABLE 803.13 NFPA 40.3.3
OCCUPANT LOAD	F-1 WAREHOUSE: 1707 SF/500 4 OCC.	IBC TABLE 1004.5 NFPA TABLE 7.3.1.2
MAX. TRAVEL DISTANCE	F-1 (NONSPRINKLERED) = 200 FEET	IBC TABLE 1017.2
COMMON PATH OF TRAVEL	75 FEET, OCCUPANT LOAD 49 OR LESS, NON-SPRINKLERED 50 FEET, NON-SPRINKLERED	IBC SECT. 1006.2.1 NFPA TABLE 40.2.5.1
NUMBER OF EXITS	SINGLE EXIT PERMITTED SINCE SPACE COMPLIES WITH TABLE 1006.2.1 AND DISCHARGES DIRECTLY OUTSIDE.	IBC SECT. 1006.3.4.2





NOTE:

MASONRY TO MATCH EXISTING WASTEWATER TREATMENT BUILDING

WALL TYPES:

1" = 1'-0"

1 FLOOR PLAN
1/4" = 1'-0"

PRINTS ISSUED FOR:
90% SUBMISSION

NO.	REVISIONS	DATE
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MYSTIC HARBOUR
DEWATERING BUILDING
WORCESTER COUNTY, MARYLAND

STATE OF MARYLAND — JOSEPH H. HELFRICH — REGISTERED — ARCHITECT

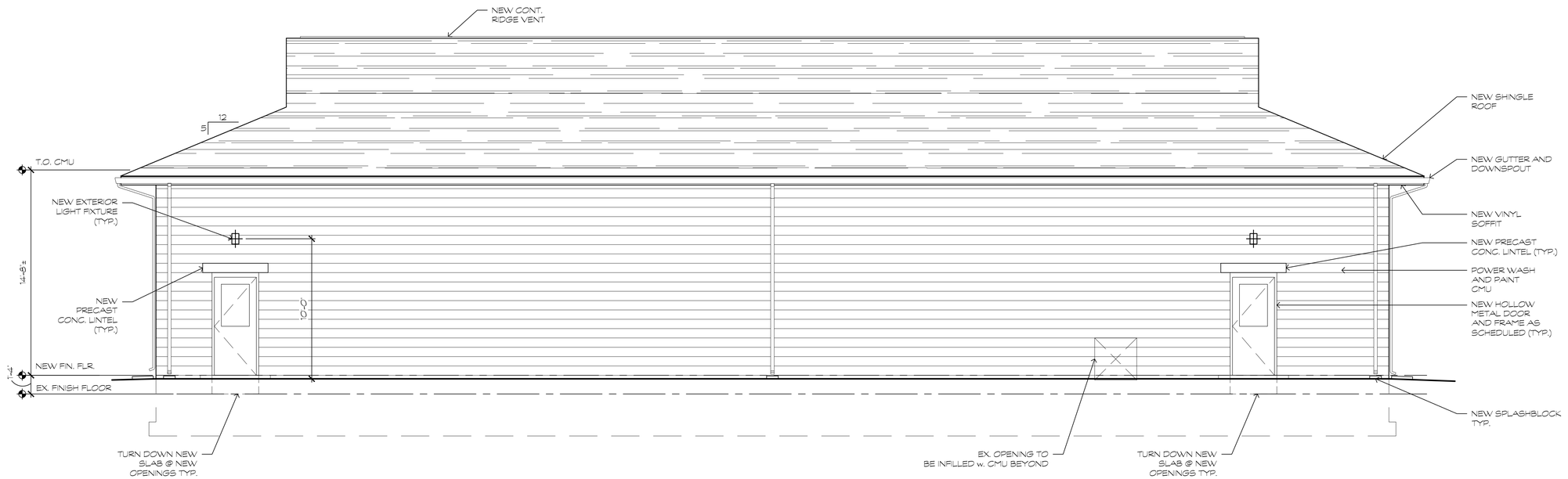
FLOOR PLAN - DEWATERING BUILDING

SCALE	: AS NOTED
DESIGN BY	: MHH
DRAWN BY	: AJB
CHECKED BY	: MHH
GMB FILE	: 250196
DATE	: SEPT 2026

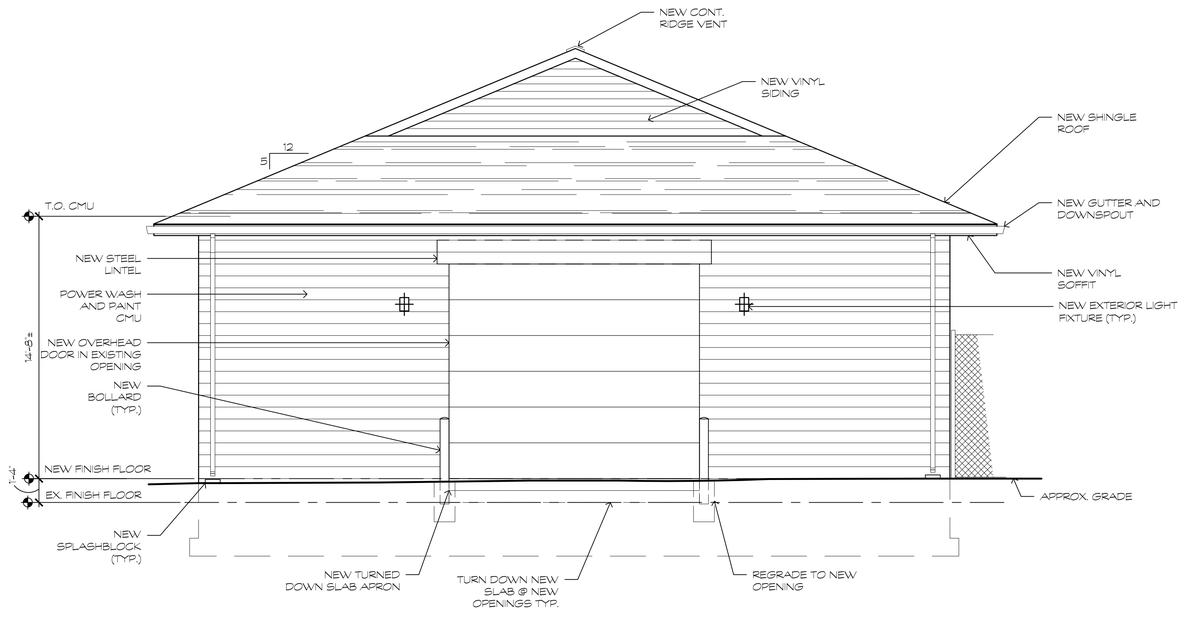
SHEET NO.
A1.3

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g:\Projects\2025\250196 mystic harbour wwtp biosolids ug design\Drawings\working sets\A1.3 FLOOR PLAN.dwg, 9/10/2026 8:45 AM, Lee K. Wholey
PLOT CODE
PEN1-WHITE 039 INCHES (1.00mm)
PEN2-MAGENTA 007 INCHES (.18mm)
PEN3-BLUE 009 INCHES (.23mm)
PEN4-CYAN 014 INCHES (.35mm)
PEN5-GREEN 011 INCHES (.28mm)
PEN6-YELLOW 007 INCHES (.18mm)
PEN7-RED 006 INCHES (.14mm)



NORTH ELEVATION



WEST ELEVATION

1 ELEVATIONS
1/4" = 1'-0"

PRINTS ISSUED FOR:
90% SUBMISSION

NO.	REVISIONS	DATE
1	ISSUED FOR PERMIT	8/12/26

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MYSTIC HARBOUR WWTP
BIOSOLIDS UPGRADE &
BUILDING REHABILITATION

WORCESTER COUNTY, MARYLAND

STATE OF MARYLAND
BENJAMIN H. HEPPE
26431
REGISTERED
PROFESSIONAL
ARCHITECT

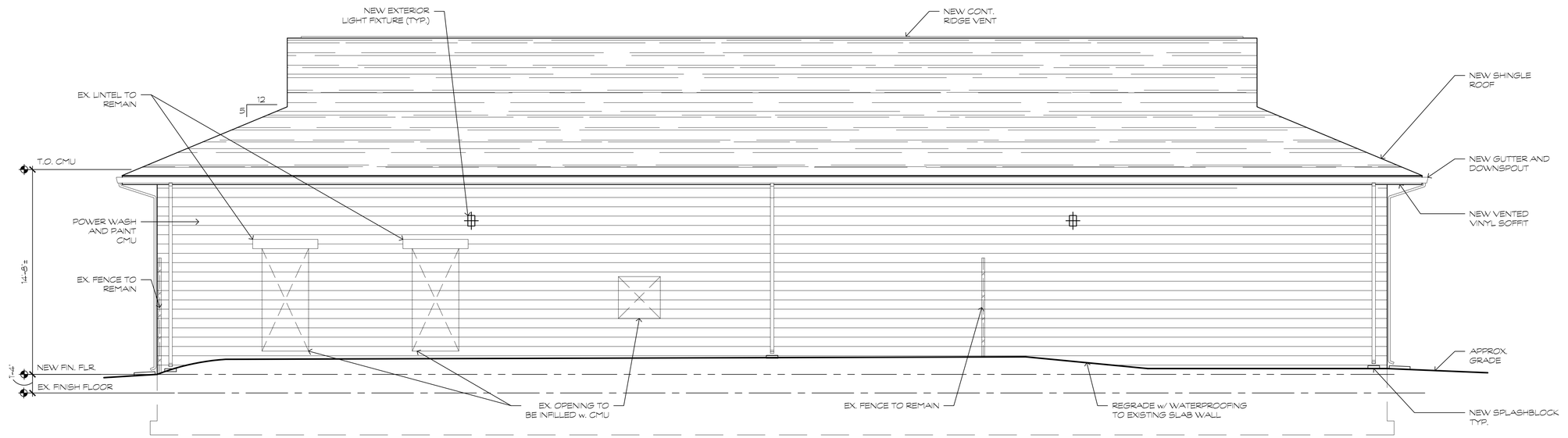
ELEVATIONS -
STORAGE BUILDING

SCALE	: AS NOTED
DESIGN BY	: MHH
DRAWN BY	: AJB
CHECKED BY	: MHH
GMB FILE	: 250196
DATE	: SEPT 2026

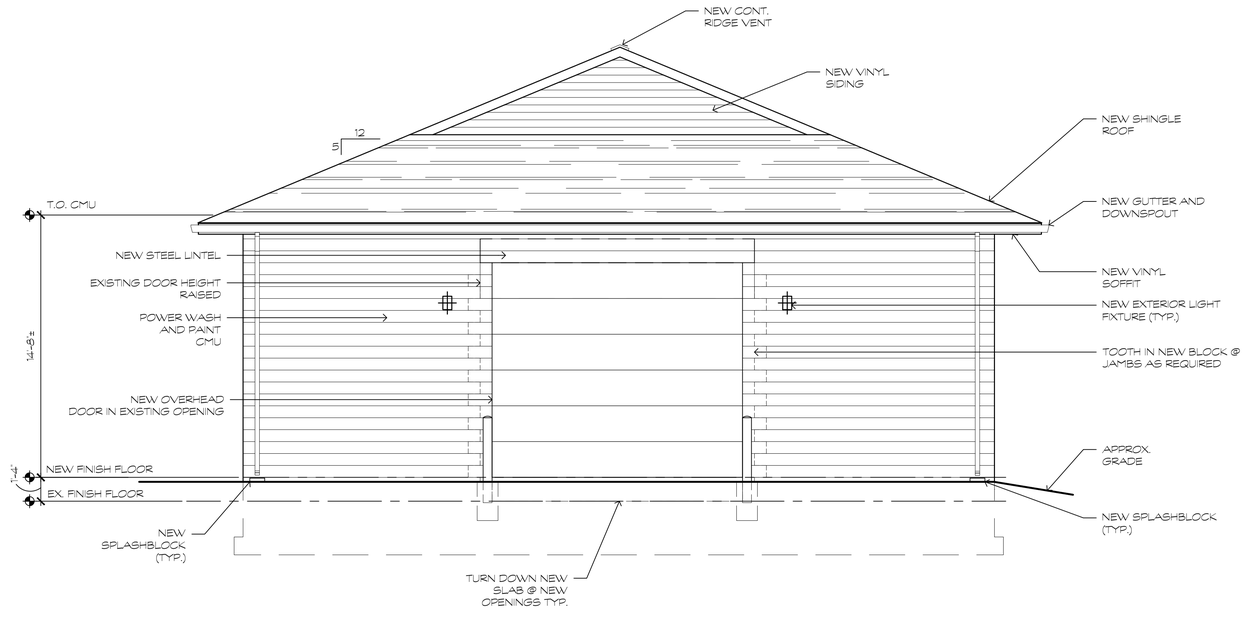
SHEET NO.
A2.1

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PLOT CODE
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PEN2-YELLOW 007 INCHES (0mm)
PEN3-GREEN 010 INCHES (0mm)
PEN4-CYAN 014 INCHES (0mm)
PEN5-BLUE 020 INCHES (0mm)
PEN6-MAGENTA 027 INCHES (0mm)
PEN7-WHITE 039 INCHES (0mm)



SOUTH ELEVATION



EAST ELEVATION

1 ELEVATIONS
1/4" = 1'-0"

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MYSTIC HARBOUR WWTP
BIOSOLIDS UPGRADE &
BUILDING REHABILITATION

WORCESTER COUNTY, MARYLAND

STATE OF MARYLAND
MORGAN H. HELPERT
26435
REGISTERED
ARCHITECT

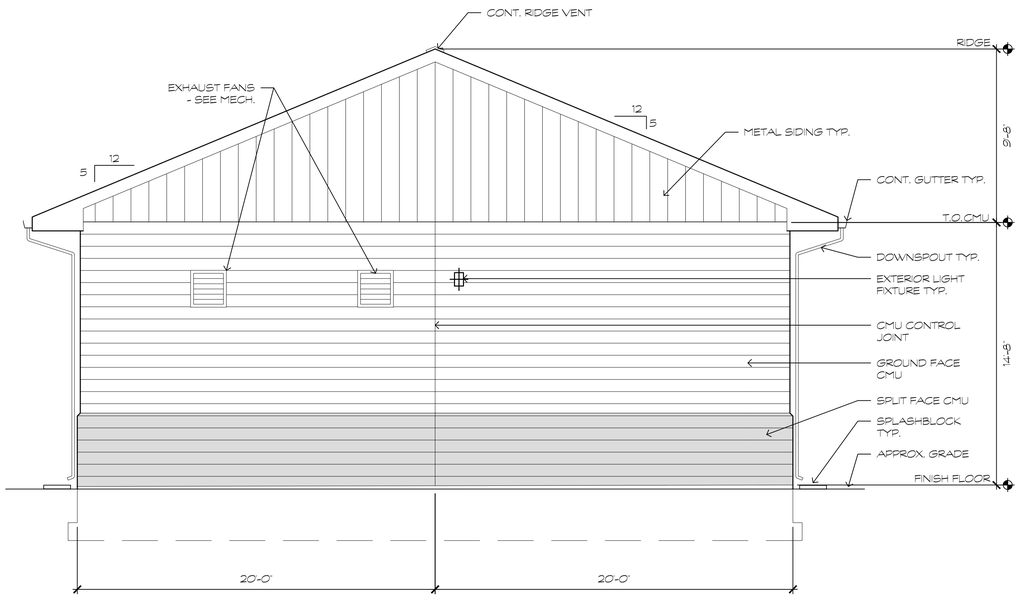
ELEVATIONS -
STORAGE BUILDING

SCALE	: AS NOTED
DESIGN BY	: MHH
DRAWN BY	: AJB
CHECKED BY	: MHH
GMB FILE	: 250196
DATE	: SEPT 2026

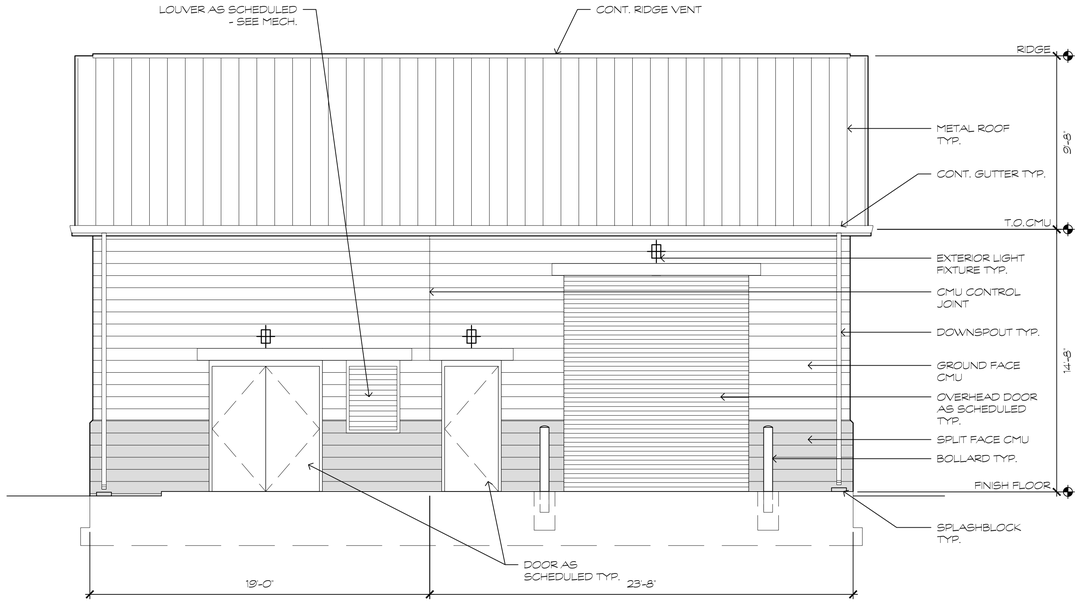
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A2.2

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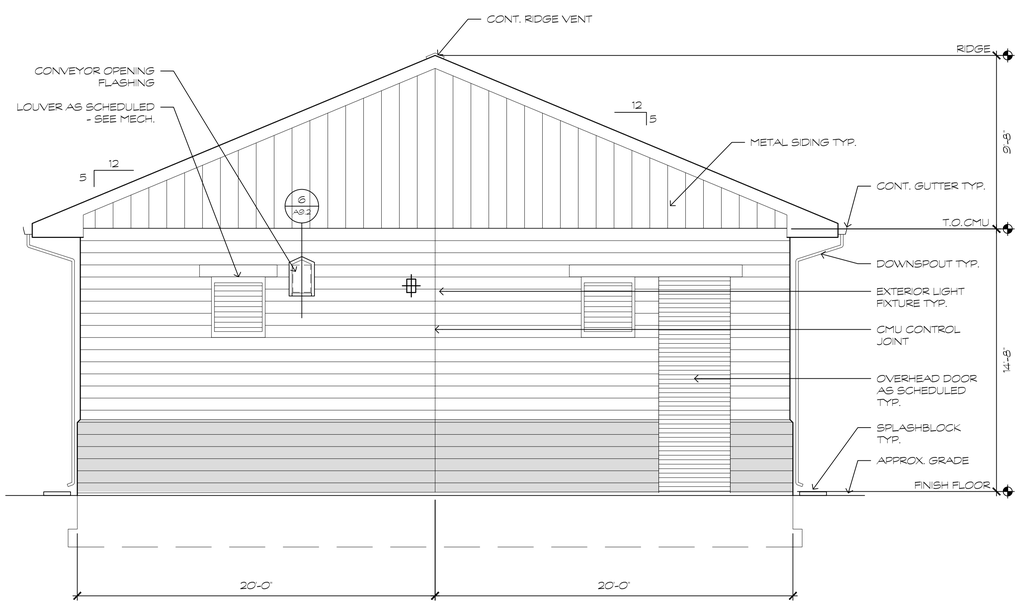
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PLOT CODE
PEN1-RED 006 INCHES (0.6mm)
PEN2-YELLOW 007 INCHES (0.4mm)
PEN3-GREEN 010 INCHES (0.25mm)
PEN4-CYAN 014 INCHES (0.2mm)
PEN5-BLUE 020 INCHES (0.5mm)
PEN6-MAGENTA 027 INCHES (0.7mm)
PEN7-WHITE 039 INCHES (1.0mm)



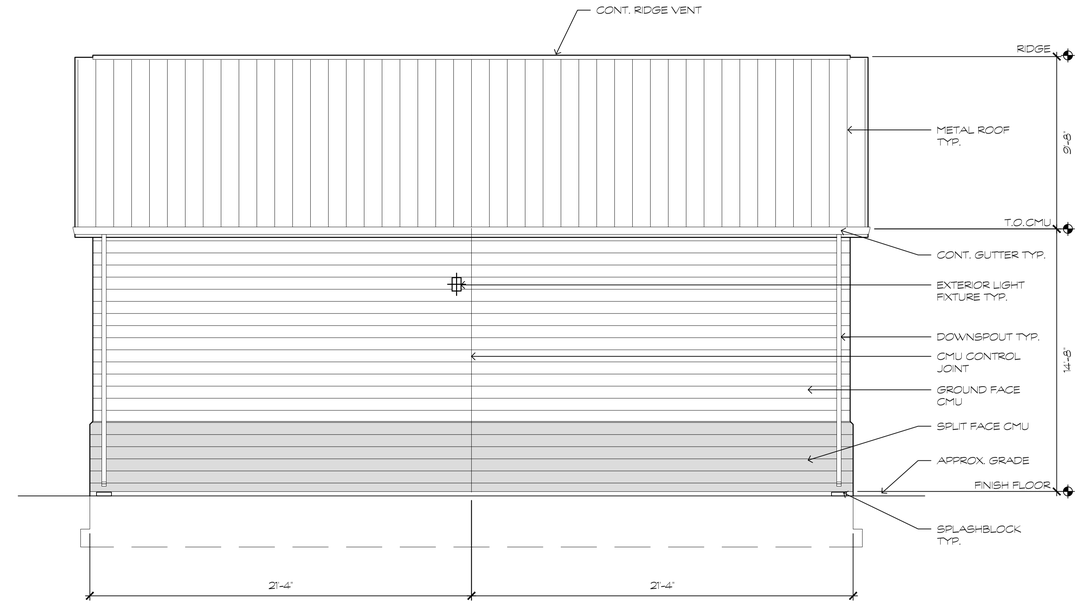
SOUTH ELEVATION



EAST ELEVATION



NORTH ELEVATION



WEST ELEVATION

1 ELEVATIONS
1/4" = 1'-0"

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MYSTIC HARBOUR
DEWATERING BUILDING

WORCESTER COUNTY, MARYLAND

STATE OF MARYLAND
MEGAN H. HEITZENRATER
21483
ARCHITECT

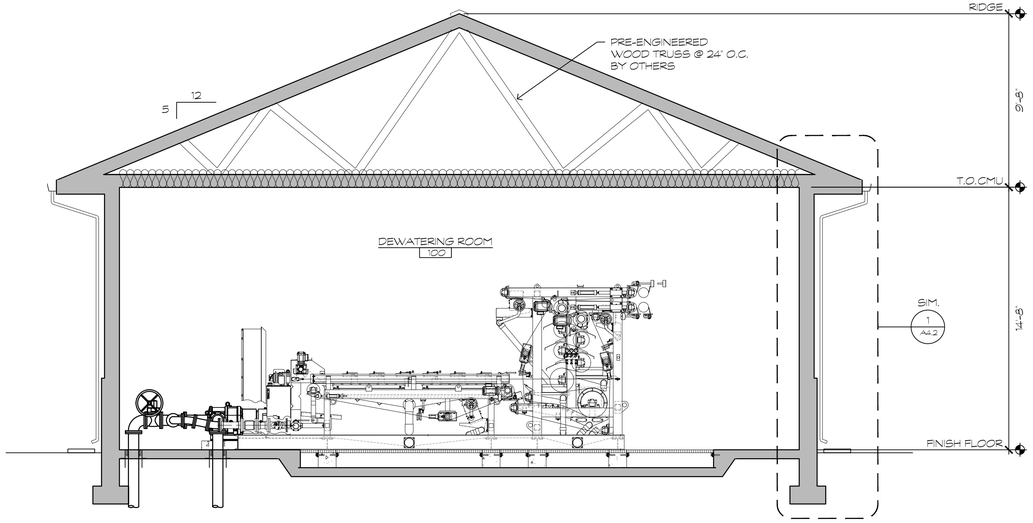
ELEVATIONS -
DEWATERING
BUILDING

SCALE	: AS NOTED
DESIGN BY	: MHH
DRAWN BY	: AJB
CHECKED BY	: LKW
GMB FILE	: 250196
DATE	: SEPT 2026

SHEET NO.
A2.3

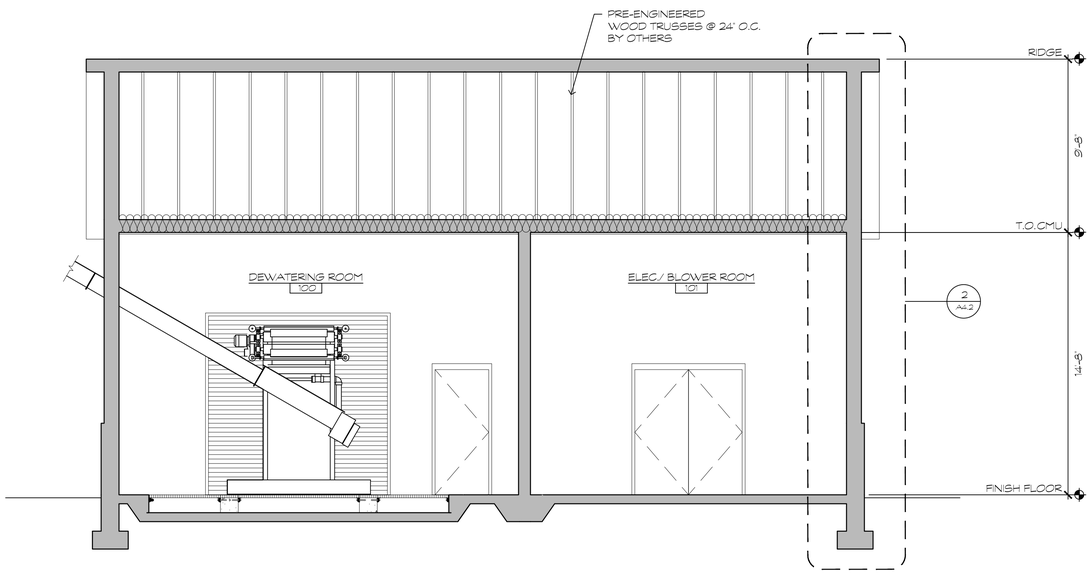
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g:\Projects\2025\250196 mystic harbour wwtp biosolids ug design\Drawings\working sets\A2.3 ELEVATIONS.dwg, 9/10/2026 8:45 AM, Lee K. Wholey
PLOT CODE
PEN1-RED 006 INCHES (0.1mm)
PEN2-YELLOW 007 INCHES (0.1mm)
PEN3-GREEN 010 INCHES (0.2mm)
PEN4-BLUE 020 INCHES (0.5mm)
PEN5-MAGEN 027 INCHES (0.7mm)
PEN6-WHITE 039 INCHES (1.0mm)



1 BUILDING SECTION

1/4" = 1'-0"



2 BUILDING SECTION

1/4" = 1'-0"

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MYSTIC HARBOUR
DEWATERING BUILDING

WORCESTER COUNTY, MARYLAND

STATE OF MARYLAND
MICHAEL H. HOLLOWAY
16457
ARCHITECT

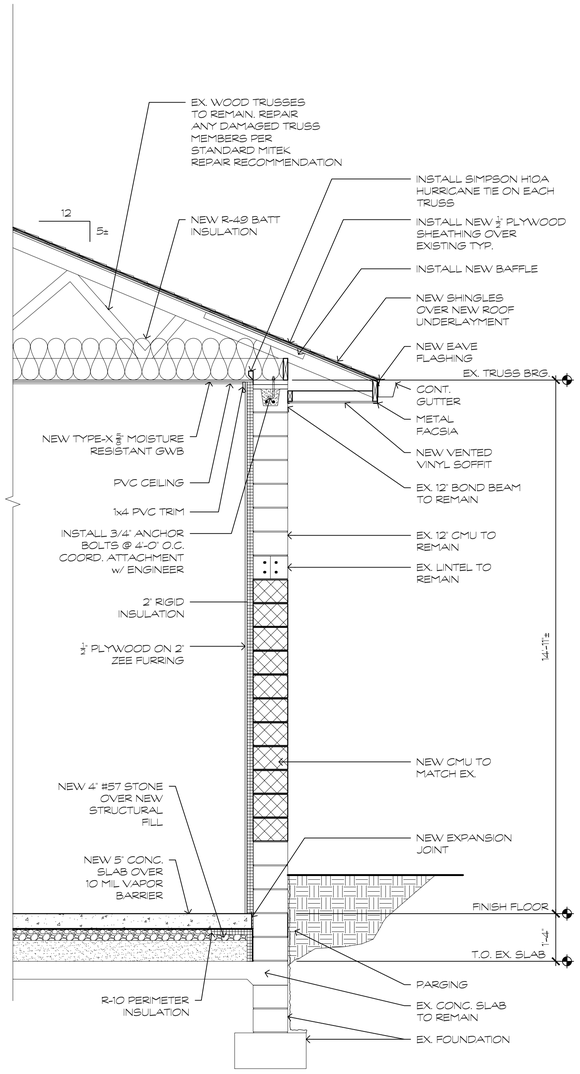
BUILDING SECTIONS
- DEWATERING
BUILDING

SCALE	: AS NOTED
DESIGN BY	: MHH
DRAWN BY	: AJB
CHECKED BY	: LKW
GMB FILE	: 250196
DATE	: SEPT 2026

SHEET NO.
A3.1

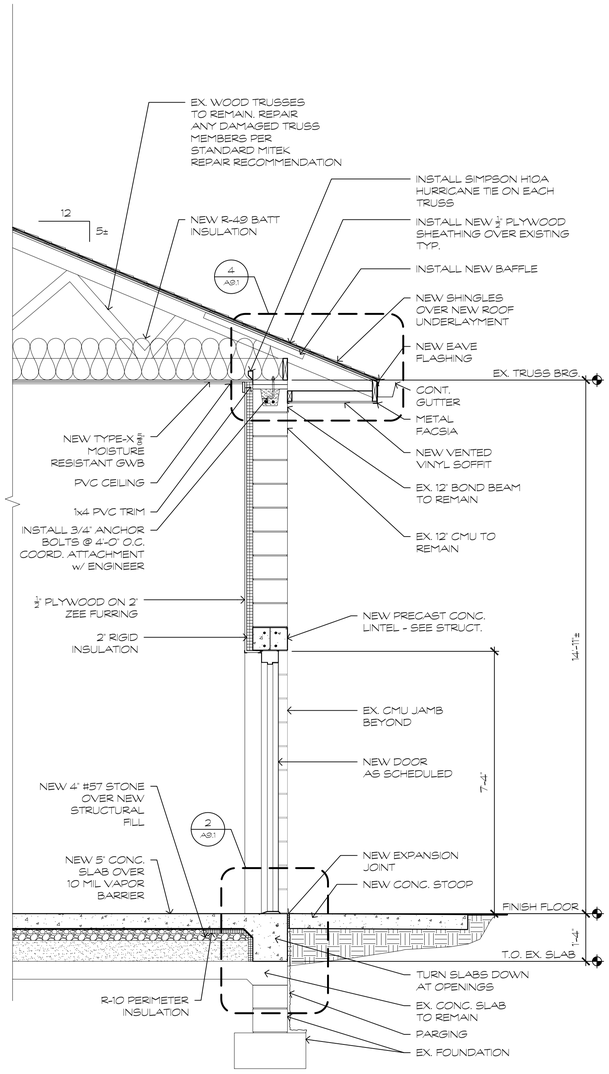
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PLOT CODE
PEN1-RED 006 INCHES (.15mm)
PEN2-YELLOW 007 INCHES (.18mm)
PEN3-GREEN 010 INCHES (.25mm)
PEN4-CYAN 014 INCHES (.35mm)
PEN5-BLUE 020 INCHES (.50mm)
PEN6-MAGENTA 027 INCHES (.70mm)
PEN7-WHITE 039 INCHES (1.00mm)



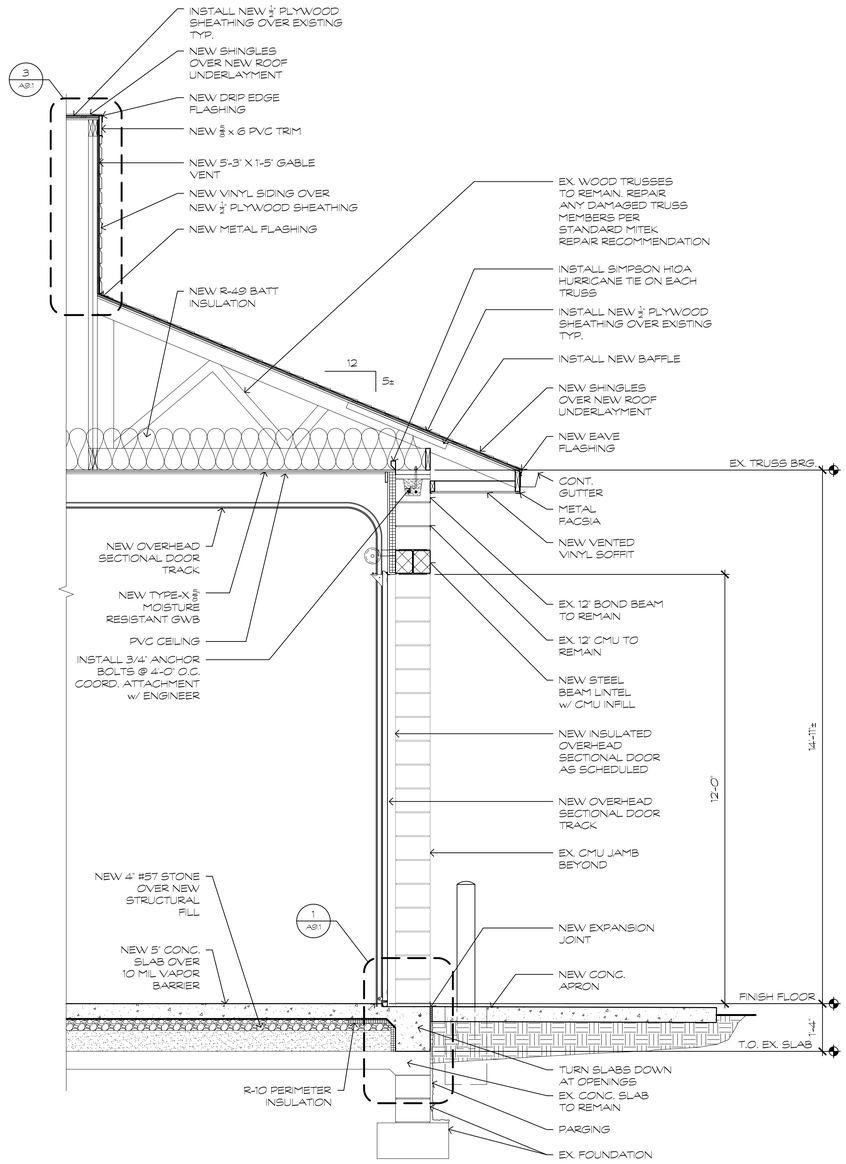
3 WALL SECTION

1/2" = 1'-0"



2 WALL SECTION

1/2" = 1'-0"



1 WALL SECTION

1/2" = 1'-0"

PRINTS ISSUED FOR:
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NO.	REVISIONS	DATE
1	ISSUED FOR PERMIT	8/12/26

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MYSTIC HARBOUR WWTP BIOSOLIDS UPGRADE & BUILDING REHABILITATION

WORCESTER COUNTY, MARYLAND

STATE OF MARYLAND
MICHAEL H. HELSEL
PROFESSIONAL ENGINEER
26278
ARCHITECT

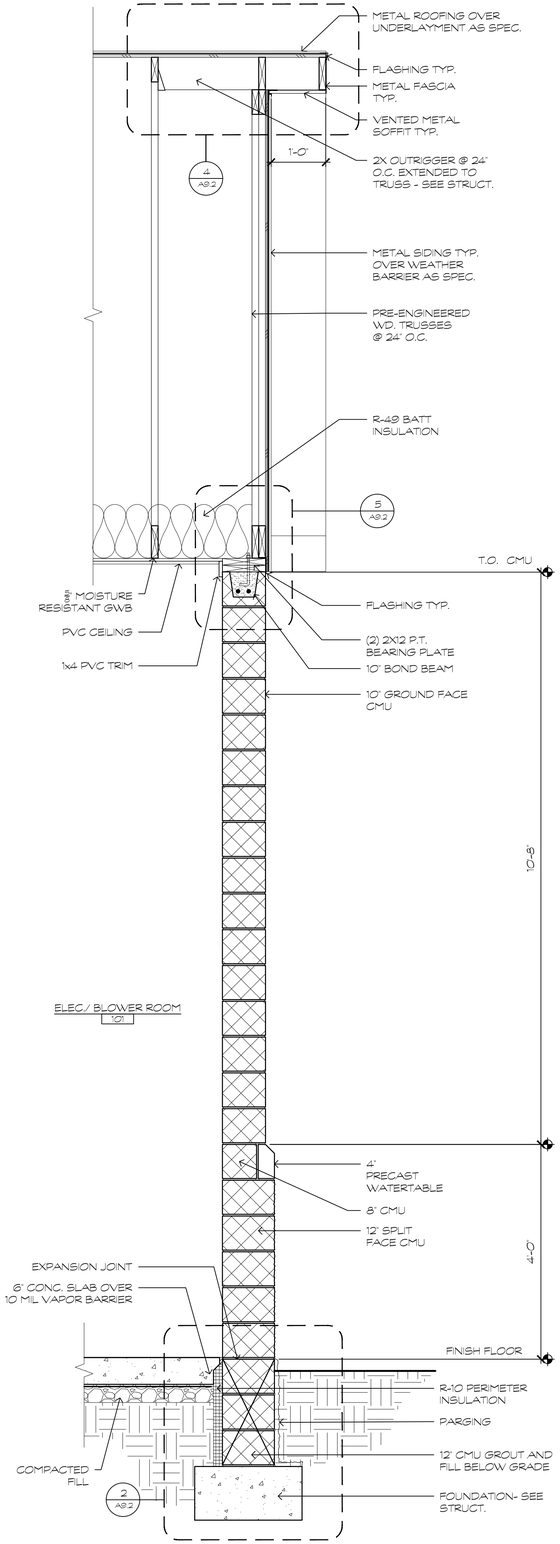
WALL SECTIONS - STORAGE BUILDING

SCALE : AS NOTED	SHEET NO.
DESIGN BY : MHH	A4.1
DRAWN BY : AJB	
CHECKED BY : MHH	
GMB FILE : 250196	
DATE : OCT 2026	

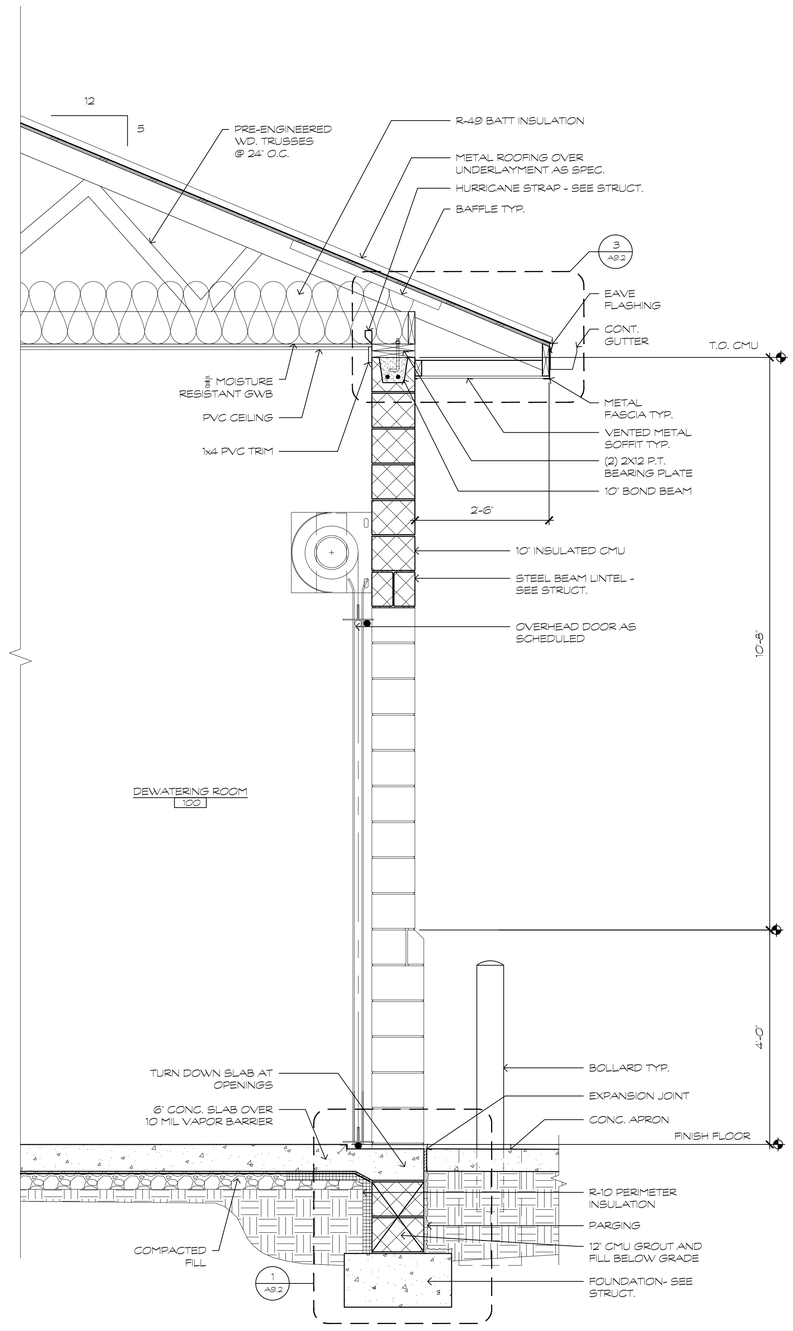
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g:\Projects\2025\250196 mystic harbour wwtp biosolids ug design\Drawings\working sets\A2.1 ELEVATIONS.dwg, 10/30/2026 2:42 PM, Lee K. Whaley
PLOT CODE
PEN1-RED 255 INCHES (25mm)
PEN2-YELLOW 207 INCHES (18mm)
PEN3-GREEN 013 INCHES (25mm)
PEN4-CYAN 014 INCHES (13mm)
PEN5-BLUE 021 INCHES (50mm)
PEN6-MAGENTA 022 INCHES (13mm)
PEN7-WHITE 039 INCHES (100mm)

G:\Projects\2025\250196 mystic harbour wwtp biosolids ug design\Drawings\working sets\A2.1 ELEVATIONS.dwg Oct 30, 2026 - 2:42pm



2 WALL SECTION
3/4" = 1'-0"



1 WALL SECTION
3/4" = 1'-0"

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NO.	REVISIONS	DATE
1	ISSUED FOR PERMIT	8/12/26

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MYSTIC HARBOUR
DEWATERING BUILDING
WORCESTER COUNTY, MARYLAND

STATE OF MARYLAND
KEVIN H. HEFFNER
REGISTERED
PROFESSIONAL
ARCHITECT
16457

WALL SECTIONS - DEWATERING BUILDING

SCALE	: AS NOTED
DESIGN BY	: MHH
DRAWN BY	: LKW
CHECKED BY	: LKW
GMB FILE	: 250196
DATE	: SEPT 2026

SHEET NO.
A4.2

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PLOT CODE
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PEN2-YELLOW 007 INCHES (.18mm)
PEN3-GREEN 005 INCHES (.25mm)
PEN4-CYAN 014 INCHES (.35mm)
PEN5-BLUE 020 INCHES (.50mm)
PEN6-MAGENTA 027 INCHES (.70mm)
PEN7-WHITE 039 INCHES (1.00mm)

DOOR SCHEDULE

DOOR #	ROOM NAME	TYPE	MATL.	SIZE	THICK	RATING	FRAME	HEAD/JAM	HARDWARE	REMARKS
100A	STORAGE AREA	C	STEEL	14'-0" X 12'-0"	--	--	--	5&6	HW-2	
100B	STORAGE AREA	A	FIBERGLASS	3'-0" X 7'-0"	1 3/4"	--	F-1	7&8	HW-1	
100C	STORAGE AREA	A	FIBERGLASS	3'-0" X 7'-0"	1 3/4"	--	F-1	7&8	HW-1	
100D	STORAGE AREA	C	STEEL	14'-0" X 12'-0"	--	--	--	5&6	HW-2	
200A	DEWATERING ROOM	D	STEEL	10'-0" x 12'-0"	--	--	--	3&4	HW-3	
200B	DEWATERING ROOM	B	FIBERGLASS	3'-0" x 7'-0"	1 3/4"	--	F-1	1&2	HW-1	
200C	DEWATERING ROOM	D	STEEL	4'-0" X 12'-0"	--	--	--	3&4	HW-3	
201A	ELEC/BLOWER ROOM	B	FIBERGLASS	3'-0" x 7'-0" (PAIR)	1 3/4"	--	F-1	1&2	HW-1	

FINISH SCHEDULE

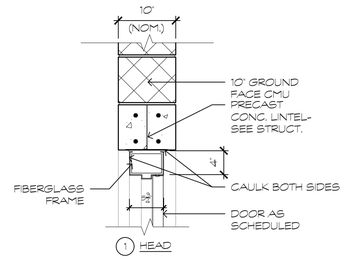
ROOM #	ROOM NAME	FLOOR	BASE	WALLS				CEILING	CLG. HT.	NOTES
				N	E	S	W			
100	STORAGE AREA	SEALED CONC.	NONE	PAINT	PAINT	PAINT	PAINT	PVC	14'-8"	
200	DEWATERING ROOM	SEALED CONC.	NONE	PAINT	PAINT	PAINT	PAINT	PVC	14'-8"	
201	ELEC/BLOWER ROOM	SEALED CONC.	NONE	PAINT	PAINT	PAINT	PAINT	PVC	14'-8"	

HARDWARE SETS:

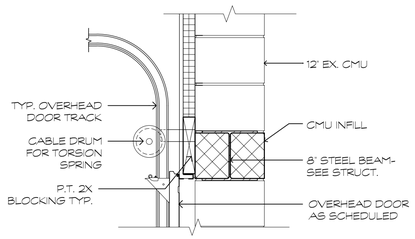
HW-1
3 PR HINGES (BB)
1 ENTRY LOCKSET W/ PANIC HARDWARE
1 CLOSER
1 WEATHERSTRIP
1 ALUM. THRESHOLD
1 KICKPLATE (INSIDE FACE)

HW-2
BALANCE OF HARDWARE BY SECTIONAL DOOR MANUFACTURER

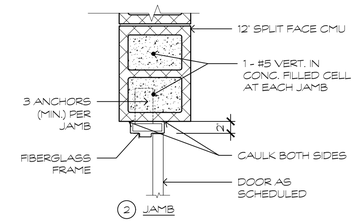
HW-3
BALANCE OF HARDWARE BY COILING DOOR MANUFACTURER



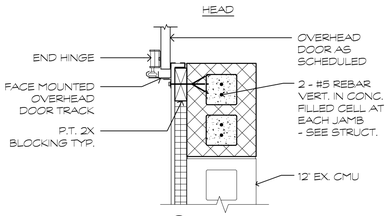
1 HEAD



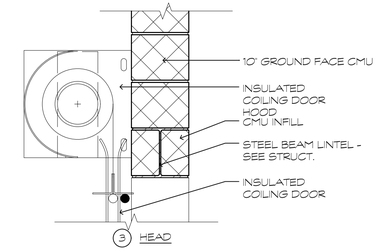
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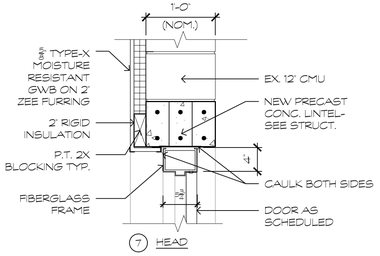
2 JAMB



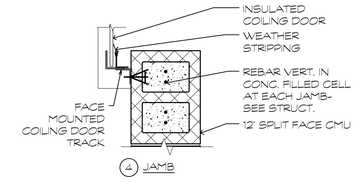
6 JAMB



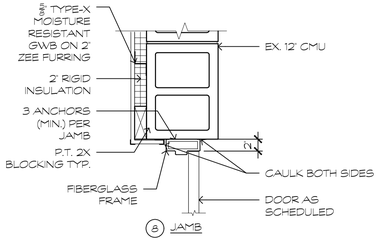
3 HEAD



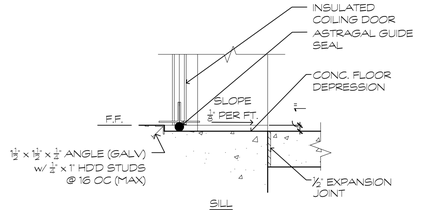
7 HEAD



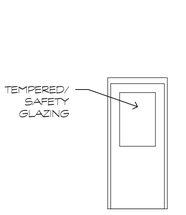
4 JAMB



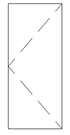
8 JAMB



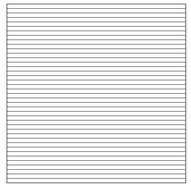
SILL



A


B


C


D

INSULATED HALF-LITE DOOR

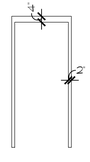
FLUSH

INSULATED STEEL SECTIONAL DOOR

INSULATED COILING OVERHEAD DOOR

DOOR TYPES:

1/4" = 1'-0"



A

F-1
FIBERGLASS

FRAME TYPES:

1/4" = 1'-0"

DOOR DETAILS:

1" = 1'-0"

PRINTS ISSUED FOR:
90% SUBMISSION

NO.	REVISIONS	DATE
1	ISSUED FOR PERMIT	8/12/26

PROFESSIONAL CERTIFICATION.
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 26278, EXPIRATION DATE: JUNE 21, 2027.

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GEORGE, MILES & BUHR, LLC
ARCHITECTS & ENGINEERS
SALISBURY - BALTIMORE - SEAFORD
206 WEST MAIN STREET
SALISBURY, MARYLAND 21801
410-742-3115, FAX 410-548-5790
www.gmbnet.com

MYSTIC HARBOUR WWTP BIOSOLIDS UPGRADE & BUILDING REHABILITATION

WORCESTER COUNTY, MARYLAND

STATE OF MARYLAND — MICHAEL H. HEATH — 26278 — REGISTERED PROFESSIONAL ARCHITECT

SCHEDULES AND DOOR DETAIL

SCALE	: AS NOTED	SHEET NO.
DESIGN BY	: MHH	A5.1
DRAWN BY	: AJB	
CHECKED BY	: MHH	
GMB FILE	: 250196	
DATE	: SEPT 2026	

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g:\Projects\2025\250196 mystic harbour wwtp biosolids ug design\Drawings\working sets\A5. SCHEDULES AND DOOR DETAILS.dwg, 9/10/2026 8:45 AM, Lee K. Wholey

PEN1-RED .007 INCHES (.18mm)
PEN2-YELLOW .007 INCHES (.18mm)
PEN3-GREEN .010 INCHES (.25mm)
PEN4-BLUE .020 INCHES (.50mm)
PEN5-MAGENTA .031 INCHES (.79mm)
PEN6-WHITE .051 INCHES (1.30mm)
PLOT CODE PEN4-.DWN

LEGEND:

CORRUGATED PVC CEILING

SURFACE MOUNTED LED

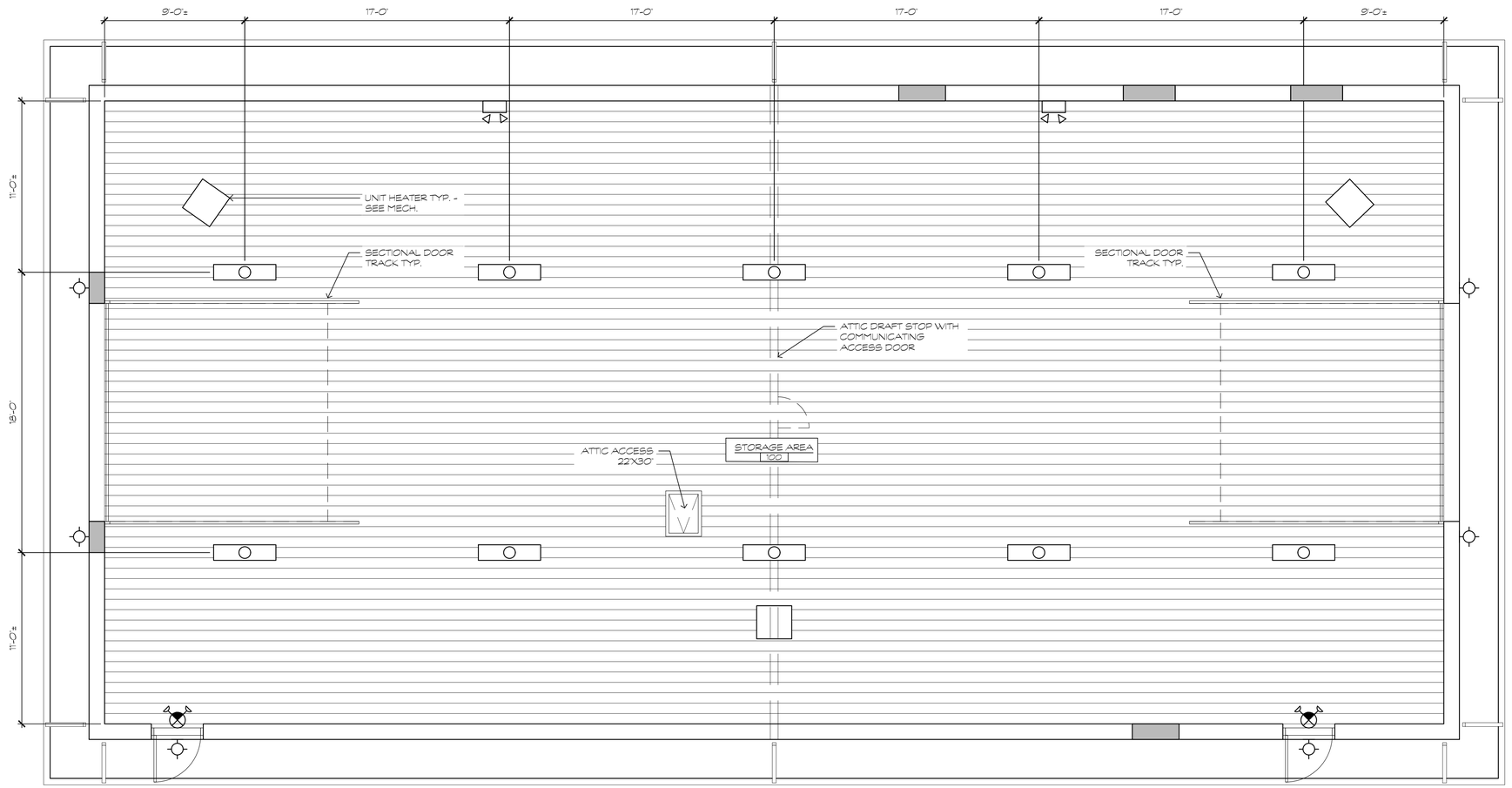
EXTERIOR LED WALL MOUNTED FIXTURE

EMERGENCY BATTERY PACK

COMBO EMERGENCY/ EXIT LIGHT

NOTES:

1. LIGHT FIXTURES ARE SHOWN FOR GENERAL REFERENCE ONLY. SEE ELECTRICAL FOR QUANTITIES, TYPES AND LOCATIONS.
2. SEE ELECTRICAL FOR EMERGENCY LIGHTING.



1 REFLECTED CEILING PLAN

1/4" = 1'-0"

PRINTS ISSUED FOR:
90% SUBMISSION

NO.	REVISIONS	DATE
1	ISSUED FOR PERMIT	8/12/26

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SALISBURY, MARYLAND 21801
410-742-3115, FAX 410-548-5790
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MYSTIC HARBOUR WWTP BIOSOLIDS UPGRADE & BUILDING REHABILITATION

WORCESTER COUNTY, MARYLAND

STATE OF MARYLAND · WILLIAM H. HELFRICH · 16457 · REGISTERED ARCHITECT

REFLECTED CEILING PLAN - STORAGE BUILDING

SCALE	: AS NOTED
DESIGN BY	: MHH
DRAWN BY	: LKW
CHECKED BY	: MHH
GMB FILE	: 250196
DATE	: SEPT 2026

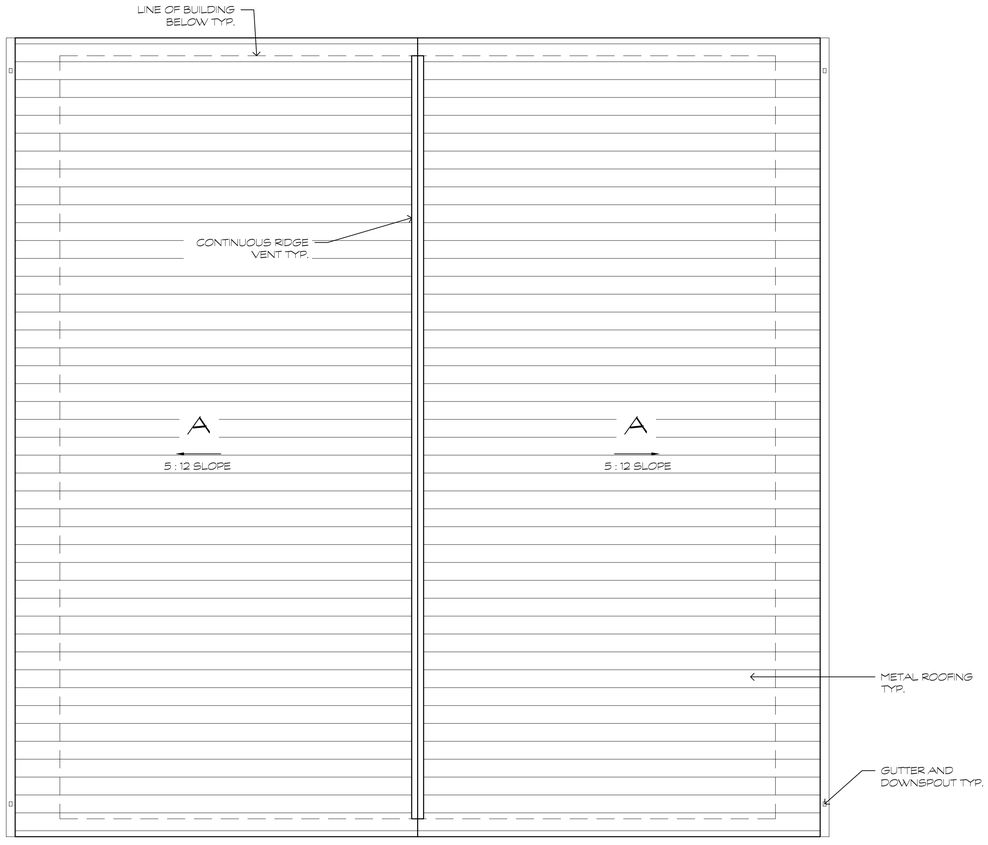
SHEET NO.
A8.1

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PLOT CODE
PEN1-RED 005 INCHES (.13mm)
PEN2-YELLOW 007 INCHES (.18mm)
PEN3-GREEN 010 INCHES (.25mm)
PEN4-CYAN 014 INCHES (.35mm)
PEN5-BLUE 020 INCHES (.50mm)
PEN6-MAGENTA 027 INCHES (.70mm)
PEN7-WHITE 039 INCHES (1.00mm)

G:\Projects\2025\250196 mystic harbour wwtp biosolids ug design\Drawings\working sets\A8.1 REFLECTED CEILING PLAN.dwg Sep 10, 2026 - 8:45am



ROOF CALCULATIONS

BASED ON SMACNA GUIDELINES - LATEST ED.

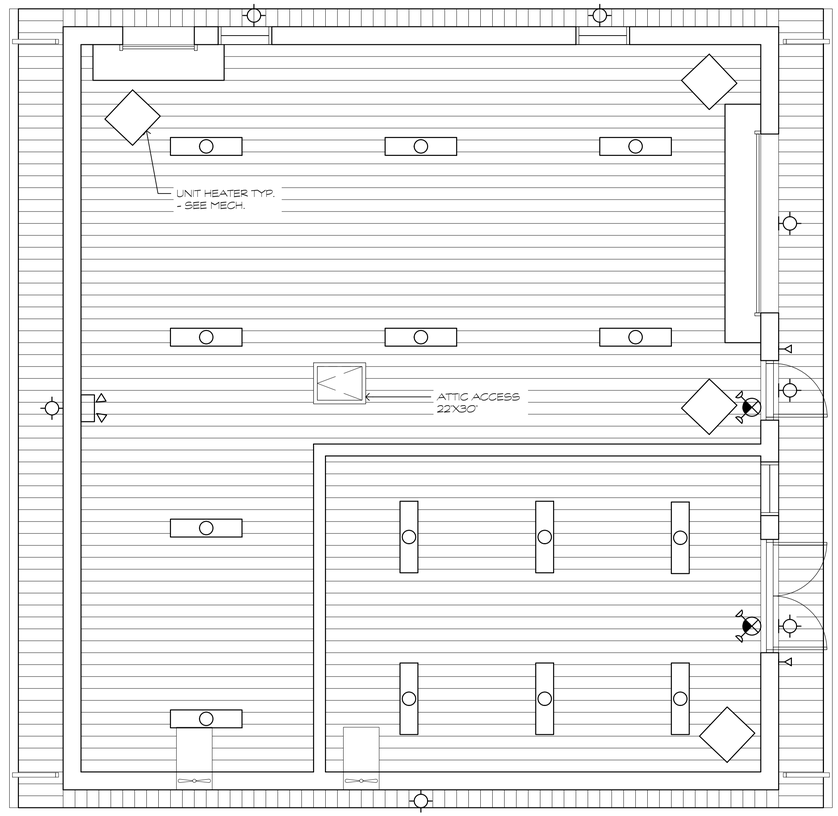
GENERAL CONTRACTOR SHALL DESIGN GUTTERS AND DOWNSPOUTS TO ACCOMMODATE RAINFALL FOR 100 YEAR STORMS.

ROOF AREA 'A'

1. 1,005 S.F. SERVED BY 2 DOWNSPOUTS. 1005/2 = 502.5 S.F. SERVED BY EACH DOWNSPOUT.
2. 502.5/120 (RAINFALL FOR 100 YEAR STORM) = 4.19 SQ. IN. MIN. AREA PER DOWNSPOUT.
3. DOWNSPOUT SIZE 3" x 4" MIN.

2 ROOF PLAN

1/4" = 1'-0"



LEGEND:

- CORRUGATED PVC CEILING
- SURFACE MOUNTED LED
- EXTERIOR LED WALL MOUNTED FIXTURE
- EMERGENCY BATTERY PACK
- COMBO EMERGENCY/ EXIT LIGHT
- EMERGENCY REMOTE HEAD

NOTES:

1. LIGHT FIXTURES ARE SHOWN FOR GENERAL REFERENCE ONLY. SEE ELECTRICAL FOR QUANTITIES, TYPES AND LOCATIONS.
2. SEE ELECTRICAL FOR EMERGENCY LIGHTING.

1 REFLECTED CEILING PLAN

1/4" = 1'-0"

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NO.	REVISIONS	DATE
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MYSTIC HARBOUR
DEWATERING BUILDING

WORCESTER COUNTY, MARYLAND

STATE OF MARYLAND · MICHAEL HEATH PRICE · 16457 · REGISTERED PROFESSIONAL ARCHITECT

REFLECTED CEILING PLAN - DEWATERING BUILDING

SCALE : AS NOTED	SHEET NO.
DESIGN BY : MHH	A8.2
DRAWN BY : LKW	
CHECKED BY : MHH	
GMB FILE : 250196	
DATE : SEPT 2026	

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PLOT CODE
PEN1-RED 006 INCHES (.15mm)
PEN2-YELLOW 007 INCHES (.18mm)
PEN3-GREEN 010 INCHES (.25mm)
PEN4-CYAN 014 INCHES (.35mm)
PEN5-BLUE 020 INCHES (.50mm)
PEN6-MAGENTA 027 INCHES (.70mm)
PEN7-WHITE 039 INCHES (1.00mm)

COMcheck Software Version COMcheckWeb
Envelope Compliance Certificate

Project Information

Energy Code:	2021 IECC
Project Title:	Mystic Harbour Storage Building
Location:	West Ocean City, Maryland
Climate Zone:	4a
Project Type:	Alteration

Construction Site:
9624 Stephen Decatur Hwy
Berlin, Maryland 21811

Owner/Agent:
Worcester County
1 West Market St
Snow Hill, Maryland 21863
4106325623

Designer/Contractor:
Morgan Helfrich
George, Miles & Buhr, LLC
206 W Main Street
Salisbury, Maryland 21801
4107423115
mhelfrich@gmbnet.com

Building Area	Floor Area
1-Warehouse : Nonresidential	3696

Envelope Assemblies

Post-Alteration Assembly	R-Value Cavity	R-Value Cont.	Proposed U-Factor	Proposed SHGC	Max. Allowed U-Factor	Max. Allowed SHGC
Roof: Attic Roof, Wood Joists, [Bldg. Use 1 - Warehouse]	49.0	0.0	0.021	---	0.021	---
Floor: Unheated Slab-On-Grade, [Bldg. Use 1 - Warehouse]	---	10.0	0.580	---	0.520	---
NORTH						
Ext. Wall: Concrete Block, 12in., Partially Grouted, Cells Empty,Light Density , Furring: Metal, [Bldg. Use 1 - Warehouse]	0.0	10.0	0.072	---	0.104	---
EAST						
Ext. Wall: Concrete Block, 12in., Partially Grouted, Cells Empty,Light Density , Furring: Metal, [Bldg. Use 1 - Warehouse]	0.0	10.0	0.072	---	0.104	---
Door: Insulated Metal, Garage door 14 6.95266e-310lazing, [Bldg. Use 1 - Warehouse]	---	---	0.125	---	0.310	---
SOUTH						
Ext. Wall: Concrete Block, 12in., Partially Grouted, Cells Empty,Light Density , Furring: Metal, [Bldg. Use 1 - Warehouse]	0.0	10.0	0.072	---	0.104	---
Door: Insulated Metal, Swinging, [Bldg. Use 1 - Warehouse]	---	---	0.370	---	0.370	---
Door: Insulated Metal, Swinging, [Bldg. Use 1 - Warehouse]	---	---	0.370	---	0.370	---
WEST						
Ext. Wall: Concrete Block, 12in., Partially Grouted, Cells Empty,Light Density , Furring: Metal, [Bldg. Use 1 - Warehouse]	0.0	10.0	0.072	---	0.104	---
Door: Insulated Metal, Garage door 14 6.95266e-310lazing, [Bldg. Use 1 - Warehouse]	---	---	0.125	---	0.310	---

(a) Slab-On-Grade proposed and budget U-factors shown in table are F-factors.

Project Notes

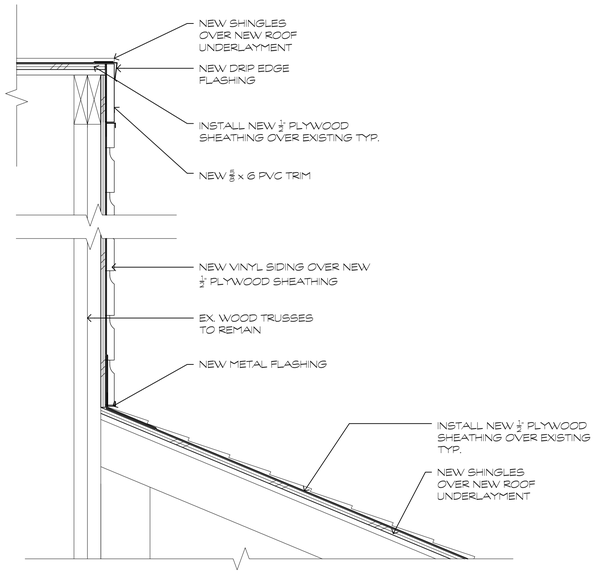
Envelope PASSES

Envelope Compliance Statement

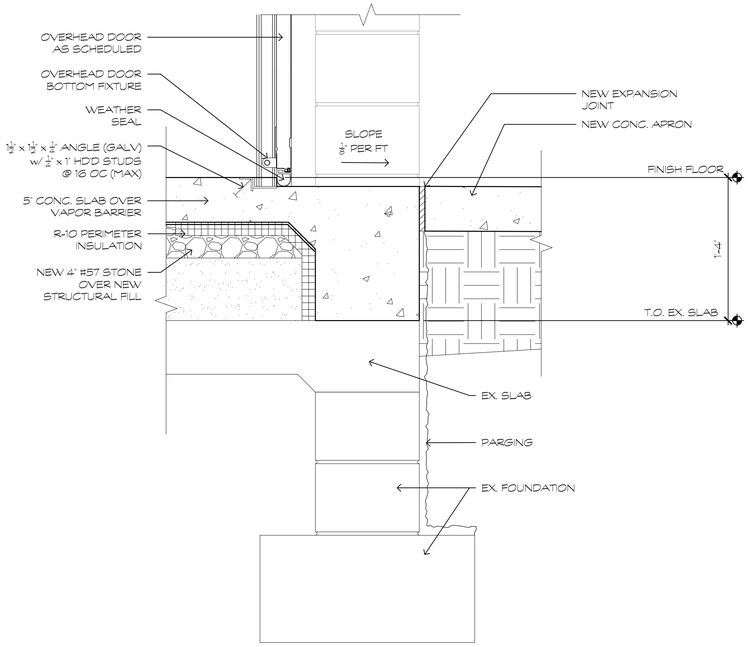
Compliance Statement: The proposed envelope alteration project represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed envelope systems have been designed to meet the 2021 IECC requirements in COMcheck Version COMcheckWeb and to comply with any applicable mandatory requirements listed in the inspection Checklist.

Name - Title | Signature | Date

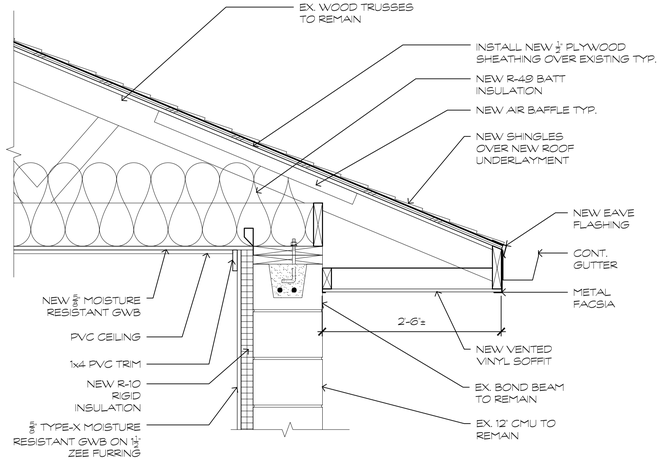
This report identifies proposed Construction Documentation Design only, GMB - Architects & Engineers is not liable for construction or any deviations from this design.



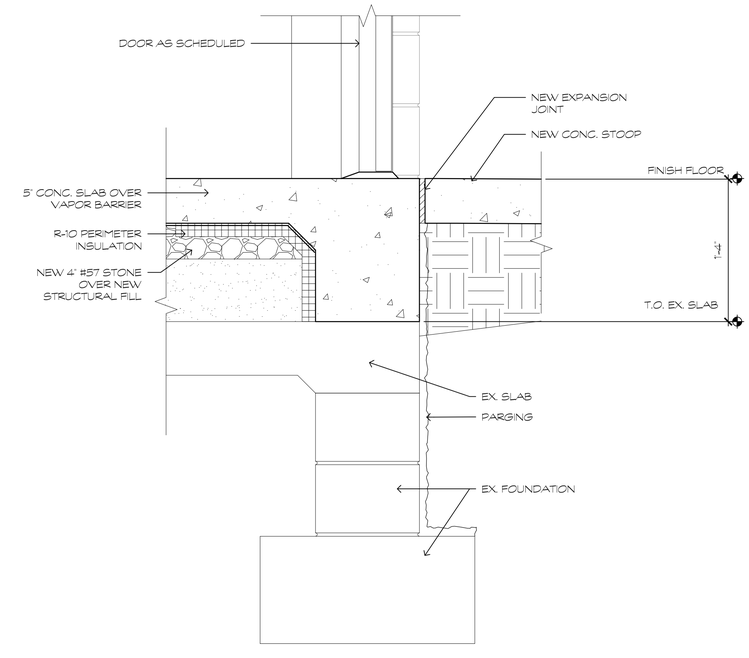
3 TYP. ROOF DETAIL
1 1/2" = 1'-0"



1 TYP. FOUNDATION DETAIL @ OVERHEAD DOOR
1 1/2" = 1'-0"



4 TYP. ROOF DETAIL
1 1/2" = 1'-0"



2 TYP. FOUNDATION DETAIL @ ENTRY DOOR
1 1/2" = 1'-0"

PRINTS ISSUED FOR:
90% SUBMISSION

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MYSTIC HARBOUR WWTP
BIOSOLIDS UPGRADE &
BUILDING REHABILITATION

WORCESTER COUNTY, MARYLAND

STATE OF MARYLAND
JOSH H. HELFRICH
16457
REGISTERED ARCHITECT

DETAILS - STORAGE BUILDING

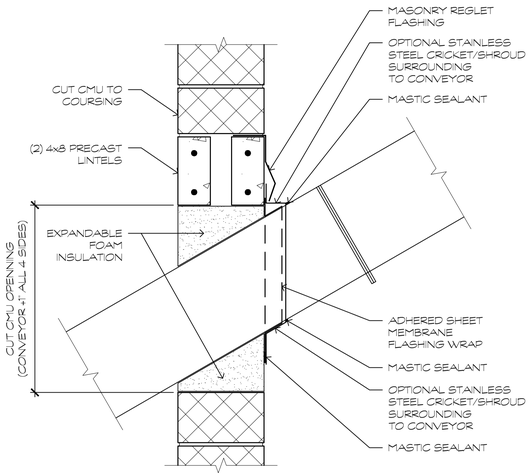
SCALE	: AS NOTED
DESIGN BY	: VALUE
DRAWN BY	: VALUE
CHECKED BY	: VALUE
GMB FILE	: 250196
DATE	: SEPT 2026

SHEET NO.
A9.1

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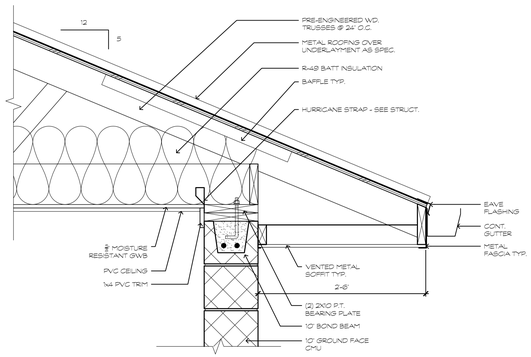
g:\Projects\2025\250196 mystic harbour wwtp biosolids ug design\Drawings\working sets\A9.1 DETAILS.dwg, 9/10/2026 8:46 AM, Lee K. Wholey
PLOT CODE
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PEN2-YELLOW 007 INCHES (0.4mm)
PEN3-GREEN 070 INCHES (1.5mm)
PEN4-CYAN 014 INCHES (1.0mm)
PEN5-BLUE 020 INCHES (0.5mm)
PEN6-MAGENTA 027 INCHES (0.6mm)
PEN7-WHITE 033 INCHES (0.8mm)

G:\Projects\2025\250196 mystic harbour wwtp biosolids ug design\Drawings\working sets\A9.1 DETAILS.dwg Sep 10, 2026 - 8:46am



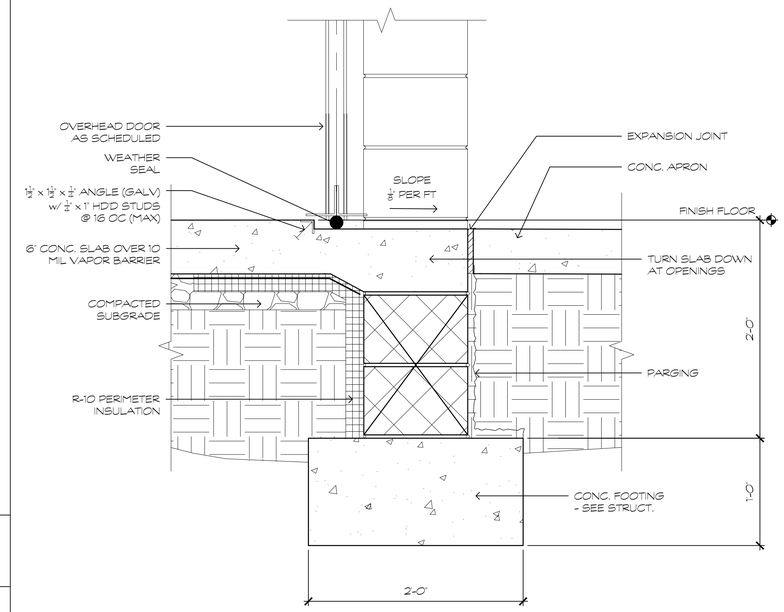
6 CONVEYOR PENETRATION DETAIL

1 1/2" = 1'-0"



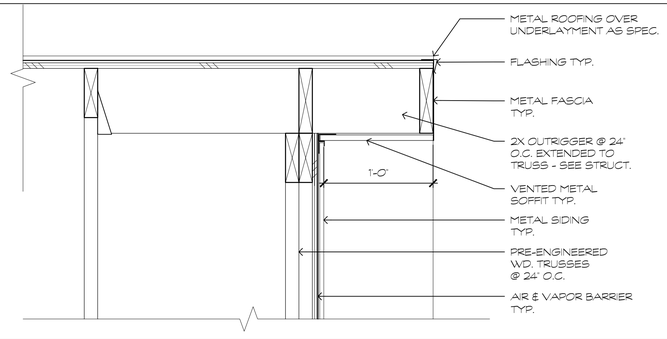
3 TYP. ROOF DETAIL @ EAVE

1 1/2" = 1'-0"



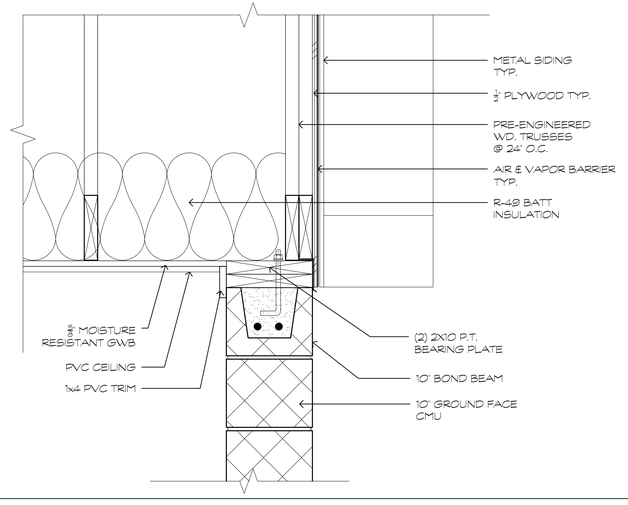
1 TYP. FOUNDATION DETAIL @ OVERHEAD DOOR

1 1/2" = 1'-0"



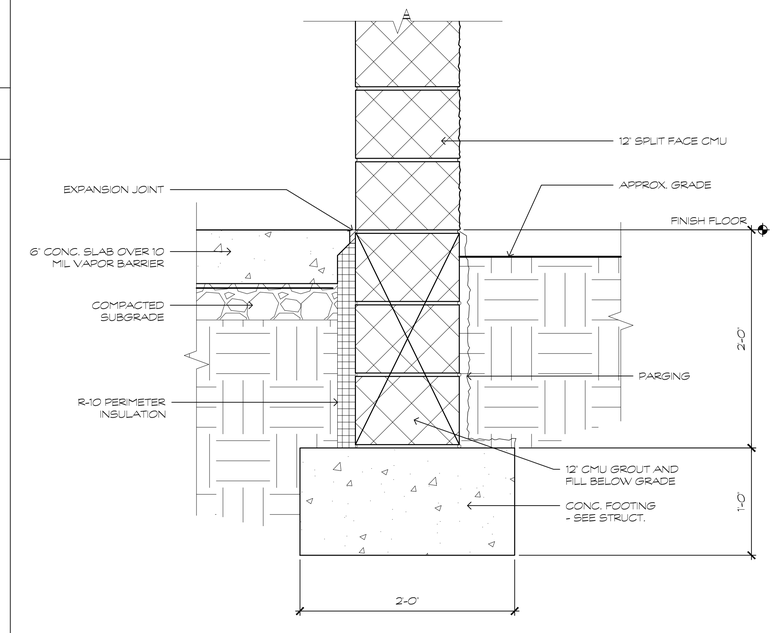
4 TYP. ROOF DETAIL

1 1/2" = 1'-0"



5 TYP. ROOF DETAIL

1" = 1'-0"



2 TYP. FOUNDATION DETAIL

1 1/2" = 1'-0"

7 NOT USED

PRINTS ISSUED FOR: 90% SUBMISSION

NO.	REVISIONS	DATE
1	ISSUED FOR PERMIT	8/12/26

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MYSTIC HARBOUR
DEWATERING BUILDING

WORCESTER COUNTY, MARYLAND

STATE OF MARYLAND
MARGARET H. HEATH PRICE
REG. NO. 16457
REGISTERED ARCHITECT

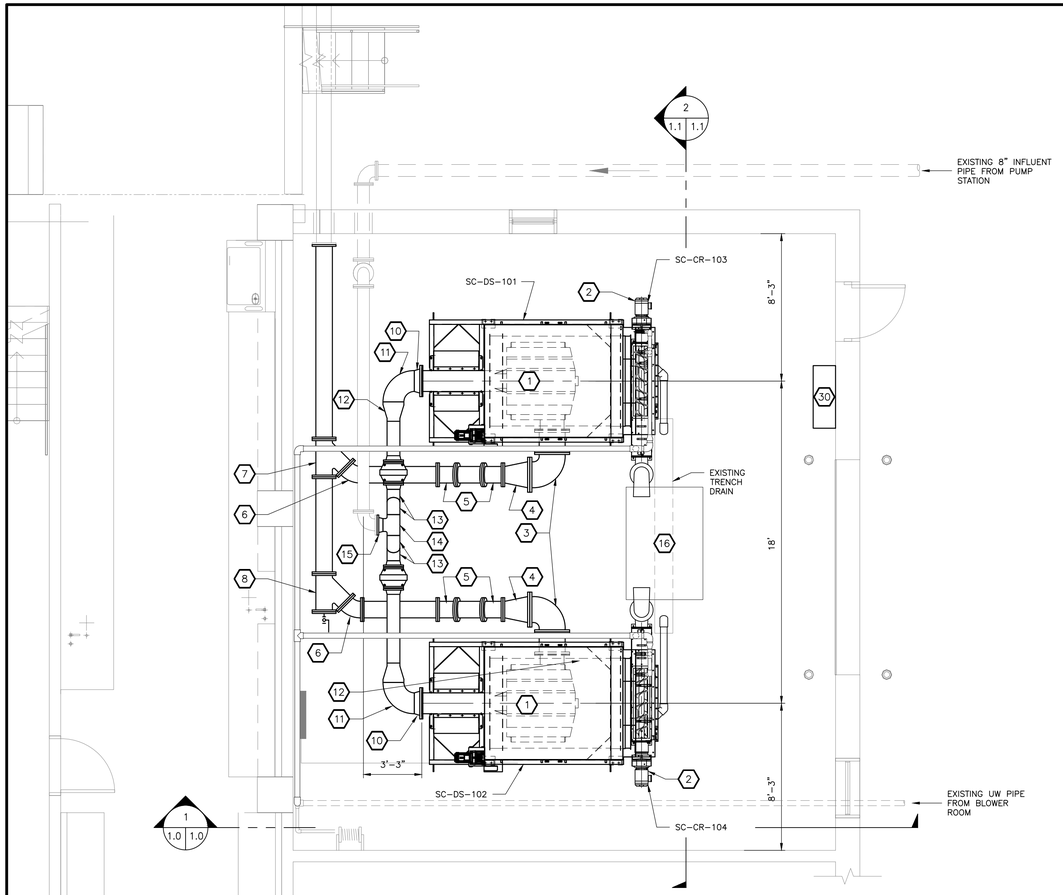
DETAILS - DEWATERING BUILDING

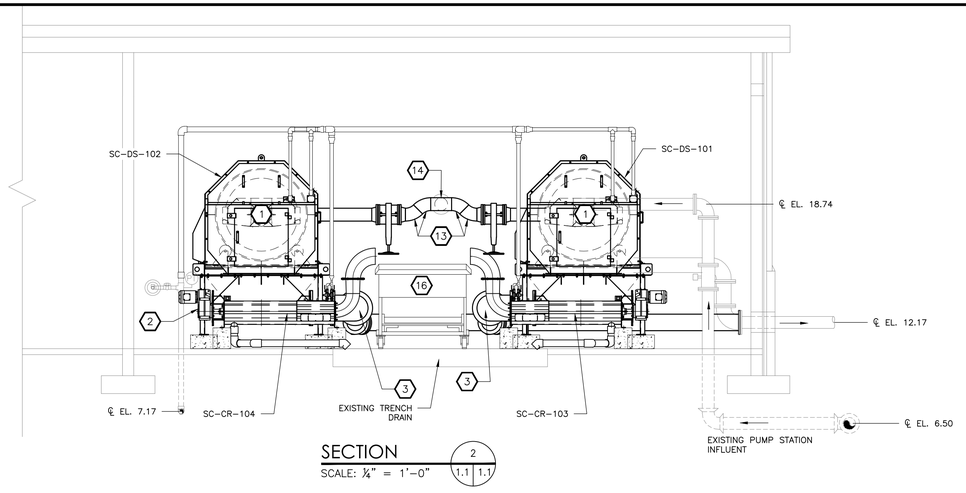
SCALE	: AS NOTED
DESIGN BY	: MHH
DRAWN BY	: LKW
CHECKED BY	: LKW
GMB FILE	: 250196
DATE	: SEPT 2026

SHEET NO. A9.2

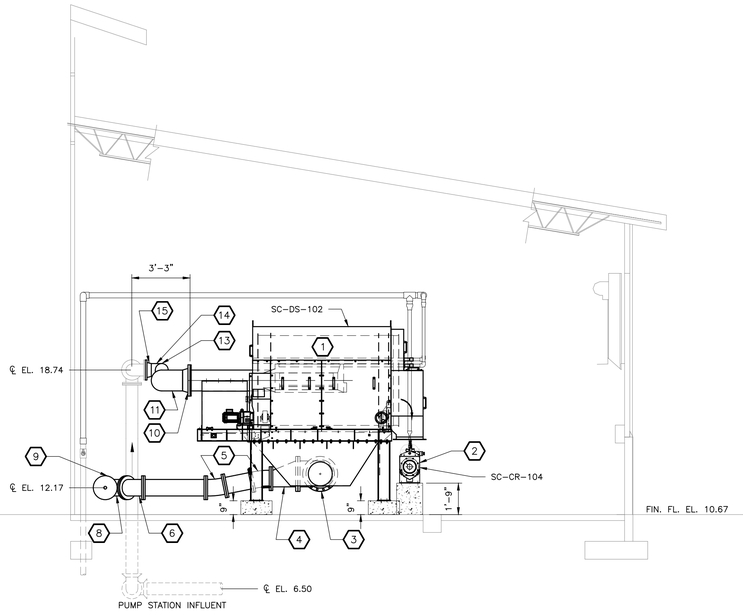
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PLOT CODE
PEN1-RED 006 INCHES (.15mm)
PEN2-YELLOW 007 INCHES (.18mm)
PEN3-GREEN 009 INCHES (.23mm)
PEN4-CYAN 014 INCHES (.36mm)
PEN5-BLUE 020 INCHES (.50mm)
PEN6-MAGEN 027 INCHES (.70mm)
PEN7-WHITE 039 INCHES (1.00mm)

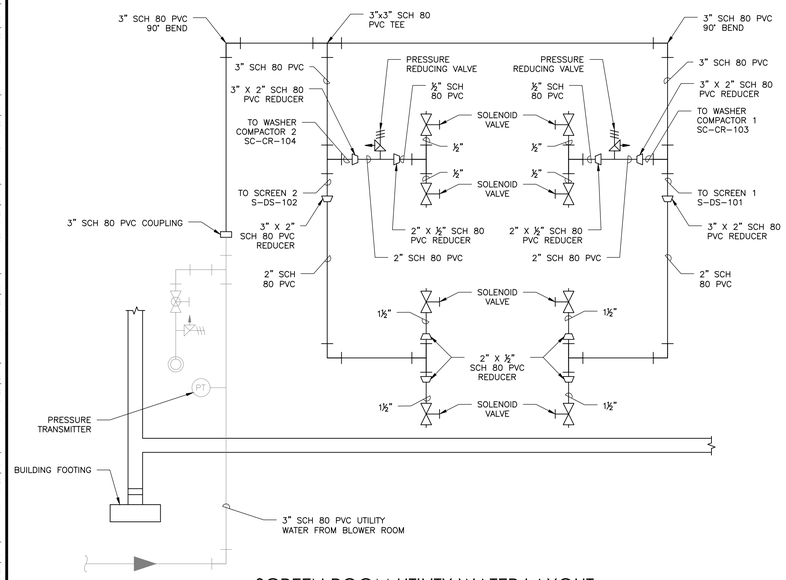




SECTION
SCALE: ¼" = 1'-0"
2 1.1 1.1



SECTION
SCALE: ¼" = 1'-0"
1 1.0 1.0



SCREEN ROOM UTILITY WATER LAYOUT
NO SCALE

CONSTRUCTION NOTES

1. HYCOR ROTOSHEAR SCREEN.
2. AQUA WASHPRESS DEWATERING SCREW PRESS UNIT.
3. 16-INCH 90° D.I. BEND.
4. 16-INCH x 10-INCH D.I. ECCENTRIC REDUCER.
5. 10-INCH 11¼° D.I. BEND.
6. 10-INCH 45° D.I. BEND.
7. 10-INCH D.I. TEE.
8. 10-INCH D.I. WYE.
9. 10-INCH BLIND FLANGE WITH THREADED 1½-INCH PVC CONNECTION AND BALL VALVE.
10. 14-INCH S.S. WELD NECK FLANGE.
11. 14-INCH S.S. 90° BEND.
12. 14x8 S.S. REDUCER.
13. 8-INCH S.S. 45° BEND.
14. 8-INCH S.S. TEE.
15. 8-INCH S.S. WELD NECK FLANGE.
16. 2 CU.YD. ROLLING DUMPSTER.

0 1 5 10
SCALE: 1/4" = 1'-0"

PRINTS ISSUED FOR:
90% SUBMISSION

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1	ISSUED FOR PERMIT	8/12/26

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MYSTIC HARBOUR WWTP BIOSOLIDS UPGRADE & BUILDING REHABILITATION

WORCESTER COUNTY, MARYLAND

STATE OF MARYLAND
CHRISTOPHER BRIAN DORMAN
No. 26278
PROFESSIONAL ENGINEER
8/12/26

SCREENING PLAN AND SECTION

SCALE : AS NOTED	SHEET NO.
DESIGN BY : JTH	Q1.0
DRAWN BY : MMD	
CHECKED BY : CBD	
GMB FILE : 250196	
DATE : OCT 2026	

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PLOT CODE
PEN1-WHITE .039 INCHES (1.00mm)
PEN2-MAGENTA .027 INCHES (.70mm)
PEN3-BLUE .020 INCHES (.50mm)
PEN4-CYAN .014 INCHES (.35mm)
PEN5-GREEN .010 INCHES (.25mm)
PEN6-YELLOW .007 INCHES (.18mm)
PEN7-RED .006 INCHES (.15mm)

PROPOSED PIPING AND EQUIPMENT

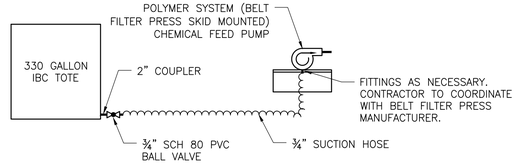
1. 6–INCH CHECK VALVE.
2. 6–INCH BUTTERFLY VALVE.
3. 6–INCH PLUG VALVE.
4. 4x4x6 D.I. BULLHEAD TEE.
5. 6x4 D.I. REDUCER.
6. 4–INCH FLOW METER (SL–FE/FIT–101).
7. 4–INCH VENTURI MIXER (SL–BDP–121).
8. 4–INCH PLUG VALVE.
9. 8x6 SCH 80 PVC REDUCER.
10. 6–INCH PUMP DISCHARGE.
11. 6–INCH PUMP SUCTION.
12. 6–INCH AIR PIPE.
13. 4–INCH PUMP DISCHARGE.
14. 6–INCH FLOOR DRAIN.
15. POLYMER STORAGE – TWO (2) 330 GALLON IBC TOTES. SEE DETAIL FOR PIPING CONNECTION.
16. EMERGENCY EYEWASH.
17. SINK.
18. 3–INCH NON–POTABLE WATER.
19. 2–INCH POTABLE WATER.
20. HOSE BIB.
21. HOSE REEL.
22. CONTRACTOR SHALL ROUTE 1½–INCH POLYMER FEED PIPING ALONGSIDE THE 4–INCH SLUDGE PIPING.
23. ¾" SUCTION HOSE
24. FLOOR SLEEVE, SEE DETAIL SHEET C3.1.

GENERAL NOTES

1. EQUIPMENT IS SHOWN FOR GENERAL REFERENCE ONLY. REFER TO THE PROCESS MECHANICAL AND ELECTRICAL DRAWINGS TO CONFIRM LOCATIONS, MOUNTING HEIGHTS, SIZES AND QUANTITIES.
2. SEE STRUCTURAL DRAWINGS FOR FOUNDATION SIZES, DETAILS AND LOCATIONS.
3. SLOPE FLOORS TO DRAIN.
4. CONTRACTOR SHALL PROVIDE ALL PIPING AND PIPING SUPPORTS AS NECESSARY.
5. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH ALL APPLICABLE AND ADOPTED REGULATIONS INCLUDING, BUT NOT LIMITED TO, NATIONAL, CITY, STATE, LOCAL CODES AND ORDINANCES WHICH MAY BE IN EFFECT.
6. PIPING SHOWN ON DRAWINGS SHOW THE GENERAL RUN AND CONNECTIONS AND MAY OR MAY NOT IN ALL PARTS BE SHOWN IN ITS EXACT POSITION. CONTRACTOR SHALL BE RESPONSIBLE FOR ERECTING THE PIPING SUITABLE IN EVERY RESPECT FOR THE WORK. PIPING SHALL BE INSTALLED SO THAT ACCESS, CLEARANCE, HEADROOM AND PITCH ARE MAINTAINED. CONTRACTORS OF THE VARIOUS TRADES SHALL INCORPORATE THE INSTALLATION.
7. ALL EXPOSED HORIZONTAL AND VERTICAL PIPING SHALL BE INSTALLED IN A NEAT ARRANGEMENT IN LOCATIONS WHICH ARE THE MOST INCONSPICUOUS. VERTICAL DROPS SHALL BE KEPT TO AN ABSOLUTE MINIMUM AND THEIR FINAL LOCATIONS SHALL BE COORDINATED AND RUN WITHIN CHASES, WALLS, SOFFITS WITH OTHER MECHANICAL/ELECTRICAL FEEDS.
8. ALL BURIED VALVES SHALL BE INSTALLED WITH A VALVE BOX.
9. ALL NON–POTABLE WATER CONNECTIONS SHALL BE INSTALLED WITH A NON–POTABLE WATER SIGN.
10. CONTRACTOR RESPONSIBLE FOR ALL INTERCONNECTING PIPING AND WIRING ASSOCIATED WITH COMPRESSED AIR SYSTEM.
11. PROVIDE EQUIPMENT PADS FOR ALL EQUIPMENT IN THIS BUILDING.
12. DUCTILE IRON PIPE SHALL NOT BE SUPPORTED FROM CEILING.
13. ALL WALL PENETRATIONS TO BE COMPLETELY AIR TIGHT.
14. BELT FILTER PRESS CONNECTIONS TO BE COORDINATED WITH BELT FILTER PRESS MANUFACTURER.

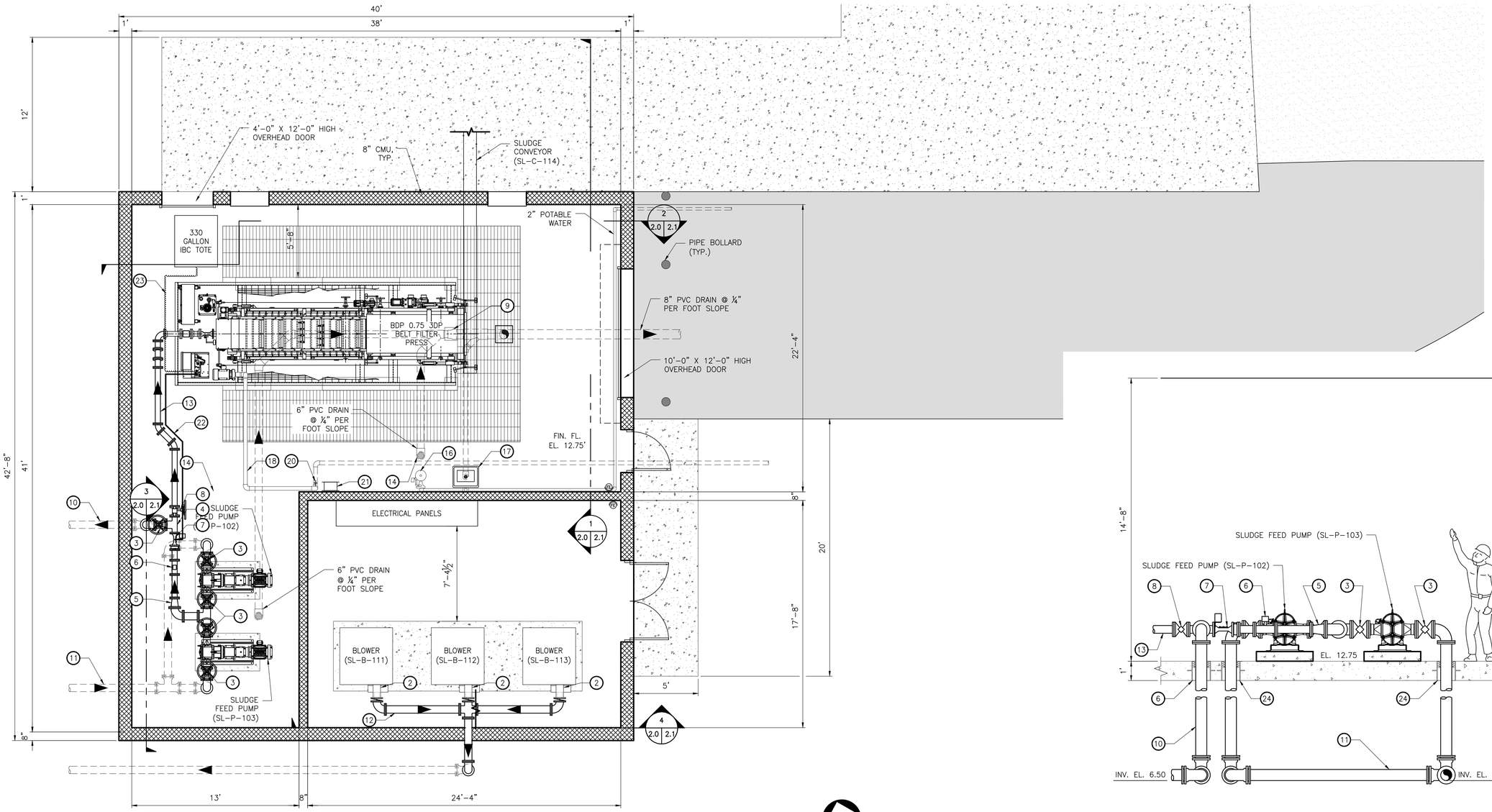
LEGEND

SCOPE BREAK. SEE SPEC SECTION 00410 & 01150.



CHEMICAL FEED SCHEMATIC

NO SCALE



SLUDGE DEWATERING BUILDING PLAN

SCALE: ¼" = 1'–0"

SECTION

SCALE: ⅜" = 1'–0"

PRINTS ISSUED FOR: 90% SUBMISSION

NO.	REVISIONS	DATE
1	ISSUED FOR PERMIT	8/12/26

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MYSTIC HARBOUR WWTP BIOSOLIDS UPGRADE & BUILDING REHABILITATION

WORCESTER COUNTY, MARYLAND

STATE OF MARYLAND — CHRISTOPHER BRIAN DEEL — REG. NO. 26278 — PROFESSIONAL ENGINEER — 8/12/26

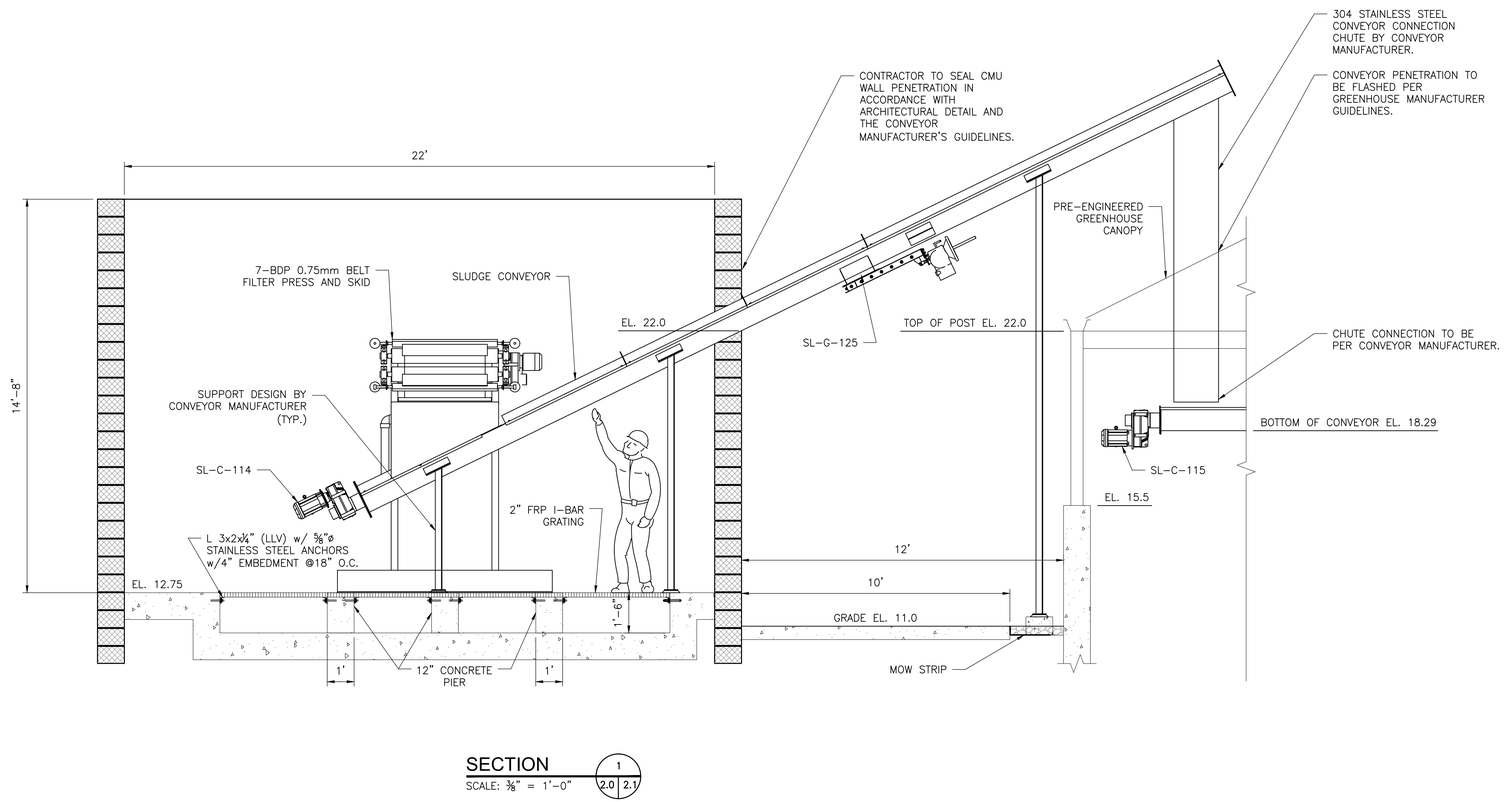
SLUDGE DEWATERING BUILDING

SCALE	: AS NOTED
DESIGN BY	: JTH
DRAWN BY	: MMD
CHECKED BY	: CBD
GMB FILE	: 250196
DATE	: OCT 2026

SHEET NO. Q2.0

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PLOT CODE: STB4-CMYK 074 INCHES (1.85mm) PEN2-GREEN 070 INCHES (1.75mm) PEN3-BLUE 020 INCHES (.50mm) PEN4-MAGENTA 037 INCHES (.94mm) PEN1-RED 006 INCHES (.15mm) PEN5-WHITE 026 INCHES (.65mm)
G:\Projects\2025\250196 Mystic Harbour WWTP Biosolids UG Design\Drawings\Working Sets\Q2.0 SLUDGE DEWATERING BUILDING.dwg, 10/12/2026 7:40:19 AM, mmd, 2(Mod) for ARCH D



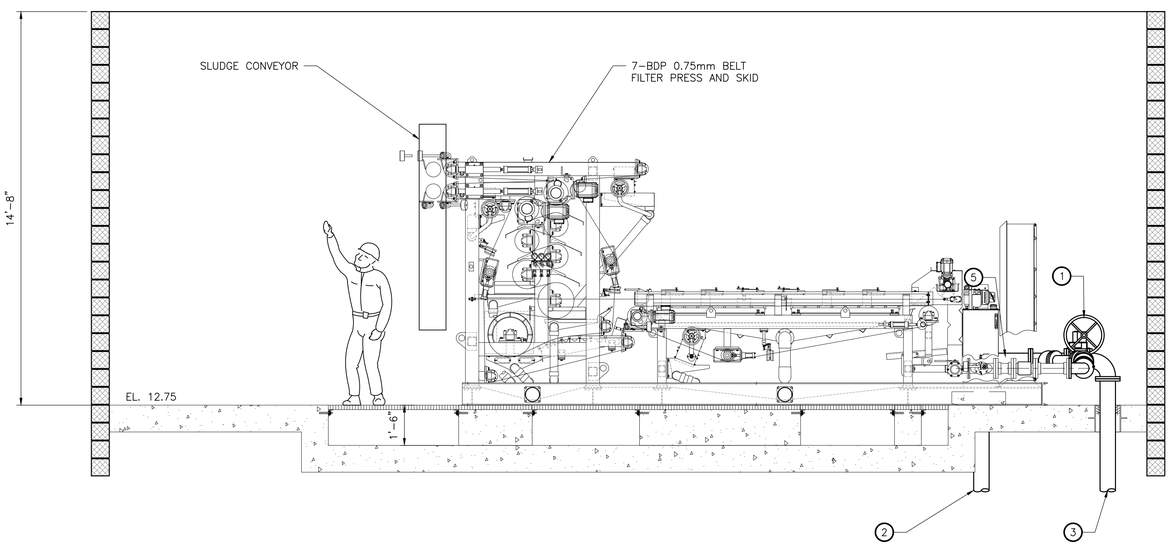
SECTION 1
SCALE: ⅜" = 1'-0"

PROPOSED PIPING AND EQUIPMENT

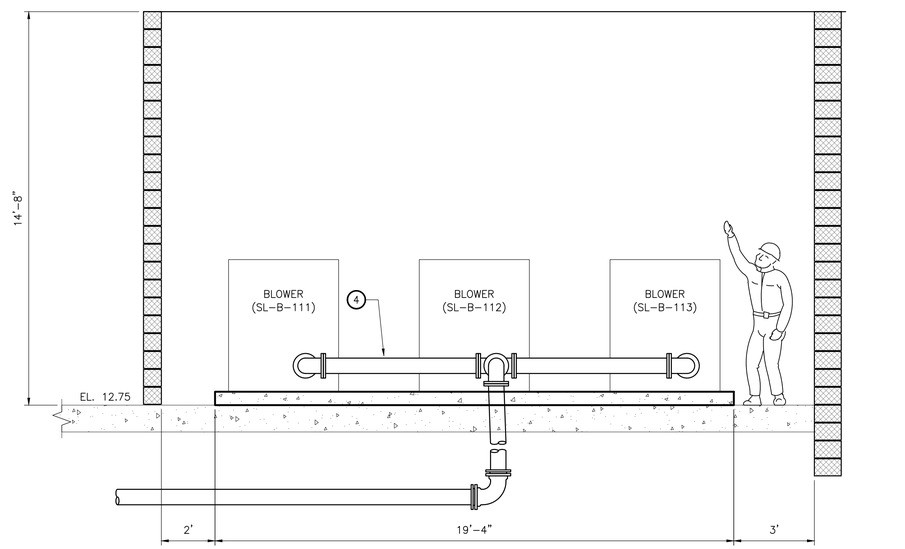
1. 6-INCH PLUG VALVE.
2. 6-INCH PUMP DISCHARGE.
3. 6-INCH PUMP SUCTION.
4. 6-INCH AIR PIPE.
5. 4-INCH PUMP DISCHARGE.

GENERAL NOTES

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2. SEE STRUCTURAL DRAWINGS FOR FOUNDATION SIZES, DETAILS AND LOCATIONS.
3. SLOPE FLOORS TO DRAIN.
4. CONTRACTOR SHALL PROVIDE ALL PIPING AND PIPING SUPPORTS AS NECESSARY.
5. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH ALL APPLICABLE AND ADOPTED REGULATIONS INCLUDING, BUT NOT LIMITED TO, NATIONAL, CITY, STATE, LOCAL CODES AND ORDINANCES WHICH MAY BE IN EFFECT.
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8. ALL BURIED VALVES SHALL BE INSTALLED WITH A VALVE BOX.
9. ALL NON-POTABLE WATER CONNECTIONS SHALL BE INSTALLED WITH A NON-POTABLE WATER SIGN.
10. CONTRACTOR RESPONSIBLE FOR ALL INTERCONNECTING PIPING AND WIRING.
11. PROVIDE EQUIPMENT PADS FOR ALL EQUIPMENT IN THIS BUILDING.
12. DUCTILE IRON PIPE SHALL NOT BE SUPPORTED FROM CEILING.
13. ALL WALL PENETRATIONS TO BE COMPLETELY AIR TIGHT.



SECTION 2
SCALE: ⅜" = 1'-0"



SECTION 4
SCALE: ⅜" = 1'-0"

0 1 5 8
SCALE: 3/8" = 1'-0"

PRINTS ISSUED FOR:
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MYSTIC HARBOUR WWTP BIOSOLIDS UPGRADE & BUILDING REHABILITATION

WORCESTER COUNTY, MARYLAND

STATE OF MARYLAND
CHRISTOPHER BRIAN JOHNSON
No. 26278
PROFESSIONAL ENGINEER
8/12/26

SLUDGE DEWATERING BUILDING SECTIONS

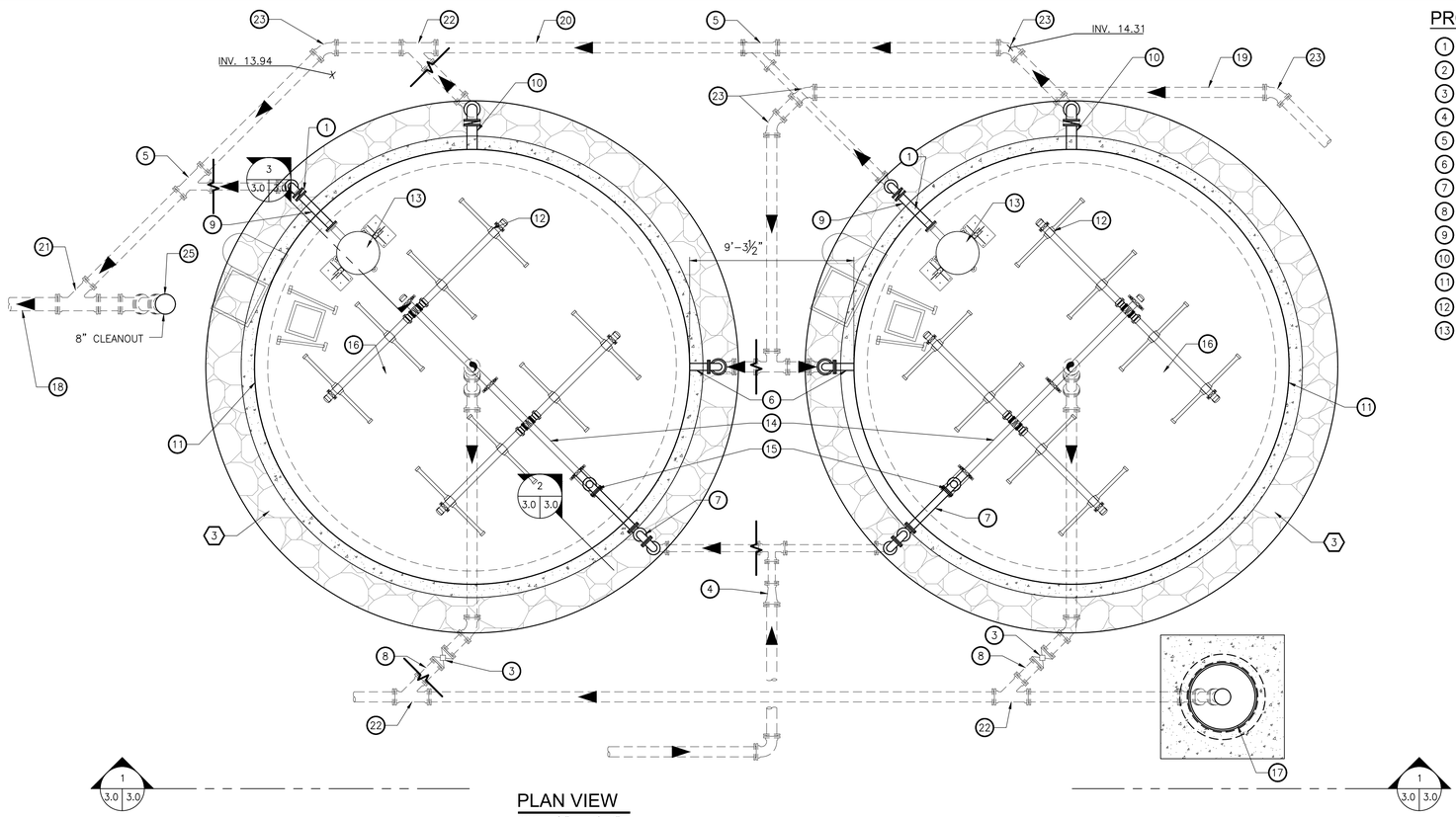
SCALE : AS NOTED	SHEET NO.
DESIGN BY : JTH	Q2.1
DRAWN BY : MMD	
CHECKED BY : CBD	
GMB FILE : 250196	
DATE : OCT 2026	

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PLOT CODE
PEN1-RED 006 INCHES (.15mm)
PEN2-YELLOW 007 INCHES (.18mm)
PEN3-GREEN 010 INCHES (.25mm)
PEN4-CYAN 014 INCHES (.35mm)
PEN5-BLUE 020 INCHES (.50mm)
PEN6-MAGENTA 027 INCHES (.70mm)
PEN7-WHITE 039 INCHES (1.00mm)

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PLAN VIEW
SCALE: ¼" = 1'-0"

PROPOSED PIPING AND EQUIPMENT

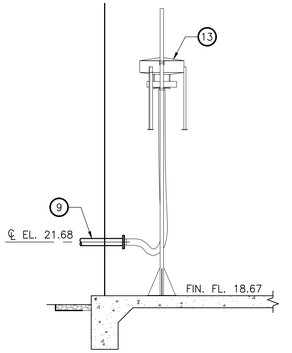
1. 4-INCH BUTTERFLY VALVE.
2. 4-INCH PLUG VALVE.
3. 6-INCH PLUG VALVE.
4. 6x4 D.I. REDUCER.
5. 6x4 D.I. WYE.
6. 4-INCH D.I. INLET PIPE.
7. 4-INCH D.I. AIR PIPE.
8. 6-INCH D.I. OUTLET PIPE.
9. 4-INCH D.I. DECANT PIPE.
10. 6-INCH D.I. OVERFLOW PIPE.
11. BOLTED STAINLESS STEEL SLUDGE HOLDING TANK.
12. MXPV-24" MAXAIR PVC DIFFUSER ASSEMBLY.
13. FLOATING DECANTER
14. 4-INCH SCH. 40 PVC SUBHEADER.
15. 4-INCH SCH. 10 304L STAINLESS STEEL DROP PIPE.
16. 4-INCH SCH. 40 PVC LATERAL.
17. PIG LAUNCHING PIT.
18. 8-INCH GRAVITY SEWER.
19. 6-INCH D.I. SLUDGE PIPE.
20. 6-INCH GRAVITY SEWER.
21. 8x6 D.I. WYE.
22. 6x6 D.I. WYE.
23. 6-INCH 45° BEND.
24. 4-INCH KADANT PSFF SIGHT FLOW INDICATOR.
25. 8-INCH TERMINAL CLEANOUT.

CONSTRUCTION NOTES

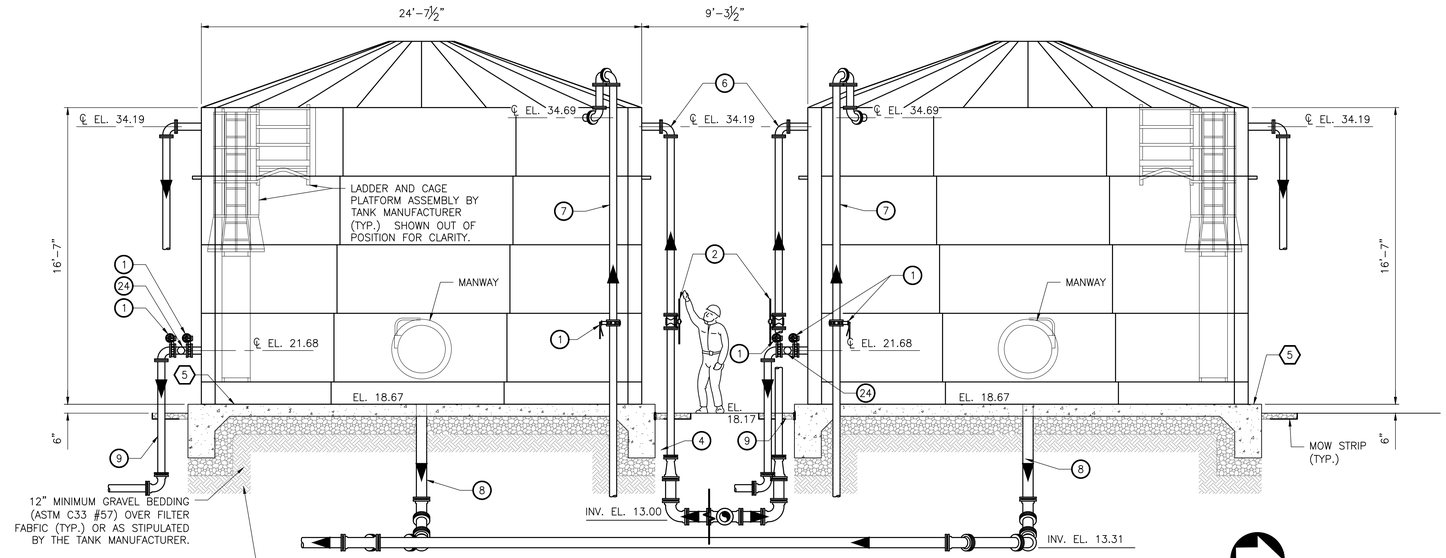
1. 4-INCH SCH. 10 304L STAINLESS STEEL DROP PIPE WITH FLANGED TO CONNECTION TO BE PROPERLY SUPPORTED VIA TANK WALLS WITH NO DOWNWARD FORCE ON 4-INCH PVC MANIFOLD.
2. DIFUSSERS TO BE MOUNTED 1-FOOT ABOVE FINISHED FLOOR OF TANK. CONTRACTOR TO COORDINATE ATTACHMENT METHOD WITH MANUFACTURER.
3. FURNISH AND INSTALL MOWING STRIP, SEE DETAIL SHEET C3.2.
4. CONTRACTOR TO COORDINATE ALL INTERIOR AND EXTERIOR PIPE SUPPORTS WITH DIFFUSER MANUFACTURER AND TANK MANUFACTURER.
5. CONCRETE FOUNDATION(S) DESIGN IS THE RESPONSIBILITY OF THE TANK MANUFACTURER. FLOOR SHALL BE SLOPED TO DRAIN.

LEGEND

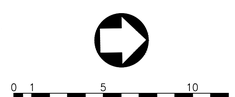
SCOPE BREAK. SEE SPEC SECTION 00410 & 01150.



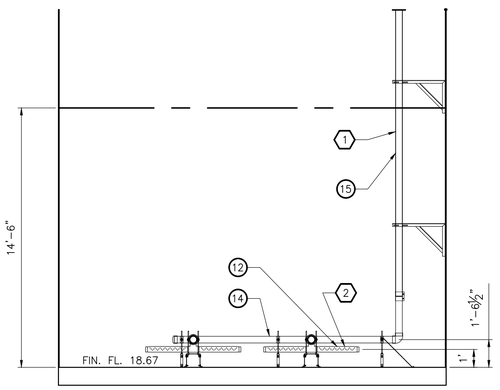
SECTION
SCALE: ¼" = 1'-0"



SECTION
SCALE: ¼" = 1'-0"



SCALE: 1/4" = 1'-0"



SECTION
SCALE: ¼" = 1'-0"

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90% SUBMISSION

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MYSTIC HARBOUR WWTP BIOSOLIDS UPGRADE & BUILDING REHABILITATION

WORCESTER COUNTY, MARYLAND

STATE OF MARYLAND
CHRISTOPHER BRIAN DEMPSEY
PROFESSIONAL ENGINEER
8/12/26

SLUDGE HOLDING TANKS

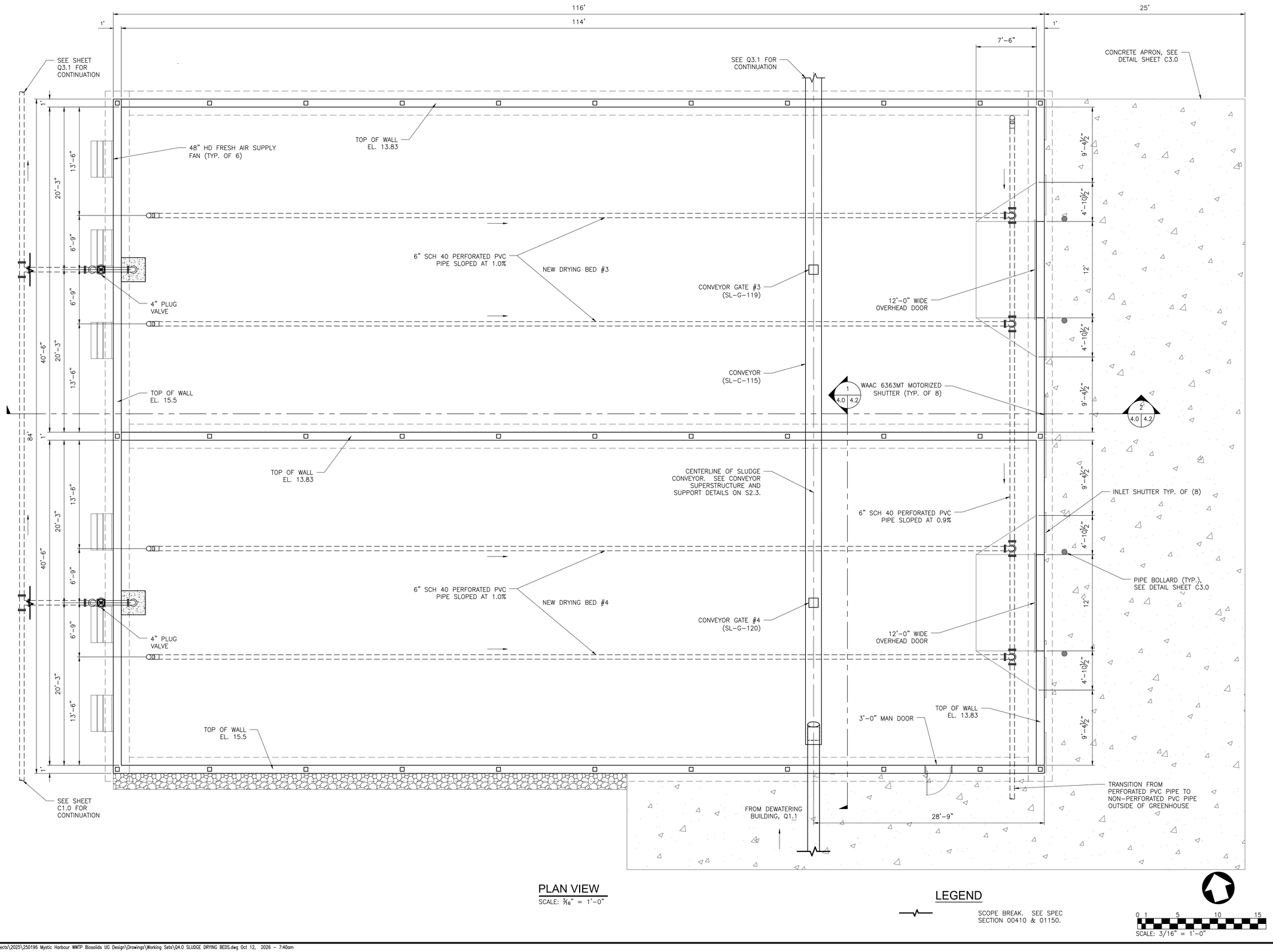
SCALE : AS NOTED	SHEET NO.
DESIGN BY : JTH	Q3.0
DRAWN BY : MMD	
CHECKED BY : CBD	
GMB FILE : 250196	
DATE : OCT 2026	

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PLOT CODE
PEN1-RED 006 INCHES (.15mm)
PEN2-YELLOW 007 INCHES (.18mm)
PEN3-GREEN 010 INCHES (.25mm)
PEN4-BLUE 020 INCHES (.50mm)
PEN5-MAGENTA 027 INCHES (.70mm)
PEN6-WHITE 039 INCHES (1.00mm)

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PLAN VIEW
SCALE: 3/16" = 1'-0"

LEGEND
SCOPE BREAK. SEE SPEC SECTION 00410 & 01150.

0 1 5 10 15
SCALE: 3/16" = 1'-0"

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1	ISSUED FOR PERMIT	8/12/26

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MYSTIC HARBOUR WWTP BIOSOLIDS UPGRADE & BUILDING REHABILITATION

WORCESTER COUNTY, MARYLAND

STATE OF MARYLAND
CHRISTOPHER BRIAN DENNISON
No. 26278
PROFESSIONAL ENGINEER
8/12/26

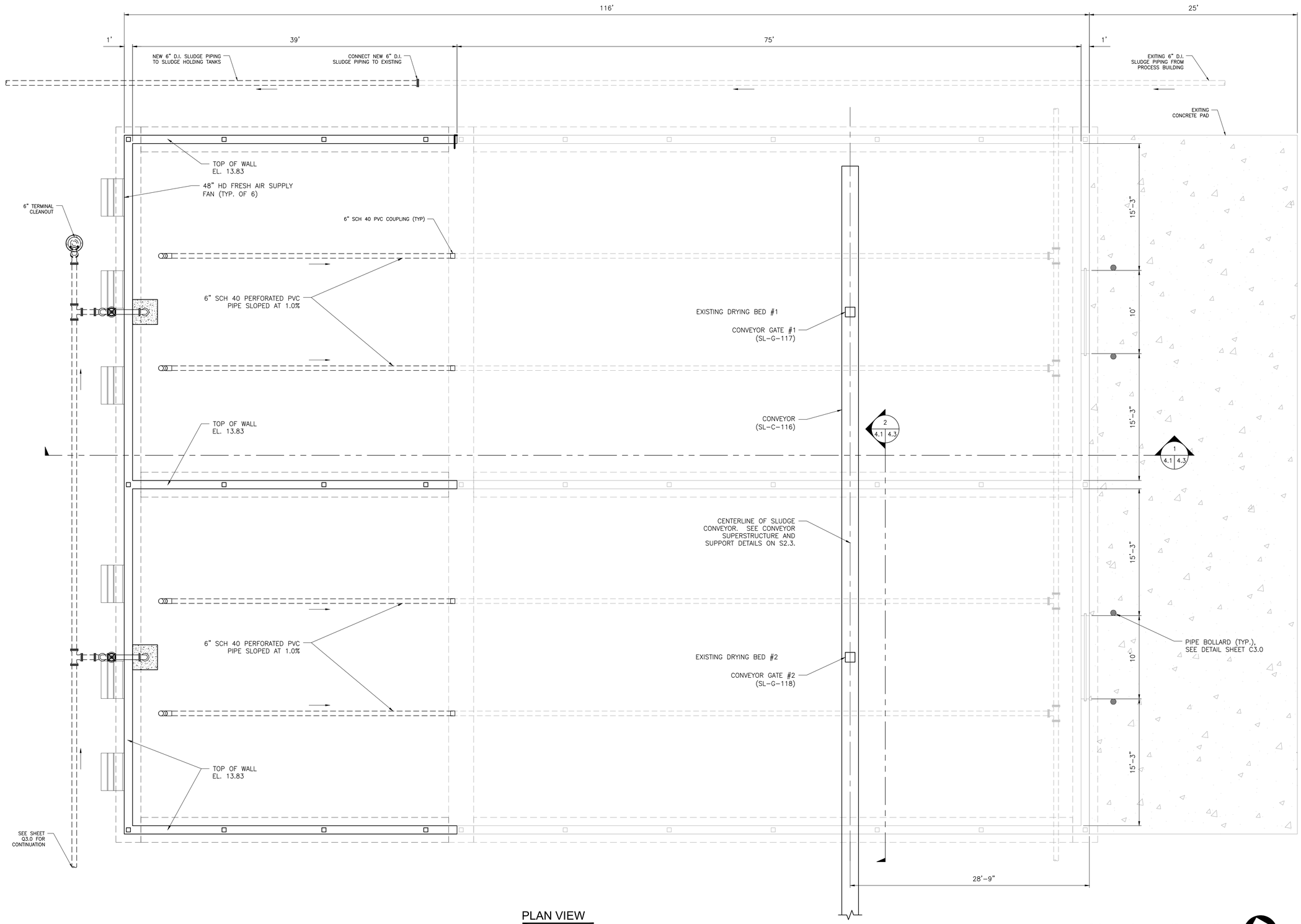
PROPOSED SLUDGE DRYING BEDS

SCALE : AS NOTED	SHEET NO.
DESIGN BY : JTH	Q4.0
DRAWN BY : MMD	
CHECKED BY : CBD	
GMB FILE : 250196	
DATE : OCT 2026	

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G:\Projects\2025\250196 Mystic Harbour WWTP Biosolids UG Design\Drawings\Working Sets\Q4.0 SLUDGE DRYING BEDS.dwg 8/12/2026 7:40:45 AM mmd
2DWG To PDF.pc3



PLAN VIEW
SCALE: 3/16" = 1'-0"

0 1 5 10 15
SCALE: 3/16" = 1'-0"

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NO.	REVISIONS	DATE
1	ISSUED FOR PERMIT	8/12/26

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WORCESTER COUNTY, MARYLAND

STATE OF MARYLAND
CHRISTOPHER BRYAN DEMSEY
No. 26278
REGISTERED PROFESSIONAL ENGINEER
8/12/26

EXISTING SLUDGE DRYING BEDS MODIFICATIONS

SCALE	: AS NOTED
DESIGN BY	: JTH
DRAWN BY	: MMD
CHECKED BY	: CBD
GMB FILE	: 250196
DATE	: OCT 2026

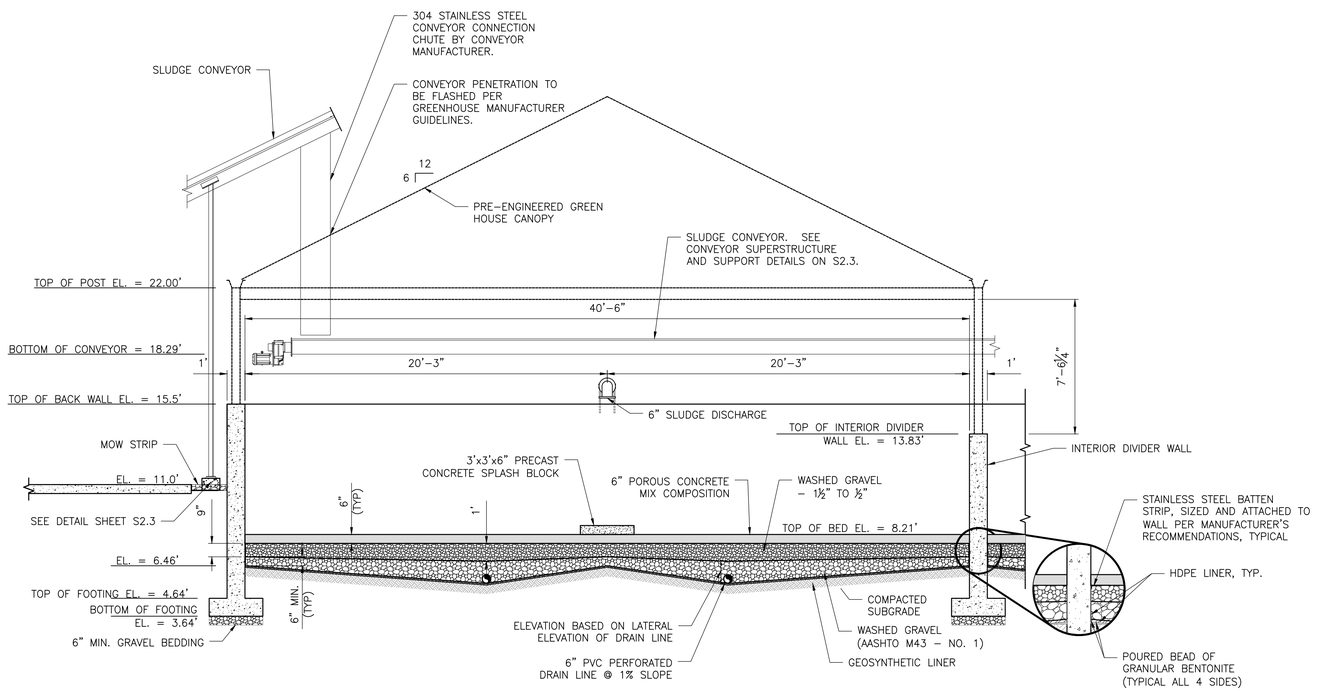
SHEET NO.
Q4.1

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PLOT CODE
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PEN2-MAGENTA 027 INCHES (0.7mm)
PEN3-BLUE 020 INCHES (0.5mm)
PEN4-CYAN 014 INCHES (0.3mm)
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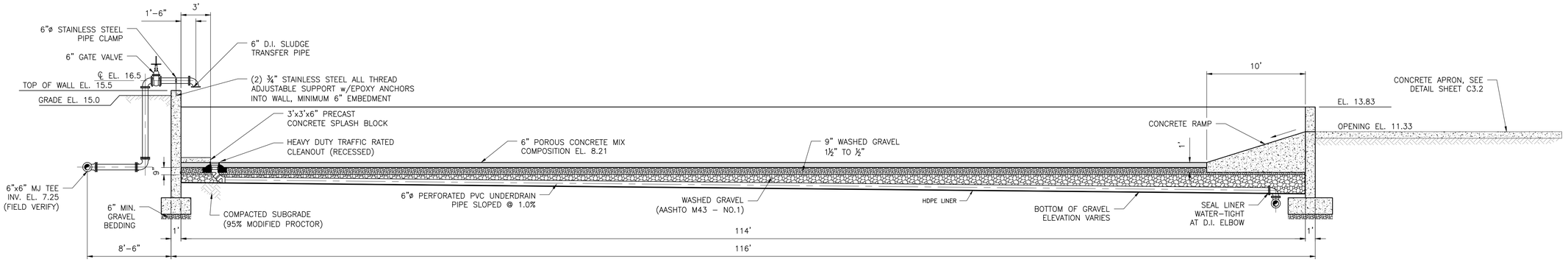
GENERAL NOTES

1. CONTRACTOR SHALL COORDINATE WITH OWNER AND ENGINEER PRIOR TO LAYOUT OF BED INGRESS/EGRESS RAMP.
2. POROUS CONCRETE BED SURFACE CAN BE INSTALLED IN ONE (1) SIX INCH LIFT.
3. CONTRACTOR SHALL DEMONSTRATE THAT THEY HAVE EXPERIENCE IN PLACEMENT OF POROUS CONCRETE FOR DRYING BEDS OR EMPLOY THE SERVICES OF INDIVIDUALS WHO HAVE.
4. PRE-ENGINEERED GREENHOUSE MANUFACTURER SHALL COORDINATE RAFTERS AND TRUSSES WITH SLUDGE CONVEYOR AND SUPERSTRUCTURE.



SECTION 1 4.0 | 4.2
SCALE: ¼" = 1'-0"

0 1 5 10
SCALE: 1/4" = 1'-0"



SECTION 2 4.0 | 4.2
SCALE: 3/16" = 1'-0"

0 1 5 10 15
SCALE: 3/16" = 1'-0"

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MYSTIC HARBOUR WWTP BIOSOLIDS UPGRADE & BUILDING REHABILITATION

WORCESTER COUNTY, MARYLAND

STATE OF MARYLAND — CHRISTOPHER BRIAN DESIGN — PROFESSIONAL ENGINEER — 8/12/26

PROPOSED SLUDGE DRYING BEDS SECTIONS

SCALE	: AS NOTED
DESIGN BY	: JTH
DRAWN BY	: MMD
CHECKED BY	: CBD
GMB FILE	: 250196
DATE	: OCT 2026

SHEET NO. Q4.2

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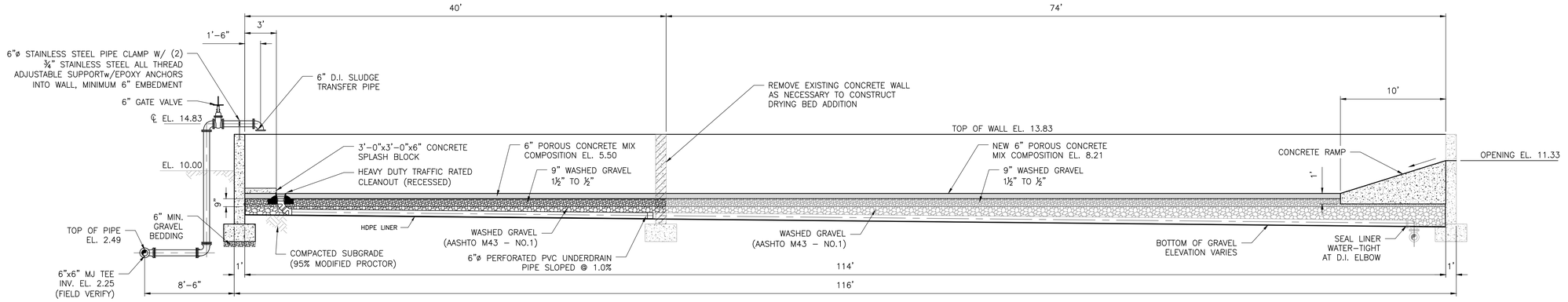
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PEN5-GREEN 011 INCHES (0.3mm)
PEN6-YELLOW 007 INCHES (0.2mm)
PEN7-RED 006 INCHES (0.1mm)

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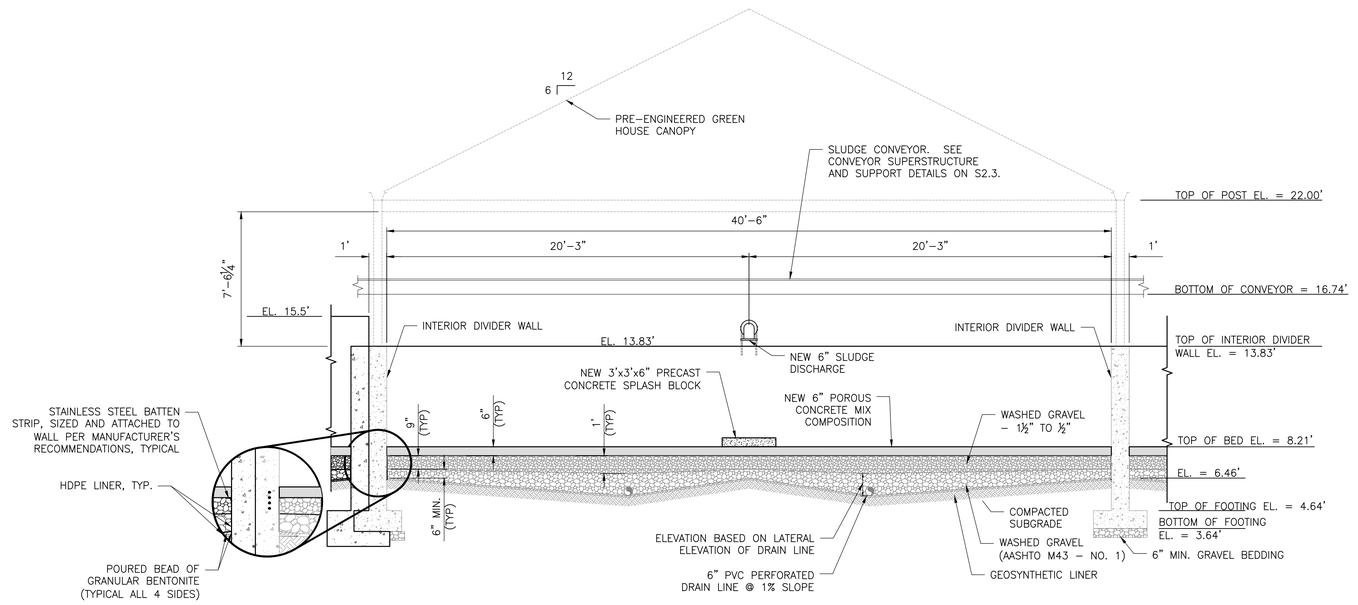
GENERAL NOTES

1. CONTRACTOR SHALL COORDINATE WITH OWNER AND ENGINEER PRIOR TO LAYOUT OF BED INGRESS/EGRESS RAMP.
2. POROUS CONCRETE BED SURFACE CAN BE INSTALLED IN ONE (1) SIX INCH LIFT.
3. CONTRACTOR SHALL DEMONSTRATE THAT THEY HAVE EXPERIENCE IN PLACEMENT OF POROUS CONCRETE FOR DRYING BEDS OR EMPLOY THE SERVICES OF INDIVIDUALS WHO HAVE.
4. PRE-ENGINEERED GREENHOUSE MANUFACTURER SHALL COORDINATE RAFTERS AND TRUSSES WITH SLUDGE CONVEYOR AND SUPERSTRUCTURE.



SECTION (1 / 4.1 | 4.3)
SCALE: 3/16" = 1'-0"

0 1 5 10 15
SCALE: 3/16" = 1'-0"



SECTION (2 / 4.1 | 4.3)
SCALE: ¼" = 1'-0"

0 1 5 10
SCALE: 1/4" = 1'-0"

PRINTS ISSUED FOR:
90% SUBMISSION

NO.	REVISIONS	DATE
1	ISSUED FOR PERMIT	8/12/26

PROFESSIONAL CERTIFICATION.
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 26278, EXPIRATION DATE: JUNE 21, 2027.

GMB
GEORGE, MILES & BUHR, LLC
ARCHITECTS & ENGINEERS
SALISBURY • BALTIMORE • SEAFORD
206 WEST MAIN STREET
SALISBURY, MARYLAND 21801
410-742-3115, FAX 410-548-5790
www.gmbnet.com

MYSTIC HARBOUR WWTP BIOSOLIDS UPGRADE & BUILDING REHABILITATION

WORCESTER COUNTY, MARYLAND

STATE OF MARYLAND — JOSEPH THOMAS HOLLAND — 26278 — PROFESSIONAL ENGINEER — 8/12/26

EXISTING SLUDGE DRYING BEDS SECTIONS

SCALE : AS NOTED	SHEET NO.
DESIGN BY : JTH	Q4.3
DRAWN BY : MMD	
CHECKED BY : CBD	
GMB FILE : 250196	
DATE : OCT 2026	

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PLOT CODE
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PEN2-MAROON 027 INCHES (0.70mm)
PEN3-BLUE 020 INCHES (0.50mm)
PEN4-CYAN 014 INCHES (0.35mm)
PEN5-GREEN 010 INCHES (0.25mm)
PEN6-YELLOW 007 INCHES (0.18mm)
PEN7-RED 005 INCHES (0.13mm)
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POWER SYMBOLS

RECEPTACLES MOUNTED 36" AFF UNLESS OTHERWISE NOTED

FLOOR BOX	WALL MOUNTED	
X	X	DUPLEX RECEPTACLE X=CIRCUIT (TYP. ALL)
		RECEPTACLE–SINGLE
		DOUBLE DUPLEX RECEPTACLE
		DATA OUTLET
		TELEPHONE OUTLET
	X	SPECIAL PURPOSE RECEPTACLE X = VOLTAGE OR PURPOSE
C		COUNTERTOP POWER STRIP
J		JUNCTION OR PULL BOX
R1		MOTOR STARTER R1 = DESIGNATION
		DISCONNECT SWITCH
		HOA SWITCH
		STOP/LOCKOUT
		EMERGENCY POWER SHUT–OFF SWITCH
X		MOTOR X = HORSEPOWER

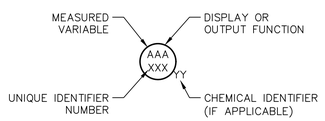
ABBREVIATIONS

3P	3 POLE
3R	NEMA 3R
4X	NEMA 4X
A	AMP
AC	ALTERNATING CURRENT
AF	AMP FRAME
AFF	ABOVE FINISHED FLOOR
AT	AMP TRIP
ATS	AUTOMATIC TRANSFER SWITCH
AWG	AMERICAN WIRE GAUGE
BLDG	BUILDING
CKT	CIRCUIT
CMD	COMMAND
CP	CONTROL PANEL
DIA	DIAMETER
DIV	DIVISION
DS	DISCONNECT SWITCH
EUH	ELECTRIC UNIT HEATER
EXP	EXPLOSION PROOF (NEMA 8)
FDBK	FEEDBACK
FVNR	FULL VOLTAGE NON REVERSING
FVR	FULL VOLTAGE REVERSING
GFI	GROUND FAULT CIRCUIT INTERRUPTER
GND	GROUND
HOA	HAND–OFF–AUTOMATIC
HP	HORSE POWER
HVAC	HEAT–VENT–AIR CONDITIONING
JB	JUNCTION BOX
KA	KILOAMPERE
KCMIL	1000 CIRCULAR MILS
KV	KILOVOLT
KVA	KILOVOLT AMPERE
KW	KILOWATT
LTG	LIGHTING
MAX	MAXIMUM
MC	MANUFACTURER'S CABLE
MCC	MOTOR CONTROL CENTER
MCP	MOTOR CIRCUIT PROTECTOR
MFR	MANUFACTURER
MIN	MINIMUM
MS	MOTOR STARTER
N	NEUTRAL
N/A	NOT APPLICABLE
N.C.	NORMALLY CLOSED
NEMA	NATIONAL ELECTRICAL MANUFACTURER'S ASSOCIATION
N.O.	NORMALLY OPEN
No.	NUMBER
ϕ	PHASE
PH	PHASE
PNL	PANEL
PSI	POUNDS PER SQUARE INCH
PVC	POLYVINYL CHLORIDE
QTY	QUANTITY
RGS	RIGID GALVANIZED STEEL
RVSS	REDUCED VOLTAGE SOLID STATE
SP	SPARE
SS	STAINLESS STEEL
STP	SHIELDED TWISTED PAIR
TYP.	TYPICAL
TVSS	TRANSIENT VOLTAGE SURGE SUPRESSION
U.O.N.	UNLESS OTHERWISE NOTED
V	VOLT
VAC	VOLTS ALTERNATING CIRCUIT
VFD	VARIABLE FREQUENCY DRIVE
W	WIRE
WPIU	WEATHERPROOF IN–USE
WR	WEATHER RESISTANT
XFMR	TRANSFORMER

SCHEMATIC DIAGRAM SYMBOLS

	CONTACT (SHOWN NORMALLY OPEN)
	CONTACT (SHOWN NORMALLY CLOSED)
	THERMAL OVERLOAD
CR XX / CRXX	CONTACTOR COIL XX DENOTE #
ETM	ELAPSED TIME METER
	FACTORY WIRING
	FIELD WIRING
	FUTURE
R	INDICATING LAMP (LETTER DENOTES COLOR) R = RED G = GREEN A = AMBER Y = YELLOW
	SWITCH
	LIMIT SWITCH
	FLOAT SWITCH
	PRESSURE SWITCH
	TEMPERATURE SWITCH
	FLOW SWITCH
	FUSED CUTOUT SWITCH
OFF ON	ON/OFF SWITCH
X	TIMING RELAY NORMALLY CLOSED TIME TO OPEN X = INITIAL DELAY SETTING

INSTRUMENT SYMBOL DECODER



FIRST LETTER 'A'		SUCCEEDING LETTERS 'B'
MEASURED VARIABLE		DISPLAY OR OUTPUT FUNCTION
A	ANALYZER	ALARM
B	BURNER	–
C	–	CONTROL
D	DIFFERENTIAL	DIFFERENTIAL
E	VOLTAGE	PRIMARY ELEMENT
F	FLOW RATE	–
G	–	GLASS
H	HAND	HIGH
I	CURRENT	INDICATE
J	POWER	SCAN
K	TIME	CONTROL STATION
L	LEVEL	LOW/LIGHT
M	MALFUNCTION	MIDDLE
N	TURBIDITY	–
O	–	ORIFICE
P	PRESSURE	–
Q	QUANTITY	INTEGRATE/TOTALIZE
R	REMOTE	RECORD/PRINT
S	SPEED/FREQUENCY	SWITCH
T	TEMPERATURE	TRANSMIT
U	MULTIVARIABLE	MULTIFUNCTION
V	VIBRATION	VALVE
W	WEIGHT	–
X	LIMIT	RELAY
Y	STATUS	COMPUTING OR SIGNAL CONVERTING
Z	POSITION	DRIVE/ACTUATE

SINGLE LINE SYMBOLS

XX AT XX AF	CIRCUIT BREAKER XX AT = AMP TRIP XX AF = AMP FRAME
	FVNR STARTER
	6 PULSE VFD
	18 PULSE VFD
	SOFT START
	ACTUATED VALVE
X	DISCONNECT SWITCH X = FUSE RATING (IF SHOWN)
X%Z	LINE REACTOR X = REACTOR IMPEDANCE
R1	MOTOR STARTER R1 = DESIGNATION
NAME SIZE, PHASE PRIMARY – SECONDARY ENCLOSURE	POWER TRANSFORMER
	FUSE
	GROUND
R	INDICATING LAMP (LETTER DENOTES COLOR) R = RED G = GREEN A = AMBER Y = YELLOW
X	ELECTRIC MOTOR 5 = HORSEPOWER
K	KIRK KEY
KK	2 CYLINDER KIRK KEY
M	MOTOR ACTUATOR
S	SOLENOID ACTUATOR
ST	SHUNT–TRIP

CIRCUIT DECODER

3/4"C. 4#12, #12 GND	3/4" CONDUIT WITH (4) 12 AWG CONDUCTORS I.E., (3) PHASE AND (1) NEUTRAL, WITH (1) 12 AWG EQUIPMENT GROUNDING CONDUCTOR
(4) 4"C. 3#350, #350N, #4/0 GND EA	FOUR 4" CONDUITS WITH PARALLEL SETS OF THREE 350 KCMIL PHASE CONDUCTORS, A 350 KCMIL NEUTRAL CONDUCTOR AND A #4/0 AWG GROUND IN EACH
(2) TC 3#500, #1 GND & #1/0 GND	TWO TRAY CABLES, 3#500 KCMIL PHASE AND #1 GND WITH A SUPPLEMENTAL #1/0 GND RUN ALONG WITH THE CABLES IN THE TRAY
1"C. 1–STP	1" CONDUIT WITH ONE SHIELDED TWISTED PAIR CABLES
1"C. (1) 12–FOC	1" CONDUIT WITH ONE 12 STRAND FIBER OPTIC CABLE
1"C. (1) 8PR#16	1" CONDUIT WITH ONE 8 PAIR UNSHIELDED TWISTED PAIR CABLES
2"C. (2) 4PR#18 STP	2" CONDUIT WITH TWO 4 PAIR SHIELDED TWISTED PAIR CABLES
CBM	CABLE BY MANUFACTURER

LIGHTING SYMBOLS

X	LIGHTING FIXTURE X = TYPE
X	CEILING MOUNTED SPOT FIXTURE X = TYPE
X	EMERGENCY LIGHT X = TYPE
X	EXIT SIGN X = TYPE (WHERE THE ARROW INDICATES THE PATH OF EGRESS AND THE SHADED TRIANGLES INDICATE THE FACE WITH "EXIT" DISPLAYED)
X	REMOTE EMERGENCY HEAD X = TYPE
X	EXTERIOR WALL MOUNTED FIXTURE X = TYPE
X	EXTERIOR POLE MOUNTED FIXTURE X = TYPE
X X	EXTERIOR POLE MOUNTED DOUBLE ARM FIXTURE X = TYPE

SWITCHING SYMBOLS

MOUNTED 48" AFF UNLESS OTHERWISE NOTED

S	SINGLE POLE WALL SWITCH
S_2	DPDT WALL SWITCH
S_3	3–WAY WALL SWITCH
S_4	4–WAY WALL SWITCH
S_D	DIMMER SWITCH
S_P	SWITCH WITH PILOT
S_M	MANUAL MOTOR STARTER SWITCH
S_{OS}	OCCUPANCY SENSOR SWITCH
S_K	KEY–OPERATED SWITCH
S_{XP}	EXPLOSION PROOF SWITCH
PC	PHOTO ELECTRIC CONTROL
OS	OCCUPATION SENSOR, CEILING MOUNTED
DS	DOOR SWITCH
R1	LIGHTING CONTACTOR R1 = DESIGNATION
LC–1	LIGHTING CONTACTOR REMOTE PUSH BUTTON ON–OFF CONTROL LC–1 = CONTACTOR CONTROLLED

CIRCUITING AND RACEWAY SYMBOLS

[CIRCUIT SIZE] XXX	CIRCUIT DESIGNATOR, WHERE 'XXX' REPRESENTS THE CIRCUIT NUMBER AND [CIRCUIT SIZE] REPRESENTS CIRCUIT COMPOSITION, SEE THE CIRCUIT DECODER
LPB–3 XXX	HOMERUN LPB–3 = LIGHTING PANEL "B", CIRCUIT 3 XXX = CONDUIT NUMBER
	EXISTING CONDUIT
	NEW, ABOVEGROUND CONDUIT
	NEW, UNDERGROUND CONDUIT
	UNDERGROUND ELECTRICAL DUCT BANK
	BARE COPPER GROUND CONDUCTOR, 2/0 UNLESS OTHERWISE NOTED
	SITE PLAN POWER OR UTILITY POLE
	CADWELD OR MECHANICAL BONDING
	GROUND ROD
	GROUNDING TEST WELL
	AIR TERMINAL

GENERAL NOTES:

1. ALL ELECTRICAL EQUIPMENT AND INSTALLATIONS SHALL CONFORM WITH THE REQUIREMENTS OF LATEST APPLICABLE VERSION OF THE INTERNATIONAL BUILDING CODE (IBC) AND NATIONAL ELECTRICAL CODE (NFPA 70) AS ADOPTED BY THE AUTHORITY HAVING JURISDICTION (AHJ), AND UNDERWRITER'S LABORATORIES (UL) REQUIREMENTS.
2. ALL WORK SHALL BE INSTALLED IN A NEAT AND WORKMAN LIKE MANNER. REFER TO NECA 1 – GOOD WORKMANSHIP IN ELECTRICAL CONSTRUCTION AND OTHER APPLICABLE NECA STANDARDS. CONDUIT PLANS ARE DIAGRAMMATIC IN NATURE AND NOT INTENDED TO SHOW ALL TURNS, BENDS, FITTINGS, AND SPECIAL INTRICACIES. THIS DOES NOT LIMIT CONTRACTOR'S LIABILITY FOR THE INSTALLATION OF A SOUND AND COMPLETE SYSTEM THAT COMPLIES WITH THE NEC AND LOCAL CODES AND REGULATIONS.
3. PRIOR TO PURCHASING ANY MATERIALS OR COMMENCING WORK, CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS, CONDUIT SIZES AND LOCATIONS, EQUIPMENT, ETC. SHOWN ON THE DRAWINGS OR AFFECTING THIS WORK AND SHALL REPORT ANY DEVIATIONS TO THE ENGINEER.
4. COORDINATE ALL WORK WITH STRUCTURAL, MECHANICAL, AND OTHER CRAFTS AS REQUIRED. CONTRACTOR SHALL BECOME FAMILIAR WITH ALL WORK SHOWN ON OTHER DRAWINGS FOR VARIOUS ASPECTS OF THIS PROJECT AND COORDINATE ACCORDINGLY.
5. PROVIDE ALL LABOR, MATERIAL, AND EQUIPMENT COMPLETELY TO PROVIDE FULLY OPERATIONAL SYSTEMS.
6. ALL ELECTRICAL EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
7. WHERE CONDUIT SIZE AND FILL IS NOT DEFINED ON THE SINGLE LINE OR INTERCONNECTION DIAGRAM, PROVIDE 3/4" CONDUIT WITH 2#12 AWG AND #12 AWG GROUND CONDUCTORS FOR SINGLE PHASE AND 3/4" CONDUIT WITH 3#12 AWG AND #12 AWG GROUND CONDUCTOR FOR 3 PHASE.
8. ALL 120V OR GREATER WIRING FOR DEDICATED OR MULTIPLE CIRCUITS IN THE SAME RACEWAY SHALL INCLUDE AN EQUIPMENT GROUNDING CONDUCTOR.

MECHANICAL/PLUMBING COORDINATION:

1. CONTRACTOR SHALL COORDINATE CHARACTERISTICS AND REQUIREMENTS OF ALL MECHANICAL AND PLUMBING EQUIPMENT WITH ELECTRICAL DRAWINGS PRIOR TO ORDERING OR INSTALLING EQUIPMENT. CONTRACTOR SHALL FURNISH EQUIPMENT COMPATIBLE FOR THE VOLTAGES SHOWN ON THE MECHANICAL/PLUMBING DRAWINGS.
2. ALL MECHANICAL AND PLUMBING EQUIPMENT REQUIRING ELECTRICAL POWER SHALL BE INSTALLED WITH DISCONNECT SWITCHES AT EACH PIECE OF EQUIPMENT. COORDINATE SWITCH TYPE (FUSED OR NON–FUSED) WITH EQUIPMENT CHARACTERISTICS, MANUFACTURER'S RECOMMENDATIONS, AND THE MECHANICAL/PLUMBING DRAWINGS.

DEMOLITION AND MODIFICATION

	EXISTING
	NEW
	TO BE MODIFIED HATCH
	DEMOLITION HATCH

811 MISS UTILITY LAW

LOCATIONS OF EXISTING UTILITIES SHOWN HEREON HAVE BEEN DEVELOPED FROM UTILITY COMPANY RECORDS AND/OR ABOVE GROUND INSPECTION OF THE SITE. COMPLETENESS OR ACCURACY OF TYPE, SIZE, DEPTH OR HORIZONTAL LOCATION OF UNDERGROUND UTILITIES OR STRUCTURES CANNOT BE GUARANTEED. PURSUANT TO REQUIREMENTS OF MARYLAND SENATE BILL 911, KNOWN AS THE MISS UTILITY LAW, WHICH WENT INTO EFFECT ON 10–1–10, CONTRACTORS MUST VERIFY LOCATIONS OF UNDERGROUND UTILITIES BY NOTIFYING FACILITY OWNERS THROUGH THE ONE–CALL SYSTEM, 1–800–257–7777, NO LESS THAN 2 DAYS, NOR MORE THAN 10 DAYS PRIOR TO EXCAVATION OR DEMOLITION WORK.

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(302) 29I-9093
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Keystone ENGINEERING GROUP

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ARCHITECTS & ENGINEERS
206 WEST MAIN STREET
SALISBURY, MARYLAND 21801
www.gmbnet.com

250196 MYSTIC HARBOUR WWTP BIOSOLIDS UPGRADE & BUILDING REHIBILITATION

WORCESTER COUNTY, MARYLAND

STATE OF MARYLAND — CHRISTOPHER J. MILES — 53642 — PROFESSIONAL ENGINEER
10/27/2026

LEGEND ELECTRICAL

SCALE	: AS NOTED
DESIGN BY	: JPY
DRAWN BY	: JPY
CHECKED BY	: CTJ
GMB FILE	: 250196
DATE	: OCT. 2026

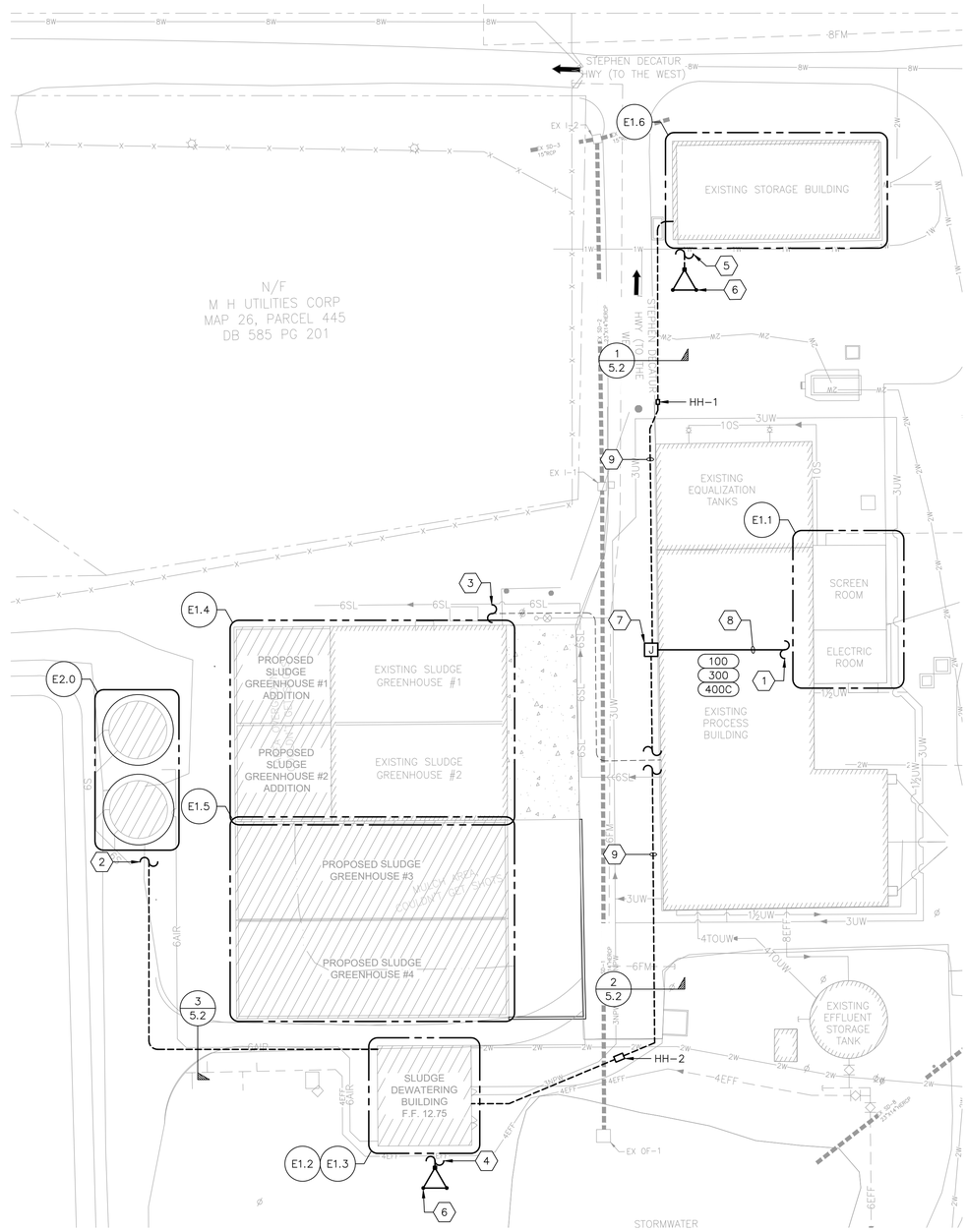
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PLOT CODE
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PEN–MAGENTA .027 INCHES (.70mm)
PEN–BLUE .020 INCHES (.50mm)
PEN–GREEN .014 INCHES (.35mm)
PEN–YELLOW .007 INCHES (.18mm)
PEN–RED .005 INCHES (.13mm)



KEYNOTES:

1. EXTEND TO MCC–1 AND DP1. REFER TO SINGLE LINE DIAGRAM ON SHEETS E6.1 AND E6.2 FOR ADDITIONAL INFORMATION.
2. REFER TO E2.0 FOR CONTINUATION.
3. EXISTING CONDUIT AND CONDUCTORS SHALL BE RE–ROUTED TO MDPSDB. REFER TO SINGLE LINE DIAGRAM ON SHEET E6.2 FOR ADDITIONAL INFORMATION.
4. EXTEND TO MDP. REFER TO SINGLE LINE DIAGRAM ON SHEET E6.1 FOR ADDITIONAL INFORMATION.
5. EXTEND TO MDPSB. REFER TO SINGLE LINE DIAGRAM ON SHEET E6.3 FOR ADDITIONAL INFORMATION.
6. LOCATE GROUNDING TRIAD TO AVOID OBSTRUCTIONS.
7. PROVIDE AIR GAP JUNCTION BOX. REFER TO DETAIL ON SHEET E5.4.
8. PROVIDE CONDUIT SEALS UPON BARRIER WITH CLASSIFIED AREA WITHIN EXISTING PROCESS BUILDING. REFER TO DETAIL ON SHEET E5.2.
9. COORDINATE NEW WORK WITH EXISTING BELOW–GRADE PIPING AND STORM DRAIN.

SITE PLAN – ELECTRICAL
SCALE: 1" = 30'

0 15 30 60 90
SCALE IN FEET

N

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250196 MYSTIC HARBOUR WWTP BIOSOLIDS UPGRADE & BUILDING REHIBILITATION

WORCESTER COUNTY, MARYLAND

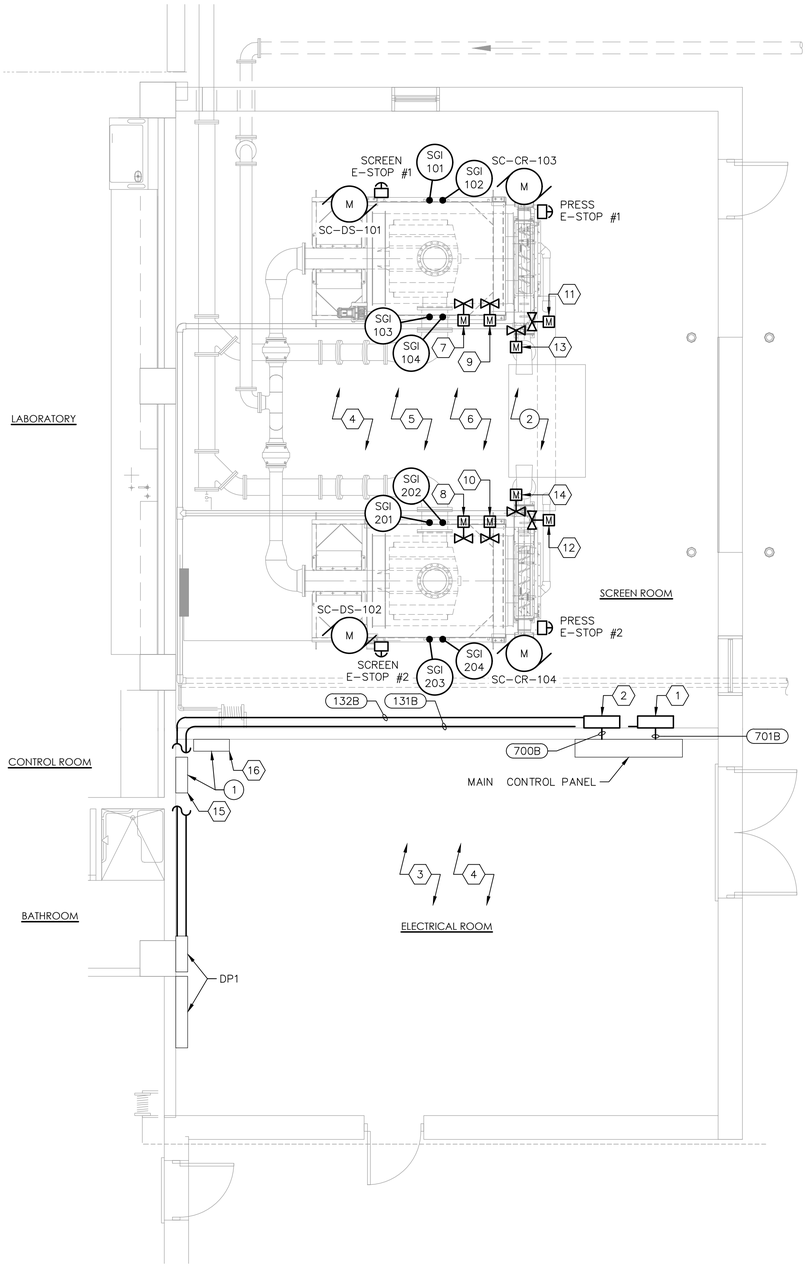
STATE OF MARYLAND
CURTIS L. JAMES
53642
PROFESSIONAL ENGINEER
10/27/2026

SITE PLAN
ELECTRICAL

SCALE : AS NOTED	SHEET NO.
DESIGN BY : JPY	E1.0
DRAWN BY : JPY	
CHECKED BY : CLJ	
GMB FILE : 250196	
DATE : OCT. 2026	DRAWING OF

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PENW-YELLOW 007 INCHES (.18mm)
PENW-GREEN 010 INCHES (.25mm)
PENW-CYAN 014 INCHES (.35mm)
PENW-BLUE 020 INCHES (.50mm)
PENW-MAGENTA 027 INCHES (.70mm)
PENW-WHITE 039 INCHES (1.00mm)



EXISTING PROCESS BUILDING – ELECTRICAL AND SCREEN ROOM – POWER PLAN

SCALE: 1/4" = 1'

0 2 4 6 8 10

N

KEYNOTES:

1. SCREEN & DEWATERING SCREW PRESS CONTROL PANEL #1.
2. SCREEN & DEWATERING SCREW PRESS CONTROL PANEL #2.
3. EQUIPMENT LOCATION BASED ON OBSERVATIONS. CONFIRM PRIOR TO STARTING WORK.
4. REFER TO SINGLE LINE AND INTERCONNECT DIAGRAMS ON SHEETS E6.2, E6.4, AND E6.5 FOR ADDITIONAL INFORMATION.
5. ROUTE CONDUIT ALONG CEILING. PROVIDE STAINLESS STEEL MOUNTING HARDWARE AND FASTENERS.
6. CLASS I, DIV 2.
7. EXTERNAL SPRAY SOLENOID VALVE #1.
8. EXTERNAL SPRAY SOLENOID VALVE #2.
9. INTERNAL SPRAY SOLENOID VALVE #1.
10. INTERNAL SPRAY SOLENOID VALVE #2.
11. FLUSH SPRAY SOLENOID VALVE #1.
12. FLUSH SPRAY SOLENOID VALVE #2.
13. WASH ZONE SOLENOID VALVE #1.
14. WASH ZONE SOLENOID VALVE #2.
15. EXISTING SCREEN & DEWATERING SCREW PRESS CONTROL PANEL #1.
16. EXISTING SCREEN & DEWATERING SCREW PRESS CONTROL PANEL #2.

DEMOLITION NOTES:

1. DISCONNECT AND REMOVE EXISTING SCREEN CONTROL PANELS. REMOVE CONDUCTORS BACK TO SOURCE. CAP AND SEAL CONDUIT.
2. DISCONNECT AND REMOVE EXISTING SCREEN MOTORS, INSTRUMENTATION, CONTROL VALVES, AND CONDUCTORS BACK TO SOURCE. CAP AND SEAL CONDUIT.
3. PROVIDE CONDUIT LABELING INDICATING OPPOSITE END TERMINATIONS. E.G., MCC-1 SECTION 1.

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WORCESTER COUNTY, MARYLAND

STATE OF MARYLAND
CURTIS L. JAMES
53642
PROFESSIONAL ENGINEER
10/27/2026

EXISTING PROCESS BUILDING ELECTRICAL AND SCREEN ROOM ELECTRICAL

SCALE : AS NOTED	SHEET NO.
DESIGN BY : JPY	E1.1
DRAWN BY : JPY	
CHECKED BY : CLJ	
GMB FILE : 250196	
DATE : OCT. 2026	DRAWING OF

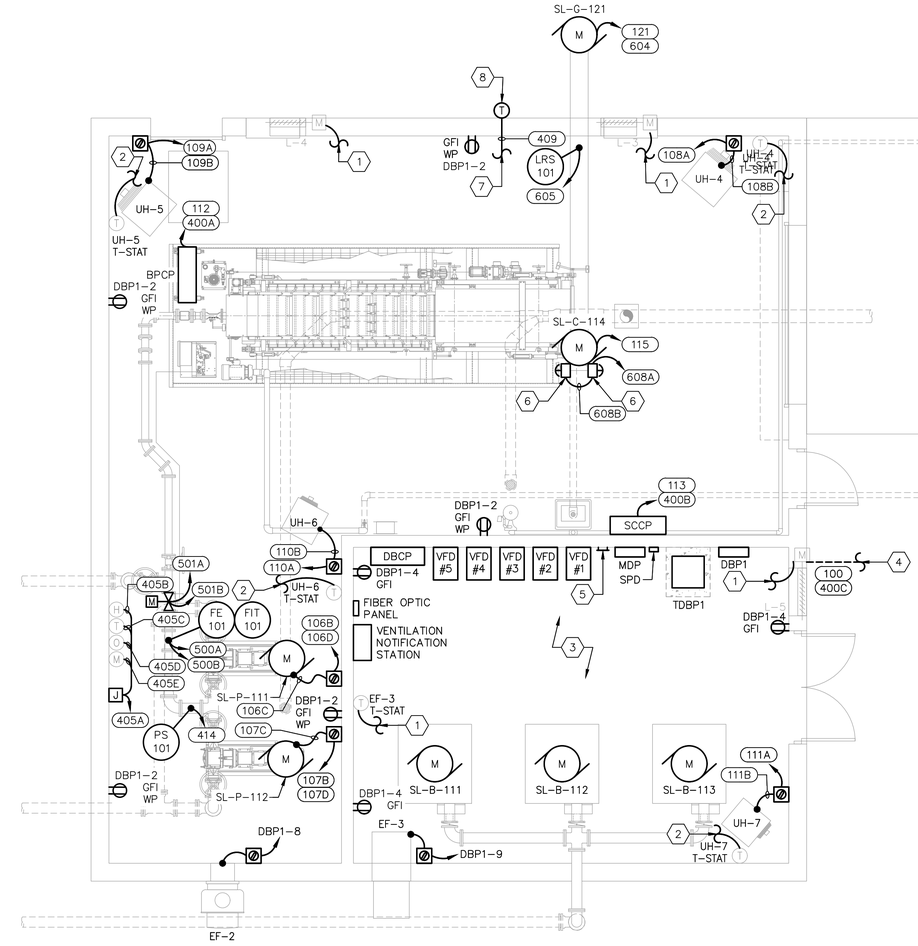
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PLOT CODE
PEN1-RED .006 INCHES (.15mm)
PEN2-YELLOW .007 INCHES (.18mm)
PEN3-GREEN .010 INCHES (.25mm)
PEN4-CYAN .011 INCHES (.28mm)
PEN5-BLUE .020 INCHES (.50mm)
PEN6-MAGENTA .027 INCHES (.70mm)
PEN7-WHITE .028 INCHES (1.00mm)

KEYNOTES:

1. EXTEND 3/4"C. 2#12, #12 GND TO CORRESPONDING EXHAUST FAN'S MOTOR RATED SWITCH.
2. EXTEND 3/4"C. 2#12, #12 GND TO CORRESPONDING UNIT HEATER.
3. REFER TO SINGLE LINE AND INTERCONNECT DIAGRAMS ON SHEETS E6.1 AND E6.4 FOR ADDITIONAL INFORMATION.
4. REFER TO SITE PLAN ON SHEET E1.1 FOR CONTINUATION.
5. REFER TO SLUDGE DEWATERING BUILDING GROUNDING BUS BAR DETAIL ON SHEET E5.1.
6. PROVIDE FINAL CONNECTIONS FOR CONVEYOR E-STOP. COORDINATE WITH DIVISION 40 CONTRACTOR.
7. EXTEND TO DBCP.
8. MOUNT OUTDOOR TEMPERATURE AT 36" A.F.F.



SLUDGE DEWATERING BUILDING POWER PLAN

SCALE: 1/4" = 1'

0 2 4 6 8 10

N

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BUILDING REHIBILITATION

WORCESTER COUNTY, MARYLAND

STATE OF MARYLAND
JAMES P. YOUNG
53642
PROFESSIONAL ENGINEER
10/27/2026

SLUDGE
DEWATERING
BUILDING
POWER
ELECTRICAL

SCALE : AS NOTED	SHEET NO.
DESIGN BY : JPY	E1.2
DRAWN BY : JPY	
CHECKED BY : CLJ	
GMB FILE : 250196	
DATE : OCT. 2026	DRAWING OF

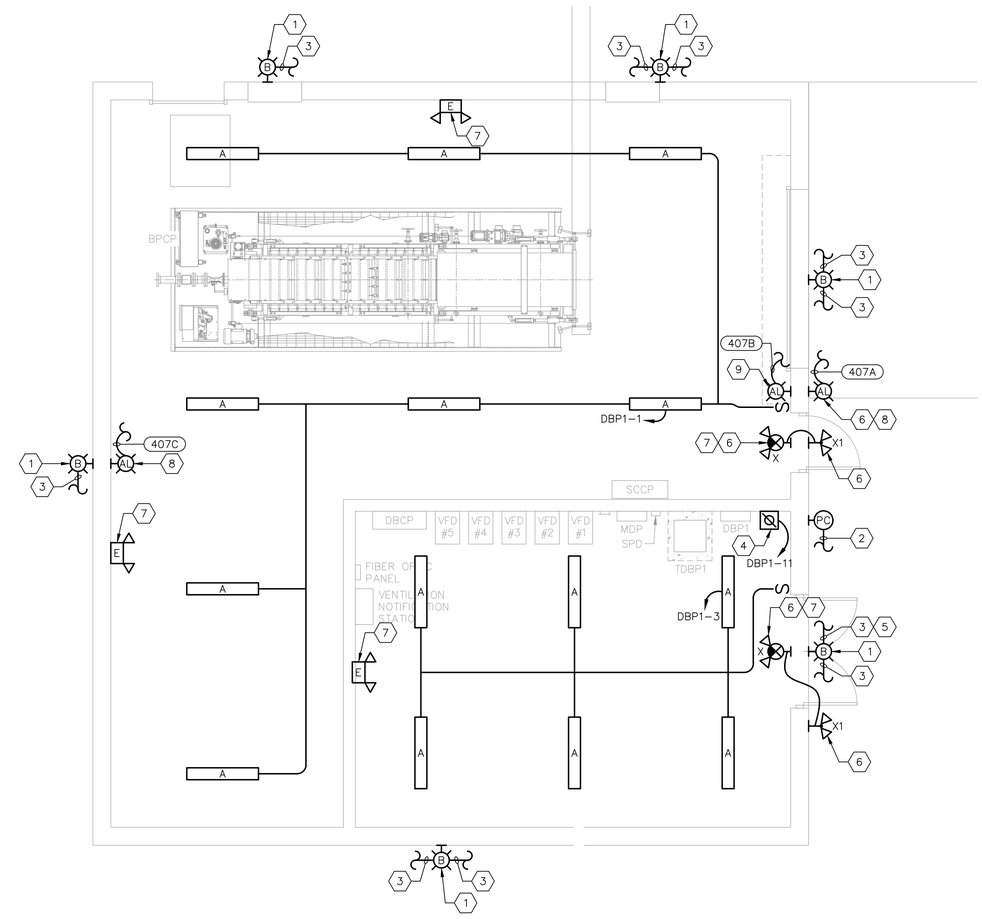
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PDN1-RED .008 INCHES (.14mm)
PDN1-YELLOW .007 INCHES (.18mm)
PDN1-GREEN .010 INCHES (.25mm)
PLOT CODE PDN1-CDM .014 INCHES (.35mm)
PDN1-BLUE .020 INCHES (.50mm)
PDN1-MAGENTA .027 INCHES (.69mm)
PDN1-WHITE .039 INCHES (1.00mm)

KEYNOTES:

1. MOUNT FIXTURE 15' A.F.F.
2. PROVIDE 3/4"C. 2#12, #12 GND TO SERVE PHOTOCELL. PHOTOCELL SHALL CONTROL EXTERIOR LIGHTING.
3. PROVIDE 3/4"C. 2#12, #12 GND TO SERVE EXTERIOR WALL MOUNT LIGHTING. CONDUIT ROUTING SHALL BE CONCEALED FROM EXTERIOR VIEW.
4. PROVIDE LIGHTING CONTROLLER TO SERVE EXTERIOR LIGHTING FIXTURES. SEE DETAILS ON SHEET E5.0.
5. PROVIDE 3/4"C. 2#12, #12 GND TO LIGHTING CONTROLLER IN ELECTRICAL ROOM.
6. LIGHTING FIXTURES SHALL BE MOUNTED 1' ABOVE DOORS.
7. EMERGENCY UNITS SHALL BE SERVED BY UNSWITCHED LIGHTING BRANCH-CIRCUIT SERVING SPACE.
8. REFER TO SAFE TO ENTER INDICATOR MOUNTING DETAIL ON SHEET E5.3 FOR MOUNTING ARRANGEMENT.



SLUDGE DEWATERING BUILDING LIGHTING PLAN

SCALE: 1/4" = 1'-0"

0 2 4 6 8 10

N

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PLOT CODE
PEN1-RED .006 INCHES (.15mm)
PEN2-YELLOW .007 INCHES (.18mm)
PEN3-GREEN .010 INCHES (.25mm)
PEN4-CYAN .014 INCHES (.35mm)
PEN5-BLUE .020 INCHES (.50mm)
PEN6-MAGENTA .027 INCHES (.70mm)
PEN7-WHITE .039 INCHES (1.00mm)

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STATE OF MARYLAND
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53842
PROFESSIONAL ENGINEER
10/27/2026

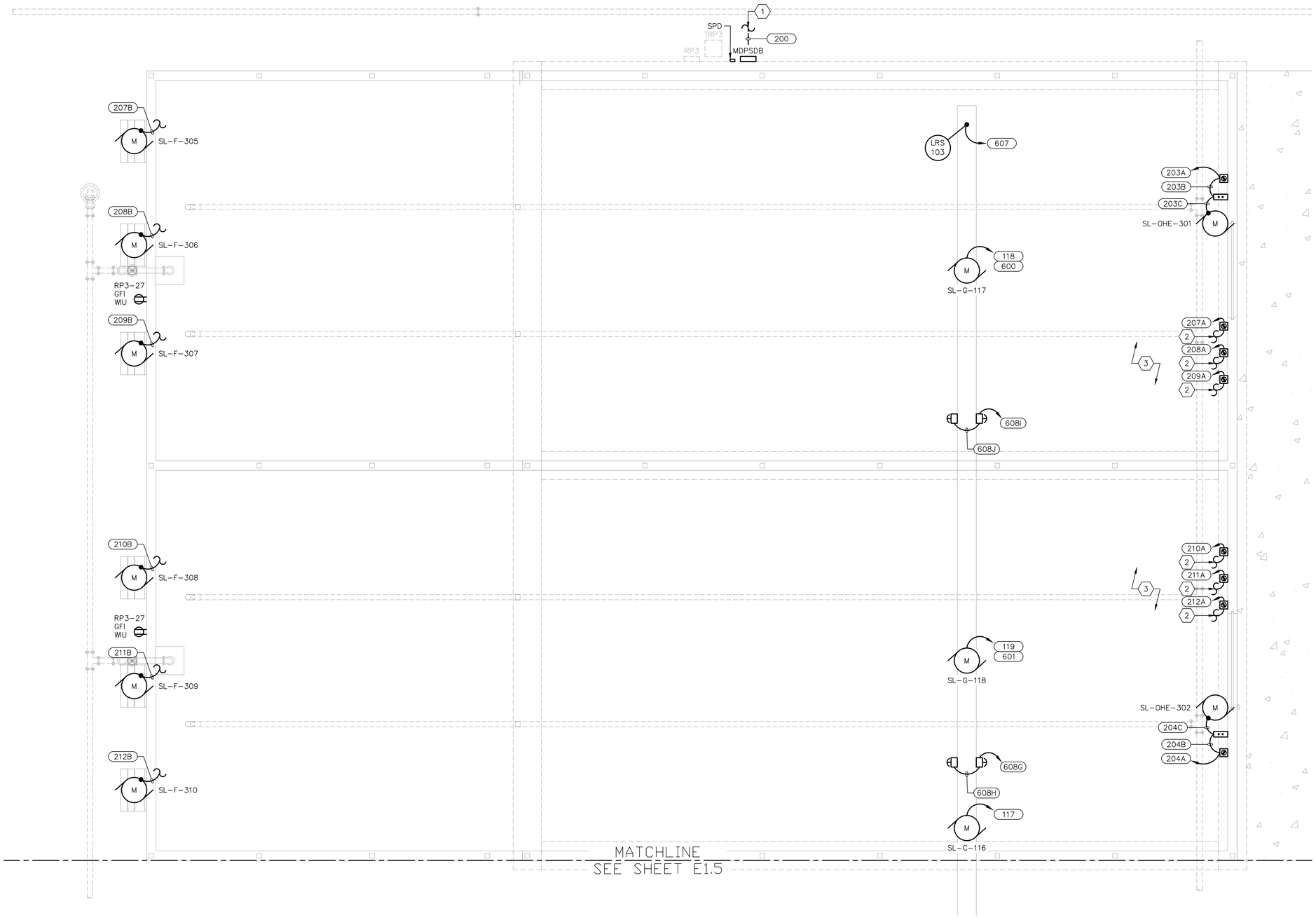
SLUDGE DEWATERING BUILDING LIGHTING ELECTRICAL

SCALE : AS NOTED	SHEET NO.
DESIGN BY : JPY	
DRAWN BY : JPY	E1.3
CHECKED BY : CLJ	
GMB FILE : 250196	
DATE : OCT. 2026	DRAWING OF

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KEYNOTES:

1. REFER TO E1.0 FOR CONTINUATION.
2. EXTEND TO CORRESPONDING EXHAUST FAN.
3. REFER TO WALL MOUNTED ROTARY DISCONNECT DETAIL ON SHEET E5.4.



EXISTING SLUDGE DRYING BED POWER PLAN

SCALE: 3/16" = 1'

0 2 4 6 8 10 12

N

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PROFESSIONAL ENGINEER
10/27/2026

EXISTING SLUDGE DRYING BEDS POWER ELECTRICAL

SCALE : AS NOTED	SHEET NO.
DESIGN BY : JPY	E1.4
DRAWN BY : JPY	
CHECKED BY : CLJ	
GMB FILE : 250196	
DATE : OCT. 2026	DRAWING OF

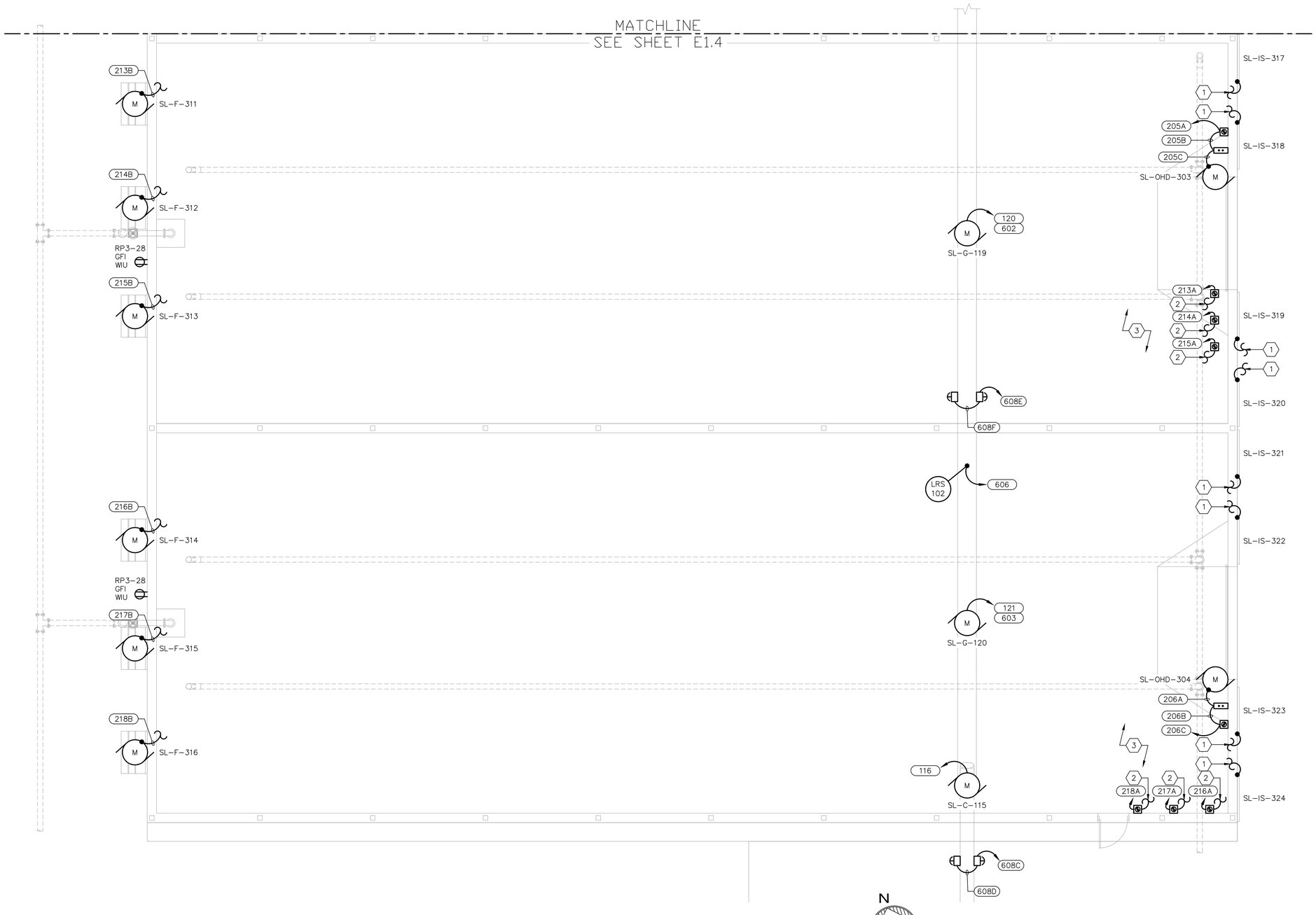
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PLOT CODE
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PEN2-YELLOW .007 INCHES (.18mm)
PEN3-GREEN .010 INCHES (.25mm)
PEN4-CYAN .014 INCHES (.35mm)
PEN5-BLUE .020 INCHES (.50mm)
PEN6-MAGENTA .027 INCHES (.70mm)
PEN7-WHITE .039 INCHES (1.00mm)

KEYNOTES:

1. EXTEND 3/4"C. 2#12, #12 GND TO CORRESPONDING EXHAUST FANS' MOTOR RATED SWITCH.
2. EXTEND TO CORRESPONDING EXHAUST FAN.
3. REFER TO WALL MOUNTED ROTARY DISCONNECT DETAIL ON SHEET E5.4.



NEW SLUDGE DRYING BED POWER PLAN

SCALE: 3/16" = 1' 0 2 4 6 8 10 12

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PLOT CODE
P01-RED .008 INCHES (.19mm)
P02-YELLOW .007 INCHES (.18mm)
P03-GREEN .010 INCHES (.25mm)
P04-CYAN .014 INCHES (.35mm)
P05-BLUE .020 INCHES (.50mm)
P06-MAGENTA .027 INCHES (.70mm)
P07-WHITE .039 INCHES (1.00mm)

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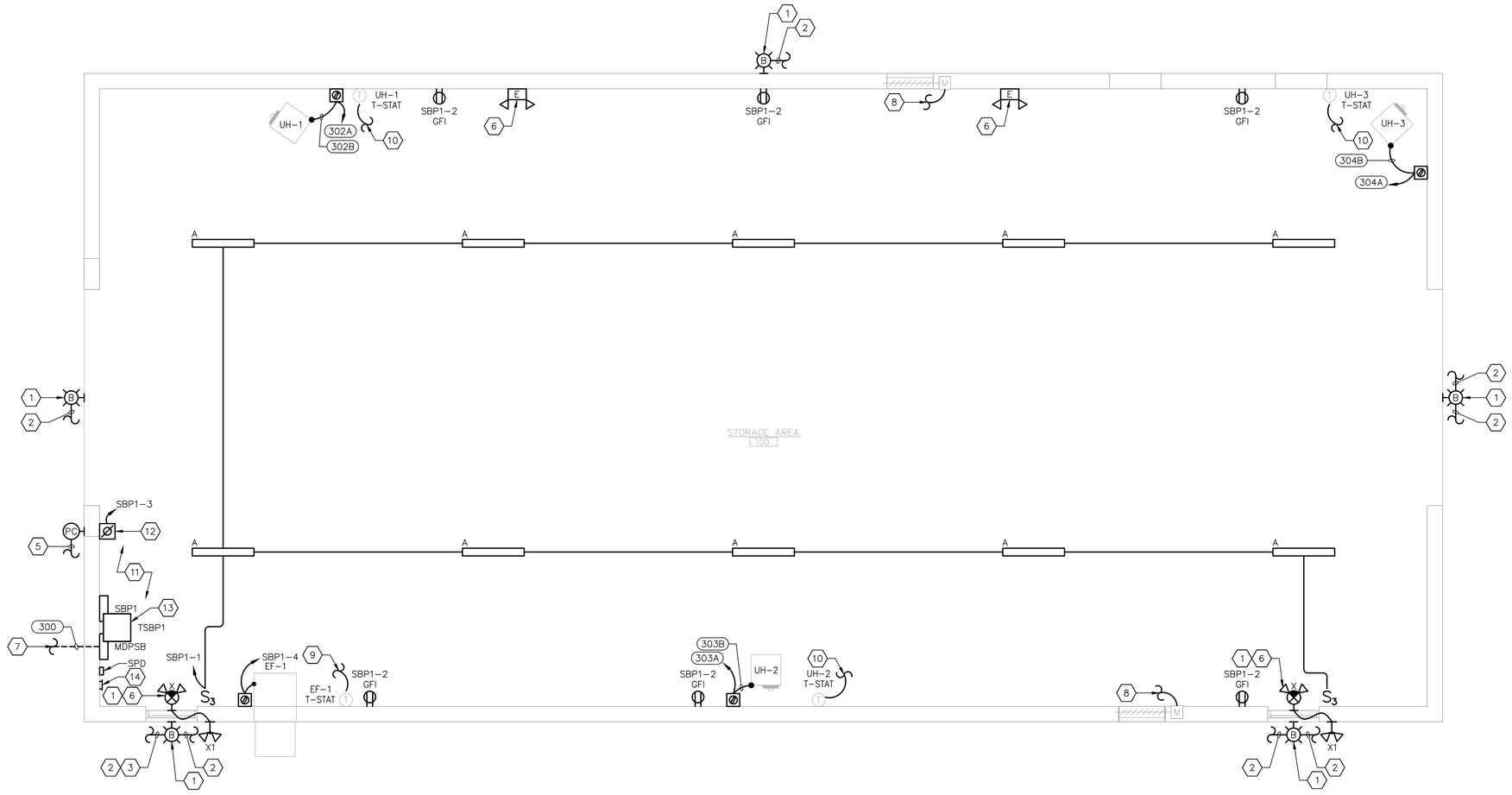
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PROFESSIONAL ENGINEER
10/27/2026

NEW SLUDGE DRYING BEDS POWER ELECTRICAL

SCALE : AS NOTED	SHEET NO.
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DRAWN BY : JPY	E1.5
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GMB FILE : 250196	
DATE : OCT. 2026	DRAWING OF

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KEYNOTES:

1. MOUNT FIXTURE 1' ABOVE DOOR.
2. PROVIDE 3/4"C. 2#12, #12 GND TO SERVE EXTERIOR WALL MOUNT LIGHTING. CONDUIT ROUTING SHALL BE CONCEALED FROM EXTERIOR VIEW.
3. PROVIDE 3/4"C. 2#12, #12 GND TO LIGHTING CONTROLLER.
4. PROVIDE LIGHTING CONTROLLER TO SERVE EXTERIOR LIGHTING FIXTURES. SEE DETAILS ON SHEET E5.1.
5. PROVIDE 3/4"C. 2#12, #12 GND TO SERVE PHOTCELL. PHOTOCELL SHALL CONTROL EXTERIOR LIGHTING.
6. EMERGENCY UNITS SHALL BE SERVED BY UNSWITCHED LIGHTING BRANCH-CIRCUIT SERVING SPACE.
7. REFER TO SITE PLAN ON SHEET E1.0 FOR CONTINUATION.
8. EXTEND 3/4"C. 2#12, #12 GND TO CORRESPONDING EXHAUST FAN'S THERMOSTAT.
9. EXTEND 3/4"C. 2#12, #12 GND TO CORRESPONDING EXHAUST FAN.
10. EXTEND 3/4"C. 2#12, #12 GND TO CORRESPONDING UNIT HEATER.
11. REFER TO SINGLE LINE ON SHEET E6.3 FOR ADDITIONAL INFORMATION.
12. PROVIDE HOA TO SERVE EXTERIOR LIGHTING FIXTURES. SEE DETAIL ON SHEET E5.1.
13. REFER TO WALL MOUNTED TRANSFORMER ELEVATION DETAIL ON SHEET E5.4. PROVIDE STAINLESS STEEL MOUNTING AND FASTENING HARDWARE.
14. REFER TO STORAGE BUILDING GROUNDING BUS BAR DETAIL ON SHEET E5.1.

STORAGE BUILDING - POWER AND LIGHTING - ELECTRICAL

SCALE: 1/4" = 1'-0"

0 16 32 48 64 80

N

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PROFESSIONAL ENGINEER
10/27/2026

STORAGE BUILDING - POWER AND LIGHTING - ELECTRICAL

SCALE	: AS NOTED
DESIGN BY	: JPY
DRAWN BY	: JPY
CHECKED BY	: CLJ
GMB FILE	: 250196
DATE	: JULY 2026

SHEET NO. E1.6

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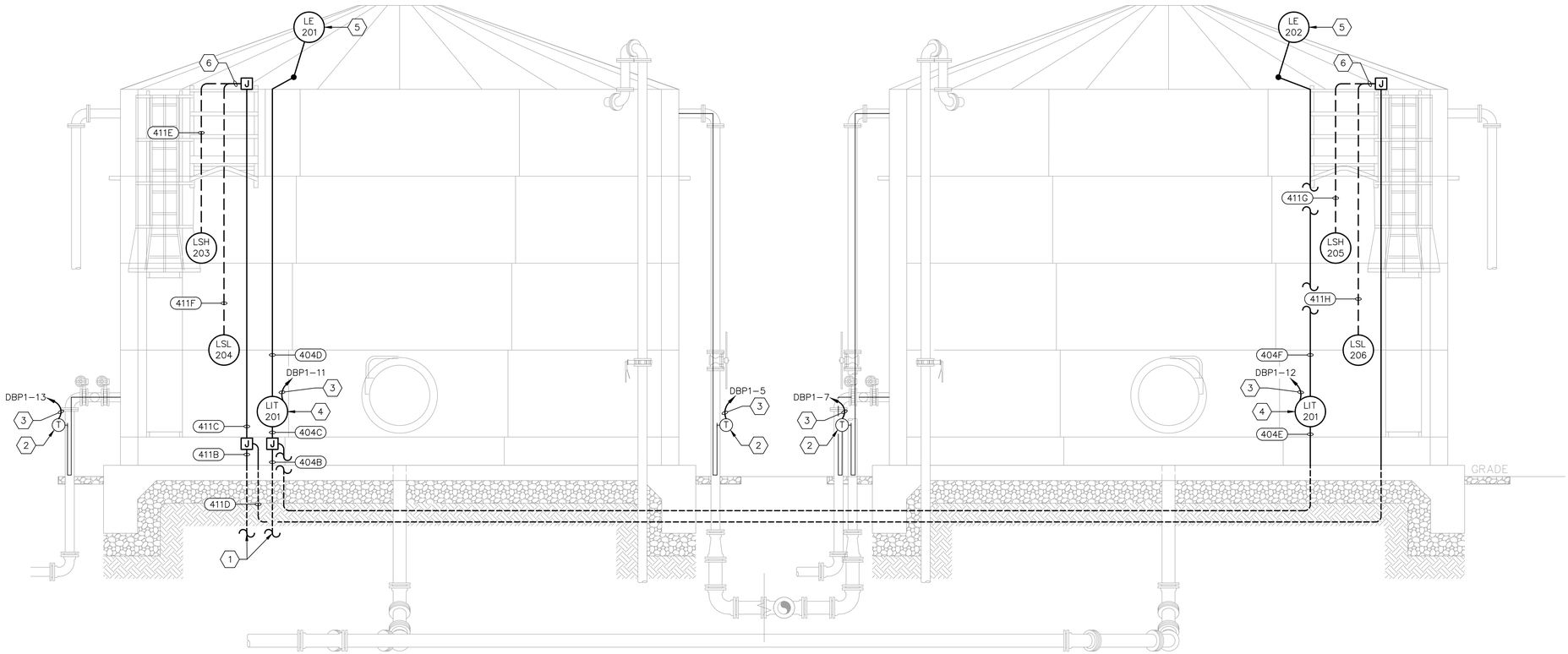
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PLOT CODE
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PEN2-YELLOW .007 INCHES (.13mm)
PEN3-GREEN .010 INCHES (.25mm)
PEN4-WHITE .014 INCHES (.35mm)
PEN5-BLUE .020 INCHES (.50mm)
PEN6-MAGENTA .027 INCHES (.70mm)
PEN7-WHITE .039 INCHES (1.00mm)

KEYNOTES:

1. REFER TO E1.0 FOR CONTINUATION.
2. REFER TO HEAT TRACING DETAIL FOR ADDITIONAL INFORMATION.
3. PROVIDE 2#10, #10 GND.
4. REFER TO LEVEL TRANSMITTER MOUNTING DETAIL ON SHEET E5.3.
5. LEVEL SENSOR SHALL BE MOUNTED USING 6" PORT WITH 6" BLIND FLANGE. PORT / FLANGE SHALL BE LEVEL WITH LIQUID SURFACE. INSTALLATION SHALL COMPLY WITH MANUFACTURER'S INSTRUCTIONS.
6. FLOAT SWITCH SHALL BE MOUNTED IN TANK WITH STAINLESS STEEL STRAIN RELIEF HANGERS.



SLUDGE HOLDING TANKS POWER PLAN

SCALE 3/8" = 1' 0 1 2 3 4 5 6

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53842
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10/27/2026

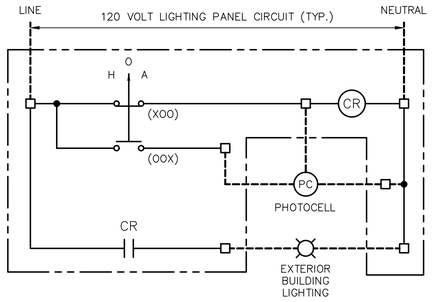
SLUDGE
HOLDING TANKS
POWER
ELECTRICAL

SCALE : AS NOTED	SHEET NO.
DESIGN BY : JPY	E2.0
DRAWN BY : JPY	
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PLOT CODE
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PEN2-YELLOW .007 INCHES (.18mm)
PEN3-GREEN .010 INCHES (.25mm)
PEN4-CYAN .014 INCHES (.35mm)
PEN5-BLUE .020 INCHES (.50mm)
PEN6-MAGENTA .027 INCHES (.70mm)
PEN7-WHITE .039 INCHES (1.00mm)

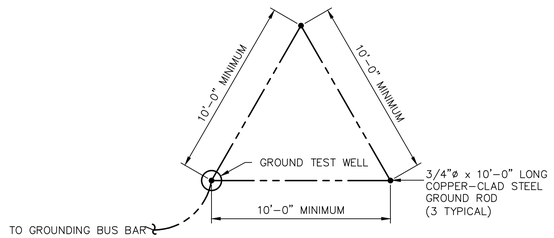


NOTES:

1. PROVIDE 10"X10"X6" HOA ENCLOSURE TO SERVE EXTERIOR LIGHTING CONTROLLER.
2. PROVIDE 120 VOLT RELAY WITH 15A RATED CONTACTS.

EXTERIOR LIGHTING CONTROLLER – DIAGRAM

SCALE: NONE



NOTES:

1. SEE SHEET E1.0 FOR GROUNDING TRIAD LOCATION.

GROUNDING TRIAD – DETAIL

SCALE: NONE

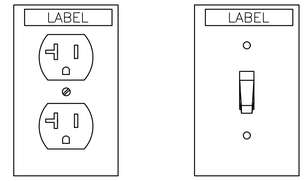
[CONTROLS PANEL NAME]
SOURCE [#1]: ["PANELBOARD NAME" CKT [#]]
SOURCE [#2]: ["PANELBOARD NAME" CKT [#]]

NOTES:

1. CONTROLS PANEL LABELS SHALL INDICATED CONTROL PANEL NAME, VOLTAGE, PHASE, WIRE, AND SOURCE.
2. E.G., LINE 1: "FILTER CONTROLS PANEL", LINE 2: "P1 CKT 1".
3. CONTROLS PANELS WITH MULTIPLE EXTERNAL POWER SOURCES SHALL BE INDICATED.
4. LABELS SHALL BE CENTERED AT THE TOP OF THE ENCLOSURE COVER.
5. LABELS SHALL BE MACHINE GENERATED. HANDWRITTEN LABELS ARE NOT PERMITTED.

CONTROL PANELS – LABEL – DETAIL

SCALE: NONE

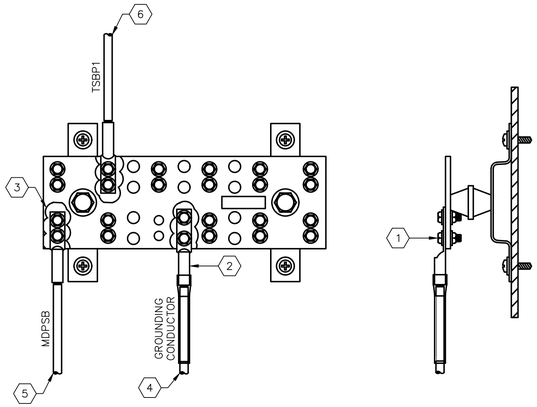


NOTES:

1. SINGLE PANELBOARD INSTALLATIONS, LABEL SHALL INDICATE "CIRCUIT [NUMBER]". E.G., "CIRCUIT 1".
2. MULTIPLE PANELBOARD INSTALLATIONS, LABEL SHALL INDICATE "[PANELBOARD NAME] CKT [NUMBER]". E.G., "P1 CKT 1" OR "P2 CKT 4".
3. ALL DEVICES SHALL BE LABELED.
4. PROVIDE WEATHERPROOF COVERS IN PROCESS AND CHEMICAL ROOMS.

WIRING DEVICE – LABEL – DETAIL

SCALE: NONE

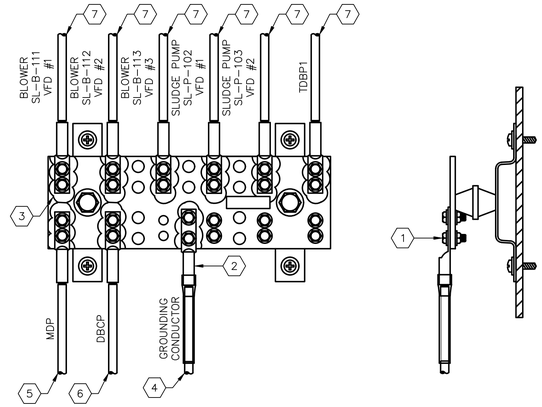


KEY NOTES:

1. PROVIDE STAINLESS STEEL HEX HEAD BOLT, LOCK WASHER, FLAT WASHER, AND NUT, SIZED AS REQUIRED.
2. PROVIDE TWO HOLE LONG BARREL COMPRESSION LUG WITH INSPECTION WINDOW. SIZED TO MATCH CONDUCTOR.
3. PROVIDE ANTI-OXIDANT COMPOUND APPLIED BETWEEN THE BONDING LUG TONGUE AND BUSBAR (TYPICAL).
4. PROVIDE INSULATED CONDUCTOR IN CONDUIT, EQUIVALENT IN SIZE TO ELECTRODE GROUNDING CONDUCTOR, TO GROUND BAR IN SERVICE ENTRANCE EQUIPMENT.
5. PROVIDE #1 GREEN INSULATED CONDUCTOR IN CONDUIT TO INDICATED EQUIPMENT.
6. PROVIDE #8 GREEN INSULATED CONDUCTOR IN CONDUIT TO INDICATED EQUIPMENT.

STORAGE BUILDING GROUNDING BUS BAR – DETAIL

SCALE: NONE



KEY NOTES:

1. PROVIDE STAINLESS STEEL HEX HEAD BOLT, LOCK WASHER, FLAT WASHER, AND NUT, SIZED AS REQUIRED.
2. PROVIDE TWO HOLE LONG BARREL COMPRESSION LUG WITH INSPECTION WINDOW. SIZED TO MATCH CONDUCTOR.
3. PROVIDE ANTI-OXIDANT COMPOUND APPLIED BETWEEN THE BONDING LUG TONGUE AND BUSBAR (TYPICAL).
4. PROVIDE INSULATED CONDUCTOR IN CONDUIT, EQUIVALENT IN SIZE TO ELECTRODE GROUNDING CONDUCTOR, TO GROUND BAR IN SERVICE ENTRANCE EQUIPMENT.
5. PROVIDE #1 GREEN INSULATED CONDUCTOR IN CONDUIT TO INDICATED EQUIPMENT.
6. PROVIDE #12 GREEN INSULATED CONDUCTOR IN CONDUIT TO INDICATED EQUIPMENT.
7. PROVIDE #8 GREEN INSULATED CONDUCTOR IN CONDUIT TO INDICATED EQUIPMENT.

SLUDGE DEWATERING GROUNDING BUS BAR – DETAIL

SCALE: NONE

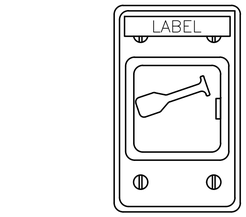
PANELBOARD [NAME]
[VOLTAGE, PHASE, # WIRE]
SOURCE: [UPSTREAM EQUIPMENT]

NOTES:

1. PANELBOARD LABEL SHALL INDICATE PANELBOARD NAME, VOLTAGE, PHASE, WIRE, AND SOURCE.
2. E.G., LINE 1: "PANELBOARD P1", LINE 2: "208/120V, 3PH, 4W", LINE 3: "SOURCE: MDP".
3. ALL PANELBOARDS / LOAD CENTERS SHALL BE LABELED.
4. LABELS SHALL BE CENTERED AT THE TOP OF THE ENCLOSURE COVER.
5. LABELS SHALL BE MACHINE GENERATED. HANDWRITTEN LABELS ARE NOT PERMITTED.

PANELBOARD / LOAD CENTER – LABEL – DETAIL

SCALE: NTS



PLAN SYMBOL: S_M

NOTES:

1. PROVIDE MOTOR RATED SWITCH WITH WEATHERPROOF LOCKING HANDLE GUARD.
2. USE ARRANGEMENT IN PROCESS ROOM, CHEMICAL ROOMS, AND EXTERIOR LOCATIONS.

MOTOR RATED SWITCH – DETAIL

SCALE: NTS

EQUIPMENT [NAME]
[VOLTAGE, PHASE, # WIRE]
SOURCE: [UPSTREAM EQUIPMENT]

NOTES:

1. EQUIPMENT LABEL SHALL INDICATE EQUIPMENT NAME, VOLTAGE, PHASE, WIRE, AND SOURCE.
2. E.G., LINE 1: "PUMP 1", LINE 2: "480V, 3PH, 3W", LINE 3: "SOURCE: PUMP 1 VFD".
3. ALL EQUIPMENT SHALL BE LABELED.
4. LABELS SHALL BE CENTERED AT THE TOP OF THE ENCLOSURE COVER.
5. LABELS SHALL BE MACHINE GENERATED. HANDWRITTEN LABELS ARE NOT PERMITTED.

EQUIPMENT – LABEL – DETAIL

SCALE: NONE

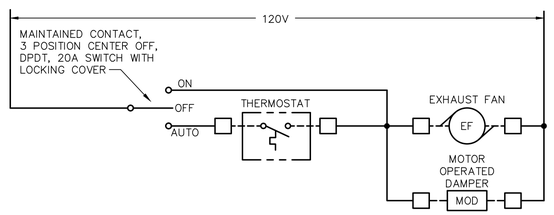
[VOLTAGE]
[OPPOSITE END LOCATION]
[OPPOSITE EQUIPMENT]

NOTES:

1. CONDUIT LABELS SHALL INDICATED VOLTAGE, OPPOSITE END LOCATION, AND OPPOSITE END EQUIPMENT.
2. E.G., LINE 1: "120 VOLT", LINE 2: "ELECTRICAL ROOM", LINE 3: "PANELBOARD P1".
3. LABELS SHALL BE CENTERED AT THE TOP OF THE ENCLOSURE COVER.
4. LABELS SHALL BE MACHINE GENERATED. HANDWRITTEN LABELS ARE NOT PERMITTED.

CONDUIT – LABEL – DETAIL

SCALE: NONE



EXHAUST FAN – HOA – DIAGRAM

SCALE: NONE

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STATE OF MARYLAND
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53642
PROFESSIONAL ENGINEER
10/27/2026

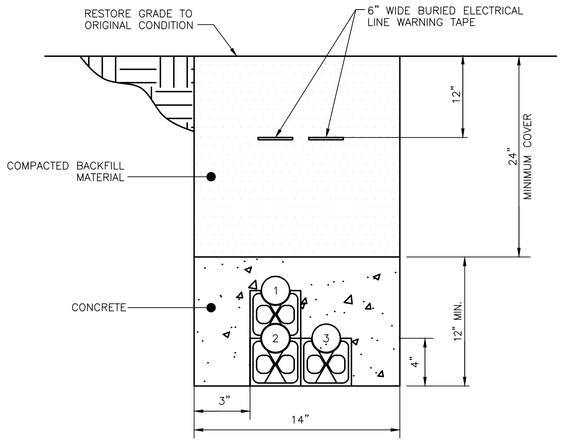
DETAILS
ELECTRICAL

SCALE : AS NOTED	SHEET NO.
DESIGN BY : JPY	E5.1
DRAWN BY : JPY	
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PLOT CODE
PEN-WHITE .039 INCHES (1.00mm)
PEN-MAGENTA .027 INCHES (.70mm)
PEN-BLUE .020 INCHES (.50mm)
PEN-CYAN .014 INCHES (.35mm)
PEN-GREEN .010 INCHES (.25mm)
PEN-YELLOW .007 INCHES (.18mm)
PEN-RED .006 INCHES (.15mm)

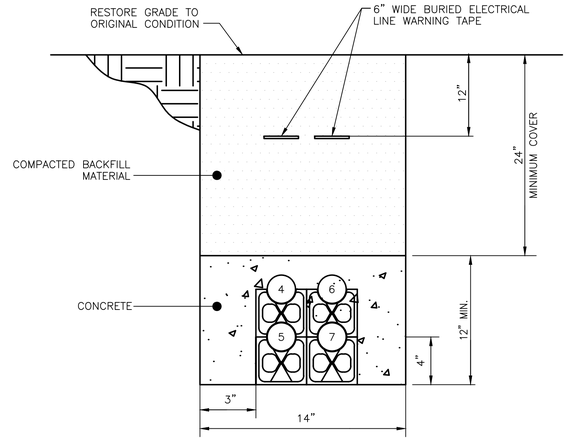


NOTES:

1. PROVIDE CONDUIT SPACERS AT 8 – 10 FT. INTERVALS.
2. COORDINATE DUCT BANK WITH OTHER DIVISIONS.
3. STUB UP SPARES BELOW WALL MOUNTED AIR GAP JUNCTION BOX.

1	300	POWER–ACTIVE	2–1/2"C.	3#4/0, #6 GND
2	S1	SPARE	2"C.	---
3	S2	SPARE	2"C.	---

1 CONCRETE ENCASED – 3–WAY – DETAIL
SCALE: NONE

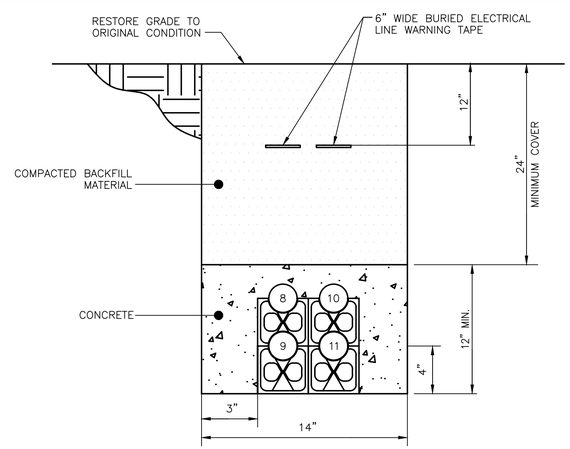


NOTES:

1. PROVIDE CONDUIT SPACERS AT 8 – 10 FT. INTERVALS.
2. COORDINATE DUCT BANK WITH OTHER DIVISIONS.

4	100	POWER–ACTIVE	2–1/2"C.	3#500 KCMIL, #3 GND
5	400C	CONTROL–ACTIVE	2"C.	FO–6 STRANDS
6	S3	SPARE	2"C.	---
7	S4	SPARE	2"C.	---

2 CONCRETE ENCASED – 4–WAY – DETAIL
SCALE: NONE

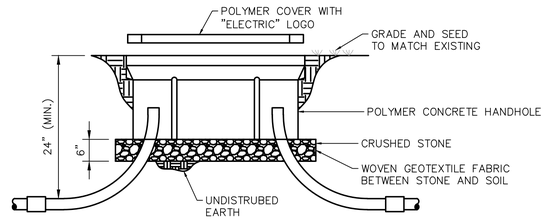


NOTES:

1. PROVIDE CONDUIT SPACERS AT 8 – 10 FT. INTERVALS.
2. COORDINATE DUCT BANK WITH OTHER DIVISIONS.

8	DBP1–5	POWER–ACTIVE	2"C.	2#10, #10 GND
	DBP1–7	POWER–ACTIVE		2#10, #10 GND
	DBP1–11	POWER–ACTIVE		2#10, #10 GND
	DBP1–12	POWER–ACTIVE		2#10, #10 GND
	DBP1–13	POWER–ACTIVE		2#10, #10 GND
9	404B	ANALOG	2"C.	2–STP
10	411B	DIGITAL	2"C.	8#14
11	S6	SPARE	2"C.	---

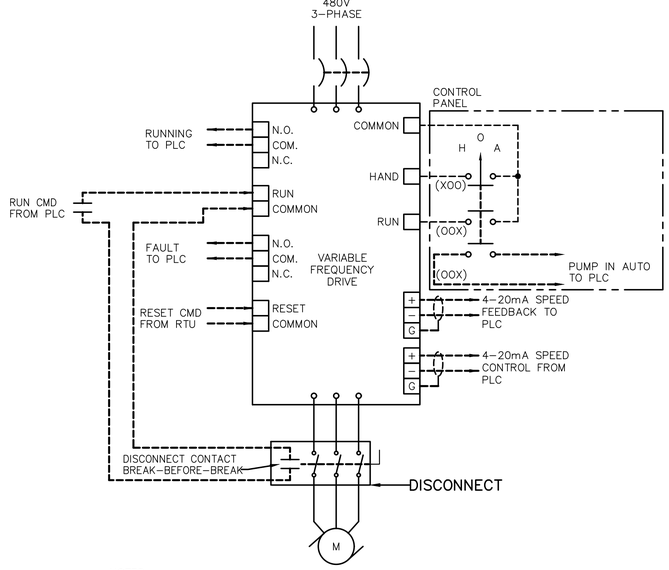
3 CONCRETE ENCASED – 4–WAY – DETAIL
SCALE: NONE



NOTES:

1. PROVIDE CRUSHED STONE FOR PAD. EXTEND 6" BEYOND EACH SIDE.
2. PROVIDE WOVEN GEOTEXTILE FABRIC BETWEEN SOIL AND STONE.
3. PROVIDE 24" PVC SWEEPS (MIN.). MODIFY SWEEP LENGTH TO PROVIDE ADEQUATE BENDING RADIUS FOR CONDUCTOR BETWEEN SWEEP AND COVER. MAINTAIN A MINIMUM OF 8" ABOVE INTERIOR GRADE.
4. PROVIDE 1/2" STAINLESS STEEL HEX BOLTS AND WASHERS TO SECURE COVER.
5. REFER TO HANDHOLE SCHEDULE ON SHEET E–6.5.

POWER – HANDHOLE – DETAIL
SCALE: NONE



NOTES:

1. DISCONNECT SERVING VFD CONTROLLED MOTOR SHALL HAVE BREAK–BEFORE–BREAK CONTACTS INTERRUPTING CONTROL SIGNAL TO DEACTIVATE VFD PRIOR TO OPENING DISCONNECT.
2. PROVIDE CONTROL WIRING FROM LOCAL MOTOR DISCONNECT CONTACTS IN SERIES WITH VFD START/STOP CONTROL CIRCUIT.

VFD WITH LOCAL DISCONNECT – DIAGRAM
SCALE: NONE

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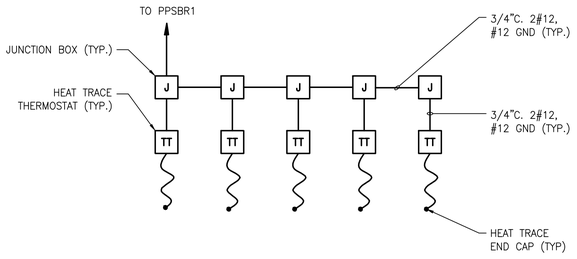
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CHRISTOPHER L. JAMES
53642
PROFESSIONAL ENGINEER
10/27/2026

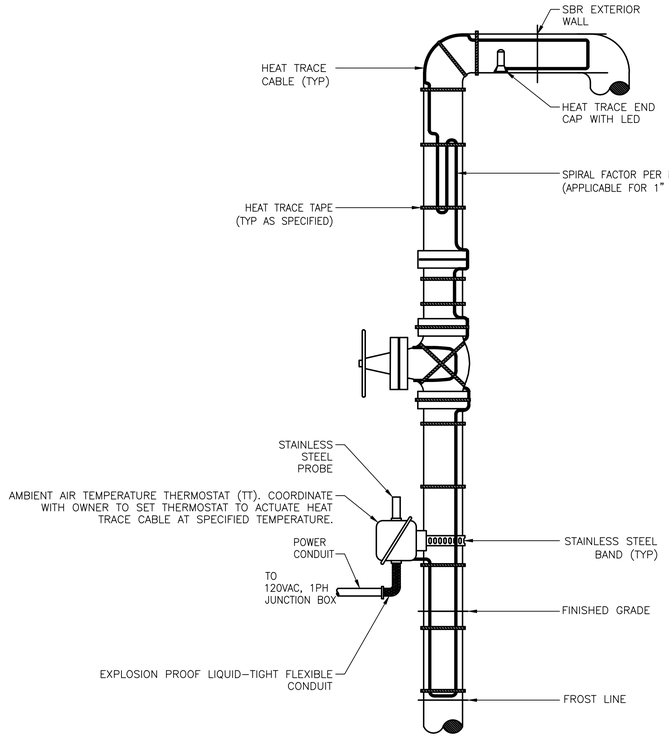
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ELECTRICAL

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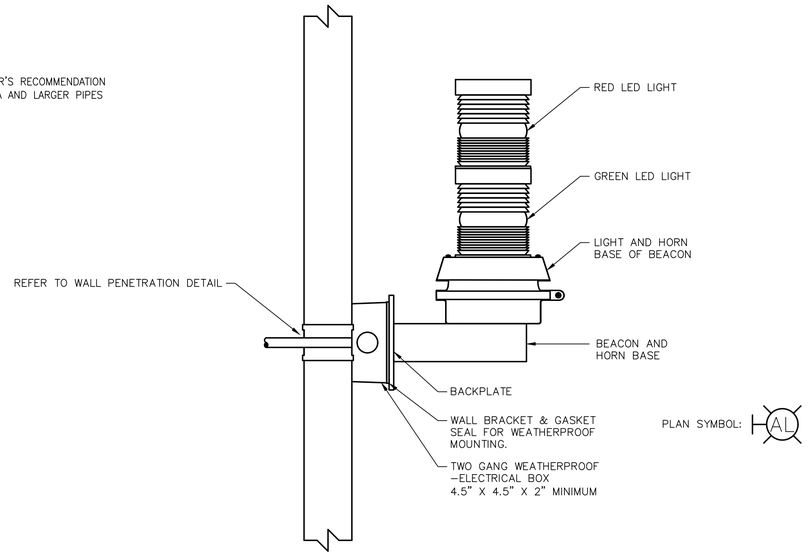
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PEN2–GREEN .010 INCHES (.25mm)
PEN4–CYAN .014 INCHES (.35mm)
PEN5–BLUE .020 INCHES (.50mm)
PEN6–MAGENTA .027 INCHES (.70mm)
PEN7–WHITE .039 INCHES (1.00mm)





HEAT TRACING – DETAIL

SCALE: NONE

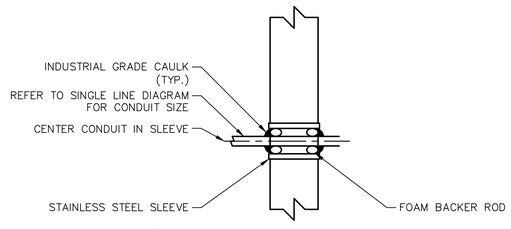


NOTES:

1. FOR OUTDOOR WEATHERPROOF INSTALLATION ENCLOSURE PLUGS SHALL BE SEALED WITH SILICONE SEALING COMPOUND.

SAFE TO ENTER INDICATOR MOUNTING – DETAIL

SCALE: NONE

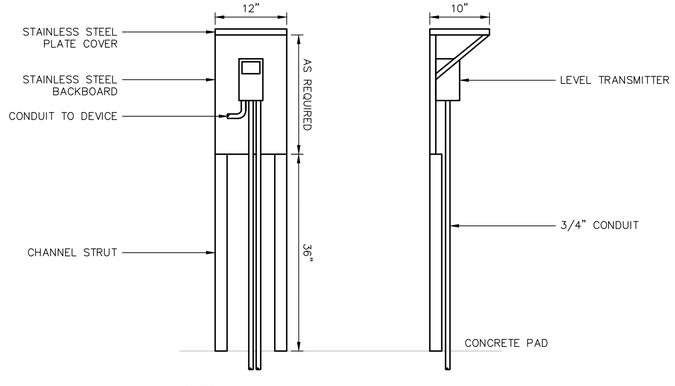


NOTES:

1. PROVIDE CORE DRILLED WALL PENETRATION. PROVIDE 3/8" ANNULAR GAP (MIN.) BETWEEN CONDUIT AND SLEEVE.
2. PROVIDE FOAM BACKER ROD. INSTALL WITH 3/8" GAP (MIN.) BETWEEN EDGE OF SLEEVE AND LEADING EDGE OF FOAM BACKER ROD.
3. PROVIDE INDUSTRIAL GRADE CAULK. APPLY TO ADHERE TO CONDUIT AND EXTEND OVER SLEEVE FORMING A BOND WITH EXTERIOR SURFACE. COLOR SHALL MATCH EXTERIOR FINISH OR COMPLEMENT WHERE AN EXACT FINISH IS NOT AVAILABLE.
4. CAULK SHALL BE INSTALLED WITH A SMOOTH, CLEAN FINISH.

WALL PENETRATION – DETAIL

SCALE: NONE



NOTES:

1. PROVIDE STAINLESS STEEL MOUNTING AND FASTENING HARDWARE.

LEVEL TRANSMITTER MOUNTING – DETAIL

SCALE: NONE

SAFE TO ENTER INDICATOR
GREEN – SAFE TO ENTER
RED – DO NOT ENTER

NOTES:

1. PROVIDE STAINLESS STEEL MOUNTING HARDWARE.
2. LOCATE SIGNAGE DIRECTLY BELOW SAFE TO ENTER INDICATOR.

SAFE TO ENTER – SIGN – DETAIL

SCALE: NONE

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WORCESTER COUNTY, MARYLAND

STATE OF MARYLAND
JOSEPH T. YOUNG
53642
PROFESSIONAL ENGINEER
10/27/2026

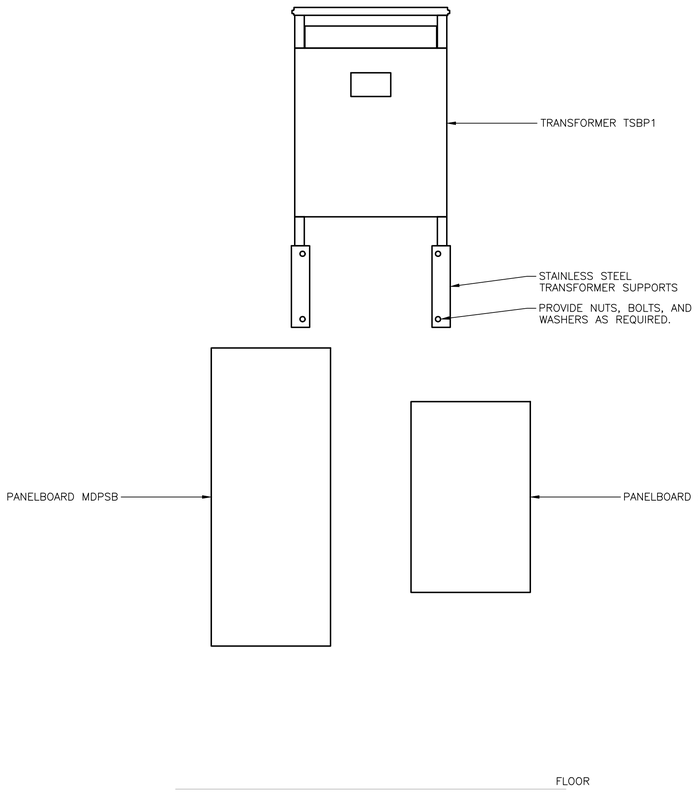
DETAILS
ELECTRICAL

SCALE : AS NOTED	SHEET NO.
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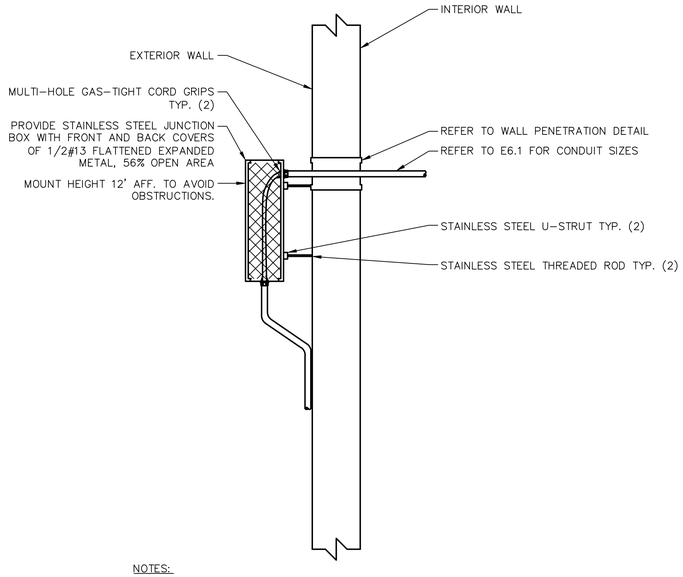
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PLOT CODE
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PEN2-YELLOW .007 INCHES (.18mm)
PEN3-GREEN .010 INCHES (.25mm)
PEN4-CYAN .014 INCHES (.35mm)
PEN5-BLUE .020 INCHES (.50mm)
PEN6-MAGENTA .027 INCHES (.70mm)
PEN7-WHITE .039 INCHES (1.00mm)



WALL MOUNTED TRANSFORMER ELEVATION – DETAIL

SCALE: NONE

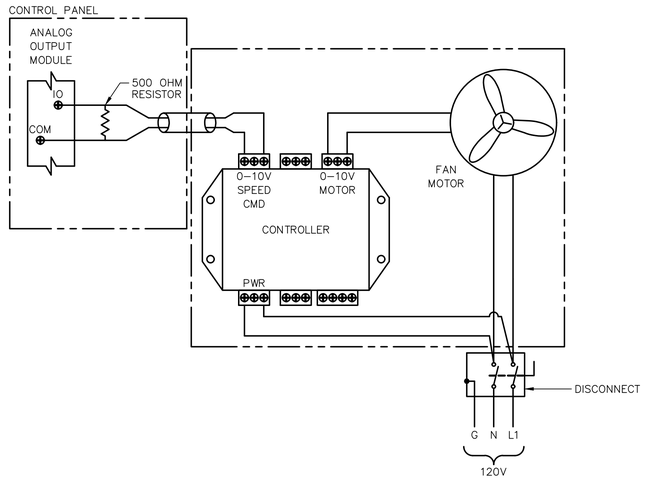


NOTES:

1. PROVIDE CORE DRILLED WALL PENETRATION.
2. PROVIDE FOAM BACKER ROD WITH INDUSTRIAL CAULK TO SEAL AND WATERPROOF WALL PENETRATION. CAULK COLOR SHALL MATCH WALL FINISH.

WALL MOUNTED AIRGAP JUNCTION BOX – DETAIL

SCALE: NONE

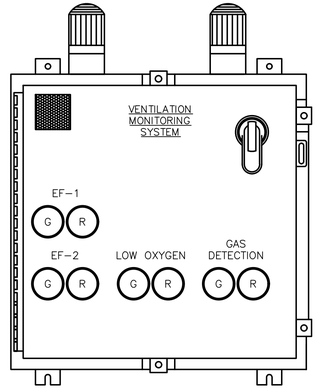


NOTES:

1. APPLICABLE TO SLUDGE DEWATERING BUILDING.
2. COORDINATE WITH DIVISION 15 CONTRACTOR.

SUPPLY/EXHAUST FAN DRIVE CONTROLLER – 120V

SCALE: NONE

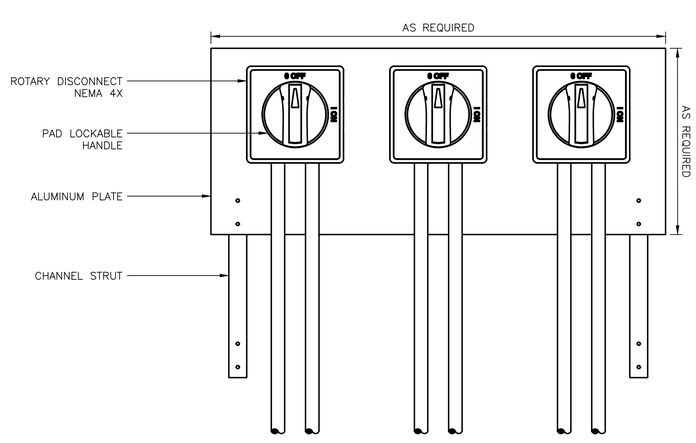


NOTES:

1. PROVIDE RED AND GREEN BEACON FOR "NOT SAFE"/"SAFE" STATUS.
2. PROVIDE ELECTRONIC ALARM FOR "NOT SAFE" STATUS.
3. PROVIDE INTERCONNECTIONS WITH SCADA PANEL.
4. INDICATOR LIGHTS, GREEN LIGHT FOR "G" AND RED LIGHT FOR "R".

VENTILATION MONITORING SYSTEM ENCLOSURE – DETAIL

SCALE: NONE



NOTES:

1. PROVIDE ALUMINUM BACKING PLATE.
2. PROVIDE STAINLESS STEEL STRUT, MOUNTING HARDWARE, AND FASTENERS.

WALL MOUNTED ROTARY DISCONNECT – DETAIL

SCALE: NONE

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STATE OF MARYLAND
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DETAILS
ELECTRICAL

SCALE : AS NOTED	SHEET NO.
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PLOT CODE
PEN1–RED .006 INCHES (.15mm)
PEN2–YELLOW .007 INCHES (.18mm)
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PEN5–BLUE .020 INCHES (.50mm)
PEN6–MAGENTA .027 INCHES (.70mm)
PEN7–WHITE .039 INCHES (1.00mm)

EXISTING MOTOR CONTROL CENTER 'MCC', 1200A, 480/277V, 3ϕ, 3W
PROCESS BUILDING – ELECTRICAL ROOM

400A 3P

4"C. 3#500 KCMIL, #3 GND — 100

MAIN DISTRIBUTION PANEL 'MDP', 400A, 480V, 3ϕ, 3W, NEMA 1
DEWATERING BUILDING – ELECTRICAL ROOM

400A 3P

G — #4/0 — GROUNDING BAR — #4/0 — TO GROUNDING TRIAD

SURGE PROTECTIVE DEVICE — 3/4"C. 3#10, #10 GND — 101 — 30A 3P

TDBP1 — 1"C. 3#6, #10 GND — 102A — 60A 3P

PANELBOARD DBP1 — 1"C. 3#6, #10 GND — 102B

3/4"C. 3#10, #10 GND	103A	40A 3P	3/4"C. 3#10, #10 GND	104A	40A 3P	3/4"C. 3#10, #10 GND	105A	40A 3P	1-1/4"C. 3#3, #8 GND	106A	90A 3P	1-1/4"C. 3#3, #8 GND	107A	90A 3P	3/4"C. 3#10, #10 GND	108A	30A 3P	3/4"C. 3#10, #10 GND	109A	30A 3P	3/4"C. 3#12, #12 GND	110A	15A 3P	3/4"C. 3#12, #12 GND	111A	15A 3P	1"C. 3#6, #10 GND	112	50A 3P	1"C. 3#6, #10 GND	113	50A 3P

5% LINE REACTOR — 15 HP 6 PULSE CT HD 50° C — VFD #1 NEMA 1

5% LINE REACTOR — 15 HP 6 PULSE CT HD 50° C — VFD #2 NEMA 1

5% LINE REACTOR — 15 HP 6 PULSE CT HD 50° C — VFD #3 NEMA 1

5% LINE REACTOR — 30 HP 6 PULSE CT HD — STR/STP CKT — VFD #4 NEMA 1

5% LINE REACTOR — 30 HP 6 PULSE CT HD — STR/STP CKT — VFD #5 NEMA 1

3/4"C. 3#10, #10 GND	103B	MDP–19, 21,23	3/4"C. 3#10, #10 GND	104B	MDP–20, 22,24	3/4"C. 3#10, #10 GND	105B	MDP–25, 27,29	1-1/4"C. 3#3, #8 GND	106B		3/4"C. 2#14	106D		1-1/4"C. 3#3, #8 GND	107B		3/4"C. 2#14	107D

M — 15 — BLOWER #1 SL–B–111

M — 15 — BLOWER #2 SL–B–112

M — 15 — BLOWER #3 SL–B–113

100A NEMA 1 — 1-1/4"C. 3#3, #8 GND — 106C — 30 — SLUDGE PUMP SL–P–102

100A NEMA 1 — 1-1/4"C. 3#3, #8 GND — 107C — 30 — SLUDGE PUMP SL–P–103

30A NEMA 4X — UH–4 ELECTRIC UNIT HEATER #4 15KW

30A NEMA 4X — UH–5 ELECTRIC UNIT HEATER #5 15KW

30A NEMA 4X — UH–6 ELECTRIC UNIT HEATER #6 7.5KW

30A NEMA 4X — UH–7 ELECTRIC UNIT HEATER #7 5KW

TO BPCP DEWATERING BUILDING

TO SCCP DEWATERING BUILDING

TO MDP SLUDGE DEWATERING BUILDING — 112

BPCP – BELT FILTER PRESS CONTROL PANEL, 480V
DEWATERING BUILDING – EQUIPMENT ROOM

2	1/3	1	1	1	0.5	0.5	M	10	10	
BPD HYDRAULIC UNIT SL–BPD–104	FEEDBOX DRIVE SL–BPD–105	BPD PRESS DRIVE #1 SL–BPD–106	BPD PRESS DRIVE #2 SL–BPD–107	BPD GBT DRIVE SL–BPD–108	POLYMER PUMP #1 SL–BPD–109	POLYMER PUMP #2 SL–BPD–110	VENTURI MIXER SL–BPD–121	BPD BOOSTER PUMP SL–BPD–123	RECYCLE PUMP SL–BPD–124	EMULSION UNIT CONTROL PANEL

TO MDP SLUDGE DEWATERING BUILDING — 113

SCCP – SCREW CONVEYOR CONTROL PANEL, 480V, NEMA 4X
DEWATERING BUILDING – EQUIPMENT ROOM

480VAC	480VAC	480VAC	480VAC	480VAC	480VAC	480VAC	480VAC	480VAC
PWR	PWR	PWR	PWR	PWR	PWR	PWR	PWR	PWR
3/4"C. 3#14, #14 GND — 115	3/4"C. 3#14, #14 GND — 116	3/4"C. 3#14, #14 GND — 117	3/4"C. 3#14, #14 GND — 118	3/4"C. 3#14, #14 GND — 119	3/4"C. 3#14, #14 GND — 120	3/4"C. 2#14, #14 GND — 121	3/4"C. 2#14, #14 GND — 122	
3	5	5	M	M	M	M	M	
SLUDGE CONVEYOR #1 SL–C–114 DEWATERING BUILDING	SLUDGE CONVEYOR #2 SL–C–115 SLUDGE DRYING BEDS	SLUDGE CONVEYOR #3 SL–C–116 SLUDGE DRYING BEDS	SLUDGE GATE #1 SL–G–117	SLUDGE GATE #2 SL–G–118	SLUDGE GATE #3 SL–G–119	SLUDGE GATE #4 SL–G–120	SLUDGE GATE #5 SL–G–121	

KEY NOTES:

1. SEE SCHEDULE ON SHEET E6.6 FOR ADDITIONAL INFORMATION.

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PLOT CODE
PEN1-RED — .006 INCHES (.15mm)
PEN2-YELLOW — .007 INCHES (.18mm)
PEN3-GREEN — .010 INCHES (.25mm)
PEN4-CYAN — .014 INCHES (.35mm)
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PEN7-WHITE — .039 INCHES (1.00mm)

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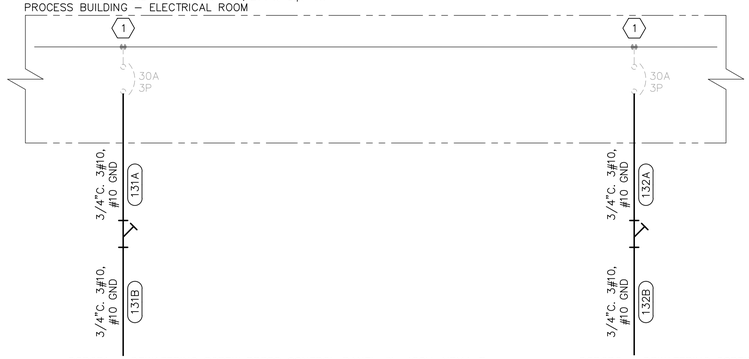
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SINGLE LINE ELECTRICAL

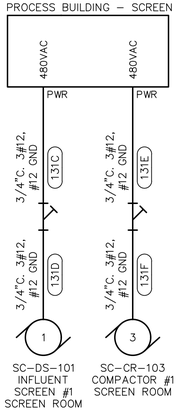
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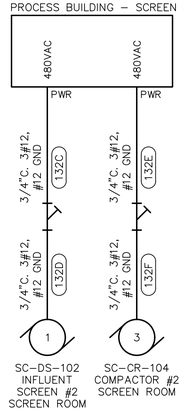
EXISTING PANELBOARD DP1, 600A, 480/277V, 3ϕ, 4W
PROCESS BUILDING – ELECTRICAL ROOM



DSPCP1 – DEWATERING SCREW PRESS CONTROL PANEL #1, 480V, NEMA 7
PROCESS BUILDING – SCREEN ROOM



DSPCP2 – DEWATERING SCREW PRESS CONTROL PANEL #2, 480V, NEMA 7
PROCESS BUILDING – SCREEN ROOM



KEYNOTES:

1. CIRCUIT BREAKER INFORMATION BASED ON FIELD OBSERVATIONS. CONTRACTOR SHALL VERIFY CIRCUIT.

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ARCHITECTS & ENGINEERS
SALISBURY, MARYLAND BALTIMORE, MARYLAND
206 WEST MAIN STREET
SALISBURY, MARYLAND 21801
www.gmbnet.com

250196 MYSTIC HARBOUR
WWTP BIOSOLIDS UPGRADE &
BUILDING REHIBILITATION

WORCESTER COUNTY, MARYLAND

STATE OF MARYLAND
JAMES YOUNG
53642
PROFESSIONAL ENGINEER
10/27/2026

SINGLE LINE
ELECTRICAL

SCALE : AS NOTED	SHEET NO.
DESIGN BY : JPY	E6.2
DRAWN BY : JPY	
CHECKED BY : CLJ	
GMB FILE : 250196	
DATE : OCT. 2026	DRAWING OF

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PEN1-RED .008 INCHES (.14mm)
PEN2-YELLOW .007 INCHES (.18mm)
PEN3-GREEN .010 INCHES (.25mm)
PEN4-CYAN PLOT CODE .014 INCHES (.35mm)
PEN5-BLUE .020 INCHES (.50mm)
PEN6-MAGENTA .027 INCHES (.69mm)
PEN7-WHITE .039 INCHES (1.00mm)

K:\Projects\GMB\2025.00255 Mystic Harbour WWTP Biosolids Upgrade\Drawings\Electrical\E6.1.dwg, 10/13/2025 12:21 PM, James Young

EXISTING SWITCHBOARD MSB, 2000A, 480/277V, 3ϕ, 4W
MAIN ELECTRICAL ROOM

250A 3P
200A 3P
2-1/2"C. 3#4/0, #6 GND
300
TO MDPSB STORAGE BUILDING

MAIN DISTRIBUTION PANEL 'MDPSDB', 250A, 480V, 3ϕ, 3W, NEMA 4
SLUDGE DRYING BED

200A 3P
N
G
#2/0
TO GROUNDING TRIAD
30A 3P
3/4"C. 3#10, #10 GND
201
SURGE PROTECTIVE DEVICE
NEMA 3R
30A 3P
3/4"C. 3#10, #10 GND
202
TRP3
EXISTING PANELBOARD RP3

15A 3P
3/4"C. 3#12, #12 GND
203A
30A NEMA 12
203B
203C
SL-OHE-301 SLUDGE DRYING BED #1 OVERHEAD DOOR

15A 3P
204A
30A NEMA 12
204B
204C
SL-OHE-302 SLUDGE DRYING BED #2 OVERHEAD DOOR

15A 3P
205A
30A NEMA 12
205B
205C
SL-OHD-303 SLUDGE DRYING BED #3 OVERHEAD DOOR

15A 3P
206A
30A NEMA 12
206B
206C
SL-OHD-304 SLUDGE DRYING BED #4 OVERHEAD DOOR

15A 3P
207A
30A NEMA 4X
207B
SL-F-305 SLUDGE DRYING BED FAN #1

15A 3P
208A
30A NEMA 4X
208B
SL-F-306 SLUDGE DRYING BED FAN #2

15A 3P
209A
30A NEMA 4X
209B
SL-F-307 SLUDGE DRYING BED FAN #3

15A 3P
210A
30A NEMA 4X
210B
SL-F-308 SLUDGE DRYING BED FAN #4

15A 3P
211A
30A NEMA 4X
211B
SL-F-309 SLUDGE DRYING BED FAN #5

15A 3P
212A
30A NEMA 4X
212B
SL-F-310 SLUDGE DRYING BED FAN #6

15A 3P
213A
30A NEMA 4X
213B
SL-F-311 SLUDGE DRYING BED FAN #7

15A 3P
214A
30A NEMA 4X
214B
SL-F-312 SLUDGE DRYING BED FAN #8

15A 3P
215A
30A NEMA 4X
215B
SL-F-313 SLUDGE DRYING BED FAN #9

15A 3P
216A
30A NEMA 4X
216B
SL-F-314 SLUDGE DRYING BED FAN #10

15A 3P
217A
30A NEMA 4X
217B
SL-F-315 SLUDGE DRYING BED FAN #11

15A 3P
218A
30A NEMA 4X
218B
SL-F-316 SLUDGE DRYING BED FAN #12

TO MSP MAIN ELECTRICAL ROOM
300
MAIN DISTRIBUTION PANEL 'MDPSB', 250A, 480V, 3ϕ, 3W, NEMA 1
STORAGE BUILDING

200A 3P
N
G
#2/0
GROUNDING BAR
#2/0
TO GROUNDING TRIAD
30A 3P
3/4"C. 3#10, #10 GND
301
SURGE PROTECTIVE DEVICE

70A 3P
1"C. 3#4, #8 GND
301A
TSBP1
1-1/4"C. 4#2, #8 GND
301B
PANELBOARD SBP1

15A 3P
3/4"C. 3#12, #12 GND
302A
30A NEMA 1
302B
UH-1 ELECTRIC UNIT HEATER #1 7KW

15A 3P
303A
30A NEMA 1
303B
UH-2 ELECTRIC UNIT HEATER #2 7KW

15A 3P
304A
30A NEMA 1
304B
UH-3 ELECTRIC UNIT HEATER #3 7KW

KEYNOTES:

1. SEE SCHEDULE ON SHEET E6.7 FOR ADDITIONAL INFORMATION.
2. SEE SCHEDULE ON SHEET E6.6 FOR ADDITIONAL INFORMATION.

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PEN7-WHITE .039 INCHES (1.00mm)
PEN6-MAGENTA .027 INCHES (.70mm)
PEN5-BLUE .020 INCHES (.50mm)
PLOT CODE PEN4-CYAN .014 INCHES (.35mm)
PEN3-GREEN .010 INCHES (.25mm)
PEN2-YELLOW .007 INCHES (.18mm)
PEN1-RED .006 INCHES (.15mm)

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250196 MYSTIC HARBOUR WWTP BIOSOLIDS UPGRADE & BUILDING REHIBILITATION

WORCESTER COUNTY, MARYLAND

STATE OF MARYLAND
JOSEPH L. JAMES
53642
PROFESSIONAL ENGINEER
10/27/2026

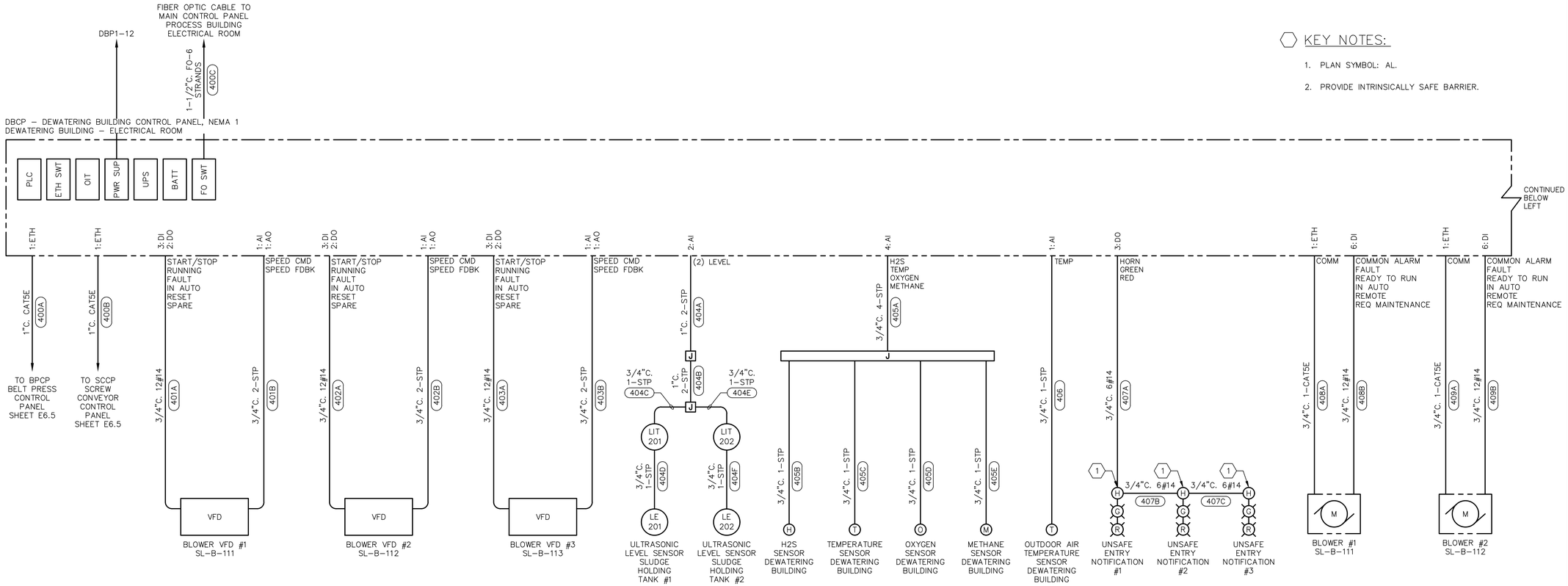
SINGLE LINE ELECTRICAL

SCALE : AS NOTED	SHEET NO.
DESIGN BY : JPY	E6.3
DRAWN BY : JPY	
CHECKED BY : CLJ	
GMB FILE : 250196	
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KEY NOTES:

1. PLAN SYMBOL: AL.
2. PROVIDE INTRINSICALLY SAFE BARRIER.



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PLOT CODE: PEN1-RED .008 INCHES (.15mm); PEN2-YELLOW .007 INCHES (.18mm); PEN3-GREEN .010 INCHES (.25mm); PEN4-CYAN .014 INCHES (.35mm); PEN5-BLUE .020 INCHES (.50mm); PEN6-MAGENTA .027 INCHES (.70mm); PEN7-WHITE .039 INCHES (1.00mm)

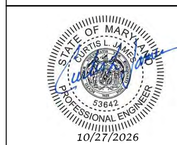
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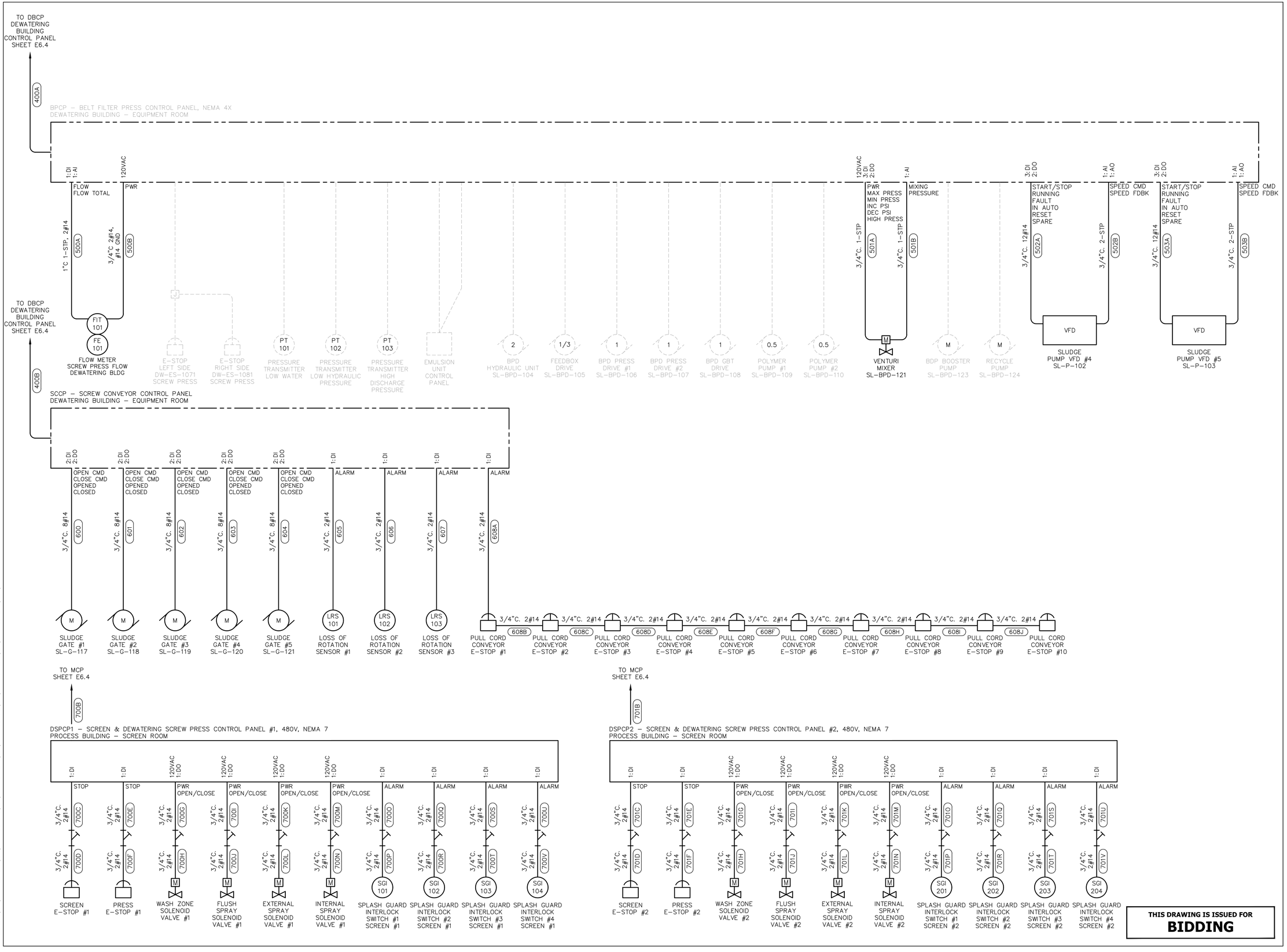


10/27/2026

INTERCONNECT DIAGRAM ELECTRICAL

SCALE : AS NOTED	SHEET NO.
DESIGN BY : JPY	E6.4
DRAWN BY : JPY	
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PLOT CODE: PEN1-RED .008 INCHES (.15mm) | PEN2-YELLOW .007 INCHES (.13mm) | PEN3-GREEN .010 INCHES (.25mm) | PEN4-CYAN .014 INCHES (.35mm) | PEN5-BLUE .020 INCHES (.50mm) | PEN6-MAGENTA .027 INCHES (.70mm) | PEN7-WHITE .039 INCHES (1.00mm)

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250196 MYSTIC HARBOUR WWTP BIOSOLIDS UPGRADE & BUILDING REHABILITATION

WORCESTER COUNTY, MARYLAND

STATE OF MARYLAND
JENNA P. YOUNG
53642
PROFESSIONAL ENGINEER
10/27/2026

INTERCONNECT DIAGRAM ELECTRICAL

SCALE : AS NOTED	SHEET NO.
DESIGN BY : JPY	E6.5
DRAWN BY : JPY	
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GMB FILE : 250196	
DATE : OCT. 2026	DRAWING OF

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PANELBOARD: DBP1

VOLTS: 208Y/120 | MOUNTING: SURFACE | A.I.C. RATING: 10K
PHASE/WIRE: 3 PHASE, 4 WIRE | ENCLOSURE: TYPE 1 | MAINS TYPE: MAIN CIRCUIT BREAKER (MCB)
SERVED BY: TDBP1 | EQUIPMENT: 100% RATED NEUTRAL, EQUIPMENT GROUND BAR | MAINS RATING: 100A | MCB RATING: 60A

ROOM DESIGNATION: BLOWER/ELECTRICAL ROOM
LOCATION: DEWATERING BUILDING

CKT NO.	CKT. BKR. P	CKT. BKR. TRIP	CIRCUIT DESCRIPTION	KVA PER PHASE A	KVA PER PHASE B	KVA PER PHASE C	CIRCUIT DESCRIPTION	CKT. BKR. TRIP	CKT. BKR. P	CKT NO.
1	1	20A	LTG - EQUIPMENT ROOM	0.61	0.72		RCPT - EQUIPMENT ROOM	20A	1	2
3	1	20A	LTG - BLOWER/ELECTRICAL RM		0.46	0.36	RCPT - BLOWER/ELECTRICAL ROOM	20A	1	4
5	1	20A	SLG HOLDING HT #1 (NOTE 2)			1.00	0.86 EXHAUST FAN EF-2	20A	1	6
7	1	20A	SLG HOLDING HT #2 (NOTE 2)	1.00	1.20		DEWATERING BLDG CONTROL PANEL	20A	1	8
9	1	20A	EXHAUST FAN EF-3		1.18	0.16	LTG-EXTERIOR	20A	1	10
11	1	20A	LE/LIT - 201			0.01	0.01 LE/LIT - 202	20A	1	12
13	1	20A	SLUDGE HOLDING HT #3 (NOTE 2)	1.00	---		SPARE	20A	1	14
15	1	20A	SPARE		---	---	SPARE	20A	1	16
17	1	20A	SPARE			---	--- SPARE	20A	1	18
19	1	20A	SPARE	---	---		SPARE	20A	1	20
21	1	20A	SPARE		---	---	SPARE	20A	1	22
23	1	20A	SPARE			---	--- SPARE	20A	1	24
25	1	20A	SPARE	---	---		SPARE	20A	1	26
27	1	20A	SPARE		---	---	SPARE	20A	1	28
29	1	20A	SPARE			---	--- SPARE	20A	1	30
			TOTAL KVA PER PHASE:	4.5	2.2	1.9				
			TOTAL KVA:			8.6				
			TOTAL AMPS PER PHASE:	37.7	17.9	15.7				
			TOTAL AMPS:			23.8				

NOTES:
1. PROVIDE MACHINE GENERATED PANELBOARD DIRECTORY AFTER COMPLETING WORK.
2. PROVIDE EPD, GFI CIRCUIT BREAKER (30MA TRIP).

PANELBOARD: MDP

VOLTS: 480 | MOUNTING: SURFACE | A.I.C. RATING: 18K
PHASE/WIRE: 3 PHASE, 3 WIRE | ENCLOSURE: TYPE 12 | MAINS TYPE: MAIN CIRCUIT BREAKER (MCB)
SERVED BY: MCC | EQUIPMENT: EQUIPMENT GROUND BAR | MAINS RATING: 400A | MCB RATING: 400A

ROOM DESIGNATION: BLOWER/ELECTRICAL ROOM
LOCATION: DEWATERING BUILDING

CKT NO.	CKT. BKR. P	CKT. BKR. TRIP	CIRCUIT DESCRIPTION	KVA PER PHASE A	KVA PER PHASE B	KVA PER PHASE C	CIRCUIT DESCRIPTION	CKT. BKR. TRIP	CKT. BKR. P	CKT NO.
1				0.00	7.28					2
3	3	30A	SPD		0.00	7.28	BLOWER SL-BL-111	40A	3	4
5						0.00 7.28				6
7				7.28	7.28					8
9	3	40A	BLOWER SL-BL-112		7.28	7.28	BLOWER SL-BL-113	40A	3	10
11						7.28 7.28				12
13				14.55	14.55					14
15	3	60A	SLUDGE PUMP SL-P-111		14.55	14.55	SLUDGE PUMP SL-P-112	60A	3	16
17						14.55 14.55				18
19				1.20	1.20					20
21	3	20A	BLOWER SL-B-111 CONTROL		1.20	1.20	BLOWER SL-B-112 CONTROL	20A	3	22
23						1.20 1.20				24
25				1.20	5.00					26
27	3	20A	BLOWER SL-B-113 CONTROL		1.20	5.00	UH-4	30A	3	28
29						1.20 5.00				30
31				5.00	2.50					32
33	3	30A	UH-5		5.00	2.50	UH-6	15A	3	34
35						5.00 2.50				36
37				1.67	---					38
39	3	15A	UH-7		1.67	---	BPCP - BELT PRESS CONTROL PANEL	50A	3	40
41						1.67 ---				42
43				---	---		SPACE	---	---	44
45	3	50A	SCCP - SCREW CONVEYOR CONTROL PANEL		---	---	SPACE	---	---	46
47						--- ---	SPACE	---	---	48
49	---	---	SPACE	---	---		SPACE	---	---	50
51	---	---	SPACE		---	---	SPACE	---	---	52
53	---	---	SPACE			--- ---	SPACE	---	---	54
55	---	---	SPACE	---	---		SPACE	---	---	56
57	---	---	SPACE		---	---	SPACE	---	---	58
59	---	---	SPACE			--- ---	SPACE	---	---	60
61	---	---	SPACE	---	5.00					62
63	---	---	SPACE		---	5.00	PANELBOARD DBP1 VIA TDBP1	60A	3	64
65	---	---	SPACE			--- 5.00				66
			TOTAL KVA PER PHASE:	73.7	73.7	73.7				
			TOTAL KVA:			221.1				
			TOTAL AMPS PER PHASE:	265.9	265.9	265.9				
			TOTAL AMPS:			265.9				

NOTES:
1. PROVIDE MACHINE GENERATED PANELBOARD DIRECTORY AFTER COMPLETING WORK.

LUMINAIRE SCHEDULE

TYPE	DESCRIPTION	BASIS OF DESIGN MANUFACTURER	BASIS OF DESIGN SERIES	ACCEPTABLE MANFACTURERS	LIGHT SOURCE	LIGHT SOURCE PERFORMANCE LUMENS	CCT	CRI	L-RATING	DRIVER CHARACTERISTICS	INPUT VOLTAGE	INPUT WATTS	MOUNTING	FINISH	COMMENTS
A	4' LED LINEAR, SURFACE MOUNT LUMINAIRE. SUITABLE FOR WET, DAMP, AND COLD LOCATIONS. NEMA 4X FIBERGLASS HOUSING. INJECTION MOLD, ACRYLIC LENS WITH HIGH IMPACT RESISTANCE.	LITHONIA	FEM	COLUMBIA RAB	LED	12,000	4000	80	75	CONSTANT	120	75W	CEILING	WHITE	NOTE 1
B	WALL PACK LED WITH TWO-PIECE DIE-CAST ALUMINUM HOUSING, SUITABLE FOR WET ENVIRONMENTS. BOROSILICATE GLASS REFLECTOR.	LITHONIA	TWX2	COLUMBIA RAB	LED	4,400	4000	80	75	CONSTANT	120	32W	WALL	BLACK	---
E	EMERGENCY LIGHTING UNIT WITH POLYCARBONATE HOUSING, FULLY GASKETED AND CORROSION RESITANT NEMA 4X ENCLOSURE RATED FOR WET LOCATIONS. BATTERY BACK-UP WITH SELF DIAGNOSTICS.	DUAL LITE	DYNC	LITHONIA RAB	LED	331 EA	5000	---	---	FIXED	120	3	WALL	GREY	---
X	EMERGENCY COMBINATION EXIT UNIT WITH TWO LED HEADS. DIE-CAST ALUMINUM, FULLY GASKETED, AND CORROSION RESISTANT. POLYCARBONATE LENSED EXIT FACE. 12 WATT CAPACITY TO SERVE REMOTE HEADS. BATTERY BACK-UP WITH SELF DIAGNOSTICS.	DUAL LITE	DYNC	LITHONIA RAB	LED	331 EA	5000	---	---	FIXED	120	3	WALL	WHITE	---
X1	DUAL HEAD REMOTE EMERGENCY LED CONSTRUCTED FROM DIE-CAST ALUMINUM WITH MOUNTING PLATE.	DUAL LITE	OCR	LITHONIA RAB	LED	331 EA	5000	---	---	FIXED	6/12 VDC	2.6	WALL	BLACK	---

NOTES:
1. DIMMING FEATURE NOT USED. INSTALL FOR 100% OUTPUT.

SAFE TO ENTER INDICATOR - LUMINAIRE SCHEDULE

TYPE	DESCRIPTION	BASIS OF DESIGN MANUFACTURER	BASIS OF DESIGN SERIES	ACCEPTABLE MANFACTURERS	LIGHT SOURCE	LIGHT SOURCE PERFORMANCE LUMENS	CCT	CRI	DRIVER CHARACTERISTICS	INPUT VOLTAGE (VAC)	INPUT WATTS	MOUNTING	FINISH	COMMENTS
AL	STACK LIGHT AND WALL BASE WITH RADIANT SOUND MODULE DESIGNED FOR LATERAL OR WALL MOUNTING. MULT-PATTERN LIGHT, TYPE 4X OUTDOOR USE.	FEDERAL SIGNAL	RSL	EDWARDS SIGNALING	LED	---	---	---	---	12-24VAC/DC	1.44	WALL MOUNT	BLACK	NOTE 1

NOTES:
1. PROVIDE TWO LED MODULES, ONE GREEN AND ONE RED.

TRANSFORMER - SCHEDULE

DESIGNATION	KVA	CATEGORY	PRIMARY VOLTAGE (V)	PRIMARY PHASE (PH)	PRIMARY FREQ. (HZ)	PRIMARY WINDING	SECONDARY VOLTAGE (V)	SECONDARY PHASE (PH)	SECONDARY FREQ. (HZ)	SECONDARY WINDING	ENCLOSURE MOUNTING	ENCLOSURE NEMA	DIMENSIONS AND WEIGHTS HEIGHT (IN.)	WIDTH (IN.)	DEPTH (IN.)	WEIGHT (LBS.)	COMMENTS
TDBP1	15	DRY	480	3	60	DELTA	120/208	3	60	WYE	FLOOR	2	24	21.5	21.2	188.0	---
TSBP1	30	DRY	480	3	60	DELTA	120/208	3	60	WYE	WALL	2	28.3	25.5	24.7	303.0	NOTE 1

NOTES:
1. PROVIDE WALL HANGERS.

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250196 MYSTIC HARBOUR WWTP BIOSOLIDS UPGRADE & BUILDING REHABILITATION

WORCESTER COUNTY, MARYLAND

STATE OF MARYLAND — JOSEPH T. JAMES — 53642 — PROFESSIONAL ENGINEER
10/27/2026

SCHEDULES
ELECTRICAL

SCALE	: AS NOTED
DESIGN BY	: JPY
DRAWN BY	: JPY
CHECKED BY	: CLJ
GMB FILE	: 250196
DATE	: OCT. 2026

SHEET NO. E6.6
DRAWING OF

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PLOT CODE
PEN1-RED .006 INCHES (.15mm)
PEN2-YELLOW .007 INCHES (.18mm)
PEN3-GREEN .010 INCHES (.25mm)
PEN4-CYAN .014 INCHES (.35mm)
PEN5-BLUE .020 INCHES (.50mm)
PEN6-MAGENTA .027 INCHES (.70mm)
PEN7-WHITE .039 INCHES (1.00mm)

PANELBOARD: MDPSB

VOLTS: 480 | MOUNTING: SURFACE | A.I.C. RATING: 18K
PHASE/WIRE: 3 PHASE, 3 WIRE | ENCLOSURE: TYPE 1 | MAINS TYPE: MAIN CIRCUIT BREAKER (MCB)
SERVED BY: DP1 | EQUIPMENT: 100% RATED NEUTRAL EQUIPMENT GROUND BAR | MAINS RATING: 250A | MCB RATING: 200A

ROOM DESIGNATION: STORAGE ROOM
LOCATION: STORAGE BUILDING

CKT NO.	CKT. BKR. P	CKT. BKR. TRIP	CIRCUIT DESCRIPTION	KVA PER PHASE A	KVA PER PHASE B	KVA PER PHASE C	CIRCUIT DESCRIPTION	CKT. BKR. TRIP	CKT. BKR. P	CKT NO.
1				0.00 10.00						2
3	3	30A	SPD		0.00 10.00		PANELBOARD SBP1 VIA TSBP1	25A	3	4
5						0.00 10.00				6
7				2.33 2.33						8
9	3	15A	UH-1		2.33 2.33		UH-2	15A	3	10
11						2.33 2.33				12
13				2.33 ---			SPACE	---	---	14
15	3	15A	UH-3		2.33 ---		SPACE	---	---	16
17						2.33 ---	SPACE	---	---	18
19	---	---	SPACE	--- ---			SPACE	---	---	20
21	---	---	SPACE		--- ---		SPACE	---	---	22
23	---	---	SPACE			--- ---	SPACE	---	---	24
25	---	---	SPACE	--- ---			SPACE	---	---	26
27	---	---	SPACE		--- ---		SPACE	---	---	28
29	---	---	SPACE			--- ---	SPACE	---	---	30
			TOTAL KVA PER PHASE:	17.0	17.0	17.0				
			TOTAL KVA:			51.0				
			TOTAL AMPS PER PHASE:	61.3	61.3	61.3				
			TOTAL AMPS:			61.3				

NOTES:
1. PROVIDE MACHINE GENERATED PANELBOARD DIRECTORY AFTER COMPLETING WORK.

PANELBOARD: SBP1

VOLTS: 208Y/120 | MOUNTING: SURFACE | A.I.C. RATING: 10K
PHASE/WIRE: 3 PHASE, 4 WIRE | ENCLOSURE: TYPE 1 | MAINS TYPE: MAIN CIRCUIT BREAKER (MCB)
SERVED BY: TSBP1 | EQUIPMENT: 100% RATED NEUTRAL EQUIPMENT GROUND BAR | MAINS RATING: 100A | MCB RATING: 100A

ROOM DESIGNATION: STORAGE ROOM
LOCATION: STORAGE BUILDING

CKT NO.	CKT. BKR. P	CKT. BKR. TRIP	CIRCUIT DESCRIPTION	KVA PER PHASE A	KVA PER PHASE B	KVA PER PHASE C	CIRCUIT DESCRIPTION	CKT. BKR. TRIP	CKT. BKR. P	CKT NO.
1	1	20A	LTG - STORAGE BUILDING	0.75 1.08			RCPT - STORAGE BUILDING	20A	1	2
3	1	20A	LTG - EXTERIOR		0.22 0.70		EXHAUST FAN EF-1	20A	1	4
5	1	20A	SPARE			--- ---	SPARE	20A	1	6
7	1	20A	SPARE	--- ---			SPARE	20A	1	8
9	1	20A	SPARE		--- ---		SPARE	20A	1	10
11	1	20A	SPARE			--- ---	SPARE	20A	1	12
13	1	20A	SPARE	--- ---			SPARE	20A	1	14
15	1	20A	SPARE		--- ---		SPARE	20A	1	16
17	1	20A	SPARE			--- ---	SPARE	20A	1	18
19	---	---	SPACE	--- ---			SPACE	---	---	20
21	---	---	SPACE		--- ---		SPACE	---	---	22
23	---	---	SPACE			--- ---	SPACE	---	---	24
25	---	---	SPACE	--- ---			SPACE	---	---	26
27	---	---	SPACE		--- ---		SPACE	---	---	28
29	---	---	SPACE			--- ---	SPACE	---	---	30
			TOTAL KVA PER PHASE:	1.8	0.9	0.0				
			TOTAL KVA:			2.8				
			TOTAL AMPS PER PHASE:	15.2	7.7	0.0				
			TOTAL AMPS:			7.6				

NOTES:
1. PROVIDE MACHINE GENERATED PANELBOARD DIRECTORY AFTER COMPLETING WORK.

HANDHOLE - SCHEDULE

DESIGNATION	CHARACTERISTICS WIDTH (IN.)	LENGTH (IN.)	DEPTH (IN.)	STYLE	BOTTOM	TIER	COVER LOGO
HH-1	30	48	24	STRAIGHT-WALL	OPEN	8	ELECTRICAL
HH-2	30	48	24	STRAIGHT-WALL	OPEN	AASHTO H-20	ELECTRICAL

PANELBOARD: RP3

VOLTS: 208Y/120 | MOUNTING: SURFACE | A.I.C. RATING: 10K
PHASE/WIRE: 3 PHASE, 4 WIRE | ENCLOSURE: TYPE 4 | MAINS TYPE: MAIN CIRCUIT BREAKER (MCB)
SERVED BY: MDPSDB VIA TRP3 | EQUIPMENT: 100% RATED NEUTRAL EQUIPMENT GROUND BAR | MAINS RATING: 100A | MCB RATING: 100A

ROOM DESIGNATION: NORTH EXTERIOR WALL
LOCATION: SLUDGE DRYING BEDS

EXISTING

CKT NO.	CKT. BKR. P	CKT. BKR. TRIP	CIRCUIT DESCRIPTION	KVA PER PHASE A	KVA PER PHASE B	KVA PER PHASE C	CIRCUIT DESCRIPTION	CKT. BKR. TRIP	CKT. BKR. P	CKT NO.
1	1	20A	COMPUTER CONTROLS	--- ---			CONTACTOR COIL POWER	---	---	2
3	1	20A	ROOF VENT PANEL		--- ---		GABLE INLET SHUTTERS	---	---	4
5						--- ---				6
7	3	20A	EXHAUST FAN #1	--- ---			EXHAUST FAN #2	20A	3	8
9					--- ---					10
11						--- ---				12
13	3	20A	EXHAUST FAN #3	--- ---			EXHAUST FAN #4	20A	3	14
15					--- ---					16
17	1	20A	ROLL UP DOOR #1			--- ---	NOTE 4	20A	1	18
19	1	20A	ROLL UP DOOR #2	--- ---			NOTE 4	20A	1	20
21	1	20A	REC FUEL PUMP		--- ---					22
23	1	20A	GFI RCPT O.S.			--- ---	BYPASS PUMP	100A	3	24
25	1	20A	NOTE 4	--- ---						26
27	---	---	SPACE		--- ---		SPACE	---	---	28
29	---	---	SPACE			--- ---	SPACE	---	---	30
31	---	---	SPACE	--- ---			SPACE	---	---	32
33	---	---	SPACE		--- ---		SPACE	---	---	34
35						--- ---	SPACE	---	---	36
37	3	100A	MAIN CIRCUIT BREAKER	--- ---			SPACE	---	---	38
39					--- ---		SPACE	---	---	40
			TOTAL KVA PER PHASE:	0.0	0.0	0.0				
			TOTAL KVA:			0.0				
			TOTAL AMPS PER PHASE:	0.0	0.0	0.0				
			TOTAL AMPS:			0.0				

NOTES:
1. PROVIDE MACHINE GENERATED PANELBOARD DIRECTORY AGTER COMPLETING WORK.
2. SQUARE D, TYPE NQ PANELBOARD.
3. PANELBOARD INFORMATION BASED ON FIELD OBSERVATIONS. CONTRACTOR SHALL VERIFY CIRCUIT INFORMATION.
4. NO CIRCUIT INFORMATION INDICATED.

PANELBOARD: RP3

VOLTS: 208Y/120 | MOUNTING: SURFACE | A.I.C. RATING: 10K
PHASE/WIRE: 3 PHASE, 4 WIRE | ENCLOSURE: TYPE 4 | MAINS TYPE: MAIN CIRCUIT BREAKER (MCB)
SERVED BY: MDPSDB VIA TRP3 | EQUIPMENT: 100% RATED NEUTRAL EQUIPMENT GROUND BAR | MAINS RATING: 100A | MCB RATING: 100A

ROOM DESIGNATION: NORTH EXTERIOR WALL
LOCATION: SLUDGE DRYING BEDS

NEW WORK

CKT NO.	CKT. BKR. P	CKT. BKR. TRIP	CIRCUIT DESCRIPTION	KVA PER PHASE A	KVA PER PHASE B	KVA PER PHASE C	CIRCUIT DESCRIPTION	CKT. BKR. TRIP	CKT. BKR. P	CKT NO.
1	1	20A	COMPUTER CONTROLS	--- ---			CONTACTOR COIL POWER	---	---	2
3	1	20A	ROOF VENT PANEL		--- ---		GABLE INLET SHUTTERS	---	---	4
5						--- ---				6
7	3	20A	**SPARE (NOTE 6)**	--- ---			**SPARE (NOTE 6)**	20A	3	8
9					--- ---					10
11						--- ---				12
13	3	20A	**SPARE (NOTE 6)**	--- ---			**SPARE (NOTE 6)**	20A	3	14
15					--- ---					16
17	1	20A	ROLL UP DOOR #1			--- ---	NOTE 5	20A	1	18
19	1	20A	ROLL UP DOOR #2	--- ---			NOTE 5	20A	1	20
21	1	20A	REC FUEL PUMP		--- ---					22
23	1	20A	GFI RCPT O.S.			--- ---	BYPASS PUMP	100A	3	24
25	1	20A	NOTE 5	--- ---						26
27	**1**	**20A**	**RCPT - TEMP HEAT TRACING**		0.72 0.72		**RCPT - HEAT TRACING**	**20A**	**1**	28
29	---	---	SPACE			--- ---	SPACE	---	---	30
31	---	---	SPACE	--- ---			SPACE	---	---	32
33	---	---	SPACE		--- ---		SPACE	---	---	34
35						--- ---	SPACE	---	---	36
37	3	100A	MAIN CIRCUIT BREAKER	--- ---			SPACE	---	---	38
39					--- ---		SPACE	---	---	40
			TOTAL KVA PER PHASE:	0.0	1.4	0.0				
			TOTAL KVA:			1.4				
			TOTAL AMPS PER PHASE:	0.0	12.0	0.0				
			TOTAL AMPS:			4.0				

NOTES:
1. PROVIDE MACHINE GENERATED PANELBOARD DIRECTORY AGTER COMPLETING WORK.
2. SQUARE D, TYPE NQ PANELBOARD.
3. DISCRIPTIONS IN **BOLD** INDICATE NEW WORK.
4. PANELBOARD INFORMATION BASED ON FIELD OBSERVATIONS. CONTRACTOR SHALL VERIFY CIRCUIT INFORMATION.
5. NO CIRCUIT INFORMATION INDICATED.
6. DISCONNECT CONDUCTORS AND LABEL AS SPARE.

PANELBOARD: MDPSDB

VOLTS: 480 | MOUNTING: SURFACE | A.I.C. RATING: 18K
PHASE/WIRE: 3 PHASE, 3 WIRE | ENCLOSURE: TYPE 4 | MAINS TYPE: MAIN CIRCUIT BREAKER (MCB)
SERVED BY: DP1 | EQUIPMENT: EQUIPMENT GROUND BAR | MAINS RATING: 250A | MCB RATING: 150A

ROOM DESIGNATION: NORTH EXTERIOR WALL
LOCATION: SLUDGE DRYING BED

CKT NO.	CKT. BKR. P	CKT. BKR. TRIP	CIRCUIT DESCRIPTION	KVA PER PHASE A	KVA PER PHASE B	KVA PER PHASE C	CIRCUIT DESCRIPTION	CKT. BKR. TRIP	CKT. BKR. P	CKT NO.
1				0.00 10.00						2
3	3	30A	SPD		0.00 10.00		PANELBOARD RP3 VIA TRP3	50A	3	4
5						0.00 10.00				6
7				0.58 0.58						8
9	3	15A	SL-OHE-301 SLUDGE DRYING BED #3 OVERHEAD DOOR		0.58 0.58		SL-OHE-302 SLUDGE DRYING BED #2 OVERHEAD DOOR	15A	3	10
11						0.58 0.58				12
13				0.58 0.58						14
15	3	15A	SL-OHE-303 SLUDGE DRYING BED #3 OVERHEAD DOOR		0.58 0.58		SL-OHE-304 SLUDGE DRYING BED #2 OVERHEAD DOOR	15A	3	16
17						0.58 0.58				18
19				1.33 1.33						20
21	3	15A	SL-F-305 SLUDGE DRYING BED FAN #1		1.33 1.33		SL-F-306 SLUDGE DRYING BED FAN #2	15A	3	22
23						1.33 1.33				24
25				1.33 1.33						26
27	3	15A	SL-F-307 SLUDGE DRYING BED FAN #3		1.33 1.33		SL-F-308 SLUDGE DRYING BED FAN #4	15A	3	28
29						1.33 1.33				30
31				1.33 1.33						32
33	3	15A	SL-F-309 SLUDGE DRYING BED FAN #5		1.33 1.33		SL-F-310 SLUDGE DRYING BED FAN #6	15A	3	34
35						1.33 1.33				36
37				1.33 1.33						38
39	3	15A	SL-F-311 SLUDGE DRYING BED FAN #7		1.33 1.33		SL-F-312 SLUDGE DRYING BED FAN #8	15A	3	40
41						1.33 1.33				42
43				1.33 1.33						44
45	3	15A	SL-F-313 SLUDGE DRYING BED FAN #9		1.33 1.33		SL-F-314 SLUDGE DRYING BED FAN #10	15A	3	46
47						1.33 1.33				48
49				1.33 1.33						50
51	3	15A	SL-F-315 SLUDGE DRYING BED FAN #11		1.33 1.33		SL-F-316 SLUDGE DRYING BED FAN #12	15A	3	52
53						1.33 1.33				54
55	---	---	SPACE	--- ---			SPACE	---	---	56
57	---	---	SPACE		--- ---		SPACE	---	---	58
59	---	---	SPACE			--- ---	SPACE	---	---	60
61	---	---	SPACE	--- ---			SPACE	---	---	62
63	---	---	SPACE		--- ---		SPACE	---	---	64
65	---	---	SPACE			--- ---	SPACE	---	---	66
			TOTAL KVA PER PHASE:	28.3	28.3	28.3				
			TOTAL KVA:			84.9				
			TOTAL AMPS PER PHASE:	102.1	102.1	102.1				
			TOTAL AMPS:			102.1				

NOTES:
1. PROVIDE MACHINE GENERATED PANELBOARD DIRECTORY AFTER COMPLETING WORK.

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WORCESTER COUNTY, MARYLAND

STATE OF MARYLAND
JORIS L. MEYER
53642
PROFESSIONAL ENGINEER
10/27/2026

SCHEDULES
ELECTRICAL

SCALE : AS NOTED	SHEET NO.
DESIGN BY : JPY	
DRAWN BY : JPY	E6.7
CHECKED BY : CLJ	
GMB FILE : 250196	
DATE : OCT. 2026	DRAWING OF

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K:\Projects\GMB\2025.03\250196 Mystic Harbour WWTP Biosolids Upgrade\Design\Drawings\Electrical\E6.6.dwg, 10/13/2026 12:21 PM, James Young
PEN1-WHITE .039 INCHES (1.00mm)
PEN4-MAGENTA .027 INCHES (.70mm)
PEN5-BLUE .020 INCHES (.53mm)
PLOT CODE PEN4-CYAN .014 INCHES (.35mm)
PEN3-GREEN .010 INCHES (.25mm)
PEN2-YELLOW .007 INCHES (.18mm)
PEN1-RED .006 INCHES (.14mm)

DUCTWORK SYMBOLS

SINGLE LINE / DOUBLE LINE

- NEW WORK
- EXISTING WORK TO REMAIN
- HIDDEN WORK
- DROP IN DUCT ELEVATION
- RISE IN DUCT ELEVATION
- DUCT UP
- DUCT DOWN
- ROUND DUCT UP
- ROUND DUCT DOWN
- TRANSITION (RECTANGULAR)
- TRANSITION (RECTANGULAR TO ROUND)
- VOLUME DAMPER (VD)
- FIRE DAMPER (FD)
- FLEXIBLE CONNECTION (FXC)
- VANED ELBOW
- RADIUSED ELBOW
- 45° BRANCH TAKE-OFF
- 45° BRANCH TAKE-OFF TO DIFFUSER
- 90° SPLIT TEE
- ACCESS PANEL (AP)
- ACCESS DOOR (AD)
- FLEXIBLE DUCTWORK
- LINED TRANSFER AIR DUCT

ABBREVIATIONS

AC	AIR CONDITIONING
ACC	AIR COOLED CONDENSER
AD	ACCESS DOOR
AHU	AIR HANDLING UNIT
AP	ACCESS PANEL
AS	AIR SEPARATOR
B	BOILER
BFP	BOILER FEED PUMP
BOD	BOTTOM OF DUCT
BTU	BRITISH THERMAL UNITS
CAD	CLEAN AGENT DAMPER
CC	COOLING COIL
CD	CEILING DIFFUSER
CFM	CUBIC FEET PER MINUTE
CH	CHILLER
CHWP	CHILLED WATER PUMP
CHWR	CHILLED WATER RETURN
CHWS	CHILLED WATER SUPPLY
CP	CONDENSATE PUMP
CRAC	COMPUTER ROOM AIR CONDITIONING UNIT
CT	COOLING TOWER
CU	CONDENSING UNIT
CW	COLD WATER
CWP	CONDENSER WATER PUMP
CWR	CONDENSER WATER RETURN
CWS	CONDENSER WATER SUPPLY
F	DEGREES FAHRENHEIT
D	DRAIN
DC	DRY COOLER
DOAS	DEDICATED OUTDOOR AIR SYSTEM
DP	DIFFERENTIAL PRESSURE SWITCH
DTR	DUAL TEMPERATURE RETURN
DTS	DUAL TEMPERATURE SUPPLY
DWG.	DRAWING
(E)	EXISTING
EA	EXHAUST AIR
EAV	EXHAUST AIR VALVE
EB	ELECTRIC BASEBOARD HEATER
EF	EXHAUST FAN
EG	EXHAUST GRILLE
ER	EXHAUST REGISTER
ET	EXPANSION TANK
EUH	ELECTRIC UNIT HEATER
F	FILTER
FD	FIRE DAMPER
FM	FLOW METER
FOP	FUEL OIL PUMP
FOR	FUEL OIL RETURN
FOS	FUEL OIL SUPPLY
FPM	FEET PER MINUTE
FT.	FEET
FTU	FAN TERMINAL UNIT
FXC	FLEXIBLE CONNECTION
FZ	FREEZSTAT
GA	GAGE
GPM	GALLONS PER MINUTE
GWP	GLYCOL WATER PUMP
GWR	GLYCOL WATER RETURN
GWS	GLYCOL WATER SUPPLY
H	HUMIDIFIER
HC	HEATING COIL
HP	HEAT PUMP
HP.	HORSEPOWER
HPC	HIGH PRESSURE CONDENSATE
HPS	HIGH PRESSURE STEAM
HUH	HYDRONIC UNIT HEATER
HWP	HOT WATER PUMP
HWR	HOT WATER RETURN
HWS	HOT WATER SUPPLY
HX	HEAT EXCHANGER
IN.	INCHES
KW	KILOWATT
L	LOUVER
LB.	POUNDS
LB/HR	POUNDS PER HOUR
LD	LINEAR DIFFUSER
LP	LOW PRESSURE
LPC	LOW PRESSURE CONDENSATE
LPS	LOW PRESSURE STEAM
MA	MIXED AIR
MAX.	MAXIMUM
MBH	1000 BTU
MIN.	MINIMUM
MOCB	MAXIMUM OVERCURRENT CIRCUIT BREAKER
MOD	MOTOR OPERATED DAMPER
MP	MEDIUM PRESSURE
MPC	MEDIUM PRESSURE CONDENSATE
MPS	MEDIUM PRESSURE STEAM
(N)	NEW
NC	NORMALLY CLOSED
NO	NORMALLY OPEN
OA	OUTDOOR AIR
OAI	OUTSIDE INTAKE AIR
O.C.	ON CENTER
OED	OPEN END DUCT
P	PUMP
PC	PUMPED CONDENSATE
PCHP	PROCESS CHILLER WATER PUMP
PCHR	PROCESS CHILLED WATER RETURN
PCHS	PROCESS CHILLED WATER SUPPLY
PCHWP	PRIMARY CHILLED WATER PUMP
PCHWR	PRIMARY CHILLED WATER RETURN
PHC	PREHEAT COIL
PRV	PRESSURE REDUCING VALVE
PSD	PLENUM SLOT DIFFUSER
PSIG	POUNDS PER SQUARE INCH
QTY.	QUANTITY
(R)	RELOCATE
RA	RETURN AIR
RD	ROUND DUCT
REL. HUM.	RELATIVE HUMIDITY
RF	RETURN FAN
RG	RETURN GRILLE
RHC	REHEAT COIL
RL	REFRIGERANT LIQUID
RPM	REVOLUTIONS PER MINUTE
RR	RETURN REGISTER
RS	REFRIGERANT SUCTION
RWR	RADIANT WATER RETURN
RWS	RADIANT WATER SUPPLY
S/S	START/STOP
SA	SOUND ATTENUATOR
SA	SUPPLY AIR
SAV	SUPPLY AIR VALVE
SMR	SNOWMELT RETURN
SMS	SNOWMELT SUPPLY
SF	SUPPLY FAN
SG	SUPPLY GRILLE
SM	SMOKE DETECTOR
SR	SUPPLY REGISTER
SRV	SAFETY RELIEF VALVE
TA	TRANSFER AIR
TDH	TOTAL DYNAMIC HEAD
TEMP.	TEMPERATURE
TG	TRANSFER GRILLE
TOD	TOP OF DUCT
TRD	TRANSFER DUCT
TRG	TOP RETURN GRILLE
TSR	TOP SUPPLY REGISTER
TYP.	TYPICAL
UH	UNIT HEATER
V	VENT
VAV	VARIABLE AIR VOLUME
VD	VOLUME DAMPER
W.G.	WATER GAGE
WMS	WIRE MESH SCREEN (316SS)

CONTROL DEVICE SYMBOLS

- (H) WALL MOUNTED H2S SENSOR
- (T) WALL MOUNTED TEMPERATURE SENSOR
- (O) WALL MOUNTED OXYGEN SENSOR
- (M) WALL MOUNTED METHANE SENSOR
- (CO_2) WALL MOUNTED CARBON DIOXIDE SENSOR
- (CO) WALL MOUNTED CARBON MONOXIDE SENSOR
- (FS) DUCT MOUNTED FLOW SENSOR/SWITCH
- (SD) SMOKE DETECTOR
- (P) DIFFERENTIAL PRESSURE SENSOR
- (CS) CURRENT SENSOR

REFERENCE SYMBOLS

- POINT OF CONNECTION BETWEEN NEW WORK AND EXISTING WORK
- POINT BETWEEN EXISTING WORK TO REMAIN AND EXISTING WORK TO BE REMOVED
- (X) SHEET NOTE DESIGNATION
- (X) DEMOLITION NOTE DESIGNATION
- A / M-100 DETAIL LETTER/NUMBER DESIGNATION DRAWING NUMBER CONTAINING DETAIL
- A / M-100 SECTION LETTER/NUMBER DESIGNATION DRAWING NUMBER CONTAINING SECTION
- TO BE DEMOLISHED

VALVE SYMBOLS

- SHUTOFF/ISOLATION VALVE
- GLOBE VALVE
- GATE VALVE
- BALL VALVE
- BUTTERFLY VALVE
- SWING CHECK VALVE
- LIFT CHECK VALVE
- PLUG VALVE
- GAS COCK VALVE
- CIRCUIT SETTER VALVE
- AUTOMATIC FLOW VALVE
- TRIPLE DUTY VALVE
- STRAINER WITH BLOWOFF VALVE
- 2-WAY CONTROL VALVE
- 3-WAY CONTROL VALVE
- SOLENOID VALVE
- PRESSURE REDUCTING VALVE
- SAFETY RELIEF VALVE
- FLOW CHECK VALVE
- QUICK CLOSING VALVE

FITTING SYMBOLS

- DIRECTION OF FLOW
- DIRECTION OF PITCH
- ECCENTRIC REDUCER OR INCREASER
- CONCENTRIC REDUCER OR INCREASER
- PIPE RISING UP
- PIPE DROPPING DOWN
- BOTTOM TEE
- CAP
- FLEXIBLE PIPE CONNECTION
- UNION (<2-1/2") OR FLANGE (>2")
- THERMOMETER
- PRESSURE GAUGE

EQUIPMENT TAG LEGEND

XX – YY – ZZ	EQUIPMENT TAG
XX	BUILDING NUMBER – IF APPLICABLE
YY	EQUIPMENT TYPE, SEE EQUIPMENT SCHEDULES
ZZ	EQUIPMENT TAG NUMBER FOR BUILDING

AIR DEVICE LEGEND

- SUPPLY/RETURN AIR DIRECTION
- AIRFLOW ARROW
- 4-WAY BLOW DIFFUSER (CD)
- 3-WAY BLOW DIFFUSER (CD)
- 2-WAY BLOW DIFFUSER (CD)
- 2-WAY CORNER BLOW DIFFUSER (CD)
- 1-WAY BLOW DIFFUSER (CD)
- ROUND DIFFUSER (CD)
- RETURN AIR REGISTER (RAR)
- EXHAUST AIR REGISTER (EAR)
- SUPPLY AIR REGISTER (SAR)
- LINEAR DIFFUSER (LD)
- LINEAR RETURN (LR)

LINE 1 / LINE 2 / LINE 3
AIR DEVICE CALL OUT BOX
LINE 1 = AIR DEVICE TAG
LINE 2 = CFM
LINE 3 = SIZE

CONTROL DIAGRAM LEGEND

- EXTERIOR FAN
- INTERIOR FAN
- INLINE FAN
- GRAVITY DAMPER
- MOTORIZED DAMPER
- FIXED LOUVER
- MOTOR OPERATED LOUVER

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STATE OF MARYLAND
CHRISTOPHER J. MEYER
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PROFESSIONAL ENGINEER
10/27/2026

LEGEND
MECHANICAL

SCALE : AS NOTED	SHEET NO.
DESIGN BY : PJS	M0.0
DRAWN BY : AMB	
CHECKED BY : CLJ	
GMB FILE : 250196	
DATE : NOV. 2025	DRAWING OF

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PLOT CODE
PEN1-RED .008 INCHES (.15mm)
PEN2-YELLOW .007 INCHES (.13mm)
PEN3-GREEN .010 INCHES (.25mm)
PEN4-CYAN .014 INCHES (.35mm)
PEN5-BLUE .020 INCHES (.50mm)
PEN6-MAGENTA .027 INCHES (.70mm)
PEN7-WHITE .039 INCHES (1.00mm)

GENERAL NOTES:

1. ALL MECHANICAL EQUIPMENT AND INSTALLATIONS SHALL CONFORM WITH THE REQUIREMENTS OF THE LATEST APPLICABLE VERSION OF THE INTERNATIONAL MECHANICAL CODE (IMC), NFPA 90A, INTERNATIONAL FUEL GAS CODE, INTERNATIONAL BUILDING CODE (IBC), INTERNATIONAL ENERGY CONSERVATION CODE (IECC), AS ADOPTED BY THE AUTHORITY HAVING JURISDICTION (AHJ) AND UNDERWRITER'S LABORATORIES (UL).
2. PRIOR TO PURCHASING ANY MATERIALS OR COMMENCING WORK, CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS SHOWN ON THE DRAWINGS OR AFFECTING THIS WORK AND SHALL REPORT ANY DEVIATIONS TO THE ENGINEER.
3. ALL DRAWINGS ARE DIAGRAMMATIC AND INDICATE GENERAL ARRANGEMENTS, APPROXIMATE SIZES, AND RELATIVE LOCATIONS OF PRINCIPAL ELEMENTS. PROVIDE OFFSETS AS REQUIRED FOR COORDINATED INSTALLATIONS. PROVIDE EQUIPMENT, MATERIALS, AND METHODS NOT SHOWN OR SPECIFIED, BUT REQUIRED TO COMPLETE THE WORK. DO NOT SCALE DRAWINGS FOR DIMENSIONS.
4. PRIOR TO START OF WORK, CONTRACTOR SHALL NOTIFY ENGINEER, IN WRITING, OF ANY DISCREPANCIES BETWEEN EXISTING CONDITIONS AND CONTRACT DOCUMENTS.
5. PROVIDE ALL LABOR, MATERIAL, AND EQUIPMENT COMPLETELY TO PROVIDE FULLY OPERATIONAL SYSTEMS.
6. ALL MECHANICAL EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
7. CONTRACTOR SHALL COORDINATE THE INSTALLATION OF ALL MECHANICAL EQUIPMENT AND DUCTWORK TO FIT WITHIN THE SPACE ALLOWED BY THE ARCHITECTURAL AND STRUCTURAL CONDITIONS. CUTTING OR ALTERING ANY STRUCTURAL MEMBERS SHALL NOT BE PERMITTED WITHOUT WRITTEN PERMISSION FROM THE ARCHITECT OR STRUCTURAL ENGINEER.
8. DO NOT INSTALL PIPING OVER, AROUND, IN FRONT OF, IN BACK OF, OR BELOW ELECTRICAL CONTROLS, PANELS, SWITCHES, TERMINAL BOXES, OR SIMILAR ELECTRICAL EQUIPMENT. DRIP PANS ARE NOT PERMITTED.
9. DO NOT ALLOW EQUIPMENT, PIPING OR DUCTWORK TO INFRINGE UPON WORKING CLEARANCES REQUIRED BY NEC.
10. POSITION ALL MECHANICAL WORK FOR EASY UNOBSTRUCTED MAINTENANCE ACCESS AND OPERATION.
11. WORK WILL OCCUR IN AND AROUND OWNER OPERATIONS. PROVIDE MINIMUM ONE WEEK NOTICE FOR SHUTDOWNS TO ANY SYSTEMS. WHERE PARTS OF EXISTING SYSTEMS BEING REMOVED REQUIRE CONTINUOUS OPERATION, INSTALL AND MAKE NEW SYSTEMS OPERATIONAL, PRIOR TO REMOVAL OF EXISTING SYSTEMS.
12. THE TERM "FURNISH" SHALL MEAN TO OBTAIN AND DELIVER TO THE JOB SITE. THE TERM "INSTALL" SHALL MEAN TO UNPACK, STORE, ASSEMBLE, FIX IN POSITION, AND CONNECT FOR USE. THE TERM "PROVIDE" SHALL MEAN TO FURNISH AND INSTALL. THE TERM "CONTRACTOR" SHALL MEAN THE MECHANICAL CONTRACTOR OR ANY MECHANICAL SUBCONTRACTOR.
13. THE CONTRACTOR SHALL ENSURE THAT ALL RULES AND REGULATIONS, INCLUDING THOSE WHICH MAY BE ISSUED BY THE OWNER, ARE BEING OBSERVED. THE CONTRACTOR SHALL INSTALL SIGNAGE, BARRIERS AND OTHER MEANS TO PROVIDE WARNINGS AND RESTRICT ACCESS TO CONSTRUCTION AREAS.
14. EACH CONTRACTOR SHALL COORDINATE ITS OPERATIONS WITH OPERATIONS OF OTHER TRADE CONTRACTORS THAT DEPEND ON EACH OTHER FOR PROPER INSTALLATION, CONNECTION AND OPERATION.
15. THE INSTALLATION OF ALL EQUIPMENT SHALL PERMIT ADEQUATE ACCESSIBILITY FOR PROPER MAINTENANCE.
16. UNLESS THE CONTRACT DOCUMENTS INCLUDE MORE STRINGENT REQUIREMENTS, APPLICABLE CONSTRUCTION INDUSTRY STANDARDS HAVE THE SAME FORCE AND EFFECT AS IF COPIED DIRECTLY INTO THE CONTRACT DOCUMENTS TO THE EXTENT REFERENCE. SUCH STANDARDS ARE MADE PART OF THE CONTRACT DOCUMENTS BY REFERENCE.
17. COMPLY WITH STANDARDS IN EFFECT AS OF THE DATE OF THE CONTRACT DOCUMENTS UNLESS OTHERWISE INDICATED.
18. THE CONTRACTOR SHALL BE FAMILIAR WITH INDUSTRY STANDARDS APPLICABLE TO ITS CONSTRUCTION ACTIVITY. WHERE COPIES OF STANDARDS ARE NEEDED TO PERFORM A REQUIRED CONSTRUCTION ACTIVITY, OBTAIN COPIES DIRECTLY FROM PUBLICATION SOURCE.
19. THE CONTRACTOR SHALL COMPLY WITH ALL LAWS, ORDINANCES, STATUTES AND LAWFUL ORDERS ISSUED BY AUTHORITIES HAVING JURISDICTION AND RULES, CONVENTIONS, AND AGREEMENTS WITHIN THE CONSTRUCTION INDUSTRY THAT CONTROL THE PERFORMANCE OF THE WORK.
20. THE PRODUCTS SHOWN ON THE DRAWINGS ARE BASED ON A SPECIFIC MANUFACTURER, MAKE, AND MODEL. THESE PRODUCTS ESTABLISH SIGNIFICANT QUALITIES RELATED TO TYPE, FUNCTION, DIMENSION, IN-SERVICE PERFORMANCE, PHYSICAL PROPERTIES, APPEARANCE, AND OTHER CHARACTERISTICS FOR PURPOSES OF EVALUATING PRODUCTS OF OTHER NAMED MANUFACTURERS.
21. THE ENGINEER WILL CONSIDER REQUESTS FOR SUBSTITUTION WHEN THE FOLLOWING CONDITIONS ARE SATISFIED: REQUESTED SUBSTITUTION OFFERS OWNER A SUBSTANTIAL ADVANTAGE IN COST, TIME OR ENERGY CONSERVATION AFTER DEDUCTING ADDITIONAL RESPONSIBILITIES THE SUBSTITUTION MAY PRESENT TO THE OWNER INCLUDING COMPENSATION TO ENGINEER FOR REDESIGN AND EVALUATION SERVICES AND INCREASED CONSTRUCTION COSTS OF RELATED WORK; DOES NOT REQUIRE EXTENSIVE REVISIONS TO THE CONTRACT DOCUMENTS; IS CONSISTENT WITH THE CONSTRUCTION DOCUMENTS AND WILL PRODUCE THE INDICATED RESULTS; IS FULLY DOCUMENTED AND PROPERLY SUBMITTED; WILL NOT ADVERSELY AFFECT THE CONTRACTOR'S CONSTRUCTION SCHEDULE; AND HAD BEEN COORDINATED WITH OTHER RELATED WORK.
22. THE CONTRACTOR SHALL DELIVER, STORE, AND HANDLE PRODUCTS USING MEANS AND METHODS THAT WILL PREVENT DAMAGE, DETERIORATION, AND LOSS. COMPLY WITH MANUFACTURER'S WRITTEN INSTRUCTIONS. THE CONTRACTOR SHALL STORE MATERIALS IN A MANNER THAT WILL NOT ENDANGER PROJECT STRUCTURE.
23. THE CONTRACTOR SHALL COMPLETE OR CORRECT ALL WORK IDENTIFIED AS NOT CONFORMING TO THE CONTRACT DOCUMENTS.
24. PROVIDE PERMANENT IDENTIFICATION LABELS FOR ALL NEW EQUIPMENT
25. THE CONTRACTOR SHALL PREPARE ELECTRONIC AS BUILT DRAWINGS AND PROVIDE SOURCE INFORMATION, MANUFACTURERS, MAINTENANCE DOCUMENTATION, MAINTENANCE PROCEDURES, MAINTENANCE AND SERVICE SCHEDULES, SPARE PARTS LISTS, AND WARRANTY AND BOND INFORMATION FOR EACH PIECE OF EQUIPMENT.
26. THE CONTRACTOR SHALL TRAIN OWNER'S PERSONALLY IN THE OPERATION, EMERGENCY PROCEDURES, ADJUSTMENT TROUBLESHOOTING, MAINTENANCE AND REPAIR OF EACH PIECE OF EQUIPMENT.
27. THE CONTRACTOR SHALL TAKE FIELD MEASUREMENTS AS REQUIRED TO FIT THE WORK PROPERLY. WHERE PORTIONS OF THE WORK ARE INDICATED TO FIT TO OTHER CONSTRUCTION, VERIFY DIMENSIONS OF OTHER CONSTRUCTION BY FIELD MEASUREMENTS BEFORE FABRICATION.
28. THE CONTRACTOR SHALL INSTALL VERTICAL WORK PLUMB AND HORIZONTAL WORK LEVEL UNLESS OTHERWISE INDICATED. WHERE SPACE IS LIMITED, INSTALL COMPONENTS TO MAXIMIZE SPACE AVAILABLE FOR MAINTENANCE AND EASE OF REMOVAL FOR REPLACEMENT. CONCEAL PIPES, DUCTS, WIRING, ETC, IN FINISHED AREAS UNLESS EASE OF REMOVAL FOR REPLACEMENT. MAINTAIN MINIMUM HEADROOM CLEARANCE OF 8'-0" IN SPACES WITHOUT CEILINGS.
29. THE CONTRACTOR SHALL COMPLY WITH MANUFACTURER'S WRITTEN INSTRUCTIONS AND RECOMMENDATIONS FOR INSTALLING PRODUCTS IN APPLICATIONS INDICATED.
30. PROVIDE VIBRATION ISOLATORS FOR MOTOR DRIVEN MECHANICAL EQUIPMENT UNLESS SPECIFICALLY NOTED OTHERWISE. PROVIDE ISOLATION AS RECOMMENDED BY THE EQUIPMENT MANUFACTURERS.
31. GENERAL CONTROL WIRING, THERMOSTATS, MOTORIZED DAMPERS AND CONDUIT ASSOCIATE WITH HVAC EQUIPMENT IS THE RESPONSIBILITY OF THE CONTRACTOR. INSTALL THERMOSTATS CENTERED AT 4'-0" ABOVE FINISHED FLOOR, UNLESS OTHERWISE INDICATED.
32. LOCATIONS AND SIZES OF ALL FLOOR, WALL, AND ROOF OPENINGS SHALL BE COORDINATED WITH ALL OTHER TRADES INVOLVED.
33. LOCATE ALL TEMPERATURE, PRESSURE, AND FLOW MEASURING DEVICES IN ACCESSIBLE LOCATIONS WITH THE STRAIGHT SECTION OF DUCT UP- AND DOWNSTREAM AS RECOMMENDED BY THE MANUFACTURER FOR GOOD ACCURACY.
34. WHERE TWO OR MORE ITEMS OF THE SAME TYPE OF EQUIPMENT ARE REQUIRED, THE PRODUCT OF ONE MANUFACTURER SHALL BE USED.
35. COORDINATE ALL EQUIPMENT CONNECTIONS WITH MANUFACTURERS' CERTIFIED DRAWINGS. COORDINATE AND PROVIDE ALL DUCT AND PIPING TRANSITIONS REQUIRED FOR FINAL EQUIPMENT CONNECTIONS TO FURNISHED EQUIPMENT. FIELD VERIFY AND COORDINATE ALL DUCT AND PIPING DIMENSIONS BEFORE FABRICATION.
36. ALL CONTROL WIRE AND CONDUIT SHALL COMPLY WITH THE NATIONAL ELECTRIC CODE AND DIVISION 26 OF THE SPECIFICATION.
37. WHEN MECHANICAL WORK IS SUBCONTRACTED, IT SHALL BE THE MECHANICAL CONTRACTOR'S RESPONSIBILITY TO COORDINATE SUBCONTRACTORS AND THE ASSOCIATED CONTRACTS. WHEN DISCREPANCIES ARISE PERTAINING TO WHICH CONTRACTOR PROVIDES A PARTICULAR ITEM OF THE MECHANICAL CONTRACT OR WHICH CONTRACTOR PROVIDES FINAL CONNECTIONS FOR A PARTICULAR ITEM OF THE MECHANICAL CONTRACT, IT SHALL BE BROUGHT TO THE ATTENTION OF THE MECHANICAL CONTRACTOR, WHOSE DECISION SHALL BE FINAL.
38. ALL MISCELLANEOUS STEEL REQUIRED TO ENSURE PROPER INSTALLATION AND AS SHOWN IN DETAILS FOR DUCTWORK AND EQUIPMENT (UNLESS OTHERWISE NOTED) SHALL BE FURNISHED AND INSTALLED BY THE MECHANICAL CONTRACTOR.
39. ALL DUCTWORK AND EQUIPMENT SUPPORTED FROM STRUCTURAL STEEL SHALL BE COORDINATED WITH THE GENERAL CONTRACTOR. ALL ATTACHMENTS TO STEEL BAR JOISTS, TRUSSES, OR JOIST GIRDERS SHALL BE AT PANEL POINTS. PROVIDE BEAM CLAMPS MEETING MSS STANDARDS. WELDING TO STRUCTURAL MEMBERS SHALL NOT BE PERMITTED. THE USE OF C-CLAMPS SHALL NOT BE PERMITTED.

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PROFESSIONAL ENGINEER
10/27/2026

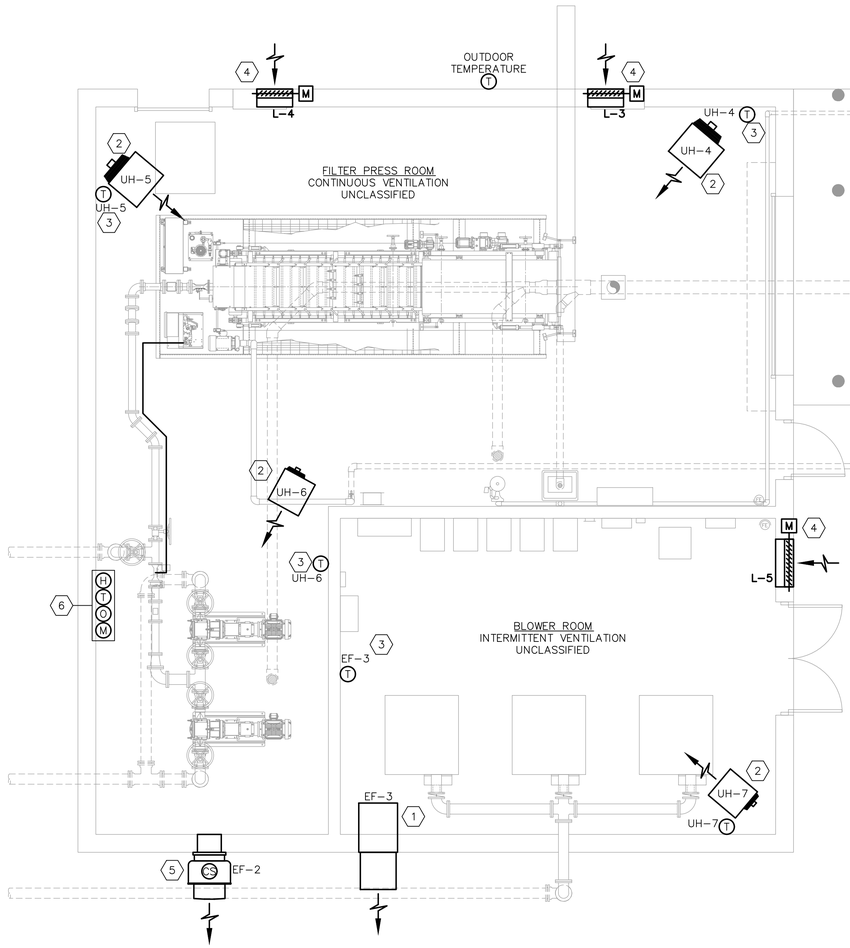
GENERAL NOTES
HVAC
MECHANICAL

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KEYNOTES:

1. MOUNT TOP OF EXHAUST FAN AT 14'–0" AFF.
2. MOUNT BOTTOM OF UNIT HEATER AT 7'–0" AFF.
3. MOUNT THERMOSTAT AT 4'–0" AFF.
4. MOUNT BOTTOM OF LOUVER AT 1'–4" AFF.
5. MOUNT TOP OF EXHAUST FAN WALL OPENING AT 14'–0".
6. MOUNT H2S SENSOR 12" BELOW THE ROOF, MOUNT TEMPERATURE AND OXYGEN SENSORS AT 4'–0" AFF, MOUNT METHANE SENSOR 12" AFF.



SLUDGE DEWATERING BUILDING HVAC PLAN

SCALE: 1/4" = 1'

0 2 4 6 8 10

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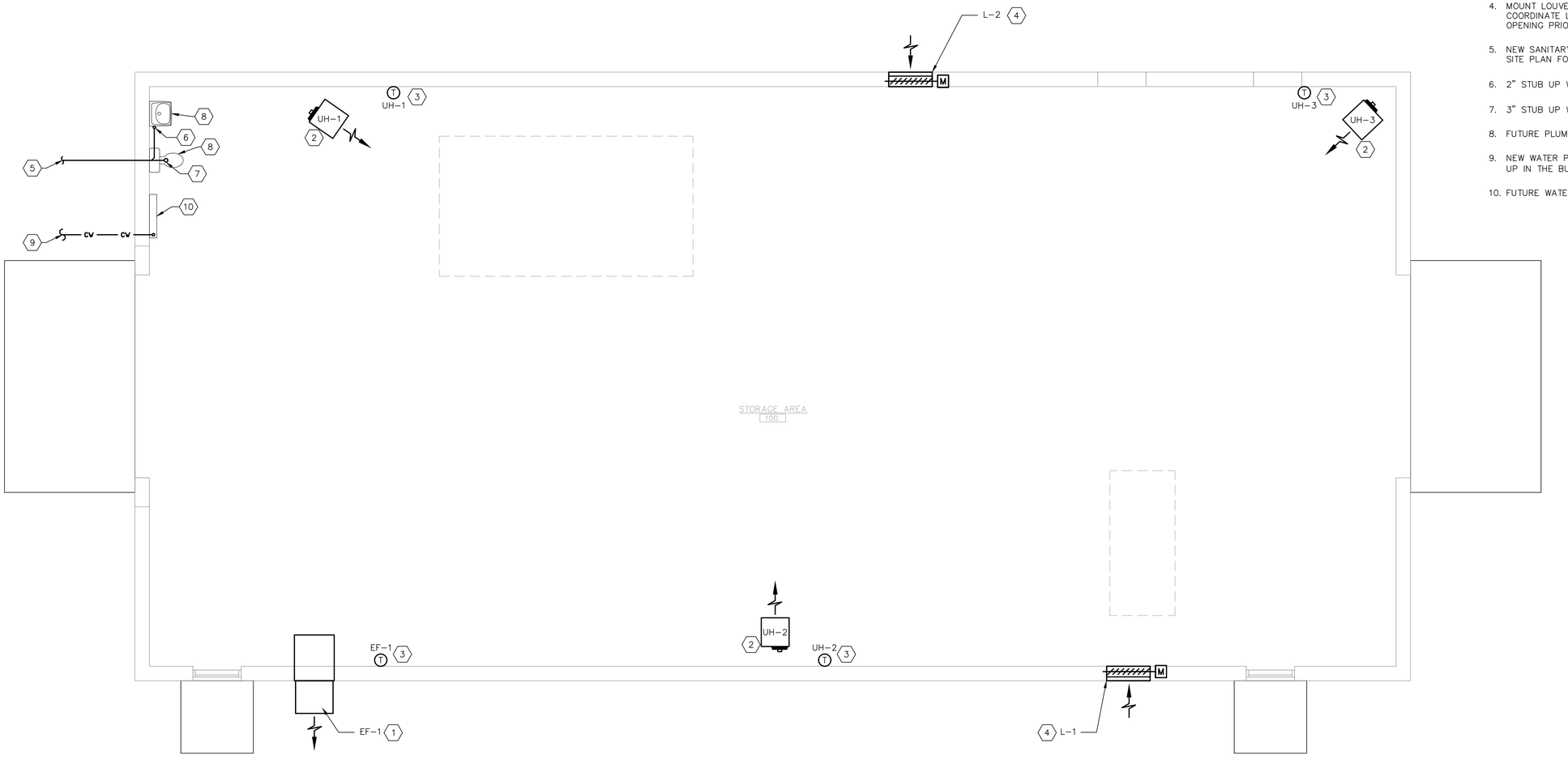
SLUDGE DEWATERING BUILDING HVAC MECHANICAL

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PEN5-BLUE .020 INCHES (.50mm)
PEN6-MAGENTA .027 INCHES (.70mm)
PEN7-WHITE .039 INCHES (1.00mm)



KEYNOTES:

1. MOUNT TOP OF EXHAUST FAN AT 14'-8" AFF.
2. MOUNT BOTTOM OF UNIT HEATER AT 10'-0" AFF.
3. MOUNT THERMOSTAT AT 4'-0" AFF.
4. MOUNT LOUVER IN EXISTING WALL OPENING. COORDINATE LOUVER SIZE TO FILL THE EXISTING OPENING PRIOR TO ORDERING.
5. NEW SANITARY PIPING FOR FUTURE TOILET ROOM – SEE SITE PLAN FOR CONTINUATION.
6. 2" STUB UP WITH CAP FOR FUTURE LAVATORY
7. 3" STUB UP WITH CAP FOR FUTURE WATER CLOSET.
8. FUTURE PLUMBING FIXTURE.
9. NEW WATER PIPING FOR FUTURE TOILET ROOM – STUB UP IN THE BUILDING AND PROVIDE BALL VALVE/CAP.
10. FUTURE WATER SERVICE EQUIPMENT.

FLOOR PLAN – STORAGE BUILDING MECHANICAL

SCALE: 1/4" = 1'-0"

0 2 4 6 8 10

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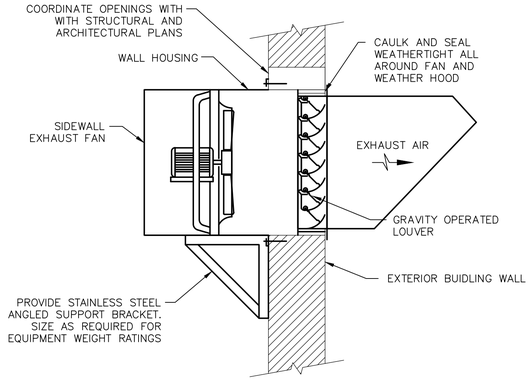
STORAGE BUILDING HVAC MECHANICAL

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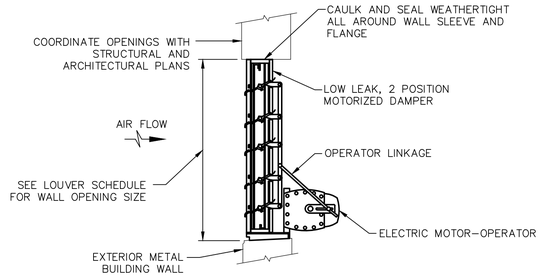
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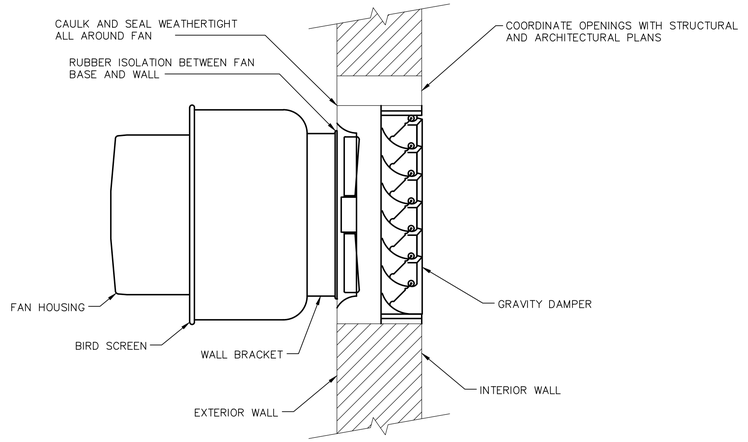
WALL MOUNTED EXHAUST FAN DETAIL

NOT TO SCALE



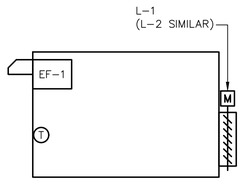
MOTOR OPERATED WALL LOUVER DETAIL

NOT TO SCALE



WALL MOUNTED EXHAUST FAN DETAIL

NOT TO SCALE

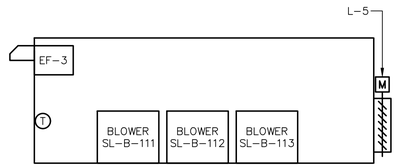


A. GENERAL

1. AS SPACE TEMPERATURE RISES ABOVE SETPOINT OF 80 DEGREES F (ADJ.), AS SENSED AT THE LINE VOLTAGE WALL MOUNTED THERMOSTAT, EF-1 SHALL START AND L-1/L-2 SHALL OPEN.
2. UPON A DROP IN TEMPERATURE BELOW SETPOINT EF-1 SHALL BE DE-ENERGIZED AND L-1/L-2 SHALL CLOSE.

STORAGE BUILDING EXHAUST FAN CONTROL SCHEMATIC

NOT TO SCALE

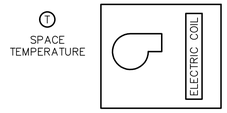


A. GENERAL

1. AS SPACE TEMPERATURE RISES ABOVE SETPOINT OF 80 DEGREES F (ADJ.), AS SENSED AT THE LINE VOLTAGE WALL MOUNTED THERMOSTAT, EF-3 SHALL START.
2. UPON A DROP IN TEMPERATURE BELOW SETPOINT EF-3 SHALL BE DE-ENERGIZED.
3. LOUVER L-5 SHALL OPEN WHEN ANY OF THE FOLLOWING ITEMS OPERATES.
   - EXHAUST FAN EF-3
   - BLOWER SL-B-111
   - BLOWER SL-B-112
   - BLOWER SL-B-113

BLOWER ROOM EXHAUST FAN CONTROL SCHEMATIC

NOT TO SCALE

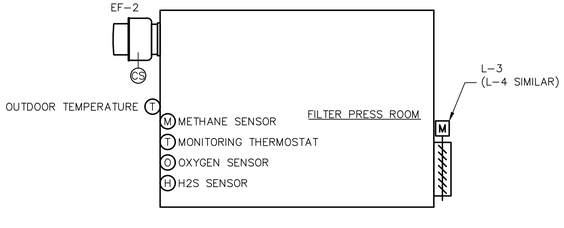


A. GENERAL

1. AS SPACE TEMPERATURE DROPS BELOW SETPOINT OF 60 DEGREES F (ADJ.), AS SENSED AT THE WALL MOUNTED THERMOSTAT, ELECTRIC UNIT HEATER SHALL START.
2. UPON A RISE IN TEMPERATURE ABOVE SETPOINT UNIT SHALL BE DE-ENERGIZED.
3. TYPICAL FOR UH-1 THROUGH UH-7.

ELECTRIC UNIT HEATER CONTROL SCHEMATIC

NOT TO SCALE



FILTER PRESS ROOM VENTILATION SYSTEM CONTROL SCHEMATIC

A. GENERAL
   1. SPACE IS CLASSIFIED AS CLASS 1 DIVISION 2 PER NFPA 820. EXHAUST FAN EF-2 SHALL RUN CONTINUOUSLY TO DECLASSIFY THE SPACE TO BE UNCLASSIFIED.

B. FUNCTIONAL DESCRIPTION
   1. HIGH VENTILATION RATE: EXHAUST FAN EF-2 SHALL RUN CONTINUOUSLY AT THE HIGH VENTILATION RATE WHEN THE LOW VENTILATION CRITERIA ARE NOT MET. THE HIGH VENTILATION RATE IS THE FULL SCHEDULED AIRFLOW FOR THE FAN.
   2. LOW VENTILATION RATE: WHEN THE FOLLOWING CONDITIONS ARE MET, EXHAUST FAN EF-2 SHALL OPERATE AT THE LOW VENTILATION RATE:
      a. THE OUTDOOR AIR TEMPERATURE IS LESS THAN OR EQUAL TO 50°F
      b. THE ROOM IS UNOCCUPIED (LIGHTS ARE OFF).
      c. GAS DETECTION SYSTEM DOES NOT INDICATE A HIGH LEVEL OF METHANE OR H2S IN THE SPACE.
      d. GAS DETECTION SYSTEM DOES NOT DETECT LOW LEVELS OF OXYGEN IN THE SPACE.

      THE LOW VENTILATION RATE IS 50% OF THE FULL SCHEDULED AIRFLOW FOR THE FAN
   3. MONITORING THERMOSTAT: THE SCADA SYSTEM SHALL CONTINUOUSLY MONITOR THE TEMPERATURE OF THE SPACES VIA MONITORING THERMOSTAT.
   4. CURRENT SENSOR: THE SCADA SYSTEM SHALL CONTINUOUSLY MONITOR THE CURRENT SENSOR AT EXHAUST FAN EF-2.
   5. OUTDOOR AIR TEMPERATURE: THE SCADA SYSTEM SHALL CONTINUOUSLY MONITOR THE OUTDOOR AIR TEMPERATURE TO SWITCH BETWEEN LOW AND HIGH VENTILATION RATES.

C. ALARMS/SAFE ENTRY DISPLAY
   1. THE SCADA SYSTEM SHALL PROVIDE AN ALARM FOR THE FOLLOWING CONDITIONS:
      a. EXHAUST FAN EF-2 SENDS A FAULT SIGNAL FROM THE FAN STARTER.
      b. SPACE TEMPERATURE DROPS BELOW 45°F. AT THE MONITORING THERMOSTAT.
      c. THE CURRENT SENSOR AT EF-2 INDICATES A MOTOR/FAN FAILURE.
      d. THE GAS DETECTION SYSTEM INDICATES A HIGH LEVEL OF METHANE OR H2S IN THE SPACE.
      e. THE GAS DETECTION SYSTEM INDICATES A LOW LEVEL OF OXYGEN IN THE SPACE.
   2. THE SAFE ENTRY DISPLAY SYSTEM SHALL MONITOR THE FOLLOWING SIGNALS FROM SCADA:
      a. EXHAUST FAN EF-2 RUNNING SIGNAL (FROM THE STARTER).
      b. AIR FLOW SWITCH.
      c. GAS DETECTION SYSTEM.

D. COORDINATION
   1. ALL SENSORS ARE PROVIDED BY DIVISION 40.

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WORCESTER COUNTY, MARYLAND

STATE OF MARYLAND
CURTIS J. MEYER
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PROFESSIONAL ENGINEER
10/27/2026

DETAILS
HVAC
MECHANICAL

SCALE : AS NOTED	SHEET NO.
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PEN7-WHITE .039 INCHES (1.00mm)

LOUVER SCHEDULE

TAG NUMBER	MANUFACTURER	LOCATION	MODEL NUMBER	CFM/UNIT	LOUVER TYPE	FREE AREA VELOCITY (FPM)	S.P. DROP IN.W.C.	NOMINAL SIZE (in.)		DAMPER TYPE	DAMPER VOLTAGE	NOTES
								WIDTH	HEIGHT			
L-1	GREENHECK	STORAGE BUILDING	EAD-635	1,500	OPERABLE	416	0.02	36	28	INTEGRAL	120	NEMA-1, FAIL CLOSED ACTUATOR, BIRD SCREEN, KYNAR 2-COAT COATING ON LOUVER AND ALL ACCESSORIES, OWNER TO SELECT FINAL COLOR
L-2	GREENHECK	STORAGE BUILDING	EAD-635	1,500	OPERABLE	416	0.02	36	28	INTEGRAL	120	NEMA-1, FAIL CLOSED ACTUATOR, BIRD SCREEN, KYNAR 2-COAT COATING ON LOUVER AND ALL ACCESSORIES, OWNER TO SELECT FINAL COLOR
L-3	GREENHECK	FILTER PRESS ROOM	EAD-635	885	OPERABLE	477	0.03	24	24	INTEGRAL	120	NEMA-4X, FAIL CLOSED ACTUATOR, BIRD SCREEN, KYNAR 2-COAT COATING ON LOUVER AND ALL ACCESSORIES, OWNER TO SELECT FINAL COLOR
L-4	GREENHECK	FILTER PRESS ROOM	EAD-635	885	OPERABLE	477	0.03	24	24	INTEGRAL	120	NEMA-4X, FAIL CLOSED ACTUATOR, BIRD SCREEN, KYNAR 2-COAT COATING ON LOUVER AND ALL ACCESSORIES, OWNER TO SELECT FINAL COLOR
L-5	GREENHECK	BLOWER ROOM	EAD-635	3,590	OPERABLE	442	0.02	32	64	INTEGRAL	120	NEMA-4X, FAIL CLOSED ACTUATOR, BIRD SCREEN, KYNAR 2-COAT COATING ON LOUVER AND ALL ACCESSORIES, OWNER TO SELECT FINAL COLOR

FAN SCHEDULE

TAG NUMBER	MANUFACTURER	LOCATION	MODEL NUMBER	PRESSURE DROP		FAN TYPE	COLLAR OPENING (in.)	DRIVE	CFM	DAMPER SIZE (in.)	MOTOR HP	FAN RPM	WINDINGS	ELECTRICAL	NOTES
				EXTERNAL S.P.	TOTAL S.P.									VOLTS-PH-HZ	
EF-1	GREENHECK	STORAGE BUILDING	SE1-20-428-B4	0.1	0.34	SIDEWALL	27.5 x 27.5	DIRECT	3,000	22 x 22	1/2	1,160	1	120-1-60	BACKDRAFT DAMPER, SHORT WALL HOUSING WITH FLUSH EXTERIOR AND OSHA GUARD, 45 DEGREE WEATHER HOOD, HI-PRO POLYESTER COATING ON FAN AND WEATHER HOOD, NEMA 1 DISCONNECT SWITCH, JUNCTION BOX WIRED AND MOUNTED, VG MOTOR WITH DIAL FOR BALANCING, PROVIDE PECO THERMOSTAT MODEL TF115-01
EF-2	GREENHECK	FILTER PRESS ROOM	CUE-160-C	0.250	0.315	SIDEWALL	18 x 18	DIRECT	1,770	NA	1/4	860	1	120-1-60	NEMA-4X DISCONNECT SWITCH, BACKDRAFT DAMPER, HI-PRO POLYESTER COATING, CONTINUOUS OPERATION, 2-SPEED VG MOTOR, WALL BRACKET, JUNCTION BOX WIRED AND MOUNTED, BIRDSCREEN
EF-3	GREENHECK	BLOWER ROOM	AER-20-VG	0.250	0.45	SIDEWALL	27.5 X 27.5	DIRECT	2,900	22 X 22	1/2	1,640	1	120-1-60	BACKDRAFT DAMPER, SHORT WALL HOUSING WITH FLUSH EXTERIOR AND OSHA GUARD, 45 DEGREE WEATHER HOOD, HI-PRO POLYESTER COATING ON FAN AND WEATHER HOOD, NEMA 4X DISCONNECT SWITCH, JUNCTION BOX SHIPPED WITH UNIT, VG MOTOR WITH DIAL FOR BALANCING, PROVIDE PECO THERMOSTAT MODEL TF115-01

UNIT HEATER SCHEDULE

TAG NUMBER	MANUFACTURER	LOCATION	MODEL NUMBER	TYPE	KW/MBH	ELECTRICAL			FAN CFM	NOTES
						VOLTS	PHASE	MCA		
UH-1	REZNOR	STORAGE BUILDING	EUH-7	ELECTRIC	7.0/23.9	480	3	9.2	740	PROVIDE PECO THERMOSTAT MODEL TF115-01, PROVIDE WALL OR CEILING BRACKETS AS REQUIRED
UH-2	REZNOR	STORAGE BUILDING	EUH-7	ELECTRIC	7.0/23.9	480	3	9.2	740	PROVIDE PECO THERMOSTAT MODEL TF115-01, PROVIDE WALL OR CEILING BRACKETS AS REQUIRED
UH-3	REZNOR	STORAGE BUILDING	EUH-7	ELECTRIC	7.0/23.9	480	3	9.2	740	PROVIDE PECO THERMOSTAT MODEL TF115-01, PROVIDE WALL OR CEILING BRACKETS AS REQUIRED
UH-4	REZNOR	FILTER PRESS ROOM	EUH-15	ELECTRIC	15/51.1	480	3	19.0	1,215	PROVIDE PECO THERMOSTAT MODEL TF115-01, PROVIDE WALL OR CEILING BRACKETS AS REQUIRED
UH-5	REZNOR	FILTER PRESS ROOM	EUH-15	ELECTRIC	15/51.1	480	3	19.0	1,215	PROVIDE PECO THERMOSTAT MODEL TF115-01, PROVIDE WALL OR CEILING BRACKETS AS REQUIRED
UH-6	REZNOR	FILTER PRESS ROOM	EUH-7	ELECTRIC	7.0/23.9	480	3	9.2	740	PROVIDE PECO THERMOSTAT MODEL TF115-01, PROVIDE WALL OR CEILING BRACKETS AS REQUIRED
UH-7	REZNOR	BLOWER ROOM	EUH-5	ELECTRIC	5.0/17.1	480	3	6.7	480	PROVIDE PECO THERMOSTAT MODEL TF115-01, PROVIDE WALL OR CEILING BRACKETS AS REQUIRED

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PEN1-RED .009 INCHES (.23mm)
PEN2-YELLOW .007 INCHES (.18mm)
PEN3-GREEN .010 INCHES (.25mm)
PLOT CODE PEN4-CYAN .014 INCHES (.35mm)
PEN5-BLUE .020 INCHES (.50mm)
PEN6-MAGENTA .027 INCHES (.70mm)
PEN7-WHITE .039 INCHES (1.00mm)

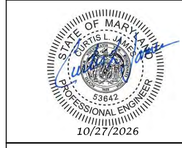
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250196 MYSTIC HARBOUR WWTP BIOSOLIDS UPGRADE & BUILDING REHIBILITATION

WORCESTER COUNTY, MARYLAND



SCHEDULES
HVAC
MECHANICAL

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CHECKED BY : CTJ	
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DATE : NOV. 2025	DRAWING OF

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GENERAL

1. ALL PLUMBI :TALLATIONS SHALL CONFORM WITH THE REQUIR T APPLICABLE VERSION OF THE INTERNATION PC), INTERNATIONAL BUILDING CODE (IBC), AND I CONSERVATION CODE (IECC), AS ADOPTED BY NG JURISDICTION (AHJ) AND UNDERWRITE).

2. PRIOR TO PURCHASING ANY MATERIALS OR COMMENCING WORK, CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS, PIPING SIZES AND LOCATIONS, EQUIPMENT, ETC. SHOWN ON THE DRAWINGS OR AFFECTING THIS WORK AND SHALL REPORT ANY DEVIATIONS TO THE ENGINEER.

3. PROVIDE ALL LABOR, MATERIAL, AND EQUIPMENT COMPLETELY TO PROVIDE FULLY OPERATIONAL SYSTEMS.

4. ALL PLUMBING EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.

5. CONTRACTOR SHALL COORDINATE THE INSTALLATION OF ALL PLUMBING EQUIPMENT, PIPING, ETC. TO FIT WITHIN THE SPACE ALLOWED BY THE ARCHITECTURAL AND STRUCTURAL CONDITIONS. CUTTING OR ALTERING ANY STRUCTURAL MEMBERS SHALL NOT BE PERMITTED WITHOUT WRITTEN PERMISSION FROM THE ARCHITECT OR STRUCTURAL ENGINEER.

6. ALL DRAWINGS ARE DIAGRAMMATIC AND INDICATE GENERAL ARRANGEMENTS, APPROXIMATE SIZES, AND RELATIVE LOCATIONS OF PRINCIPAL ELEMENTS. PROVIDE OFFSETS AS REQUIRED FOR COORDINATED INSTALLATIONS. PROVIDE EQUIPMENT, MATERIALS, AND METHODS NOT SHOWN OR SPECIFIED, BUT REQUIRED TO COMPLETE THE WORK. DO NOT SCALE DRAWINGS FOR DIMENSIONS.

7. PRIOR TO START OF WORK, CONTRACTOR SHALL NOTIFY ENGINEER, IN WRITING, OF ANY DISCREPANCIES BETWEEN EXISTING CONDITIONS AND CONTRACT DOCUMENTS.

8. DO NOT INSTALL PIPING OVER, AROUND, IN FRONT OF, IN BACK OF, OR BELOW ELECTRICAL CONTROLS, PANELS, SWITCHES, TERMINAL BOXES, OR SIMILAR ELECTRICAL EQUIPMENT. DRIP PANS ARE NOT PERMITTED EXCEPT WHERE SPECIFICALLY SHOWN.

9. DO NOT ALLOW EQUIPMENT OR PIPING TO INFRINGE UPON WORKING CLEARANCES REQUIRED BY NEC.

10. DO NOT INSTALL PIPING OR EQUIPMENT FOREIGN TO ELECTRICAL EQUIPMENT ROOMS, OR TELECOMMUNICATION CLOSETS.

11. POSITION ALL PLUMBING WORK FOR EASY UNOBSTRUCTED MAINTENANCE ACCESS AND OPERATION.

12. THE TERM 'FURNISH' SHALL MEAN TO OBTAIN AND DELIVER TO THE JOB SITE. THE TERM 'INSTALL' SHALL MEAN TO UNPACK, STORE, ASSEMBLE, FIX IN POSITION, AND CONNECT FOR USE. THE TERM 'PROVIDE' SHALL MEAN TO FURNISH AND INSTALL. THE TERM 'CONTRACTOR' SHALL MEAN THE PLUMBING CONTRACTOR OR ANY PLUMBING SUBCONTRACTOR.

13. THE CONTRACTOR SHALL ENSURE THAT ALL RULES AND REGULATIONS, INCLUDING THOSE WHICH MAY BE ISSUED BY THE OWNER, ARE BEING OBSERVED. THE CONTRACTOR SHALL INSTALL SIGNAGE, BARRIERS AND OTHER MEANS TO PROVIDE WARNINGS AND RESTRICT ACCESS TO CONSTRUCTION AREAS.

14. EACH CONTRACTOR SHALL COORDINATE ITS OPERATIONS WITH OPERATIONS OF OTHER TRADE CONTRACTORS THAT DEPEND ON EACH OTHER FOR PROPER INSTALLATION, CONNECTION AND OPERATION.

15. THE INSTALLATION OF ALL EQUIPMENT SHALL PERMIT ADEQUATE ACCESSIBILITY FOR PROPER MAINTENANCE.

16. UNLESS THE CONTRACT DOCUMENTS INCLUDE MORE STRINGENT REQUIREMENTS, APPLICABLE CONSTRUCTION INDUSTRY STANDARDS HAVE THE SAME FORCE AND EFFECT AS IF COPIED DIRECTLY INTO THE CONTRACT DOCUMENTS TO THE EXTENT REFERENCE. SUCH STANDARDS ARE MADE PART OF THE CONTRACT DOCUMENTS BY REFERENCE.

17. COMPLY WITH STANDARDS IN EFFECT AS OF THE DATE OF THE CONTRACT DOCUMENTS UNLESS OTHERWISE INDICATED.

18. THE CONTRACTOR SHALL BE FAMILIAR WITH INDUSTRY STANDARDS APPLICABLE TO ITS CONSTRUCTION ACTIVITY. WHERE COPIES OF STANDARDS ARE NEEDED TO PERFORM A REQUIRED CONSTRUCTION ACTIVITY, OBTAIN COPIES DIRECTLY FROM PUBLICATION SOURCE.

19. THE CONTRACTOR SHALL COMPLY WITH ALL LAWS, ORDINANCES, STATUTES AND LAWFUL ORDERS ISSUED BY AUTHORITIES HAVING JURISDICTION AND RULES, CONVENTIONS, AND AGREEMENTS WITHIN THE CONSTRUCTION INDUSTRY THAT CONTROL THE PERFORMANCE OF THE WORK.

20. THE PRODUCTS SHOWN ON THE DRAWINGS ARE BASED ON A SPECIFIC MANUFACTURER, MAKE, AND MODEL. THESE PRODUCTS ESTABLISH SIGNIFICANT QUALITIES RELATED TO TYPE, FUNCTION, DIMENSION, IN-SERVICE PERFORMANCE, PHYSICAL PROPERTIES, APPEARANCE, AND OTHER CHARACTERISTICS FOR PURPOSES OF EVALUATING PRODUCTS OF OTHER NAMED MANUFACTURERS.

21. THE ENGINEER WILL CONSIDER REQUESTS FOR SUBSTITUTION WHEN THE FOLLOWING CONDITIONS ARE SATISFIED: REQUESTED SUBSTITUTION OFFERS OWNER A SUBSTANTIAL ADVANTAGE IN COST, TIME OR ENERGY CONSERVATION AFTER DEDUCTING ADDITIONAL RESPONSIBILITIES THE SUBSTITUTION MAY PRESENT TO THE OWNER INCLUDING COMPENSATION TO ENGINEER FOR REDESIGN AND EVALUATION SERVICES AND INCREASED CONSTRUCTION COSTS OF RELATED WORK; DOES NOT REQUIRE EXTENSIVE REVISIONS TO THE CONTRACT DOCUMENTS; IS CONSISTENT WITH THE CONSTRUCTION DOCUMENTS AND WILL PRODUCE THE INDICATED RESULTS; IS FULLY DOCUMENTED AND PROPERLY SUBMITTED; WILL NOT ADVERSELY AFFECT THE CONTRACTOR'S CONSTRUCTION SCHEDULE; AND HAD BEEN COORDINATED WITH OTHER RELATED WORK.

22. THE CONTRACTOR SHALL DELIVER, STORE, AND HANDLE PRODUCTS USING MEANS AND METHODS THAT WILL PREVENT DAMAGE, DETERIORATION, AND LOSS. COMPLY WITH MANUFACTURER'S WRITTEN INSTRUCTIONS. THE CONTRACTOR SHALL STORE MATERIALS IN A MANNER THAT WILL NOT ENDANGER PROJECT STRUCTURE.

23. THE CONTRACTOR SHALL COMPLETE OR CORRECT ALL WORK IDENTIFIED AS NOT CONFORMING TO THE CONTRACT DOCUMENTS.

24. PROVIDE PERMANENT IDENTIFICATION LABELS FOR ALL NEW EQUIPMENT.

25. THE CONTRACTOR SHALL PREPARE ELECTRONIC AS BUILT DRAWINGS AND PROVIDE SOURCE INFORMATION, MANUFACTURERS, MAINTENANCE DOCUMENTATION, MAINTENANCE PROCEDURES, MAINTENANCE AND SERVICE SCHEDULES, SPARE PARTS LISTS, AND WARRANTY AND BOND INFORMATION FOR EACH PIECE OF EQUIPMENT AS PER DIVISION 1 SPECIFICATION REQUIREMENTS.

26. THE CONTRACTOR SHALL TRAIN OWNER'S PERSONNEL IN THE OPERATION, EMERGENCY PROCEDURES, ADJUSTMENT TROUBLESHOOTING, MAINTENANCE AND REPAIR OF EACH PIECE OF EQUIPMENT.

27. THE CONTRACTOR SHALL TAKE FIELD MEASUREMENTS AS REQUIRED TO FIT THE WORK PROPERLY. WHERE PORTIONS OF THE WORK ARE INDICATED TO FIT TO OTHER CONSTRUCTION, VERIFY DIMENSIONS OF OTHER CONSTRUCTION BY FIELD MEASUREMENTS BEFORE FABRICATION.

28. THE CONTRACTOR SHALL INSTALL VERTICAL WORK PLUMB AND HORIZONTAL WORK LEVEL UNLESS OTHERWISE INDICATED. WHERE SPACE IS LIMITED, INSTALL COMPONENTS TO MAXIMIZE SPACE AVAILABLE FOR MAINTENANCE AND EASE OF REMOVAL FOR REPLACEMENT. CONCEAL PIPES, WIRING, ETC, IN FINISHED AREAS UNLESS EASE OF REMOVAL FOR REPLACEMENT. CONCEAL PIPES, WIRING, ETC, IN FINISHED AREAS UNLESS OTHERWISE INDICATED. MAINTAIN MINIMUM HEADROOM CLEARANCE OF 8'-0" IN SPACES WITHOUT CEILINGS.

29. THE CONTRACTOR SHALL COMPLY WITH MANUFACTURER'S WRITTEN INSTRUCTIONS AND RECOMMENDATIONS FOR INSTALLING PRODUCTS IN APPLICATIONS INDICATED.

30. ALL TESTS SHALL BE COMPLETED BEFORE ANY PLUMBING EQUIPMENT OR PIPING INSULATION IS APPLIED.

31. WHERE TWO OR MORE ITEMS OF THE SAME TYPE OF EQUIPMENT ARE REQUIRED, THE PRODUCT OF ONE MANUFACTURER SHALL BE USED.

32. COORDINATE ALL EQUIPMENT CONNECTIONS WITH MANUFACTURERS' CERTIFIED DRAWINGS. COORDINATE AND PROVIDE ALL PIPING TRANSITIONS REQUIRED FOR FINAL EQUIPMENT CONNECTIONS TO FURNISHED EQUIPMENT. FIELD VERIFY AND COORDINATE ALL DUCT AND PIPING DIMENSIONS BEFORE FABRICATION.

33. ALL MISCELLANEOUS MATERIALS REQUIRED TO ENSURE PROPER INSTALLATION AND AS SHOWN IN DETAILS FOR PIPING AND EQUIPMENT (UNLESS OTHERWISE NOTED) SHALL BE FURNISHED AND INSTALLED BY THE PLUMBING CONTRACTOR.

34. ALL PIPING AND EQUIPMENT SUPPORTED FROM STRUCTURAL STEEL SHALL BE COORDINATED WITH THE GENERAL CONTRACTOR. ALL ATTACHMENTS TO STEEL BAR JOISTS, TRUSSES, OR JOIST GIRDERS SHALL BE AT PANEL POINTS. PROVIDE BEAM CLAMPS MEETING MSS STANDARDS. WELDING TO STRUCTURAL MEMBERS SHALL NOT BE PERMITTED. THE USE OF C-CLAMPS SHALL NOT BE PERMITTED.

PLUMBING/ELECTRICAL COORDINATION

1. CONTRACTOR SHALL COORDINATE ELECTRICAL CHARACTERISTICS AND REQUIREMENTS OF ALL PLUMBING EQUIPMENT WITH ELECTRICAL DRAWINGS & ELECTRICAL CONTRACTOR PRIOR TO ORDERING OR INSTALLING EQUIPMENT. CONTRACTOR SHALL FURNISH EQUIPMENT COMPATIBLE FOR THE VOLTAGES SHOWN ON THE ELECTRICAL DRAWINGS.

2. ALL PLUMBING EQUIPMENT REQUIRING ELECTRICAL POWER SHALL BE INSTALLED WITH DISCONNECT SWITCHES AT EACH PIECE OF EQUIPMENT. COORDINATE SWITCH TYPE (FUSED OR NON-FUSED) WITH EQUIPMENT CHARACTERISTICS, MANUFACTURER'S RECOMMENDATIONS, AND THE ELECTRICAL DRAWINGS.

VALVE LEGEND

- SHUTOFF VALVE
- GLOBE VALVE
- GATE VALVE
- BALL VALVE
- BUTTERFLY VALVE
- SWING CHECK VALVE
- LIFT CHECK VALVE
- PLUG VALVE
- GAS COCK VALVE
- CIRCUIT SETTER VALVE
- BALL COCK VALVE
- TRIPLE DUTY VALVE
- STRAINER WITH BLOWOFF VALVE
- 2-WAY CONTROL VALVE
- 3-WAY CONTROL VALVE
- SOLENOID VALVE
- PRESSURE REDUCTING VALVE
- SAFETY RELIEF VALVE
- FLOW CHECK VALVE

REFERENCE LEGEND

- POINT OF CONNECTION BETWEEN NEW WORK AND EXISTING WORK
- POINT BETWEEN EXISTING WORK TO REMAIN AND EXISTING WORK TO BE REMOVED
- (X) KEY NOTE DESIGNATION
- (X) DEMOLITION NOTE DESIGNATION
- A / P-100 DETAIL LETTER/NUMBER DESIGNATION; DRAWING NUMBER CONTAINING DETAIL
- A / P-100 SECTION LETTER/NUMBER DESIGNATION; DRAWING NUMBER CONTAINING SECTION
- TO BE DEMOLISHED

PLUMBING SYMBOLS

- NEW WORK
- EXISTING
- SANITARY PIPING
- SANITARY VENT PIPING
- CV — CV DOMESTIC COLD WATER PIPING
- HW — HW DOMESTIC HOT WATER PIPING
- HWR — HWR DOMESTIC HOT WATER RETURN PIPING
- GAS — GAS GAS PIPING
- BACKFLOW PREVENTER VALVE ASSEMBLY
- RPZ REDUCED PRESSURE ZONE ASSEMBLY
- STRAINER WITH BLOWDOWN VALVE
- GAS COCK VALVE
- M DOMESTIC WATER METER
- M NATURAL GAS METER
- MIXING VALVE
- PIPE BREAK
- PIPE DROP IN MIDDLE
- PIPE RISER
- PIPE DROP
- PIPE CAP
- DIRECTION OF PIPE FLOW
- .01 PIPE SLOPE
- PRESSURE GAUGE
- TEMPERATURE GAUGE
- SAFETY RELIEF VALVE
- UNION
- FLOOR DRAIN
- HOSE BIB

ABBREVIATIONS

AAV	AUTOMATIC AIR VENT	FB	FROM BELOW	PRESS.	PRESSURE
AD	AREA DRAIN	FCO	FLOOR CLEANOUT	RPZ	REDUCED PRESSURE ZONE
AFF	ABOVE FINISHED FLOOR	FD	FLOOR DRAIN	S	SANITARY
AHU	AIR HANDLING UNIT	FL.	FLOOR	SH	SHOWER
BF	BELOW FLOOR	FM	FORCED MAIN	SK	SINK
BFF	BELOW FINISHED FLOOR	FP	FIRE PROTECTION	SP	STANDPIPE
BFG	BELOW FINISHED GRADE	G	NATURAL GAS	TEMP.	TEMPERATURE
BFP	BACK FLOW PREVENTER	GM	NATURAL GAS METER	TP	TRAP PRIMER
BV	BALANCING VALVE	GPF	GALLONS PER FLUSH	TW	TEMPERED WATER
CD	CONDENSATE DRAIN	GPH	GALLONS PER HOUR	TYP.	TYPICAL
CO	CLEANOUT	GPM	GALLONS PER MINUTE	UG	UNDERGROUND
CP	CIRCULATING PUMP	EHD	EQUIVALENT HYDRAULIC DIAMETER	UR	URINAL
CFH	CUBIC FEET PER HOUR	HB	HOSE BIB	V	VENT
CONT.	CONTINUATION	IN.	INCH	VTR	VENT THROUGH ROOF
CW	DOMESTIC COLD WATER	INV.	INVERT	W	WASTE
DFU	DRAINAGE FIXTURE UNIT	IW	INDIRECT WASTE	W/	WITH
HW	DOMESTIC HOT WATER	LAV	LAVATORY	WB	WASHER BOX
DIA. / ø	DIAMETER	LPF	LITERS PER FLUSH	WC	WATER CLOSET
DN.	DOWN BELOW FLOOR LEVEL	MAX.	MAXIMUM	WCO	WALL CLEANOUT
DP	DROP IN FLOOR LEVEL	MIN.	MINIMUM	WH	WATER HEATER
DWG	DRAWING	MB	MOP BASIN	WHA	WATER HAMMER ARRESTOR
(E)	EXISTING	MV	MIXING VALVE	WSFU	WATER SUPPLY FIXTURE UNIT
EA.	EACH	(N)	NEW		

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WORCESTER COUNTY, MARYLAND

STATE OF MARYLAND · CURTIS L. JAMES · 53642 · PROFESSIONAL ENGINEER
10/27/2026

LEGEND
PLUMBING

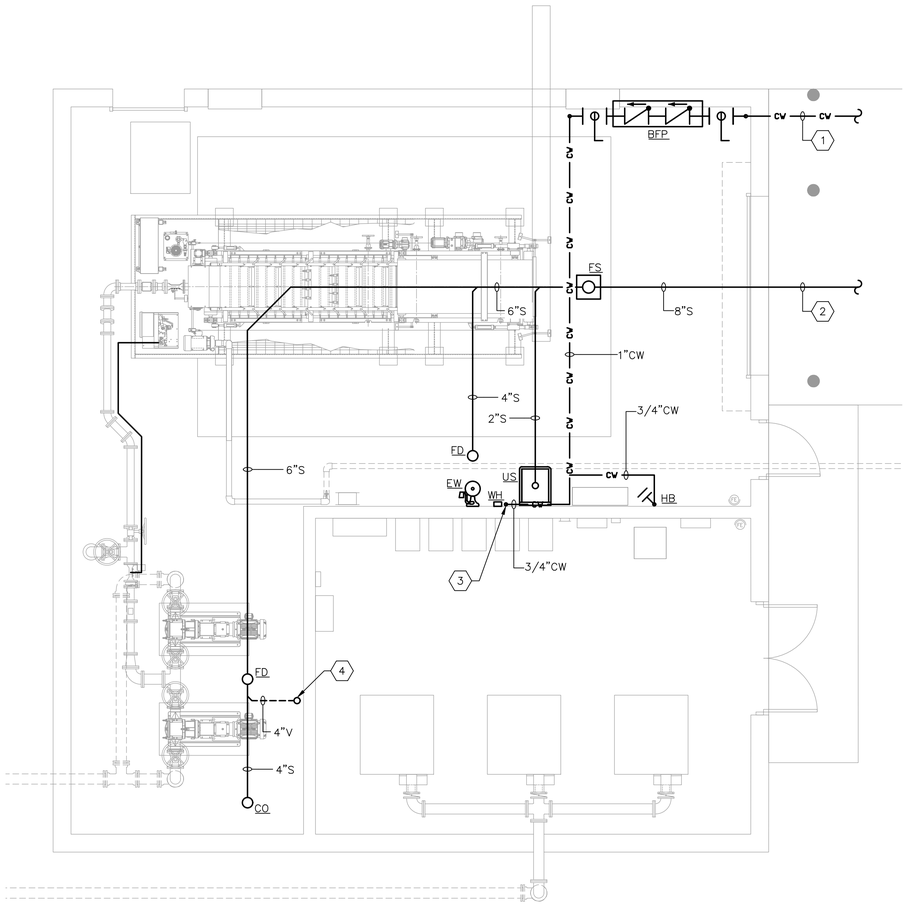
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DATE	: JULY 2026

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KEYNOTES:

1. 2" WATER SERVICE – SEE SITE PLAN FOR CONTINUATION.
2. 8" SANITARY – SEE SITE PLAN FOR CONTINUATION.
3. COLD WATER DOWN TO POU WATER HEATER – SEE RISER DIAGRAM FOR ADDITIONAL INFORMATION.
4. 4" VTR



SLUDGE DEWATERING BUILDING PLUMBING PLAN

SCALE: 1/4" = 1'

N

0 2 4 6 8 10

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WORCESTER COUNTY, MARYLAND

STATE OF MARYLAND
CHRISTOPHER L. JAMES
53642
PROFESSIONAL ENGINEER
10/27/2026

SLUDGE DEWATERING BUILDING PLUMBING

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PLOT CODE PEN4-CYAN .014 INCHES (.35mm)
PEN5-BLUE .020 INCHES (.50mm)
PEN6-MAGENTA .027 INCHES (.69mm)
PEN7-WHITE .039 INCHES (1.00mm)

PLUMBING FIXTURE SCHEDULE

UNIT NUMBER	FIXTURE	MANUFACTURER	MODEL NUMBER	MATERIAL	FAUCET	MATERIAL	C.W.	H.W.	WASTE	REMARKS / ACCESSORIES
BFP	BACKFLOW PREVENTER	WATTS	LF-007	BRONZE	-	-	2"	-	-	1/2" TO 3" LEAD FREE DOUBLE CHECK VALVE ASSEMBLY WITH QUARTER TURN BALL/NON-RISING STEM GATE VALVES, STRAINER, AND INTEGRAL TEST COCKS. SEE PLUMBING PLANS AND RISER DIAGRAM FOR SIZING REQUIREMENTS.
CO	FLOOR CLEANOUT	J.R. SMITH	4020S	CAST IRON	-	-	-	-	4"	3" TO 4" CAST IRON FLOOR CLEANOUT WITH ADJUSTABLE NICKEL BRONZE CAP.
EW	EYE WASH	GUARDIAN	G1891	STAINLESS STEEL	-	-	1/2" TEPID	-	1-1/2"	WALL BRACKET, G6020 THERMOSTATIC MIXING VALVE, BOWL COVER, 1-1/2" TAILPIECE AND TRAP
FD	FLOOR DRAIN	J.R. SMITH	6010	CAST IRON	-	-	-	-	6"	CAST IRON FLOOR DRAIN WITH CHROME PLATED BRONZE GRATE AND FRAME. PROVIDE PRO-SET "TRAP-GUARD" INSERT.
FS	FLOOR SINK	J.R. SMITH	3450	CAST IRON	-	-	-	-	8"	ACID RESISTANCE COATED, STRAINER, NO GRATE
HB	HOSE BIB	LEGEND VALVE	T-531HPNL	BRASS	-	-	3/4"	-	-	HEAVY PATTERN HOSE BIB, BRASS WITH VACUUM BREAKER.
US	UTILITY SINK	ELKAY	14-1C16X20-0X	STAINLESS STEEL	LK940AT08L25	CHROME	1/2"	1/2"	2"	16"W x 20"D x 14"H BOWL UTILITY SINK WITH 4 LEG LEVELERS, 8" CENTER FAUCET, INLINE STOP AND P-TRAP.

ELECTRIC WATER HEATER SCHEDULE

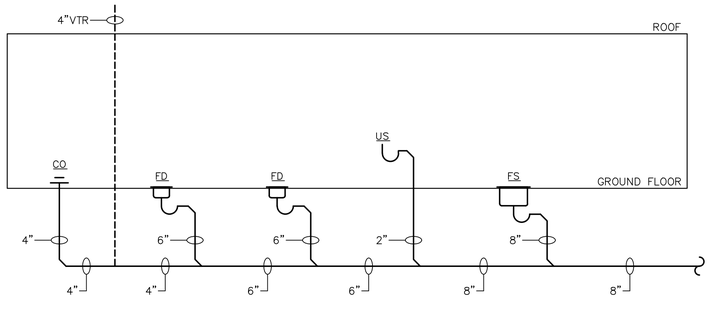
TAG NUMBER	LOCATION	MANUF.	MODEL NUMBER	STORAGE VOLUME (GAL)	TYPE	KW INPUT	RECOVERY	VOLTS-PHASE-HZ	SHIPPING WEIGHT (LBS)	NOTES
WH-1	FILTER PRESS ROOM	BRADFORD WHITE	TEF048V240	NA	TANKLESS POU	3.6	25°F @ 1.0 GPM	208-1-60	3	TO

ELECTRIC WATER NOTES KEY:

TO - TURN ON FLOW - 0.4 GPM

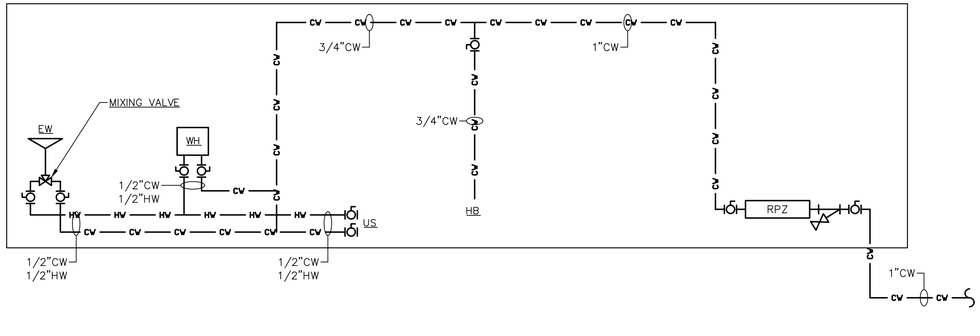
SANITARY & VENT RISER DIAGRAM NOTES:

1. ALL DRAINAGE PIPING TO BE INSTALLED AT 1/4" PER FOOT SLOPE.



SLUDGE DEWATERING BUILDING SANITARY & VENT RISER DIAGRAM

NOT TO SCALE



SLUDGE DEWATERING BUILDING POTABLE WATER RISER DIAGRAM

NOT TO SCALE

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PLOT CODE
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PEN5-BLUE .020 INCHES (.50mm)
PEN6-MAGENTA .027 INCHES (.70mm)
PEN7-WHITE .039 INCHES (1.00mm)

NO.	REVISIONS	DATE

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WORCESTER COUNTY, MARYLAND

STATE OF MARYLAND
CHRISTOPHER L. JAMES
53642
PROFESSIONAL ENGINEER
10/27/2026

DETAILS, RISERS & SCHEDULES PLUMBING

SCALE	: AS NOTED	SHEET NO.	
DESIGN BY	: PJS		P5.0
DRAWN BY	: AMB		
CHECKED BY	: CLJ		
GMB FILE	: 250196		
DATE	: JULY 2026	DRAWING	OF

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