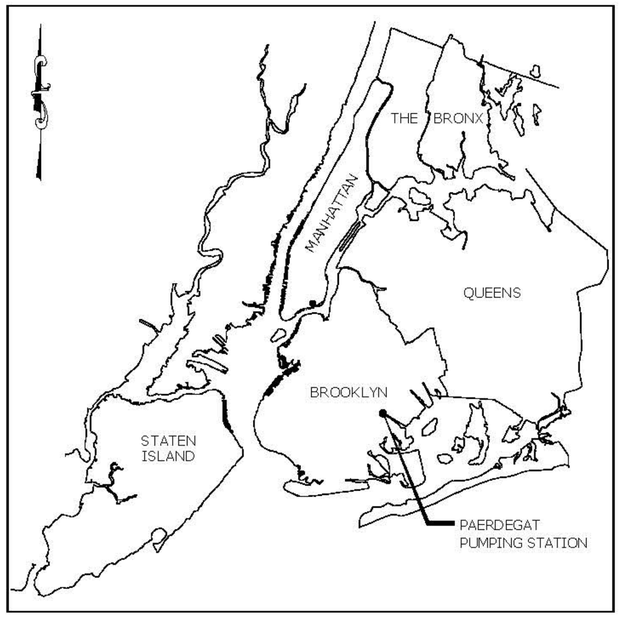
Environmental Protection

NEW YORK CITY
ENVIRONMENTAL PROTECTION
BUREAU OF ENGINEERING DESIGN AND CONSTRUCTION

CAPITAL PROJECT WP-269
RECONSTRUCTION OF PAERDEGAT PUMPING STATION
CONTRACT PS-318

BROOKLYN
OCTOBER 2026

BID SET

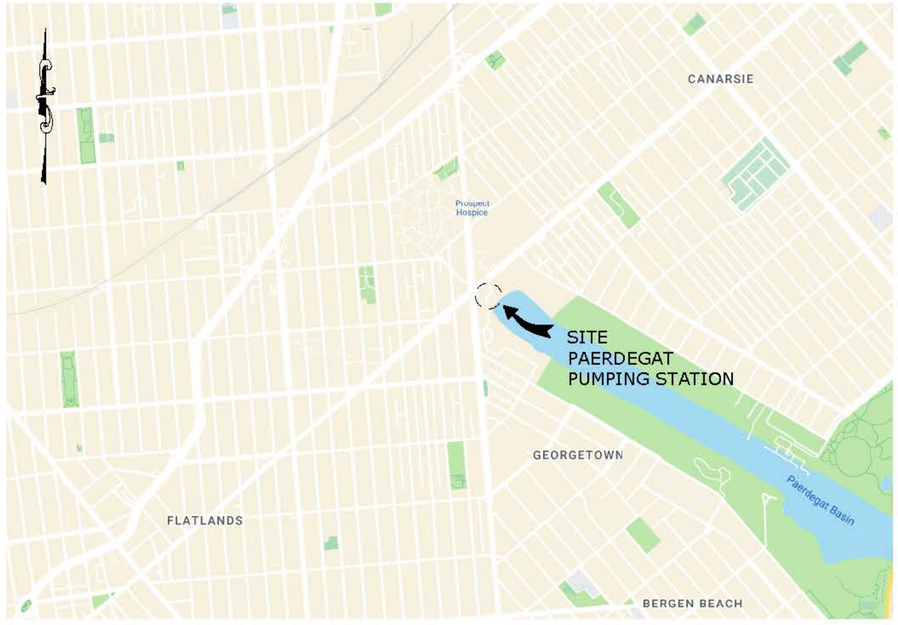


KEY PLAN

Nayankumar Shah P. E.

Digitally signed by Nayankumar Shah P. E.
Date: 2026.10.20 14:14:51 -04'00'

NAYANKUMAR SHAH, P.E.
EXECUTIVE DIRECTOR, SPECIAL PROGRAMS
BUREAU OF ENGINEERING DESIGN AND CONSTRUCTION



LOCATION PLAN

Ana Barrio

Digitally signed by Ana Barrio
Date: 2026.10.21 11:21:42 -04'00'

ANA BARRIO
DEPUTY COMMISSIONER
BUREAU OF ENGINEERING DESIGN AND CONSTRUCTION

G-001.00
SHEET NO.1 OF 274

Autodesk Docs://CI-AMER (USA) 60619010-PS-DES-6/PAER-M-MODEL_AECOM.rvt
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All inquiries regarding this drawing(s) or project should be made to NYC Environmental Protection, Bureau of Engineering Design and Construction.

GENERAL

SHEET NUMBER	DRAWING NUMBER	SHEET NAME
1	G-001.00	COVER SHEET
2	G-002.00	SHEET INDEX

CIVIL

SHEET NUMBER	DRAWING NUMBER	SHEET NAME
3	CG-001.00	LEGEND, ABBREVIATIONS , NOTES
4	DC-101.00	DEMOLITION SITE PLAN
5	DC-102.00	DEMOLITION UTILITY PLAN
6	DC-103.00	DEMOLITION FORCE MAIN PLAN AND PROFILE
7	DC-104.00	DEMOLITION GRADING PLAN
8	DC-105.00	TREE PROTECTION PLAN
9	C-101.00	EXISTING SITE PLAN AND CONTRACTOR STAGING AREA
10	C-102.00	NEW SITE PLAN
11	C-103.00	UTILITY PLAN
12	C-104.00	FORCE MAIN PLAN AND PROFILE
13	C-105.00	GRADING PLAN
14	C-106.00	LANDSCAPING PLAN
15	C-107.00	STANDARD DETAIL - SHEET 1
16	C-108.00	STANDARD DETAIL - SHEET 2
17	C-109.00	SOIL EROSION AND SEDIMENT CONTROL PLAN PHASE 1
18	C-110.00	SOIL EROSION AND SEDIMENT CONTROL PLAN PHASE 2
19	C-111.00	SOIL EROSION AND SEDIMENT CONTROL PLAN PHASE 3
20	C-112.00	SOIL EROSION AND SEDIMENT CONTROL PLAN PHASE 4
21	C-113.00	SOIL EROSION AND SEDIMENT CONTROL DETAILS
22	C-150.00	INTERIM BYPASS PUMPING PLAN
23	C-151.00	ENLARGED INTERIM BYPASS PUMPING PLAN
24	C-200.00	MPT NOTES
25	C-201.00	MPT PLAN - FLATLANDS AVE. - PHASE 1
26	C-202.00	MPT PLAN - FLATLANDS AVE. - PHASE 2
27	C-203.00	MPT PLAN - RALPH AVE.

ARCHITECTURAL

SHEET NUMBER	DRAWING NUMBER	SHEET NAME
28	AG-001.00	LEGENDS, NOTES, CODE ANALYSIS
29	DA-101.00	DEMO PLAN - SECOND AND THIRD LEVEL BELOW GROUND
30	DA-102.00	DEMO PLAN - FIRST LEVEL BELOW GROUND
31	DA-103.00	DEMO PLAN - GROUND LEVEL
32	DA-104.00	DEMO PLAN - LOWER MEZZANINE
33	DA-105.00	DEMO PLAN - EAST AND WEST FLAT ROOFS AND UPPER MEZZANINE
34	DA-106.00	DEMO PLAN - MAIN ROOF
35	A-100.00	EGRESS
36	A-101.00	SECOND AND THIRD LEVEL BELOW GROUND PLAN
37	A-102.00	FIRST LEVEL BELOW GROUND PLAN
38	A-103.00	GROUND LEVEL BUILDING PLAN
39	A-104.00	LOWER MEZZANINE PLAN
40	A-105.00	E AND W FLAT ROOFS AND UPPER MEZZANINE PLAN
41	A-106.00	MAIN ROOF PLAN
42	A-107.00	GENERATOR AND ELECTRICAL ENCLOSURES
43	A-108.00	EXISTING IRON FENCE RESTORATION
44	A-109.00	REBUILT BRICK FENCE
45	A-110.00	SIGNAGE PLANS
46	A-201.00	NORTH ELEVATION
47	A-202.00	SOUTH ELEVATION
48	A-203.00	EAST ELEVATION
49	A-204.00	WEST ELEVATION
50	A-501.00	DETAILS 1
51	A-502.00	DETAILS 2
52	A-503.00	DETAILS 3
53	A-504.00	WINDOW SCHEDULE AND DETAILS
54	A-505.00	LOUVER AND STOPLOG SCHEDULE AND DETAILS

STRUCTURAL

SHEET NUMBER	DRAWING NUMBER	SHEET NAME
55	SG-001.00	GENERAL NOTES
56	SG-002.00	GENERAL NOTES, ABBREVIATIONS
57	DS-101.00	DEMOLITION SCREENING CHAMBER, WET WELL, LOWER PUMP ROOM, UPPER PUMP ROOM
58	DS-102.00	DEMOLITION DISCHARGE PIPING GALLERY, STORAGE ROOMS, ELECTRICAL CHAMBERS
59	DS-103.00	DEMOLITION GROUND FLOOR (MCC RM, OPEN AREA, HVAC RM, SCREENING CHAMBER, FAN RM)
60	DS-104.00	DEMOLITION LOWER MEZZANINE
61	DS-105.00	DEMOLITION EAST AND WEST FLAT ROOFS AND UPPER MEZZANINE
62	DS-106.00	DEMOLITION GENERATOR AND SPILLWAY AREA
63	DS-107.00	DEMOLITION SECTION VIEW 1
64	DS-108.00	DEMOLITION SECTION VIEW 2
65	DS-109.00	DEMOLITION SPILLWAY SECTION
66	DS-110.00	DEMOLITION STANDARD DETAILS 1
67	S-101.00	SCREENING CHAMBER, WET WELL, LOWER PUMP ROOM, UPPER PUMP ROOM
68	S-102.00	DISCHARGE PIPING GALLERY, STORAGE ROOMS, ELECTRICAL CHAMBERS
69	S-103.00	GROUND FLOOR (MCC RM, OPEN AREA, HVAC RM, SCREENING CHAMBER, FAN RM)
70	S-104.00	LOWER MEZZANINE
71	S-105.00	EAST AND WEST FLAT ROOFS AND UPPER MEZZANINE
72	S-106.00	ROOF PLAN & FLAG POLE DETAILS
73	S-107.00	GENERATOR AND SPILLWAY FOUNDATION
74	S-108.00	GENERATOR AND SPILLWAY AREA
75	S-109.00	SECTION VIEW 1
76	S-110.00	SECTION VIEW 2
77	S-111.00	SECTION VIEW 3
78	S-112.00	SECTION VIEW 4
79	S-113.00	SPILLWAY SECTION 1

STRUCTURAL (CONT.)

SHEET NUMBER	DRAWING NUMBER	SHEET NAME
80	S-114.00	SPILLWAY SECTION 2
81	S-115.00	WET WELL PLAN
82	S-116.00	WET WELL SECTION 1
83	S-117.00	WET WELL SECTION 2
84	S-118.00	DIVERSION CHAMBER PLAN
85	S-119.00	DIVERSION CHAMBER SECTION
86	S-120.00	VALVE CHAMBER PLAN
87	S-121.00	VALVE CHAMBER SECTIONS
88	S-122.00	STANDARD DETAILS 1
89	S-123.00	STANDARD DETAILS 2
90	S-124.00	STANDARD DETAILS 3
91	S-125.00	STANDARD DETAILS 4
92	S-126.00	STANDARD DETAILS 5
93	S-127.00	STANDARD DETAILS 6
94	S-128.00	STANDARD DETAILS 7
95	S-129.00	STANDARD DETAILS 8
96	S-130.00	STANDARD DETAILS 9
97	S-131.00	STANDARD DETAILS 10
98	S-132.00	STANDARD CMU DETAILS

MECHANICAL

SHEET NUMBER	DRAWING NUMBER	SHEET NAME
99	MG-001.00	LEGEND, ABBREVIATIONS, NOTES
100	MG-002.00	MECHANICAL PROCESS SCHEDULE
101	DM-101.00	DEMOLITION PROCESS FLOW DIAGRAM
102	DM-102.00	DEMOLITION LOWER PUMP ROOM, WET WELL, SCREENING CHAMBER
103	DM-103.00	DEMOLITION UPPER PUMP ROOM
104	DM-104.00	DEMOLITION DISCHARGE PIPING GALLERY, STORAGE ROOMS, ELECTRICAL CHAMBERS
105	DM-105.00	DEMOLITION GROUND FLOOR (OPEN AREA, SCREENING CHAMBER, MECH EQUIP RM)
106	DM-106.00	DEMOLITION EAST AND WEST FLAT ROOFS AND UPPER MEZZANINE
107	DM-107.00	DEMOLITION SECTION VIEW NORTH
108	DM-108.00	DEMOLITION SECTION VIEW EAST - SHEET 1
109	DM-109.00	DEMOLITION SECTION VIEW EAST - SHEET 2
110	M-101.00	PROCESS FLOW DIAGRAM
111	M-102.00	LOWER PUMP ROOM, WET WELL, SCREENING CHAMBER
112	M-103.00	UPPER PUMP ROOM
113	M-104.00	DISCHARGE PIPING GALLERY, STORAGE ROOMS, ELECTRICAL CHAMBERS
114	M-105.00	GROUND FLOOR (OPEN AREA, SCREENING CHAMBER, MECH EQUIP RM)
115	M-106.00	EAST AND WEST FLAT ROOFS AND UPPER MEZZANINE
116	M-107.00	SECTION VIEW NORTH (PUMP ROOM)
117	M-108.00	SECTION VIEW EAST - SHEET 1
118	M-109.00	SECTION VIEW EAST - SHEET 2
119	M-110.00	STANDARD DETAIL - SHEET 1
120	M-111.00	STANDARD DETAIL - SHEET 2
121	M-112.00	INTERIM PUMPING STATION - PROCESS FLOW DIAGRAM
122	M-113.00	INTERIM PUMPING STATION - PLANS
123	M-114.00	INTERIM PUMPING STATION - SECTIONS

HVAC

SHEET NUMBER	DRAWING NUMBER	SHEET NAME
124	HG-001.00	LEGEND
125	HG-002.00	ABBREVIATIONS, NOTES
126	DH-101.00	DEMOLITION DISCHARGE PIPING GALLERY, STORAGE ROOMS, ELECTRICAL CHAMBERS
127	DH-102.00	DEMOLITION GROUND FLOOR
128	DH-103.00	DEMOLITION LOWER MEZZANINE
129	DH-104.00	DEMOLITION EAST AND WEST FLAT ROOFS AND UPPER MEZZANINE
130	DH-105.00	DEMOLITION SECTION VIEW SOUTH (MECHANICAL EQUIPMENT ROOM)
131	DH- 106.00	DEMOLITION GENERATOR AREA
132	H-101.00	UPPER PUMP ROOM
133	H-102.00	DISCHARGE PIPING GALLERY, STORAGE ROOMS, ELECTRICAL CHAMBERS
134	H-103.00	GROUND FLOOR
135	H-104.00	LOWER MEZZANINE
136	H-105.00	EAST AND WEST FLAT ROOFS AND UPPER MEZZANINE
137	H-106.00	SECTIONS 1
138	H-107.00	SECTIONS 2
139	H-108.00	STANDARD DETAIL - SHEET 1
140	H-109.00	STANDARD DETAIL - SHEET 2
141	H-110.00	EQUIPMENT SCHEDULE (FAN, HVAC UNITS, EUHS)
142	H-111.00	AIR FLOW DIAGRAM
143	H-112.00	PROCESS FLOW DIAGRAM
144	H-113.00	GENERAL ARRANGEMENT PLAN
145	H-114.00	FUEL STORAGE TANK, DAY TANK, AND PUMPING SYSTEM SECTION
146	H-115.00	SCHEDULES

PLUMBING

SHEET NUMBER	DRAWING NUMBER	SHEET NAME
147	PG-001.00	PLUMBING LEGEND, ABBREVIATIONS & GENERAL NOTES
148	DP-101.00	DEMOLITION LOWER PUMP ROOM, WET WELL, SCREENING CHAMBER
149	DP-102.00	DEMOLITION UPPER PUMP ROOM
150	DP-103.00	DEMOLITION DISCHARGE PIPING GALLERY, STORAGE ROOMS, ELECTRICAL CHAMBERS
151	DP-104.00	DEMOLITION GROUND FLOOR (OPEN AREA, SCREENING CHAMBER, MECH EQUIP RM)
152	DP-105.00	DEMOLITION LOWER MEZZANINE
153	DP-106.00	DEMOLITION EAST AND WEST FLAT ROOFS AND UPPER MEZZANINE
154	DP-107.00	DEMOLITION MAIN ROOF
155	DP-108.00	DEMOLITION SECTION VIEW NORTH (HVAC ROOM N WALL - WATER METER)
156	P-101.00	LOWER PUMP ROOM, WET WELL, SCREENING CHAMBER
157	P-102.00	UPPER PUMP ROOM
158	P-103.00	DISCHARGE PIPING GALLERY, STORAGE ROOMS, ELECTRICAL CHAMBERS
159	P-104.00	GROUND FLOOR (OPEN AREA, SCREENING CHAMBER, MECH EQUIP RM)
160	P-105.00	LOWER MEZZANINE

PLUMBING (CONT.)

SHEET NUMBER	DRAWING NUMBER	SHEET NAME
161	P-106.00	EAST AND WEST FLAT ROOFS AND UPPER MEZZANINE
162	P-107.00	MAIN ROOF
163	P-108.00	SECTION VIEW NORTH (HVAC ROOM N WALL - WATER METER)
164	P-109.00	STANDARD DETAIL 1
165	P-110.00	STANDARD DETAIL 2
166	P-111.00	EQUIPMENT SCHEDULE
167	P-112.00	RISER DIAGRAM

SPRINKLER

SHEET NUMBER	DRAWING NUMBER	SHEET NAME
168	SPG-001.00	NOTES, LEGEND AND ABBREVIATIONS
169	DSP-001.00	DEMOLITION DISCHARGE PIPING GALLERY, STORAGE ROOMS, ELECTRICAL CHAMBERS
170	DSP-002.00	DEMOLITION GROUND FLOOR (OPEN AREA, SCREENING CHAMBER, MECH EQUIP RM)
171	SP-001.00	PAERDEGAT - DISCHARGE PIPING GALLERY, STORAGE ROOMS, ELECTRICAL CHAMBERS
172	SP-002.00	PAERDEGAT - GROUND FLOOR (OPEN AREA, SCREENING CHAMBER, MECH EQUIP RM)
173	SP-003.00	DETAILS 1
174	SP-004.00	DETAILS 2
175	SP-005.00	DETAILS 3

FIRE ALARM

SHEET NUMBER	DRAWING NUMBER	SHEET NAME
176	FA-001.00	FIRE ALARM SYSTEM SYMBOLS, LEGEND, ABBREVIATIONS AND GENERAL NOTES
177	DFA-101.00	EXISTING FIRE ALARM SYSTEM RISER DIAGRAM
178	DFA-102.00	SECOND AND THIRD LEVEL BELOW GROUND - FIRE ALARM SYSTEM DEMOLITION PLAN
179	DFA-103.00	FIRST LEVEL BELOW GROUND - FIRE ALARM SYSTEM DEMOLITION PLAN
180	DFA-104.00	GROUND FLOOR - FIRE ALARM SYSTEM DEMOLITION PLAN
181	DFA-105.00	UPPER AND LOWER MEZZANINE - FIRE ALARM SYSTEM DEMOLITION PLAN
182	FA-101.00	FIRE ALARM SYSTEM RISER DIAGRAM
183	FA-102.00	FIRE ALARM SYSTEM RISER DIAGRAM
184	FA-103.00	SECOND AND THIRD LEVEL BELOW GROUND - FIRE ALARM SYSTEM PLAN
185	FA-104.00	FIRST LEVEL BELOW GROUND - FIRE ALARM SYSTEM PLAN
186	FA-105.00	EXTERIOR & GROUND FLOOR - FIRE ALARM SYSTEM PLAN
187	FA-106.00	LOWER MEZZANINE - FIRE ALARM SYSTEM PLAN
188	FA-107.00	UPPER MEZZANINE & OPEN FLOOR AREA - FIRE ALARM SYSTEM PLAN
189	FA-108.00	FIRE ALARM SYSTEM INPUT/OUTPUT MATRIX

ELECTRICAL

SHEET NUMBER	DRAWING NUMBER	SHEET NAME
190	EG-001.00	SYMBOLS AND LEGEND SHEET 1
191	EG-002.00	SYMBOLS AND LEGEND SHEET 2
192	EG-003.00	SYMBOLS AND LEGEND SHEET 3
193	EG-004.00	GENERAL NOTES
194	DE-101.00	EXISTING ONE LINE DIAGRAM DEMOLITION SHEET 1
195	DE-102.00	EXISTING ONE LINE DIAGRAM DEMOLITION SHEET 2
196	DE-103.00	EXISTING MCC FRONT VIEW DEMOLITION
197	DE-104.00	UPPER MEZZANINE - DEMOLITION PLAN
198	DE-105.00	EXISTING GROUND FLOOR PLAN
199	DE-106.00	MCC ROOM DEMOLITION PLAN
200	DE-107.00	GROUND FLOOR - DEMOLITION PLANS
201	DE-108.00	FIRST LEVEL BELOW GROUND - DEMOLITION PLAN
202	DE-109.00	SECOND AND THIRD LEVEL BELOW GROUND - DEMOLITION PLAN
203	DE-110.00	EXISTING ELECTRICAL SITE PLAN
204	DE-111.00	UPPER AND LOWER MEZZANINE - LIGHTING DEMOLITION PLAN
205	DE-112.00	GROUND FLOOR - LIGHTING DEMOLITION PLAN SHEET 1
206	DE-113.00	GROUND FLOOR - LIGHTING DEMOLITION PLAN SHEET 2
207	DE-114.00	FIRST LEVEL BELOW GROUND - LIGHTING DEMOLITION PLAN
208	DE-115.00	SECOND AND THIRD LEVEL BELOW GROUND - LIGHTING DEMOLITION PLAN
209	DE-116.00	EXISTING PANEL SCHEDULE
210	E-101.00	MAIN DISTRIBUTION ONE LINE DIAGRAM
211	E-102.00	NEW MCC-1A ONE LINE DIAGRAM
212	E-103.00	NEW MCC-1B ONE LINE DIAGRAM
213	E-104.00	NEW MCC FRONT VIEW
214	E-105.00	OVERALL GROUND FLOOR PLAN
215	E-106.00	MCC ROOM POWER PLAN
216	E-107.00	GROUND FLOOR - POWER PLAN
217	E-108.00	FIRST LEVEL BELOW GROUND - POWER PLAN
218	E-109.00	SECOND AND THIRD LEVEL BELOW GROUND - POWER PLAN
219	E-110.00	EAST AND WEST FLAT ROOF AND UPPER MEZZANINE POWER PLAN
220	E-111.00	SITE PLAN
221	E-112.00	DUCTBANK DETAILS
222	E-113.00	EXTERIOR ELECTRICAL EQUIPMENT FRONT VIEWS
223	E-114.00	MCC-1 FRONT VIEW AND CONDUIT ENTRY DETAILS
224	E-115.00	MCC ROOM GROUNDING PLAN
225	E-116.00	EXTERIOR GROUNDING PLAN
226	E-117.00	UPPER AND LOWER MEZZANINE - LIGHTING PLAN
227	E-118.00	GROUND FLOOR - LIGHTING PLAN SHEET 1
228	E-119.00	GROUND FLOOR - LIGHTING PLAN SHEET 2
229	E-120.00	FIRST LEVEL BELOW GROUND - LIGHTING PLAN
230	E-121.00	SECOND AND THIRD LEVEL BELOW GROUND - LIGHTING PLAN
231	E-122.00	ROOF - LIGHTING PLAN
232	E-123.00	PANELBOARD SCHEDULE SHEET 1
233	E-124.00	PANELBOARD SCHEDULE SHEET 2
234	E-125.00	BLOCK WIRING DIAGRAM SHEET 1
235	E-126.00	BLOCK WIRING DIAGRAM SHEET 2
236	E-127.00	BLOCK WIRING DIAGRAM SHEET 3
237	E-128.00	CONDUIT AND CABLE SCHEDULE SHEET 1
238	E-129.00	CONDUIT AND CABLE SCHEDULE SHEET 2
239	E-130.00	CONDUIT AND CABLE SCHEDULE SHEET 3
240	E-131.00	CONDUIT AND CABLE SCHEDULE SHEET 4

ELECTRICAL (CONT.)

SHEET NUMBER	DRAWING NUMBER	SHEET NAME
241	E-132.00	CONDUIT AND CABLE SCHEDULE SHEET 5
242	E-133.00	CONDUIT AND CABLE SCHEDULE SHEET 6
243	E-134.00	MSP-1601, 1602, 1603 CONTROL SCHEMATIC DIAGRAM
244	E-135.00	MSP-1601, 1602, 1603 CONTROL SCHEMATIC DIAGRAM
245	E-136.00	HVAC FAN CONTROL & SITE LIGHTING SCHEMATIC DIAGRAMS
246	E-137.00	MAIN SERVICE BREAKER CONTROL SCHEMATICS
247	E-138.00	MCC ROOM AND OPEN FLOOR AREA VIDEO SURVEILLANCE SYSTEM PLAN
248	E-139.00	MECHANICAL ROOM AND UPPER WET WELL AREA VIDEO SURVEILLANCE SYSTEM PLAN
249	E-140.00	DRY WELL AREA VIDEO SURVEILLANCE SYSTEM PLAN
250	E-201.00	INTERIM POWER SYSTEM - ONE LINE DIAGRAM
251	E-202.00	INTERIM POWER SYSTEM - SITE PLAN
252	E-901.00	LIGHTING FIXTURE SCHEDULE
253	E-902.00	DETAIL SHEET 1
254	E-903.00	DETAIL SHEET 2
255	E-904.00	DETAIL SHEET 3
256	E-905.00	DETAIL SHEET 4

INSTRUMENTATION AND CONTROLS

SHEET NUMBER	DRAWING NUMBER	SHEET NAME
257	IG-001.00	SYMBOLS AND ABBREVIATIONS 1
258	IG-002.00	SYMBOLS AND ABBREVIATIONS 2
259	DI-101.00	P&ID EXISTING I&C SYSTEM 1
260	DI-102.00	P&ID EXISTING I&C SYSTEM 2
261	I-101.00	NEW I&C SYSTEM DIAGRAM
262	I-102.00	NEW PUMPING STATION P&ID
263	I-103.00	NEW INLET GATES & WET WELL P&ID
264	I-104.00	NEW HIGH LEVEL PUMPS MSP-1, 2, 3 P&ID
265	I-105.00	NEW LOW LEVEL PUMPS MSP-4, 5, 6 P&ID
266	I-106.00	NEW VACUUM PRIMING SYSTEM P&ID
267	I-107.00	CITY WATER & HVAC P&ID
268	I-108.00	SUMP PUMPS & SERVICE AIR P&ID
269	I-109.00	MAIN SEWAGE PUMPS CONTROL PANEL MSPCP-1600
270	I-110.00	PUMPING STATION MONITORING AND CONTROL PANEL PMCS-9110
271	I-111.00	BACKUP SYSTEM CONTROL PANEL
272	I-112.00	TELEMETRY PANEL RTU-9130
273	I-113.00	VIDEO SURVEILLANCE SYSTEM VSS-8410
274	I-114.00	TYPICAL I&C DETAILS

BID SET

SUBMITTAL DATE: OCTOBER 2026

GRAPHIC SCALES CHECK BEFORE USE

IF SHEET IS LESS THAN 22" X 34" IT IS A REDUCED PRINT. SCALE ACCORDINGLY

NO.	DATE	REVISIONS/DESCRIPTION	APPR'D.

DESIGNED BY: TOM FINI, P.E.
DRAWN BY: MENGHONG WANG
CHECKED BY: PAUL MOULTON, P.E.
DESIGN LEAD: TOM FINI, P.E.
PROJECT MANAGER: AIMEE BOULET, P.E.

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NEW YORK, NY 10158, US

STATE OF NEW YORK · AIMEE M BOULET · 088137 · LICENSED PROFESSIONAL ENGINEER

Environmental Protection

ACCOUNTABLE MANAGER: JOHN GOULAS, P.E.
PORTFOLIO MANAGER: KEVIN ELLENWOOD, P.E.
EXECUTIVE DIRECTOR: NAYANKUMAR SHAH, P.E.

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NEW YORK CITY ENVIRONMENTAL PROTECTION
BUREAU OF ENGINEERING DESIGN & CONSTRUCTION
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CORONA, NEW YORK 11368
www.nyc.gov/dep

CAPITAL PROJECT WP-269
RECONSTRUCTION OF
PAERDEGAT PUMPING STATION
CONTRACT PS-318
GENERAL
SHEET INDEX

DATE: OCTOBER 2026
SCALE:
SHEET NO: 2 OF 274
DRAWING NO. G-002.00

All inquiries regarding this drawing(s) or project should be made to NYC Environmental Protection, Bureau of Engineering Design and Construction.

Autodesk Docs://CI-AMER (USA) 60619010-PS-DES-5/PAER-M-MODEL_AECOM.rvt
10/8/2026 4:45:39 PM

EXISTING CONDITIONS NOTES:

1. VERTICAL DATUM - NAVD88, HORIZONTAL DATUM – NEW YORK STATE PLANE COORDINATE SYSTEM, LONG ISLAND ZONE, NAD83, BASED UPON GPS OBSERVATIONS BY MATRIX NEW WORLD ON 06/05/2020, REFERRED TO NATIONAL GEODETIC SURVEY (NGS) CONTINUOUSLY OPERATING REFERENCE STATIONS (CORS) NJTP, NYBR, NYCI, AND SHK5.
2. LOCATIONS, EXTENT AND SIZES OF UNDERGROUND UTILITIES AND SUBSTRUCTURES HAVE BEEN DETERMINED FROM RECORD INFORMATION, SUPPLEMENTED BY DATA OBTAINED IN THE FIELD. ACCURACY OF THIS UTILITY DATA IS NOT GUARANTEED, NOR IS THERE ANY GUARANTEE THAT ALL EXISTING UTILITIES, WHETHER FUNCTIONAL OR ABANDONED, ARE SHOWN ON THIS MAP. ALL UTILITY LOCATIONS MUST BE VERIFIED WITH THE APPROPRIATE UTILITY COMPANY PRIOR TO DESIGN, EXCAVATION, OR CONSTRUCTION.
3. THE EXISTING CONDITIONS SHOWN HEREON ARE BASED ON A FIELD SURVEY PERFORMED BY MATRIX NEW WORLD ENGINEERING, LATEST FIELD SURVEY DATE IS 07/05/2020.
4. THE SURVEY WAS PREPARED WITHOUT BENEFIT OF A TITLE REPORT OR VESTING DEED. THE PROPERTY LINES SHOWN HEREON ARE SUBJECT TO ANY STATE OF FACTS A CURRENT TITLE REPORT OR VESTING DEED MIGHT DISCLOSE.

DEMOLITION NOTES:

1. THE CONTRACTOR SHALL COORDINATE WITH RESPECTIVE UTILITY COMPANIES PRIOR TO THE REMOVAL AND/OR RELOCATION OF UTILITIES. THE CONTRACTOR SHALL COORDINATE WITH THE UTILITY COMPANY CONCERNING PORTIONS OF WORK WHICH MAY BE PERFORMED BY THE UTILITY COMPANY'S FORCES.
2. ALL EXISTING SEWERS, PIPING AND UTILITIES SHOWN ARE NOT TO BE INTERPRETED AS THE EXACT LOCATION, OR AS THE ONLY OBSTACLES THAT MAY OCCUR ON THE SITE. CONTRACTOR SHALL VERIFY EXISTING CONDITIONS AND PROCEED WITH CAUTION AROUND ANY ANTICIPATED FEATURES. CONTRACTOR SHALL GIVE NOTICE TO ALL UTILITY COMPANIES REGARDING DESTRUCTION AND REMOVAL OF ALL SERVICE LINES AND CAP ALL LINES BEFORE PROCEEDING WITH THE WORK.
3. CONCRETE SIDEWALK AND CURB TO BE REMOVED SHALL BE DEMOLISHED AND REPLACED TO THE NEXT CLOSEST CONSTRUCTION JOINT BEYOND THE LIMIT SHOWN.
4. DAMAGE FROM CONSTRUCTION ACTIVITIES OR LOADING TO ALL EXISTING STRUCTURES AND CONDITIONS TO REMAIN WILL BE REPLACED AT CONTRACTOR'S EXPENSE.
5. THE CONTRACTOR SHALL COORDINATE WITH NYCDOT AND OBTAIN ALL NECESSARY PERMITS FOR ANY WORK WITHIN THE PUBLIC RIGHT-OF-WAY.
6. THE CONTRACTOR IS RESPONSIBLE FOR FAMILIARIZING THEMSELF WITH THE EXISTING CONDITIONS AND VERIFYING CONSISTENCY WITH THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL COORDINATE WORK WITH ALL OTHER CONTRACTORS AND CONTRACTS AT THE SITE. THE CONTRACTOR SHALL REPORT ANY DISCREPANCY TO THE ENGINEERING IMMEDIATELY AND AWAIT FURTHER INSTRUCTIONS.
7. ANY DISCREPANCIES IN INFORMATION CONVEYED EITHER BY THE DRAWINGS OR SPECIFICATIONS SHALL BE IMMEDIATELY REPORTED BY THE CONTRACTOR TO THE ATTENTION OF THE ENGINEER.
8. EXISTING PAVEMENT, LANDSCAPING, SURFACE OR SUBSURFACE FACILITIES, WITHIN OR ADJACENT TO THE CONTRACTOR'S WORK AREA OR INDICATED ON THE PLANS TO REMAIN SHALL BE PROTECTED FROM DAMAGE. ANY FACILITIES DAMAGED BY THE CONTRACTOR'S ACTIVITIES SHALL BE IMMEDIATELY REPAIRED TO ITS ORIGINAL CONDITION AND TO THE SATISFACITON OF THE ENGINEER AT NO ADDITIONAL COST.
9. PRIOR TO THE START OF ANY EXCAVATION, THE CONTRACTOR SHALL VERIFY THE LOCATION OF EXISTING UNDERGROUND UTILITIES WITHIN THE WORK AREA. THE CONTRACTOR SHALL CONTACT THE NYC LONG ISLAND ONE CALL CENTER AT 800-272-4480 AND ANY OTHER AFFECTED UTILITY COMPANIES FOR UTILITY MARK-OUT PRIOR TO THE COMMENCEMENT OF THE WORK.
10. USE WATERING, TEMPORARY ENCLOSURES AND OTHER SUITABLE METHODS, AS NECESSARY TO LIMIT THE AMOUNT OF DUST AND DIRT RISING AND SCATTERING IN THE AIR. CLEAN ADJACENT STRUCTURES AND IMPROVEMENTS OF ALL DUST AND DEBRIS CAUSED BY DEMOLITION OPERATIONS. RETURN ALL ADJACENT AREAS TO TEH CONDITIONS EXISTING PRIOR TO THE START OF WORK.
11. REMOVE FROM THE DESIGNATED SITE ALL DEBRIS, RUBBISH, SALVAGEABLE ITEMS, HAZARDOUS AND COMBUSTIBLE MATERIALS. REMOVED MATERIALS MAY NOT BE STORED, SOLD OR BURNED ON THE SITE. REMOVAL OF HAZARDOUS AND COMBUSTIBLE MATERIALS SHALL BE ACCOMPLISHED IN ACCORDANCE WITH THE PROCEDURE AS AUTHORIZED BY THE FIRE DEPARTMENT OR OTHER APPROPRIATE REGULATORY AGENCIES AND AUTHORITIES. REMOVAL OF HAZARADOUS MATERIALS SHALL BE APPROVED BY THE ENGINEER PRIOR TO DISPOSAL.
12. DISCONNECT AND SHUT OFF ALL UTILITIES SERVING AREAS TO BE DEMOLISHED BEFORE THE COMMENCEMENT OF THE DESIGNATED DEMOLITION. MARK FOR POSITION ALL UTILITY LINES AND PROTECT ACTIVE LINES DURING CONSTRUCTION. CLEARLY IDENTIFY, BEFORE THE COMMENCEMENT OF DEMOLITION, REQUIRED INTERRUPTION OF ACTIVE SYSTEMS THAT MAY AFFECT OTHER PARTIES, AND NOTIFY ALL APPLICABLE UTILITY COMPANIES TO ENSURE THE CONTINUATION OF SERVICE.

SITE WORK NOTES:

1. THE CONTRACTOR SHALL PERFORM ALL WORK IN A WORKMANLIKE MANNER TO THE ENTIRE SATISFACTION OF THE OWNER AND IN ACCORDANCE WITH RECOGNIZED TRADE PRACTICES.
2. ANY DAMAGE TO PUBLIC STREETS, CURBS, SIDEWALKS AND UTILITIES AS A RESULT OF SITE CONSTRUCTION ACTIVITIES SHALL BE REPAIRED BY THE CONTRACTOR.
3. ALL WALKWAYS TO HAVE A MAXIMUM CROSS SLOPE OF 2% AND RUNNING SLOPE OF 5% UNLESS OTHERWISE NOTED. SIDEWALK/WALKWAY RISERS MUST BE GREATER THAN 4" AND LESS THAN 8".
4. ALL GRADING WITHIN LANDSCAPED AREAS TO BE A MINIMUM OF 2% AND A MAXIMUM OF 3:1 (3 HORIZONTAL, 1 VERTICAL) SLOPE UNLESS OTHERWISE NOTED.
5. ALL GRADING IN PAVEMENT AREAS SHALL BE GREATER THAN 1% UNLESS OTHERWISE NOTED.
6. POSITIVE DRAINAGE TO BE MAINTAINED FROM ALL BUILDINGS IN ACCORDANCE WITH APPLICABLE REGULATIONS AND BUILDING CODE.
7. ALL EXCAVATED SOIL TO BE DISPOSED SHALL BE PROPERLY CLASSIFIED, HANDLED, AND DISPOSED OF OFF-SITE IN ACCORDANCE WITH ALL LOCAL, STATE, AND FEDERAL REGULATIONS.
8. THE CONTRACTOR SHALL PROVIDE RECORD "AS BUILT" PLANS OF ALL CONDUITS AND STRUCTURES TO THE APPLICABLE UTILITY COMPANIES, PROJECT ENGINEER AND THE PROJECT OWNER.
9. THE CONTRACTOR SHALL MAINTAIN FIELD NOTES, PHOTOGRAPHS, AND REDLINED PLANS CLEARLY RECORDING THE LOCATION OF ALL UNDERGROUND INSTALLATIONS. THESE RECORDS SHALL BE PROVIDED TO THE PROJECT ENGINEER UPON REQUEST.
10. CONTRACTOR TO PERFORM TEST PITS TO VERIFY EXISTING UTILITY DEPTHS, SIZES AND LOCATIONS PRIOR TO CONNECTING PROPOSED SEWER AND WATER MAINS. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IN WRITING OF ANY CONFLICTS SO THAT DESIGN MODIFICATIONS CAN BE MADE IF NECESSARY.
11. ALL WATER, STORM, AND SANITARY PIPING SHALL BE CONSTRUCTED AND TESTED IN ACCORDANCE WITH APPLICABLE NYCDEP BUREAU OF WATER AND SEWER OPERATIONS REQUIREMENTS.
12. CIRCULAR HOLE SAWS WHICH ARE APPROPRIATELY SIZED OR HAND DRILLS MUST BE USED TO MAKE OPENINGS IN EXISTING SEWERS TO RECEIVE LATERALS. JACKHAMMERS, SLEDGEHAMMERS AND OTHER UNSUITABLE TOOLS OR MACHINERY WHICH MAY DAMAGE THE SEWER MAIN ARE NOT ALLOWED TO BE USED TO MAKE LATERAL OPENINGS. ALL DEBRIS MUST BE REMOVED AND NOT ALLOWED TO FALL INTO THE PIPE.
13. ALL WATER MAINS, WATER SERVICES AND APPURTENANCES SHALL BE CONSTRUCTED, TESTED AND DISINFECTED IN ACCORDANCE WITH THE SPECIFICATIONS AND APPLICABLE NYCDEP REQUIREMENTS.'
14. THE CONTRACTOR SHALL BRING ALL EXISTING UTILITY MANHOLES, STRUCTURES, LIDS, AND UTILITY APPURTENANCES , WITHIN THE WORK AREA, UP TO FINAL GRADE.
15. A MARKER STAKE PROTRUDING A MINIMUM OF FOUR FEET ABOVE THE GROUND SURFACE SHALL BE PLACED TO INDICATE THE END OF THE CONSTRUCTION STUBS FOR BUILDING CONNECTIONS, OR STUBS SHALL BE TURNED AND EXTENDED ABOVE GRADE BY FOUR FEET AND CAPPED.
16. ALL CONNECTIONS SHALL BE COORDINATED BETWEEN ARCHITECTURAL, PLUMBING, MECHANICAL, AND ELECTRICAL PLANS.

LEGEND

MANHOLES — EXISTING
- ELECTRIC (E)
- TELEPHONE (T)
- GAS (G)
- WATER (W)
- FIRE DEPARTMENT (FD)
- STORM (SD)
- SANITARY MANHOLE (SS)
- UNIDENTIFIED MANHOLE (NO RECORD AVAILABLE)
- HARDWARE RIM EL. & INV. EL. (SEWER, ETC.) (SS) RIM 61.23 INV. 47.89

CATCH BASINS
- CATCH BASIN WITH CURB PIECE - TYPE 1
- CATCH BASIN WITHOUT CURB PIECE - TYPE 2
- YARD DRAIN

HYDRANTS
- LOW PRESSURE HYDRANT

STREET LIGHTING AND TRAFFIC SIGNALS
- WOOD UTILITY POLE
- WOOD UTILITY POLE WITH STREET LIGHT
- WOOD UTILITY POLE WITH PEDESTRIAN SIGNAL
- WOOD UTILITY POLE WITH STREET LIGHT AND PEDESTRIAN SIGNAL
- GUY ANCHORAGE — GW
- STREET LIGHT (METAL POLE)
- STREET LIGHT AND TRAFFIC SIGNAL — T
- STREET LIGHT AND TRAFFIC SIGNAL WITH PEDESTRIAN SIGNAL — TPS
- TRAFFIC SIGNAL POST
- TRAFFIC SIGNAL CONTROL BOX

VALVE BOXES
- GAS
- WATER
- UNKNOWN — UNK

LEGAL DATA
- LOT & BLOCK NUMBER — BLOCK 3870 LOT 28
- ESTABLISHED/LEGAL GRADE — 100.00
- ANGLE — 86°30'48"
- BLOCK LENGTH — 167.01'
- INTERPOLATED/CALCULATED ANGLE OR LENGTH — [86°30'48"] [167.01']
- PROPERTY POSSESSION LINE
- MAPPED PROPERTY LINE (RIGHT-OF-WAY LINE)
- LOT LINE
- SURVEY MONUMENT (CITY) - IDENTIFY BY TOPO NUMBER — ⊕M#
- BENCH MARK (LABEL) — ·BM#

SURVEY CONTROLS
- CONTROL SURVEY TRAVERSE

TREES — EXISTING
- EXISTING TREE (SIZE AS LABELED)
- SHRUB
- TREE PROTECTION

MISCELLANEOUS
- AREA LIGHT
- VAULT (SIDEWALK) — V
- MONITORING WELL — MW
- FIRE ALARM BOX — F
- POLICE CALL BOX — P
- MAIL BOX, PUBLIC PHONE — MB
- PARKING METER OR KIOSK
- COLUMN - FOUNDATION (OF ELEVATED STRUCTURES), OR PILLAR
- FLAG POLE
- SIGN (GROUND MOUNTED)
- PEDESTRIAN RAMP
- CURB (CONCRETE UNLESS OTHERWISE INDICATED)
- CURB WITH DROP CURB (DRIVEWAY) OR FLUSH CURB (HANDICAP RAMP)
- EDGE OF PAVEMENT WITHOUT CURB
- NORTH ARROW — TRUE NORTH, PLAN NORTH, N

BARRIERS
- GUIDE RAIL — RW (STN.)
- RETAINING WALL (W/TYPE)

FENCE (WITH HEIGHT AND TYPE)
- CHAIN LINK FENCE
- IRON PICKET FENCE
- WIRE FENCE
- IRON ON CONCRETE COPING
- WOOD PICKET FENCE
- WOOD STOCKADE FENCE
- WATERCOURSE LINE
- GUARD POST

BUILDINGS
- HOUSE INFORMATION — HOUSE NUMBER, BLDG TYPE, (FF) FIRST FLOOR ELEVATION, (CE) CELLAR ENTRANCE, (GF) GARAGE FLOOR — FF 61.23
- STAIRS OR STOOPS

CONDUITS — EXISTING
- STORM SEWER (WITH SIZE - LESS THAN 24") — 15" STM. SEWER
- STORM SEWER (WITH SIZE - 24" AND GREATER) — 24" STM. SEWER
- SANITARY SEWER (WITH SIZE - LESS THAN 24") — 15" SAN. SEWER
- SANITARY SEWER (WITH SIZE - 24" AND GREATER) — 24" SAN. SEWER
- COMBINED SEWER (WITH SIZE - LESS THAN 24") — 15" COMB. SEWER
- COMBINED (WITH SIZE - 24" AND GREATER) — 24" COMB. SEWER
- SANITARY SEWER FORCE MAIN (WITH SIZE - LESS THAN 24") — 15" FORCE MAIN
- SANITARY SEWER FORCE MAIN (WITH SIZE - 24" AND GREATER) — 24" FORCE MAIN
- GAS LINE (WITH SIZE) — 4" GAS
- ELECTRIC — ELECTRIC E
- WATER — WATER
- TELEPHONE — TELEPHONE
- OVERHEAD (AERIAL) UTILITY LINE — A/E,T,F

DEMOLITION — PROPOSED
- ASPHALT PAVEMENT TO BE REMOVED
- CONCRETE PAD/PAVEMENT TO BE REMOVED
- GRASS TO BE WEEDED
- GRAVEL TO BE WEEDED, RAKED, AND RESTORED
- EXCAVATION LIMITS FOR FORCE MAIN TRENCHING
- EXCAVATION LIMITS FOR ELECTRICAL DUCT BANK TRENCHING
- CONTRACTOR STAGING LIMIT
- GRASS TO BE REMOVED

SITE WORK — PROPOSED
- ASPHALT PAVEMENT
- CONCRETE PAD/PAVEMENT
- POROUS PAVEMENT
- PAVERS
- GRASS
- GRAVEL TO BE WEEDED, RAKED, AND RESTORED
- SPILLWAY GRATE COVER
- LOUVERED ENCLOSURE
- WROUGHT IRON FENCE
- DEPRESSED CURB
- STEEL-FACED CONCRETE CURB
- FORCE MAIN PIPE — FM / FM
- STORM SEWER PIPE — STRM
- ELECTRICAL DUCT — E
- CATCH BASIN
- STORM SEWER MANHOLE
- SPOT ELEVATION — 12.60
- SLOPE — 1.7%
- CONTOUR — 13.0

ABBREVIATIONS

AIR CONDITIONING	A/C
ASPHALT	ASPH.
BOTTOM OF CURB	B.C.
BOTTOM OF STRUCTURE	BOT.
BOTTOM OF WALL	B.W.
BRICK	BRK.
CATCH BASIN	C.B.
CLEARANCE	C.L.
CONSTRUCTION MANAGER	C.M.
CENTER TO CENTER	C.T.C.
CHAIN LINK FENCE	C.L.F.
COMBINED SEWER OVERFLOW	CSO
CONCRETE	CONC.
CONCRETE CURB	C.C.
CONCRETE WALK	C.W.
DEPARTMENT OF ENVIRONMENTAL PROTECTION	DEP
DEPRESSED CURB	D.C.
DRAWING	DWG.
DUCTILE IRON PIPE	DIP
EACH	EA
ELECTRIC	ELEC.
ELEVATION	ELEV.
GRATE	GR.
GUY WIRE	GW
HORIZONTAL	HORIZ
INVERT	INV.
LINED CYLINDER PIPE	LCP
MANHOLE	MH
METAL	MTL
METAL COVER	M.C.
NO PIPES VISIBLE	NPV
ON CENTER	O.C.
PAVEMENT	PVMT.
REFERENCE	REF.
REINFORCED	REINF.
REINFORCED CONCRETE PIPE	RCP
RIGHT-OF-WAY	R.O.W.
ROADWAY	RDWY.
SOIL EROSION & SEDIMENT CONTROL PLAN	SESCP
SEWER	SWR.
STEEL	ST.
STEEL-FACED CURB	S.F.C.
STONE	STN.
STORY	STY
TOP OF CURB OR CONCRETE	T.C.
TOP OF DEPRESSED OR FLUSH CURB	T.D.C.
TOP OF PIPE	T.O.P.
TOP OF PIPE BELL	T.O.B.
TOP OF WALL	T.W.
TRAVERSE	TRV
TYPICAL	TYP.
UNKNOWN	UNK
VERIFY IN FIELD	V.I.F.
VERTICAL	VERT

BID SET

SUBMITTAL DATE: OCTOBER 2026

GRAPHIC SCALES CHECK BEFORE USE

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DRAWN BY: ALEX DANIELSON
CHECKED BY: STEPHEN FUNG, P.E.
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NYC Environmental Protection

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EXECUTIVE DIRECTOR: NAYANKUMAR SHAH, P.E.

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CAPITAL PROJECT WP-269
RECONSTRUCTION OF
PAERDEGAT PUMPING STATION
CONTRACT PS-318
CIVIL
LEGEND, ABBREVIATIONS, NOTES

DATE: OCTOBER 2026
SCALE: NTS
SHEET NO: 3 OF 274
DRAWING NO. CG-001.00

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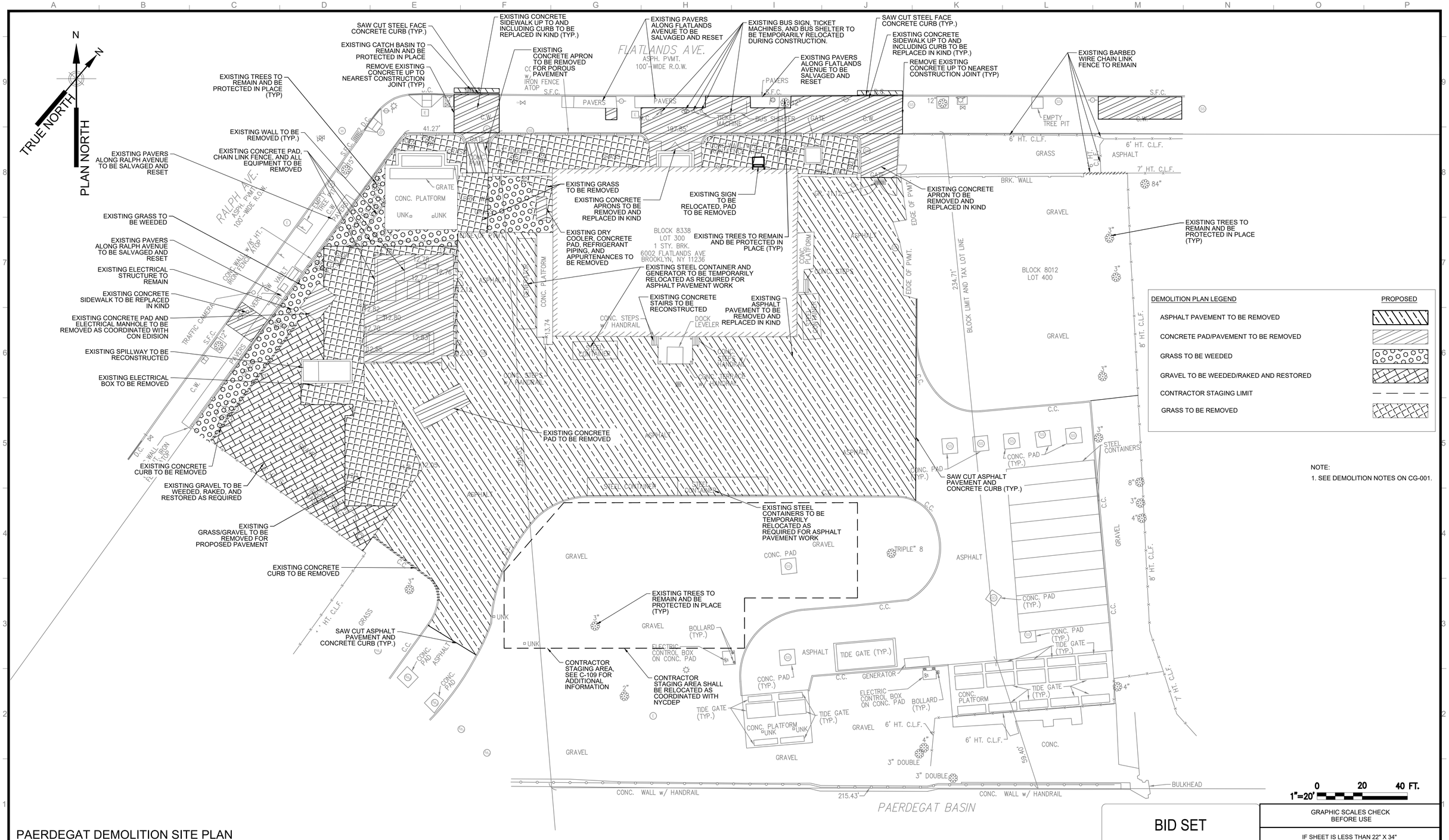

PAERDEGAT DEMOLITION SITE PLAN

SCALE: 1"= 20'

BID SET

SUBMITTAL DATE: OCTOBER 2026

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RECONSTRUCTION OF
PAERDEGAT PUMPING STATION
CONTRACT PS-318
CIVIL
DEMOLITION SITE PLAN

DATE: OCTOBER 2026
SCALE: 1" = 20'
SHEET NO: 4 OF 274
DRAWING NO. DC-101.00

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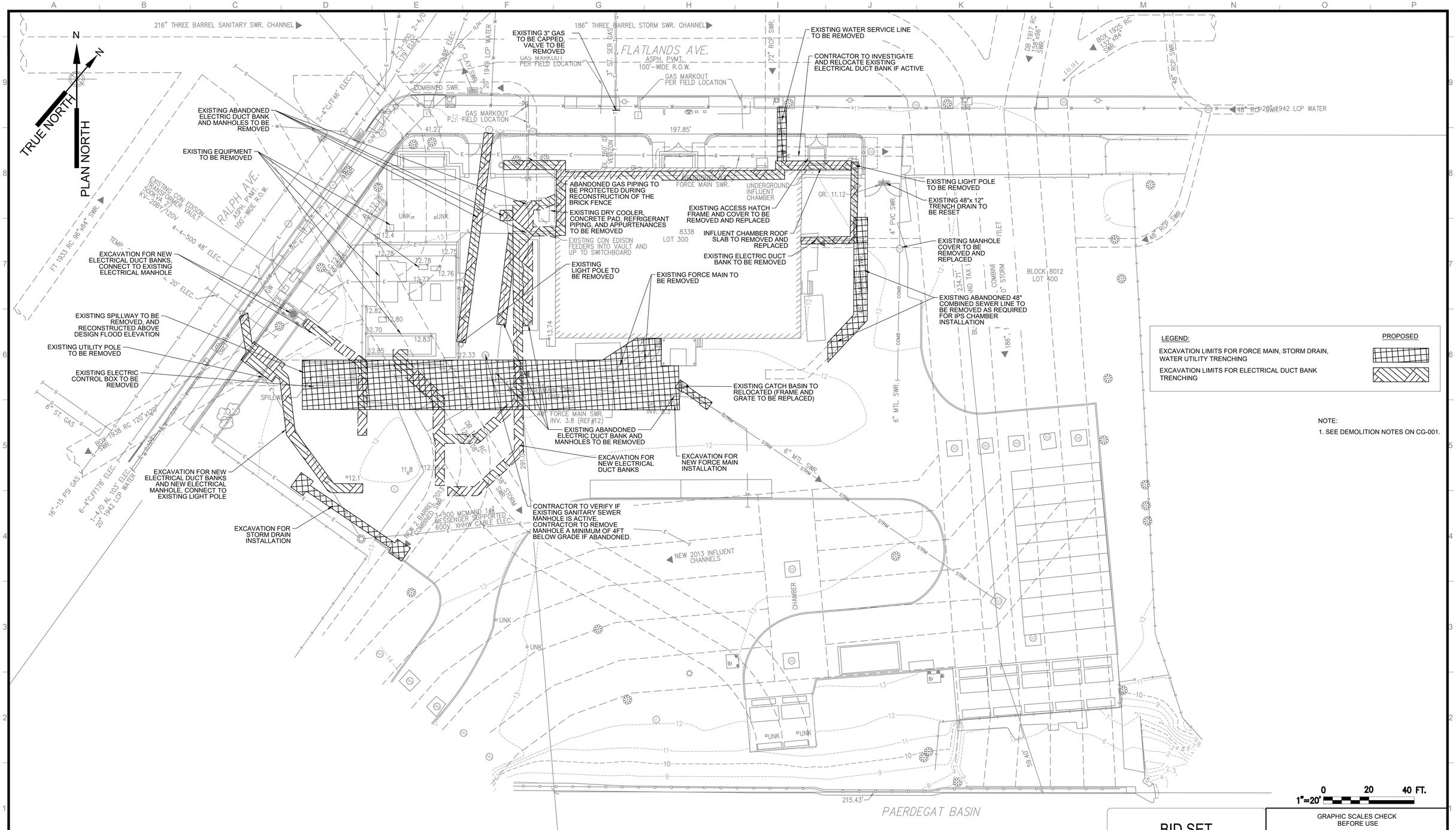

PAERDEGAT DEMOLITION UTILITY PLAN

SCALE: 1"= 20'

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DEMOLITION UTILITY PLAN

DATE: OCTOBER 2026
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SHEET NO: 5 OF 274
DRAWING NO. DC-102.00

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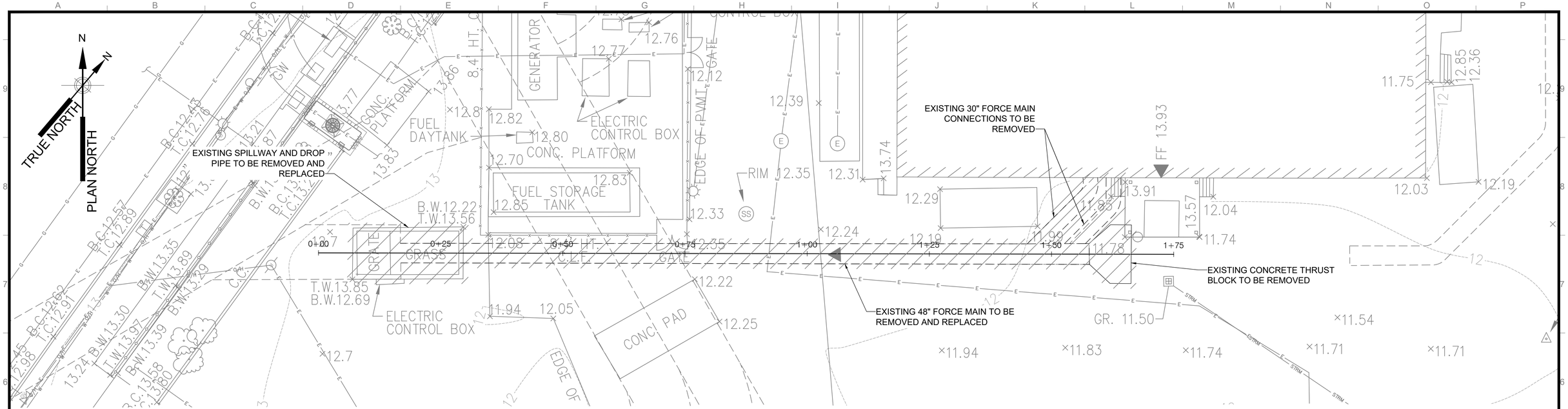
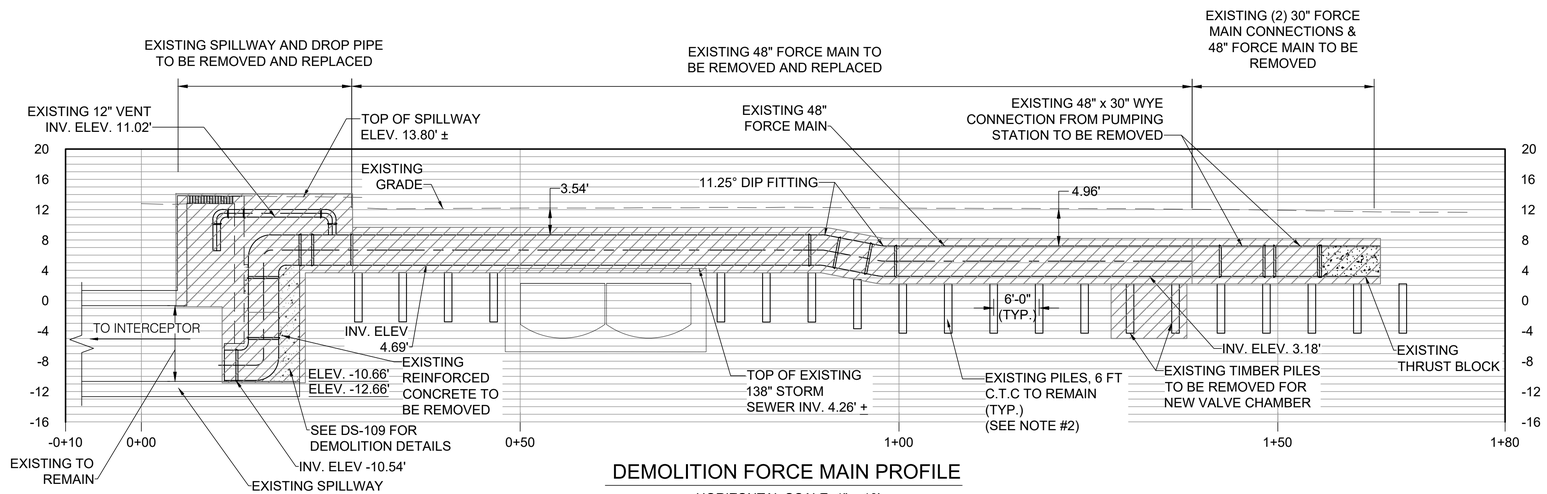


DEMOLITION FORCE MAIN PLAN

SCALE: 1"= 10'

0 10 20 FT.
1"=10'



DEMOLITION FORCE MAIN PROFILE

HORIZONTAL SCALE: 1" = 10'
VERTICAL SCALE: 1" = 10'

0 10 20 FT.
1"=10'

NOTES:

1. SEE DEMOLITION NOTES ON CG-001.
2. CONTRACTOR SHALL CONFIRM LOCATION AND CONDITION OF EXISTING TIMBER PILES UNDERNEATH EXISTING FORCE MAIN.

BID SET

SUBMITTAL DATE: OCTOBER 2026

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CHECKED BY: JEI CHON
DESIGN LEAD: STEPHEN FUNG, P.E.
PROJECT MANAGER: AIMEE BOULET, P.E.

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CAPITAL PROJECT WP-269
RECONSTRUCTION OF PAERDEGAT PUMPING STATION
CONTRACT PS-318
CIVIL
DEMOLITION FORCE MAIN PLAN AND PROFILE

DATE: OCTOBER 2026
SCALE: 1" = 10'
SHEET NO: 6 OF 274
DRAWING NO. DC-103.00

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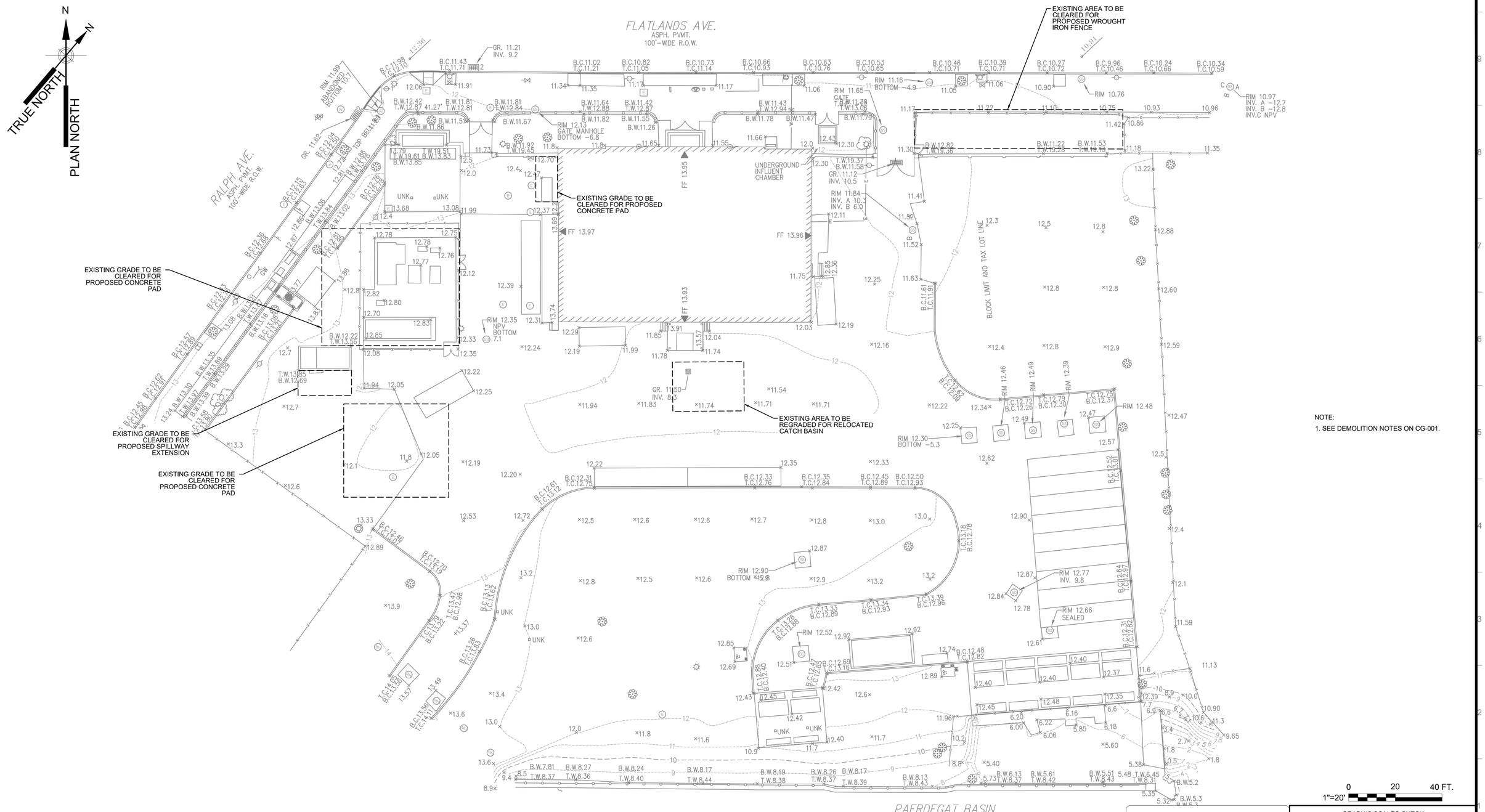

NOTE:
1. SEE DEMOLITION NOTES ON CG-001.

0 20 40 FT.
1"=20'

PAERDEGAT DEMOLITION GRADING PLAN

SCALE: 1"= 20'

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NYC Environmental Protection

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CAPITAL PROJECT WP-269
RECONSTRUCTION OF
PAERDEGAT PUMPING STATION
CONTRACT PS-318
CIVIL
DEMOLITION GRADING PLAN

DATE: OCTOBER 2026
SCALE: 1" = 20'
SHEET NO: 7 OF 274
DRAWING NO. DC-104.00

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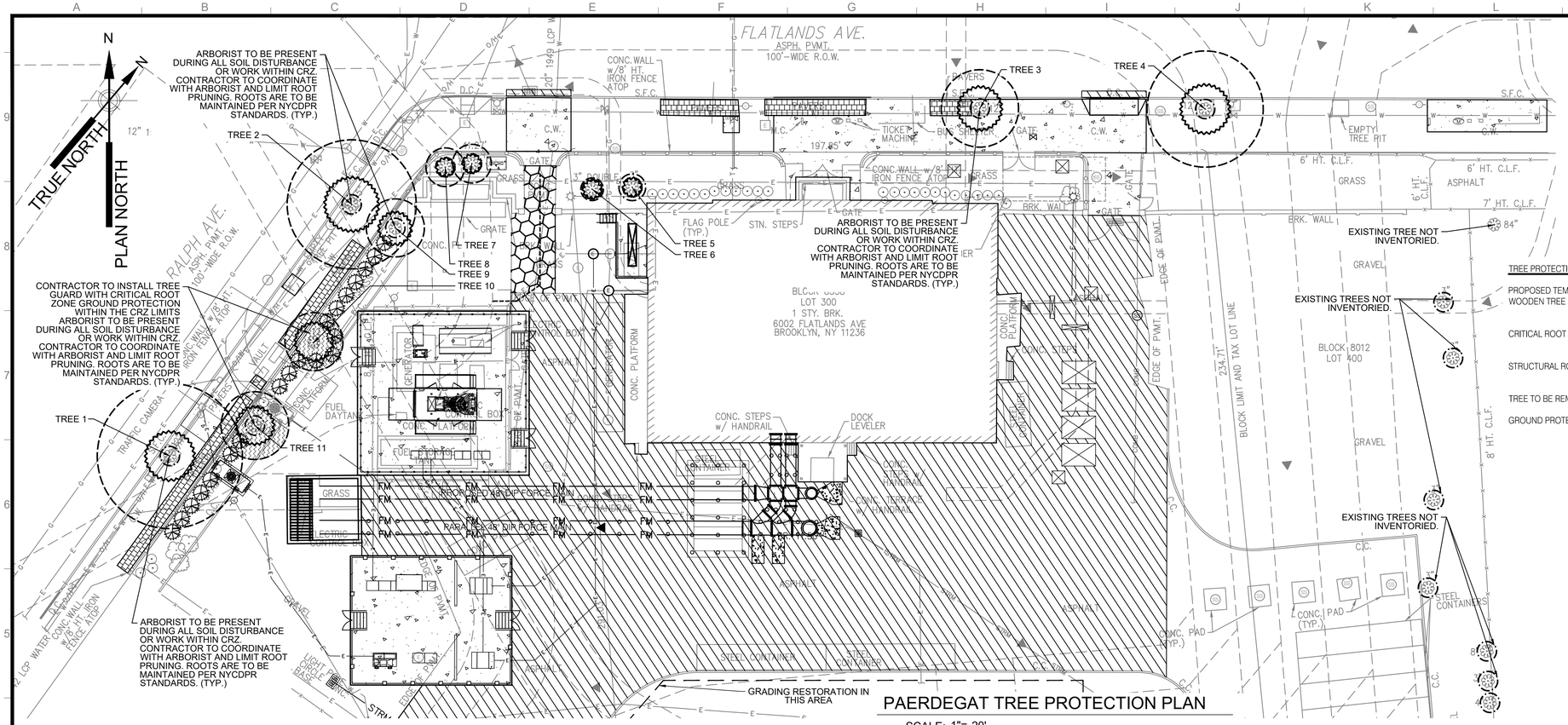


PAERDEGAT TREE PROTECTION PLAN

SCALE: 1"= 20'

TREE PROTECTION NOTES:

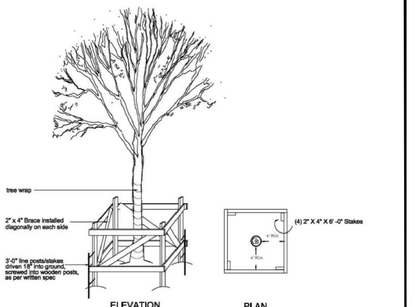
1. ALL WORK PERFORMED WITHIN 50 FEET OF A CITY TREE MUST POSSESS A PERMIT ISSUED BY THE NYC DEPARTMENT OF PARKS AND RECREATION (NYCDPR)TO AVOID UNSAFE, HAZARDOUS AND OTHER CONDITIONS WHICH MAY BE DETRIMENTAL OR POTENTIALLY DETRIMENTAL TO ANY CITY TREE. IT IS INCUMBENT UPON THE CONTRACTOR TO VERIFY WHETHER OR NOT THERE ARE ANY TREES OR TREE ROOTS SITUATED WITHIN THE CITY RIGHT OF WAY. ANY AND ALL TREES THAT FALL WITH THE JURISDICTION OF THE NYCDPR ARE PROTECTED BY LAW FROM ANY AND ALL DAMAGE THERETO INCLUDING BUT NOT LIMITED TO ANY INCIDENTAL DAMAGES, DAMAGE TO THE CANOPY, OR DAMAGE TO THE TRUNK OR ROOT ZONE DURING AND IN THE COURSE OF ANY AND ALL CONSTRUCTION ACTIVITIES, AND ALSO THE AFTERMATH OF ANY AND ALL CONSTRUCTION ACTIVITIES. NO CUTTING OR OTHERWISE DAMAGING OF TREE ROOTS IS PERMITTED. ANY AND ALL TREE WORK MUST BE COVERED UNDER PERMIT FROM NYCDPR. TREE WORK PERFORMED ABSENT A PERMIT CAN PRECIPITATE SERIOUS FINANCIAL AND LEGAL REPERCUSSIONS. VIOLATIONS AND MISDEMEANORS ARE PUNISHABLE BY A FINE NOT TO EXCEED $15,000 AND/OR IMPRISONMENT FOR UP TO ONE YEAR. ANY AND ALL APPLICATIONS RELATING TO CONSTRUCTION ACTIVITIES MUST BE ACCOMPANIED BY THE APPROPRIATE DOCUMENTATION AS REQUESTED PER P-A FORESTRY APPLICATION OR UPON FORESTER REQUEST.
2. UNLESS OTHERWISE DIRECTED IN WRITING, THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING THE TREE WORK PERMIT FROM NYCDPR. ALLOW AMPLE LEAD TIME FOR NYCDPR REVIEW AND ISSUANCE OF PERMIT.
3. ANY DAMAGE TO EXISTING TREES DURING CONSTRUCTION SHALL BE THE CONTRACTOR'S RESPONSIBILITY. THE CONTRACTOR SHALL PERFORM REMEDIAL WORK TO DAMAGED TREES AT THE CONTRACTOR'S EXPENSE; THIS WORK SHALL MEET ALL NYC PARKS REGULATIONS. CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS TO COMPLY WITH NYCDPR REGULATIONS. ADDITIONAL RESOURCES ARE AVAILABLE AT THE NYCDPR WEBSITE.
4. THE CONTRACTOR SHALL NOTIFY THE RESIDENT ENGINEER AT LEAST 30 DAYS PRIOR TO THE COMMENCEMENT OF ANY WORK REQUIRING A PERMIT. RESIDENT ENGINEER SHALL NOTIFY NYCDPR/ FORESTRY AT LEAST 20 BUSINESS DAYS PRIOR TO THE COMMENCEMENT OF ANY WORK REQUIRING A PERMIT.
5. TEMPORARY WOODEN TREE GUARDS AND TEMPORARY BARRIER FENCE SHALL BE INSTALLED WHERE DIRECTED AT THE BEGINNING OF THE CONTRACT AROUND EACH TREE IMPACTED BY DEMOLITION AND/OR CONSTRUCTION AND MAINTAINED THROUGHOUT THE COURSE OF THE ENTIRE DEMOLITION AND CONSTRUCTION PROCESS. NO WORK SHALL BE ALLOWED TO PROCEED BEFORE TREE PROTECTIONS ARE IN PLACE AND HAVE BEEN APPROVED BY NYCDPR, A CERTIFIED ARBORIST OR THE RESIDENT ENGINEER. THE COST OF TREE GUARDS SHALL BE DEEMED INCLUDED IN THE UNIT BID PRICES FOR ALL SCHEDULED ITEMS.
6. THE CONTRACTOR IS TO REFER TO THE NEW YORK CITY DEPARTMENT OF PARKS & RECREATION WEBSITE PAGE FOR TREE PROTECTION BEST PRACTICES AND PROTOCOLS FOR ADDITIONAL INFORMATION AND FOR DEFINITION OF CRITICAL ROOT ZONE (CRZ).
7. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT THE RESIDENT ENGINEER IS NOTIFIED IN ADVANCE AND PRESENT FOR ANY WORK AROUND EXISTING STREET TREES. THIS INCLUDES TREES WHERE EXCAVATION IS EXPECTED WITHIN THE CRITICAL ROOT ZONE (CRZ) OR IMMEDIATELY ADJACENT TO THE CRITICAL ROOT ZONE (CRZ). NO WORK MAY PROCEED AT THESE LOCATIONS WITHOUT THE RESIDENT ENGINEER PRESENT FOR EXCAVATIONS, BACKFILL, OR ANY OTHER WORK REQUIRING CONSTRUCTION EQUIPMENT. IF ROOTS ARE ENCOUNTERED DURING EXCAVATION, THE RESIDENT ENGINEER MUST ALSO BE PRESENT AT ANY TIME WHEN TEMPORARY ROOT PROTECTION MEASURES, SUCH AS WET BURLAP AS DESCRIBED BELOW, MUST BE UTILIZED. A STOP WORK ORDER WILL BE ISSUED BY THE RESIDENT ENGINEER FOR ANY WORK THAT IS NOT IN ACCORDANCE WITH THIS REQUIREMENT.
8. THE CONTRACTOR SHALL TAKE EXTREME CARE TO PROTECT THE ROOT SYSTEMS OF THE EXISTING TREES. BULK MATERIAL, EQUIPMENT, SCAFFOLD FOOTINGS, OR VEHICLES SHALL NOT BE STOCKPILED OR PARKED WITHIN THE CRZ OF ANY TREE, OR WITHIN TEN (10) FT. OF THE TRUNK (WHICHEVER IS GREATER). THIS IS DONE TO MINIMIZE SURFACE AND SUBSURFACE ROOT AND SOIL COMPACTION. THIS APPLIES TO ALL CRZS WITHIN OR OUTSIDE THE PROJECT LIMIT LINE. EVERY INCH OF DBH (DIAMETER BREAST HEIGHT) OF THE TREE REPRESENTS ONE REQUIRED RADIAL FOOT OF TREE PROTECTION.
9. IF STOCKPILING OCCURS WITHIN THE CRZ, A STOP WORK ORDER SHALL BE ISSUED IMMEDIATELY. ADDITIONAL VIOLATIONS MAY BE ISSUED AND MAY REQUIRE REMEDIAL WORK TO REMAIN WITHIN FORESTRY INSPECTOR'S PRESCRIBED TIMEFRAME. WORK SHALL NOT RE-COMMENCE UNTIL ALL STOCKPILED MATERIAL IS REMOVED FROM THE CRZ AND TREE REMEDIATION IS SATISFIED.
10. IF ANY MACHINERY IS OPERATING WITHIN THE CRZ THE AFFECTED AREA SHALL BE COVERED WITH MULCH TO A DEPTH OF AT LEAST TWELVE (12)-INCHES AND COVERED WITH PLYWOOD OR METAL PLATES TO DISTRIBUTE WEIGHT IN ORDER TO PROTECT ROOTS FROM DAMAGE CAUSED BY HEAVY EQUIPMENT. SUCH COVERING SHALL BE MAINTAINED DURING THE COURSE OF CONSTRUCTION AND REMOVED BY HAND OR AS SPECIFIED BY THE RESIDENT ENGINEER WITH ASSOCIATED PHOTOS REPORTED ACCORDINGLY. HEAT SOURCES, FLAMES, IGNITION SOURCES, AND SMOKING ARE PROHIBITED WITHIN THE CRZ AND WITHIN THE ABOVE MENTIONED MULCHED AREA.
11. WHEN A DEFICIENCY IN TREE PROTECTION IS DETERMINED BY RESIDENT ENGINEER IT MUST BE REMEDIED IMMEDIATELY. FAILURE TO CORRECT THE DEFICIENCY IMMEDIATELY MAY RESULT IN VIOLATIONS AND SUMMONS.
12. THE CONTRACTOR WILL IMMEDIATELY CONTACT THE RESIDENT ENGINEER IF ANY UNDERGROUND INFRASTRUCTURE (GAS, WATER/ELECTRIC ETC.) AFFECTS ANY PROPOSED OR EXISTING TREES ONSITE. THE RESIDENT ENGINEER SHALL NOTIFY NYCDPR FORESTRY. CONTRACTOR IS AWARE THAT ANY WORK DONE ON OR WITHIN 50 FEET OF A CITY TREE REQUIRES A PERMIT FROM NYCDPR. THIS INCLUDES UTILITY, SIDEWALK, PRUNING, OR ANY OTHER WORK WITHIN THE CRZ OF A TREE (WITHIN THE CITY RIGHT OF WAY) DONE BY THE GENERAL CONTRACTOR OR ANY SUBCONTRACTORS. CONTRACTOR WILL BE FAMILIAR WITH, AND FOLLOW NYC PLANTING AND FORESTRY SPECIFICATIONS. IN SOME INSTANCES, UTILITIES MAY NOT BE LABELED ON PROPOSED SITE PLAN. IF UTILITIES ARE UNKNOWN, THE PROJECT MANAGER MUST AMEND THE PLANS AND REQUEST THEIR PLANS BE REAPPROVED BY NYCDPR.
13. CONSTRUCTION ACCESS ROUTE IS TO BE DIAGRAMMED AND ROUTED TO MINIMALLY IMPACT ANY EXISTING TREES.
14. ROOTS OVER ONE (1)-INCH IN DIAMETER SHALL NOT BE CUT WITHOUT THE WRITTEN PERMISSION OF THE BOROUGH DIRECTOR OF FORESTRY.
15. TO BEST PROTECT TREE ROOTS THE CONTRACTOR SHALL EXERCISE EXTREME CARE IN REMOVING CONCRETE OR ASPHALT WITHIN THE CRZ OF EXISTING TREES. PAVEMENT SHOULD BE LIFTED RATHER THAN DRAGGED. ANY EXCAVATION WITHIN THE CRZ, OR ELSEWHERE ON SITE, AS INDICATED ON TREE PROTECTION PLAN, SHALL BE DONE BY HAND OR PNEUMATIC EXCAVATION AND IN THE PRESENCE OF THE RESIDENT ENGINEER WITH ASSOCIATED PHOTOS AND REPORT TO BE FILED WITH NYCDPR FORESTRY INSPECTOR. CONTRACTOR IS TO SCHEDULE APPOINTMENT WITH FORESTRY INSPECTOR ACCORDINGLY.
16. THE EXCAVATION AREA WITHIN THE CRZ SHALL BE BACKFILLED IMMEDIATELY AND/OR ROOTS SHALL BE KEPT CONSTANTLY MOIST WITH BURLAP COVERED WITH WHITE PLASTIC AND CHECKED A MINIMUM OF TWO (2) TIMES A DAY, ONCE IN THE MORNING AND ONCE IN THE AFTERNOON, FOR A MAXIMUM OF FORTY-EIGHT (48) HOURS, UNTIL BACKFILL IS COMPLETE AS DIRECTED BY THE DIRECTOR OF LANDSCAPE CONSTRUCTION AND THE RESIDENT ENGINEER. IF DIRECTED, SOAKER HOSES SHALL BE INSTALLED TO FACILITATE PROPERLY MOIST CONDITIONS. NO POOLING OF WATER OR CONTINUOUS RUNNING WATER SHALL OCCUR WITHIN THE DRIP LINE OF EXISTING TREES OR WITHIN THE TREE PROTECTION ZONES OTHER THAN THAT DURING THE IRRIGATION PROCESS.
17. IF ROOTS ARE TO BE EXPOSED FOR A PERIOD GREATER THAN FORTY-EIGHT (48)-HOURS, THE EXPOSED AREA SHALL BE COVERED WITH AT LEAST SIX (6)-INCHES OF MULCH AND MAINTAINED MOIST DURING THE COURSE OF CONSTRUCTION UNTIL THE AREA CAN BE PROPERLY BACKFILLED. PHOTOS TO BE TAKEN PERIODICALLY AND REPORTED TO THE FORESTRY INSPECTOR BY THE CONTRACTED LANDSCAPE CONTRACTOR.
18. NO RUNOFF OR SPILLAGE OF NOXIOUS MATERIALS WHILE MIXING, PLACING, OR STORING CONSTRUCTION MATERIAL SHALL OCCUR WITHIN THE TREE PIT OR CRZ. NO PONDING, ERODING, OR EXCESSIVE WETTING CAUSED BY DEWATERING OPERATIONS SHALL OCCUR WITHIN TREE PIT OR CRZ.
19. ALL EXISTING TREES BEING PROTECTED ON THE PROPOSED JOBSITE ARE TO BE WATERED 20 GALLONS ONCE WEEKLY BETWEEN MARCH 1 AND OCTOBER 30 ACCORDINGLY TO BEST PRESERVE EXISTING TREES DURING DEMOLITION AND CONSTRUCTION PROCESSES. WATERING SHALL BE DONE IN A MANNER THAT THERE SHOULD NOT BE STANDING WATER AROUND THE TREE.
20. UNLESS OTHERWISE NOTED IT IS BEST TO KEEP EXISTING CONCRETE WITHIN THE TREE PROTECTION ZONE AS LONG AS POSSIBLE UNTIL REMOVAL AND REINSTALLATION OF NEW SIDEWALK. CONCRETE SHOULD BE LEFT INTACT THROUGHOUT THE DEMOLITION AND CONSTRUCTION PROCESS TO PREVENT FURTHER SOIL COMPACTION ON EXISTING TREE ROOTS. OTHER WORK MAY BE SPECIFIED BY FORESTRY INSPECTOR TO BE DONE WITHIN A PRESCRIBED TIMEFRAME.
21. PREPARATORY PRUNING WORK SHALL BE PERFORMED ONLY WHEN DIRECTED BY A FORESTRY INSPECTOR. THIS WORK SHALL BE PERFORMED IN ACCORDANCE WITH ANSI A300 STANDARDS AND BY A QUALIFIED, LICENSED & INSURED ARBORIST OR TREE SERVICE COMPANY. CONTRACTOR IS TO FOLLOW ALL NYCDPR FORESTRY PERMIT & WORK ORDER REGULATIONS. CONTRACTOR IS RESPONSIBLE FOR SCHEDULING THE APPOINTMENT WITH FORESTRY INSPECTOR.

TREE PROTECTION NOTES

1. TREES #1-4 ARE WITHIN NYCDPR JURISDICTION.
2. TREES #5-11 ARE UNDER NYCDEP JURISDICTION.
3. TREES #5-11 SHALL BE PROTECTED PER NYCDPR STANDARDS BUT ALL REPORTING AND COORDINATION ITEMS NOTING NYCDPR SHALL BE DIRECTED TO NYCDEP'S REPRESENTATIVE/ RESIDENT ENGINEER.

1/13 TEMPORARY WOODEN TREE GUARD

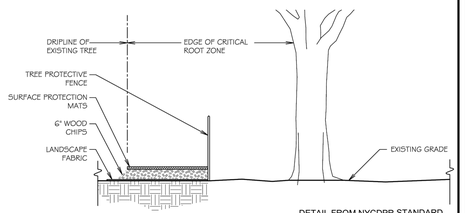
NOT TO SCALE



DETAIL FROM NYCDPR STANDARD DETAILS SHEET 13 DETAIL 1.

2 TREE PROTECTIVE FENCE WITH GROUND PROTECTION

SCALE: AS SHOWN



DETAIL FROM NYCDPR STANDARD PROTECTIVE FENCING & TREE DECOMPACTION DETAIL 2.

EXISTING TREES - COMPLETE LIST:

TREE #	BOTANICAL NAME	COMMON NAME	D.B.H (In)	CONDITION	TREE PROTECTION DETAILS	DISTANCE FROM WORK (FT)	TYPE OF WORK
1	Quercus coccinea	Scarlet Oak	18.0	GOOD	SEE NOTES	W. 6.69'	SIDEWALK RESTORATION
2	Quercus palustris	Pin Oak	20.0	GOOD	SEE NOTES	N.W. 10.95'	SIDEWALK RESTORATION
3	Ginkgo biloba	Ginkgo	16.0	GOOD	SEE NOTES	E. 2.19'	SIDEWALK RESTORATION
4	Quercus palustris	Pin Oak	18.0	GOOD	SEE NOTES	N. 13.34'	SIDEWALK RESTORATION
5	Ilex opaca	American Holly	18.0	GOOD	SEE NOTES	0.00'	LANDSCAPE RESTORATION
6	Ilex opaca	American Holly	6.0	GOOD	SEE NOTES	0.00'	LANDSCAPE RESTORATION
7	Pinus Var.	Pine, Other	6.0	GOOD	SEE NOTES	0.00'	LANDSCAPE RESTORATION
8	Pinus Var.	Pine, Other	6.0	GOOD	SEE NOTES	0.00'	LANDSCAPE RESTORATION
9	Gleditsia triacanthos 'inermis'	Pine, Other	6.0	GOOD	SEE NOTES	0.00'	LANDSCAPE RESTORATION
10	Gleditsia triacanthos 'inermis'	Honeylocust	12.0	GOOD	SEE NOTES	0.00'	LANDSCAPE RESTORATION
11	Gleditsia triacanthos 'inermis'	Honeylocust	14.0	GOOD	SEE NOTES	0.00'	LANDSCAPE RESTORATION

0 20 40 FT.
1"=20'

BID SET

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DESIGN LEAD: WILLIAM REIMER
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CAPITAL PROJECT WP-269
RECONSTRUCTION OF
PAERDEGAT PUMPING STATION
CONTRACT PS-318
CIVIL
TREE PROTECTION PLAN

DATE: OCTOBER 2026
SCALE: 1" = 20'
SHEET NO: 8 OF 274
DRAWING NO. DC-105.00

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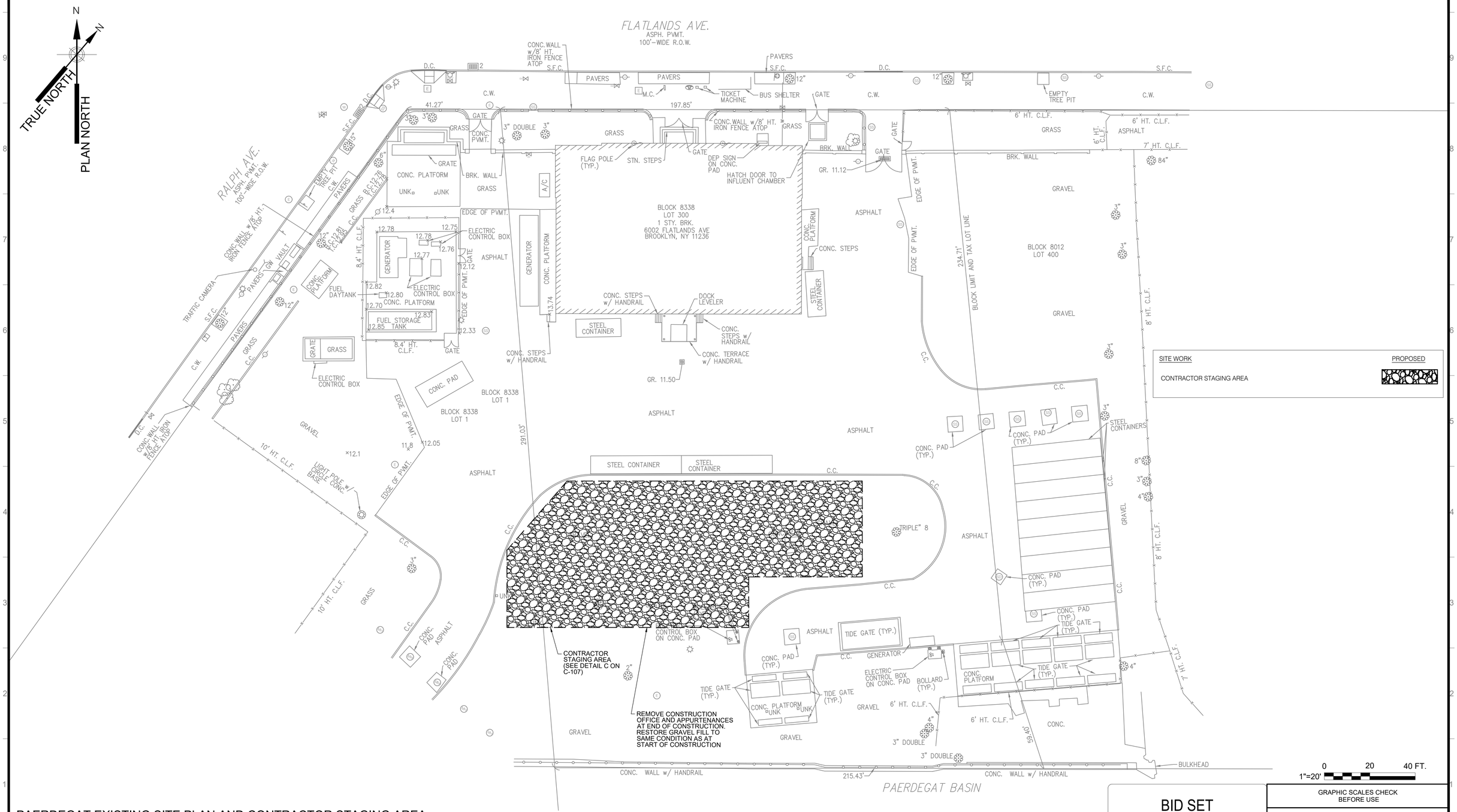

PAERDEGAT EXISTING SITE PLAN AND CONTRACTOR STAGING AREA

SCALE: 1"= 20'

BID SET

SUBMITTAL DATE: OCTOBER 2026

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CAPITAL PROJECT WP-269
RECONSTRUCTION OF PAERDEGAT PUMPING STATION
CONTRACT PS-318
CIVIL
EXISTING SITE PLAN AND CONTRACTOR STAGING AREA

DATE: OCTOBER 2026
SCALE: 1" = 20'
SHEET NO: 9 OF 274
DRAWING NO. C-101.00

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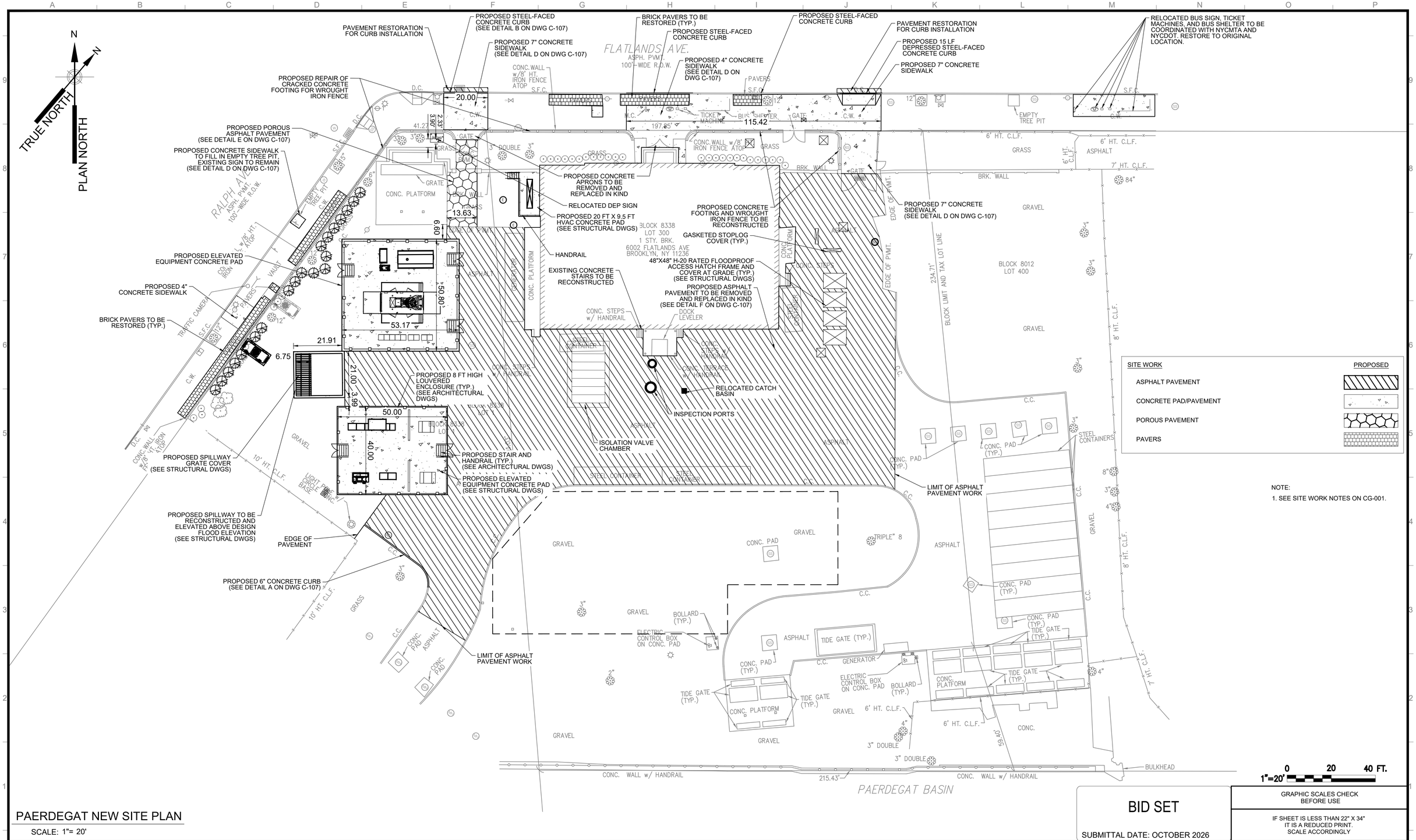

PAERDEGAT NEW SITE PLAN

SCALE: 1"= 20'

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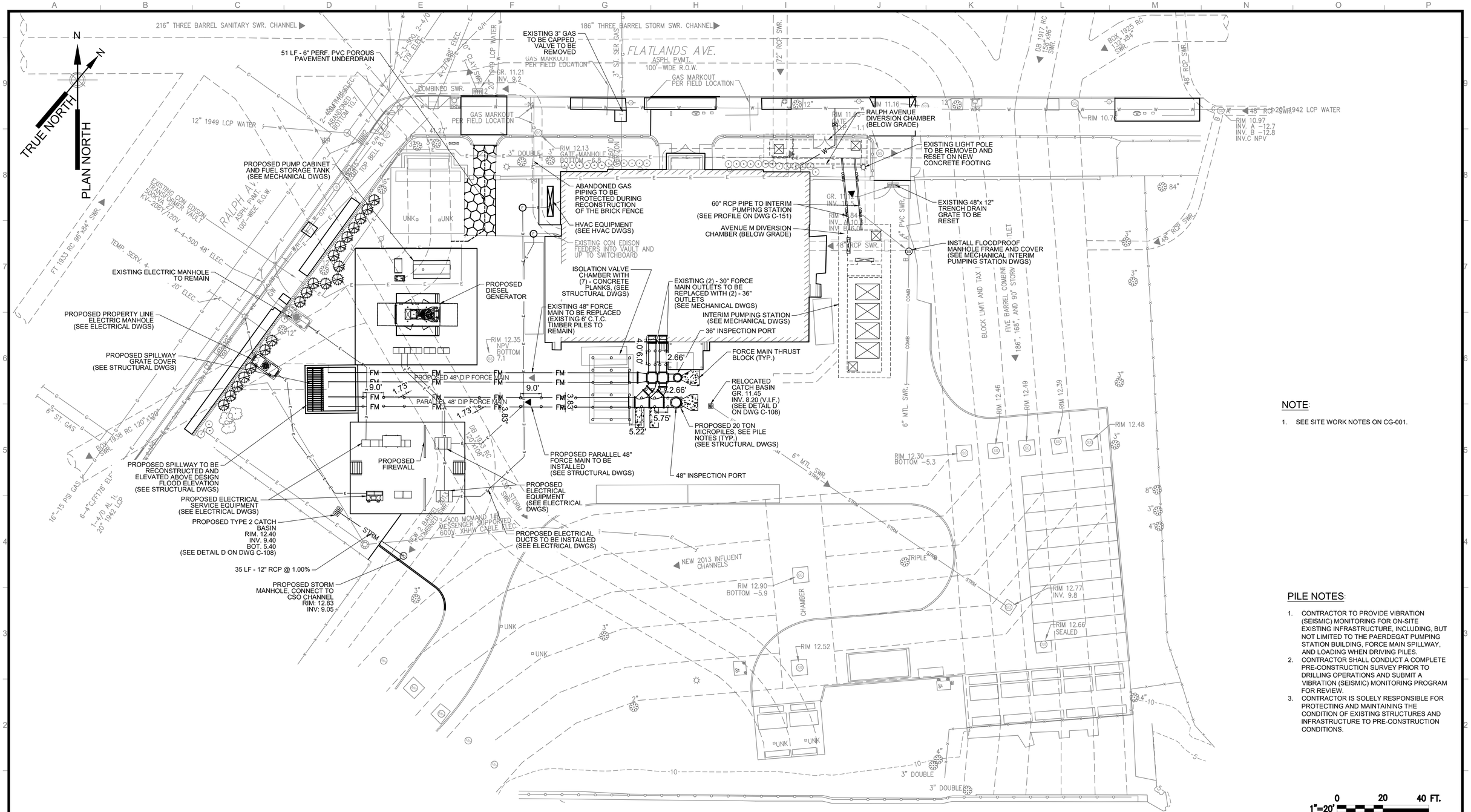

PAERDEGAT UTILITY PLAN

SCALE: 1"= 20'

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SUBMITTAL DATE: OCTOBER 2026

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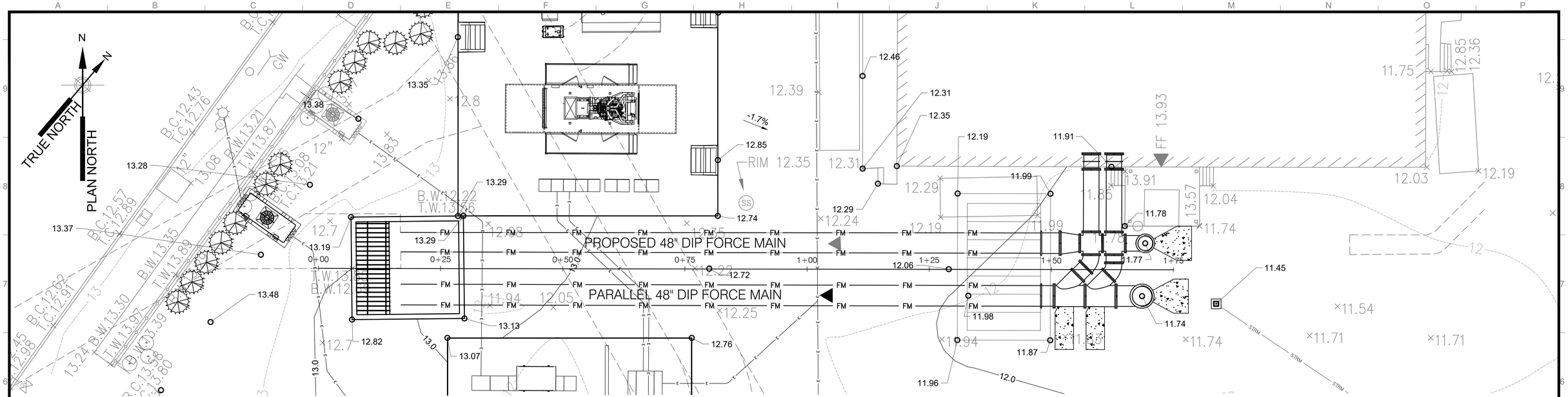
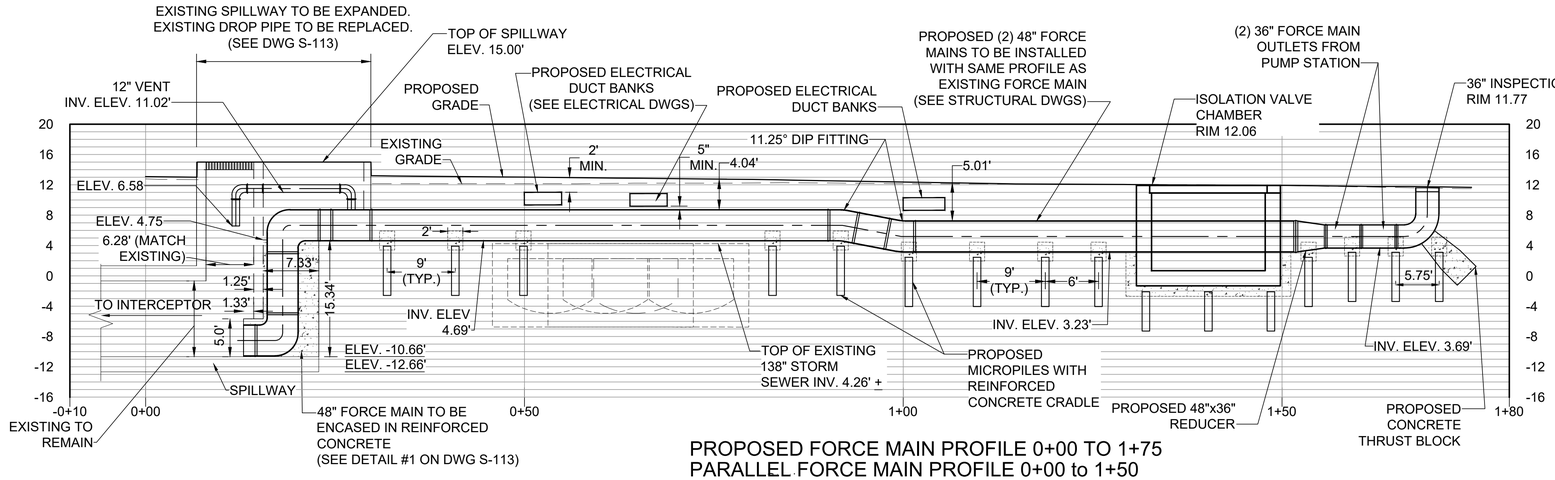


FORCE MAIN(S) PLAN

SCALE: 1"= 10'

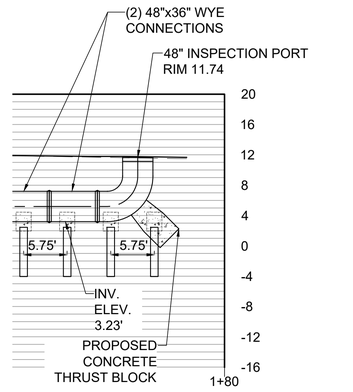
1"=10' 0 10 20 FT.



PROPOSED FORCE MAIN PROFILE 0+00 TO 1+75
PARALLEL FORCE MAIN PROFILE 0+00 to 1+50

HORIZONTAL SCALE: 1" = 10'
VERTICAL SCALE: 1" = 10'

1"=10' 0 10 20 FT.



PARALLEL FORCE MAIN PROFILE - 1+50 to 1+75

HORIZONTAL SCALE: 1" = 10'
VERTICAL SCALE: 1" = 10'

NOTE:

1. ALL PROPOSED FORCE MAIN PIPING TO BE JOINED WITH RESTRAINED JOINTS
2. PILE BENTS SHALL BE LOCATED AT THE CONNECTION BETWEEN TWO PIPE SEGMENTS AND AT THE HALFWAY POINT OF THE PIPE SEGMENT. THE DUCTILE IRON PIPE STANDARD PIPE SEGMENT (LENGTH) IS 18 FEET OR 20 FEET. IF THE DIP IS 18 FEET IN LENGTH, THE PILE BENTS SHALL BE SPACED AT EVERY 9 FEET.

BID SET

SUBMITTAL DATE: OCTOBER 2026

GRAPHIC SCALES CHECK BEFORE USE

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DESIGNED BY: ALEX DANIELSON
DRAWN BY: ALEX DANIELSON
CHECKED BY: STEPHEN FUNG, P.E.
DESIGN LEAD: STEPHEN FUNG, P.E.
PROJECT MANAGER: AIMEE BOULET, P.E.

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NYC Environmental Protection

ACCOUNTABLE MANAGER: JOHN GOULAS, P.E.
PORTFOLIO MANAGER: KEVIN ELLENWOOD, P.E.
EXECUTIVE DIRECTOR: NAYANKUMAR SHAH, P.E.

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CAPITAL PROJECT WP-269
RECONSTRUCTION OF PAERDEGAT PUMPING STATION
CONTRACT PS-318
CIVIL
FORCE MAIN PLAN AND PROFILE

DATE: OCTOBER 2026
SCALE: 1" = 10'
SHEET NO: 12 OF 274
DRAWING NO. C-104.00

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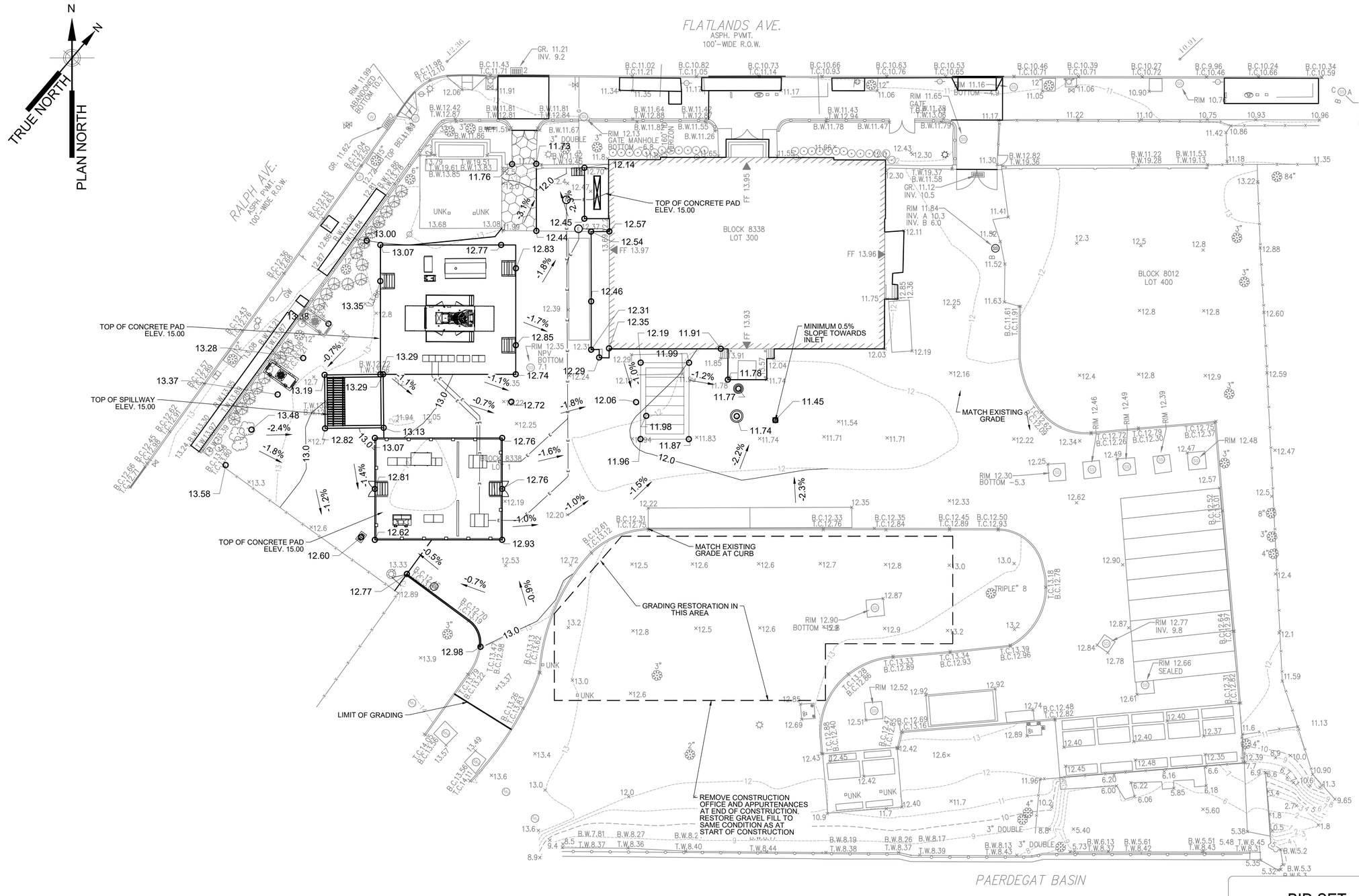

NOTE:

1. SEE SITE WORK NOTES ON CG-001.

0 20 40 FT.
1"=20'

PAERDEGAT GRADING PLAN

SCALE: 1"= 20'

BID SET

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CAPITAL PROJECT WP-269
RECONSTRUCTION OF
PAERDEGAT PUMPING STATION
CONTRACT PS-318
CIVIL
GRADING PLAN

DATE: OCTOBER 2026
SCALE: 1" = 20'
SHEET NO: 13 OF 274
DRAWING NO. C-105.00

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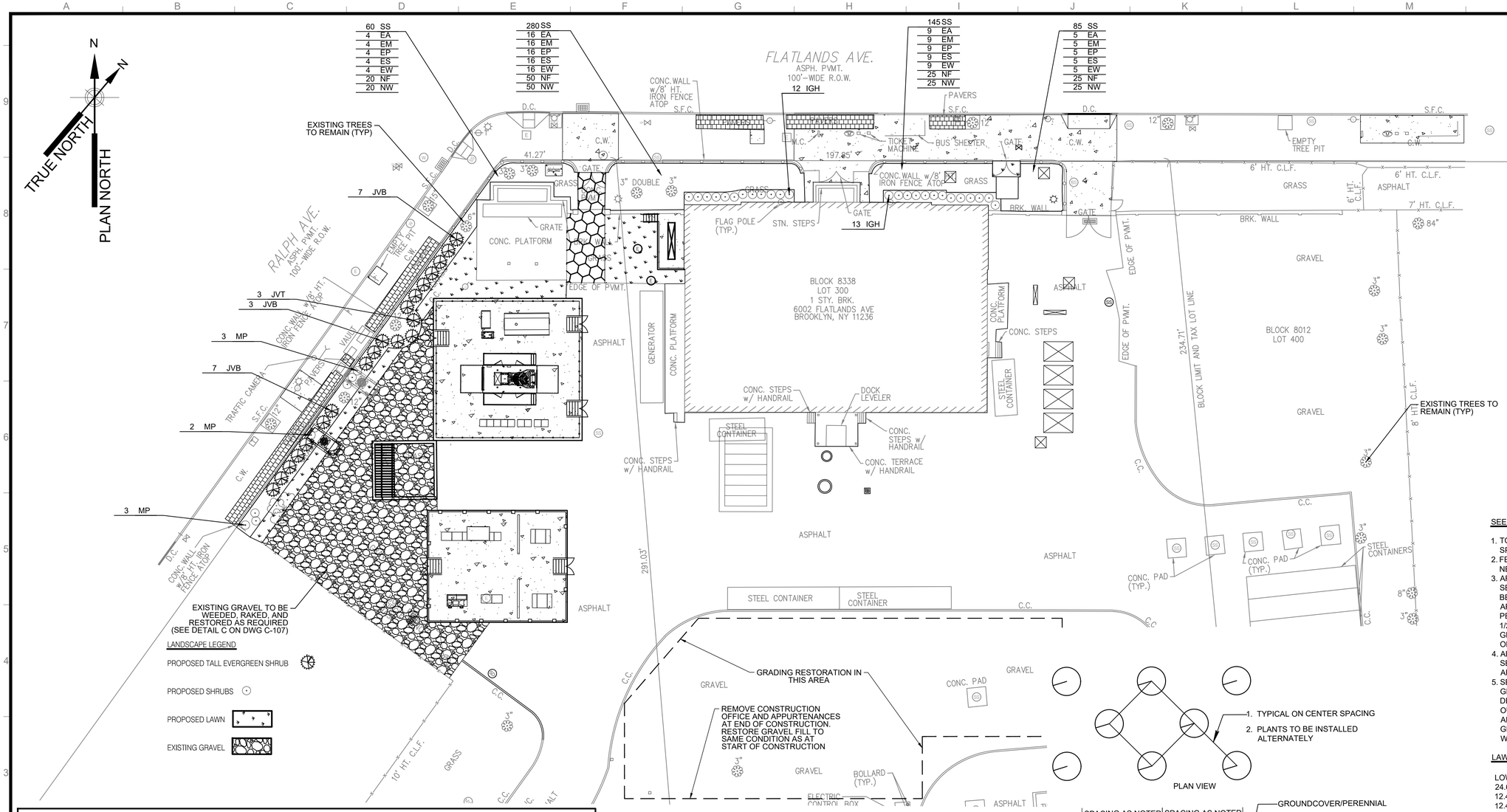


LANDSCAPE LEGEND

PROPOSED TALL EVERGREEN SHRUB

PROPOSED SHRUBS

PROPOSED LAWN

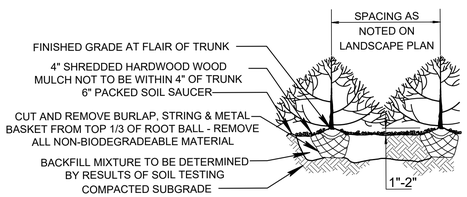
EXISTING GRAVEL

PROPOSED PLANT SCHEDULE

KEY	QTY	LATIN NAME	COMMON NAME	SIZE	NOTES
		TREES			
JVB	17	JUNIPERUS VIRGINIANA 'BURKII'	'BURKII' RED CEDAR	6'-7' HT.	HEAVY, FULL CROWN
JVT	3	JUNIPERUS VIRGINIANA 'TAYLOR'	'TAYLOR' RED CEDAR	6'-7' HT.	HEAVY, FULL CROWN
		SHRUBS			
IGH	25	ILEX GLABRA 'SHAMROCK'	INKBERRY 'SHAMROCK'	18"-24"	FULL TO GROUND
MP	8	MORELLA PENSYLVANICA	BAYBERRY	24"-30" 3 GAL.	FULL TO GROUND
		PERENNIALS/ GROUNDCOVER			
EA	34	ECHINACEA 'SOMBRERO ADOBE ORANGE'	'SOMBRERO ADOBE ORANGE' CONEFLOWER	1 GAL.	18" O.C. RANDOMLY MIXED WITH LITTLE BLUESTEM
EM	34	ECHINACEA 'SOMBRERO LEMON YELLOW'	'SOMBRERO LEMON YELLOW' CONEFLOWER	1 GAL.	18" O.C. RANDOMLY MIXED WITH LITTLE BLUESTEM
EP	34	ECHINACEA PURPUREA 'MAGNUS SUPERIOR'	'MAGNUS SUPERIOR' PURPLE CONEFLOWER	1 GAL.	18" O.C. RANDOMLY MIXED WITH LITTLE BLUESTEM
ES	34	ECHINACEA 'SOMBRERO SALSA RED'	'SOMBRERO SALSA RED' CONEFLOWER	1 GAL.	18" O.C. RANDOMLY MIXED WITH LITTLE BLUESTEM
EW	34	ECHINACEA PURPUREA 'POWWOW WHITE'	POWWOW WHITE CONEFLOWER	1 GAL.	18" O.C. RANDOMLY MIXED WITH LITTLE BLUESTEM
NF	120	NARCISSUS 'DUTCH MASTER'	'DUTCH MASTER' DAFFODIL	BULB	12" O.C.
NW	120	NARCISSUS 'ICE FOLLIES'	'ICE FOLLIES' DAFFODIL	BULB	12" O.C.
SS	570	SCHIZACHYRIUM SCOPARIUM 'CHAMELEON'	'CHAMELEON' LITTLE BLUE STEM	1 GAL.	18" O.C.

PAERDEGAT LANDSCAPING PLAN

SCALE: 1"= 20'

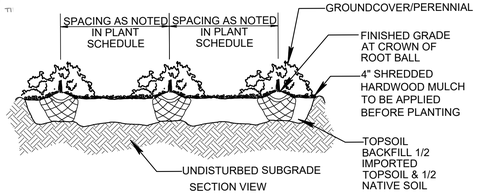


NOTES:
1. BACKFILL 50% NATIVE SOIL ONLY IF APPROVED AFTER SOIL TESTING. REMAINING 50% TO BE A TOPSOIL, HUMUS, PEAT MIXTURE.
2. FERTILIZE PLANTINGS WITH 1/2 CUP SUPERPHOSPHATE AND TO BE THOROUGHLY MIXED INTO BACKFILL MATERIAL.

TREE & SHRUB PLANTING

NOT TO SCALE

PLAN VIEW



SECTION VIEW

NOTES:
1. WATER THOROUGHLY FOLLOWING PLANTING.
2. AVOID DAMAGE TO ROOT STRUCTURE IN HANDLING AND PLANTING.
3. REMOVE ALL CONTAINERS UNLESS PLANTABLE.
4. SET PLANT MATERIAL AT ORIGINAL SOIL LEVEL.
5. PLANTABLE CONTAINERS SHOULD HAVE UPPER 1/3 REMOVED AND BE SLIT CAREFULLY AT SIDES AND BOTTOM.

GROUNDCOVER/PERENNIAL PLANTING

NOT TO SCALE

GENERAL LANDSCAPE NOTES

1. REFER TO PLANTING AND SOIL MIX SPECIFICATIONS FOR ADDITIONAL INFORMATION.
2. FOR INFORMATION REGARDING CONTRACTOR STAGING AREA RESTORATION, SEE SHEET C-101.00.
3. ALL AREAS WITH VEGETATION WILL HAVE LOW MAINTENANCE, NATIVE OR NATURALIZED, STORMWATER TOLERANT, DROUGHT RESISTANT GRASS, OR SHORT GROUND COVER.
4. NO PESTICIDE, HERBICIDES, OR FERTILIZERS SHALL BE USED ON THE SITE AFTER ESTABLISHMENT PERIOD. SEE SPECIFICATIONS FOR FURTHER INFORMATION.

SEEDING NOTES

1. TOPSOIL SHALL BE SPREAD OVER ALL PROPOSED LAWN AREAS PER SPECIFICATIONS.
2. FERTILIZER AND LIME SHALL BE APPLIED AT SUCH RATES DETERMINED NECESSARY FOR GOOD PLANT GROWTH, AS PER SOIL TEST RESULTS.
3. AREAS TO BE SEEDED SHALL BE SEEDED WITH SELECT HIGH QUALITY SEED. SEEDING MIXTURE AND SEEDING RATE SHALL BE AS SPECIFIED BELOW. TO ENSURE EVEN AND UNIFORM COVERAGE, SEED SHALL BE APPLIED IN TWO SUCCESSIVE SOWINGS WITH THE SECOND SOWING PERPENDICULAR TO THE FIRST. THE RATE OF EACH SOWING SHALL BE 1/2 THE TOTAL SEEDING RATE SPECIFIED BELOW. TO ENSURE QUALITY GERMINATION, THE SEED SHALL BE RAKED INTO THE SOIL TO A DEPTH OF ½".
4. ALL SEEDED AREAS SHALL BE MULCHED IMMEDIATELY AFTER SEEDING. MULCH SHALL BE DRY STRAW (HAY IS NOT ACCEPTABLE) APPLIED AT A RATE OF 100 LBS./1,000 S.F.
5. SEEDED AREAS SHALL BE WATERED DAILY TO INSURE GOOD GERMINATION. ONCE SEEDS HAVE GERMINATED, IRRIGATION MAY BE DECREASED BUT THE SEEDLINGS MUST NEVER BE ALLOWED TO DRY OUT COMPLETELY. FREQUENT WATERING SHALL BE CONTINUED FOR APPROXIMATELY THREE (3) WEEKS AFTER GERMINATION OR UNTIL GRASS HAS BECOME SUFFICIENTLY ESTABLISHED TO WARRANT WATERING ON AN "AS NEEDED" BASIS.

LAWN SEED MIXTURE

LOW MOW SEED MIXTURE
24.65% QUATRO SHEEP FESCUE
12.46% SILHOUETTE CHEWINGS FESCUE
12.40% EUREKA II HARD FESCUE
12.31% RUDDY CREEPING RED FESCUE
12.30% LONGFELLOW 3 CHEWINGS FESCUE
12.28% RELIANT IV HARD FESCUE
6.24% SHORELINE SLENDER CREEP RED FESCUE
6.17% LIGHTHOUSE SLEND CREEP RED FESCUE

SEED IS TO BE UNIFORMLY APPLIED AT THE RATE OF 5 LBS. PER 1000 SQ. FT. OR 220 LBS. PER ACRE. THE SEED MIX DESCRIBED ABOVE IS SOLD BY PRAIRIE NURSERY AND CALL "NO MOW LAWN SEED MIX".

OVERSEED WITH ANNUAL OATS WHICH WILL ACT AS A NURSERY CROP.

0 20 40 FT.
1"=20'

BID SET

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EXECUTIVE DIRECTOR
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CAPITAL PROJECT WP-269
RECONSTRUCTION OF
PAERDEGAT PUMPING STATION
CONTRACT PS-318
CIVIL
LANDSCAPING PLAN

DATE: OCTOBER 2026
SCALE: 1" = 20'
SHEET NO: 14 OF 274
DRAWING NO. C-106.00

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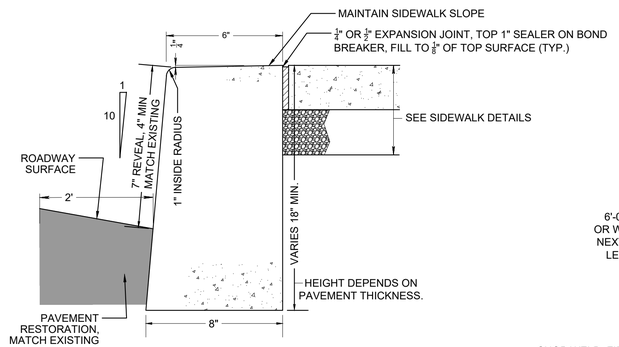
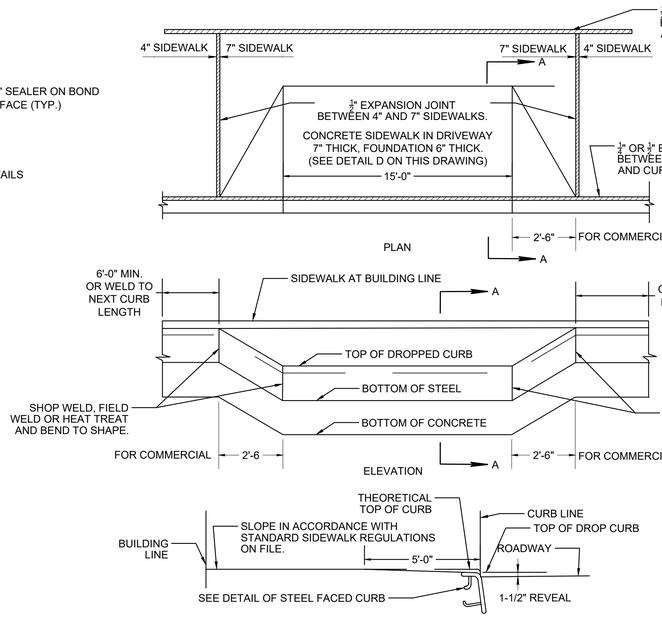
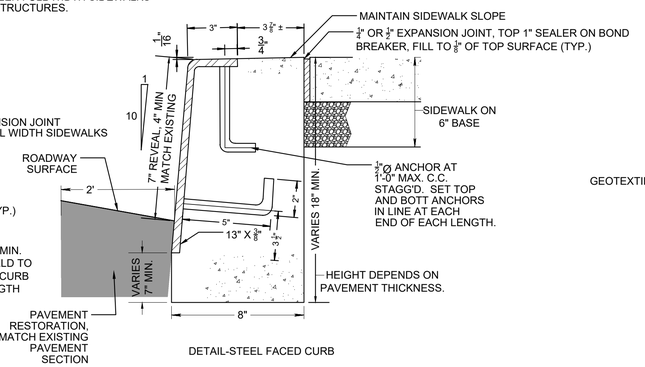


NOTES:

1. ALL MATERIALS AND CONSTRUCTION METHODS USED ARE TO CONFORM TO SECTION #4.08 OF THE NYC DEPARTMENT OF TRANSPORTATION STANDARD HIGHWAY SPECIFICATIONS.

A C-107 CONCRETE CURB
N.T.S.



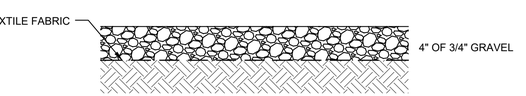


DETAIL-STEEL FACED CURB

NOTES:

1. ¾"Ø X 5" HEADED ANCHOR STUDS (GRANULAR OR SOLID FLUX FILLED) MAY BE SUBSTITUTED.
2. STRUCTURAL STEEL AS PER ASTM DESIGNATION A-36.
3. STEEL FACING TO BE CLEANED AND PAINTED AS PER SUBSECTION 2.13.4 OF THE NYCDOT STANDARD DOT SPECIFICATION. THE COLOR OF TOP COAT SHALL BE GRAY AS APPROVED BY THE ENGINEER.
4. CONCRETE TO BE CLASS B-32, TYPE II A.
5. STEEL-FACED CONCRETE CURB TO BE LOCATED ADJACENT TO ADA RAMPS. REFER TO NYCDOT STANDARD DETAIL DRAWING H-1010 TITLED "STEEL FACED CONCRETE CURB, STEEL FACING TYPE D", FOR MORE INFORMATION.

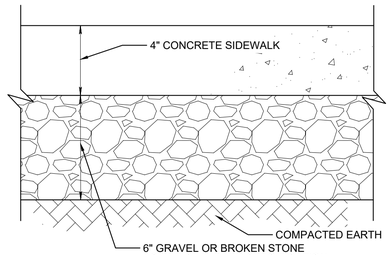
B C-107 STEEL-FACED CONCRETE CURB/ DRIVEWAY
N.T.S.



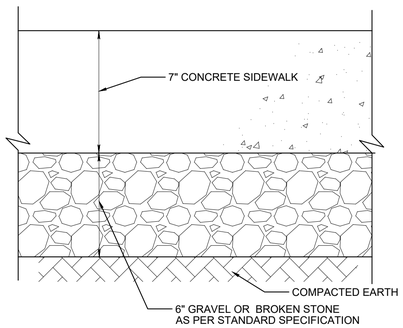
NOTES:

1. MINIMUM 1-1/2" OF BARE SOIL TO BE CLEARED PRIOR TO PLACEMENT OF GEOTEXTILE FABRIC AND GRAVEL.
2. GEOTEXTILE FABRIC TO BE PERMEABLE TO ALLOW FOR DRAINAGE TO UNDERLYING SOILS.

C C-107 GRAVEL SECTION
N.T.S.



TYPE I - SIDEWALK, OUTSIDE DRIVEWAY AND CORNER QUADRANTS

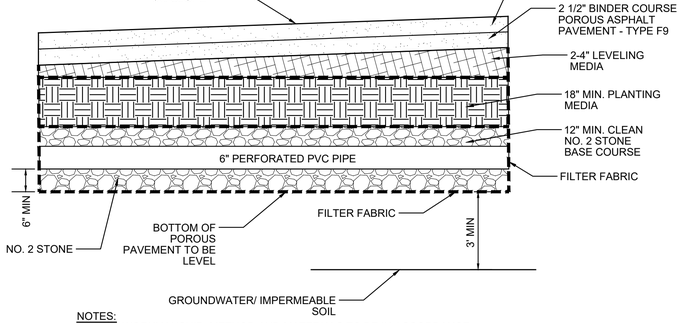


TYPE II - SIDEWALK, IN DRIVEWAY AND IN CORNER QUADRANTS

NOTES:

1. ALL MATERIALS AND CONSTRUCTION METHODS USED ARE TO CONFORM TO SECTION #4.13 OF THE NYC DEPARTMENT OF TRANSPORTATION (DOT) STANDARD HIGHWAY SPECIFICATIONS.
2. REFER TO NYCDOT DRAWING H-1045 FOR CONCRETE SIDEWALK DETAILS.

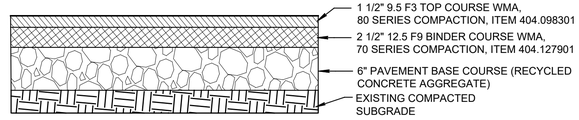
D C-107 CONCRETE SIDEWALK
N.T.S.



NOTES:

1. ALL WORKMANSHIP, METHOD AND MATERIALS TO BE IN ACCORDANCE WITH THE STATE OF NEW YORK DEPARTMENT OF TRANSPORTATION (NYSDOT) STANDARD SHEETS AND SPECIFICATIONS.
2. REFER TO NYSDOT STANDARD SPECIFICATION ITEM # 420.50130108 FOR REQUIREMENTS FOR TOP COURSE POROUS ASPHALT PAVEMENT.

E C-107 POROUS ASPHALT PAVEMENT
N.T.S.



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F C-107 HMA PAVEMENT SECTION
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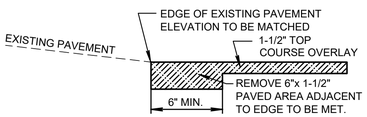

G C-107 PAVEMENT KEYWAY
N.T.S.

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CAPITAL PROJECT WP-269
RECONSTRUCTION OF
PAERDEGAT PUMPING STATION
CONTRACT PS-318
CIVIL
STANDARD DETAIL - SHEET 1

DATE: OCTOBER 2026
SCALE: AS INDICATED
SHEET NO: 15 OF 274
DRAWING NO. C-107.00

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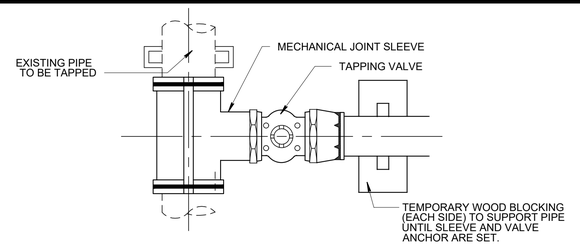
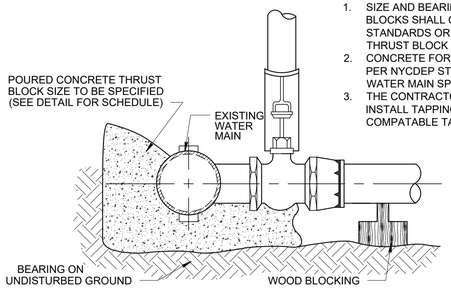


PLAN

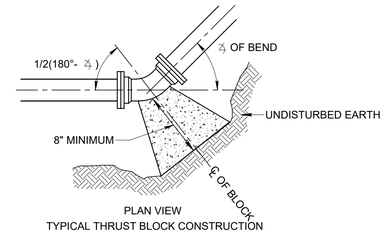


ELEVATION

NOTES:
1. SIZE AND BEARING AREA FOR THRUST BLOCKS SHALL CONFORM TO CURRENT STANDARDS OR SHALL BE AS SHOWN IN THRUST BLOCK SCHEDULE.
2. CONCRETE FOR THRUST BLOCKS TO BE PER NYCDEP STANDARD SEWER & WATER MAIN SPECIFICATIONS.
3. THE CONTRACTOR SHALL FURNISH AND INSTALL TAPPING SLEEVES WITH COMPATABLE TAPPING VALVES.

A C-108 TAPPING VALVE AND SLEEVE WET TAP ASSEMBLY

N.T.S.



PLAN VIEW

TYPICAL THRUST BLOCK CONSTRUCTION

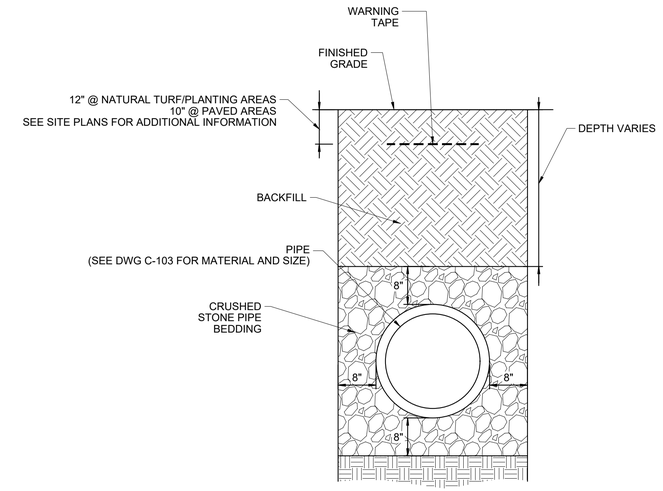
DIAMETER OF PIPE	5° TO 22-1/2° BEND	23° TO 45° BEND	45° TO 90° BEND	TEE CONNECTION	PLUG
	A	A	A	A	A
6"	1.1	2.1	4.0	2.9	2.9
8"	2.0	3.7	7.1	5.0	5.0
10"	3.1	5.8	11.1	7.9	7.9
12"	4.4	8.4	16.0	11.3	11.3

A = CONTACT BEARING AREA OF THRUST BLOCK WITH EARTH, IN SQUARE FEET

NOTES:
1. BEARING AREAS ARE BASED ON AN INTERNAL PIPE PRESSURE OF UP TO 200 PSI AND UNDISTURBED SOIL WITH A BEARING CAPACITY OF 2000 PSF. FOR A GREATER INTERNAL PRESSURE OR A LESSER SOIL BEARING CAPACITY, THESE AREAS SHALL BE INCREASED ACCORDINGLY.
2. ALL CONCRETE THRUST BLOCKS SHALL BE CONSTRUCTED PER NYCDEP STANDARD SEWER & WATER MAIN SPECIFICATIONS
3. THRUST BLOCKS SHALL BE POURED AGAINST UNDISTURBED EARTH.
4. WIDTH OF THRUST BLOCK SHALL BE TWICE THE HEIGHT WHERE PRACTICAL.

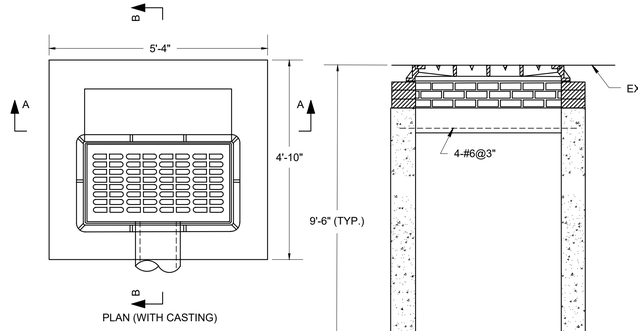
B C-108 THRUST BLOCKS FOR WATER LINES FOR PRESSURES UP TO 200 PSI

N.T.S.



C C-108 TYPICAL PIPE TRENCH DETAIL

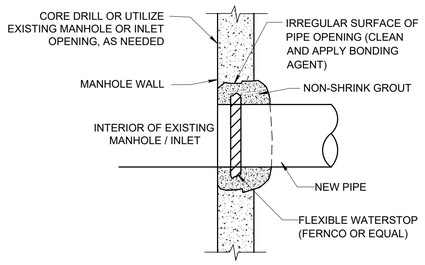
N.T.S.



NOTES:
1. LOCATION OF CURB SHALL BE AS SHOWN UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
2. LOCATION AND ANGLE OF BASIN CONNECTION MAY BE VARIED TO SUIT FIELD CONDITIONS.
3. KEYED CONSTRUCTION JOINTS ARE REQUIRED BETWEEN ANY SUCCESSIVE POURS.
4. CONCRETE IS TO BE CLASS 40. REBARS-GRADE 60.
5. REFER TO NYCDEP SEWER DESIGN STANDARDS, STANDARD DRAWING SE48 FOR DETAILS AND SPECIFICATIONS ON TYPE 2 CATCH BASINS.

D C-108 TYPE 2 CATCH BASIN

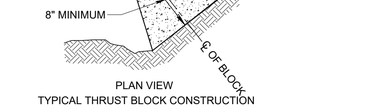
N.T.S.



NOTES:
1. CORE DRILL PRECAST MANHOLES AND USE FLEXIBLE BOOT SUCH AS KOR-N-SEAL OR APPROVED EQUAL.
2. RE-USE CAST-IN MANHOLE TO PIPE CONNECTORS WHERE PRACTICAL.
3. REPAIR CHANNEL IF DAMAGED DURING CONSTRUCTION.

E C-108 PIPE CONNECTION TO EXISITING MANHOLE

N.T.S.



PLAN VIEW

TYPICAL THRUST BLOCK CONSTRUCTION

PIPE	45° TO 90° BEND	TEE CONNECTION	PLUG
	A	A	A
36"	15.9	N/A	N/A
48"	21.9	N/A	15.9
36X48" WYE	N/A	19.8	N/A

A = CONTACT BEARING AREA OF THRUST BLOCK WITH EARTH, IN SQUARE FEET

NOTES:
1. BEARING AREAS ARE BASED ON AN INTERNAL PIPE PRESSURE OF UP TO 31 PSI AND UNDISTURBED SOIL WITH A BEARING CAPACITY OF 3000 PSF. FOR A GREATER INTERNAL PRESSURE OR A LESSER SOIL BEARING CAPACITY, THESE AREAS SHALL BE INCREASED ACCORDINGLY.
2. ALL CONCRETE THRUST BLOCKS SHALL BE CONSTRUCTED PER NYCDEP STANDARD SEWER & WATER MAIN SPECIFICATIONS
3. THRUST BLOCKS SHALL BE POURED AGAINST UNDISTURBED EARTH.
4. WIDTH OF THRUST BLOCK SHALL BE TWICE THE HEIGHT WHERE PRACTICAL.

F C-108 THRUST BLOCKS FOR SANITARY FORCE MAIN

N.T.S.

BID SET

SUBMITTAL DATE: OCTOBER 2026

GRAPHIC SCALES CHECK BEFORE USE

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NO.	DATE	REVISIONS/DESCRIPTION	APPR'D.

DESIGNED BY: ALEX DANIELSON
DRAWN BY: ALEX DANIELSON
CHECKED BY: STEPHEN FUNG, P.E.
DESIGN LEAD: STEPHEN FUNG, P.E.
PROJECT MANAGER: AIMEE BOULET, P.E.

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STATE OF NEW YORK · STEPHEN FUNG · 108763-01 · LICENSED PROFESSIONAL ENGINEER

NYC Environmental Protection

ACCOUNTABLE MANAGER: JOHN GOULAS, P.E.
PORTFOLIO MANAGER: KEVIN ELLENWOOD, P.E.
EXECUTIVE DIRECTOR: NAYANKUMAR SHAH, P.E.

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CAPITAL PROJECT WP-269
RECONSTRUCTION OF
PAERDEGAT PUMPING STATION
CONTRACT PS-318
CIVIL
STANDARD DETAIL - SHEET 2

DATE: OCTOBER 2026
SCALE: AS INDICATED
SHEET NO: 16 OF 274
DRAWING NO. C-108.00

All inquiries regarding this drawing(s) or project should be made to NYC Environmental Protection, Bureau of Engineering Design and Construction.

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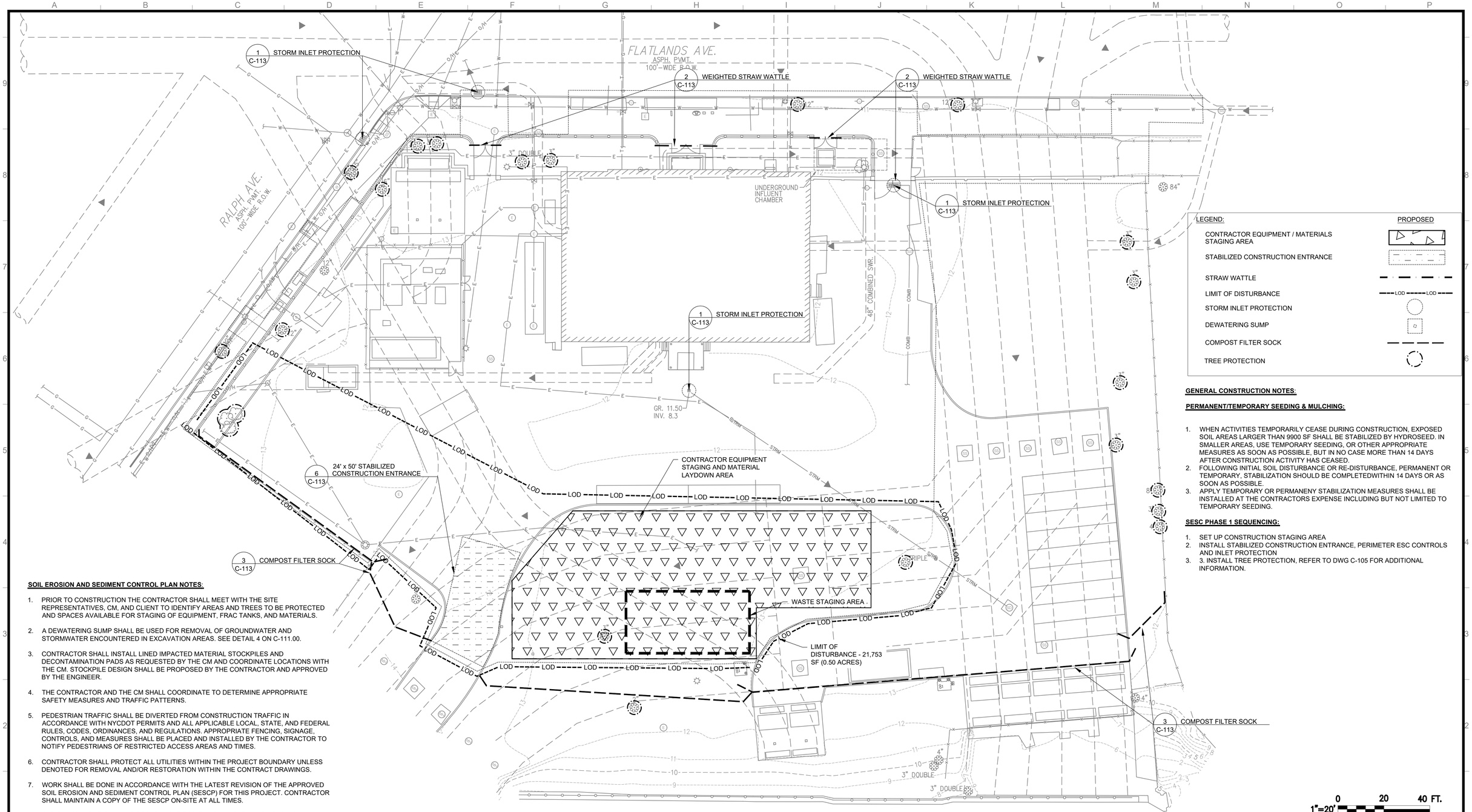

SOIL EROSION AND SEDIMENT CONTROL PLAN NOTES:

1. PRIOR TO CONSTRUCTION THE CONTRACTOR SHALL MEET WITH THE SITE REPRESENTATIVES, CM, AND CLIENT TO IDENTIFY AREAS AND TREES TO BE PROTECTED AND SPACES AVAILABLE FOR STAGING OF EQUIPMENT, FRAC TANKS, AND MATERIALS.
2. A DEWATERING SUMP SHALL BE USED FOR REMOVAL OF GROUNDWATER AND STORMWATER ENCOUNTERED IN EXCAVATION AREAS. SEE DETAIL 4 ON C-111.00.
3. CONTRACTOR SHALL INSTALL LINED IMPACTED MATERIAL STOCKPILES AND DECONTAMINATION PADS AS REQUESTED BY THE CM AND COORDINATE LOCATIONS WITH THE CM. STOCKPILE DESIGN SHALL BE PROPOSED BY THE CONTRACTOR AND APPROVED BY THE ENGINEER.
4. THE CONTRACTOR AND THE CM SHALL COORDINATE TO DETERMINE APPROPRIATE SAFETY MEASURES AND TRAFFIC PATTERNS.
5. PEDESTRIAN TRAFFIC SHALL BE DIVERTED FROM CONSTRUCTION TRAFFIC IN ACCORDANCE WITH NYCDOT PERMITS AND ALL APPLICABLE LOCAL, STATE, AND FEDERAL RULES, CODES, ORDINANCES, AND REGULATIONS. APPROPRIATE FENCING, SIGNAGE, CONTROLS, AND MEASURES SHALL BE PLACED AND INSTALLED BY THE CONTRACTOR TO NOTIFY PEDESTRIANS OF RESTRICTED ACCESS AREAS AND TIMES.
6. CONTRACTOR SHALL PROTECT ALL UTILITIES WITHIN THE PROJECT BOUNDARY UNLESS DENOTED FOR REMOVAL AND/OR RESTORATION WITHIN THE CONTRACT DRAWINGS.
7. WORK SHALL BE DONE IN ACCORDANCE WITH THE LATEST REVISION OF THE APPROVED SOIL EROSION AND SEDIMENT CONTROL PLAN (SESCP) FOR THIS PROJECT. CONTRACTOR SHALL MAINTAIN A COPY OF THE SESCP ON-SITE AT ALL TIMES.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ENVIRONMENTAL MONITORING CONTROLS IN ACCORDANCE WITH THE PROJECT ENVIRONMENTAL MONITORING PLAN.

GENERAL CONSTRUCTION NOTES:

PERMANENT/TEMPORARY SEEDING & MULCHING:

1. WHEN ACTIVITIES TEMPORARILY CEASE DURING CONSTRUCTION, EXPOSED SOIL AREAS LARGER THAN 9900 SF SHALL BE STABILIZED BY HYDROSEED. IN SMALLER AREAS, USE TEMPORARY SEEDING, OR OTHER APPROPRIATE MEASURES AS SOON AS POSSIBLE, BUT IN NO CASE MORE THAN 14 DAYS AFTER CONSTRUCTION ACTIVITY HAS CEASED.
2. FOLLOWING INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE, PERMANENT OR TEMPORARY, STABILIZATION SHOULD BE COMPLETEDWITHIN 14 DAYS OR AS SOON AS POSSIBLE.
3. APPLY TEMPORARY OR PERMANENY STABILIZATION MEASURES SHALL BE INSTALLED AT THE CONTRACTORS EXPENSE INCLUDING BUT NOT LIMITED TO TEMPORARY SEEDING.

SESC PHASE 1 SEQUENCING:

1. SET UP CONSTRUCTION STAGING AREA
2. INSTALL STABILIZED CONSTRUCTION ENTRANCE, PERIMETER ESC CONTROLS AND INLET PROTECTION
3. 3. INSTALL TREE PROTECTION, REFER TO DWG C-105 FOR ADDITIONAL INFORMATION.

0 20 40 FT.
1"=20'

PAERDEGAT SOIL EROSION AND SEDIMENT CONTROL PLAN

SCALE: 1"= 20'

BID SET

SUBMITTAL DATE: OCTOBER 2026

GRAPHIC SCALES CHECK BEFORE USE

IF SHEET IS LESS THAN 22" X 34" IT IS A REDUCED PRINT. SCALE ACCORDINGLY

NO.	DATE	REVISIONS/DESCRIPTION	APPR'D.

DESIGNED BY: D. KENNEDY, P.E.
DRAWN BY: D. KENNEDY, P.E.
CHECKED BY: JEI CHON
DESIGN LEAD: STEPHEN FUNG, P.E.
PROJECT MANAGER: AIMEE BOULET, P.E.

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STATE OF NEW YORK STEPHEN FUNG 109763 LICENSED PROFESSIONAL ENGINEER

NYC Environmental Protection

ACCOUNTABLE MANAGER	JOHN GOULAS, P.E.
PORTFOLIO MANAGER	KEVIN ELLENWOOD, P.E.
EXECUTIVE DIRECTOR	NAYANKUMAR SHAH, P.E.

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CAPITAL PROJECT WP-269
RECONSTRUCTION OF
PAERDEGAT PUMPING STATION
CONTRACT PS-318
CIVIL
SOIL EROSION AND SEDIMENT CONTROL PLAN
PHASE 1

DATE: OCTOBER 2026
SCALE: 1" = 20'
SHEET NO: 17 OF 274
DRAWING NO. C-109.00

All inquiries regarding this drawing(s) or project should be made to NYC Environmental Protection, Bureau of Engineering Design and Construction.

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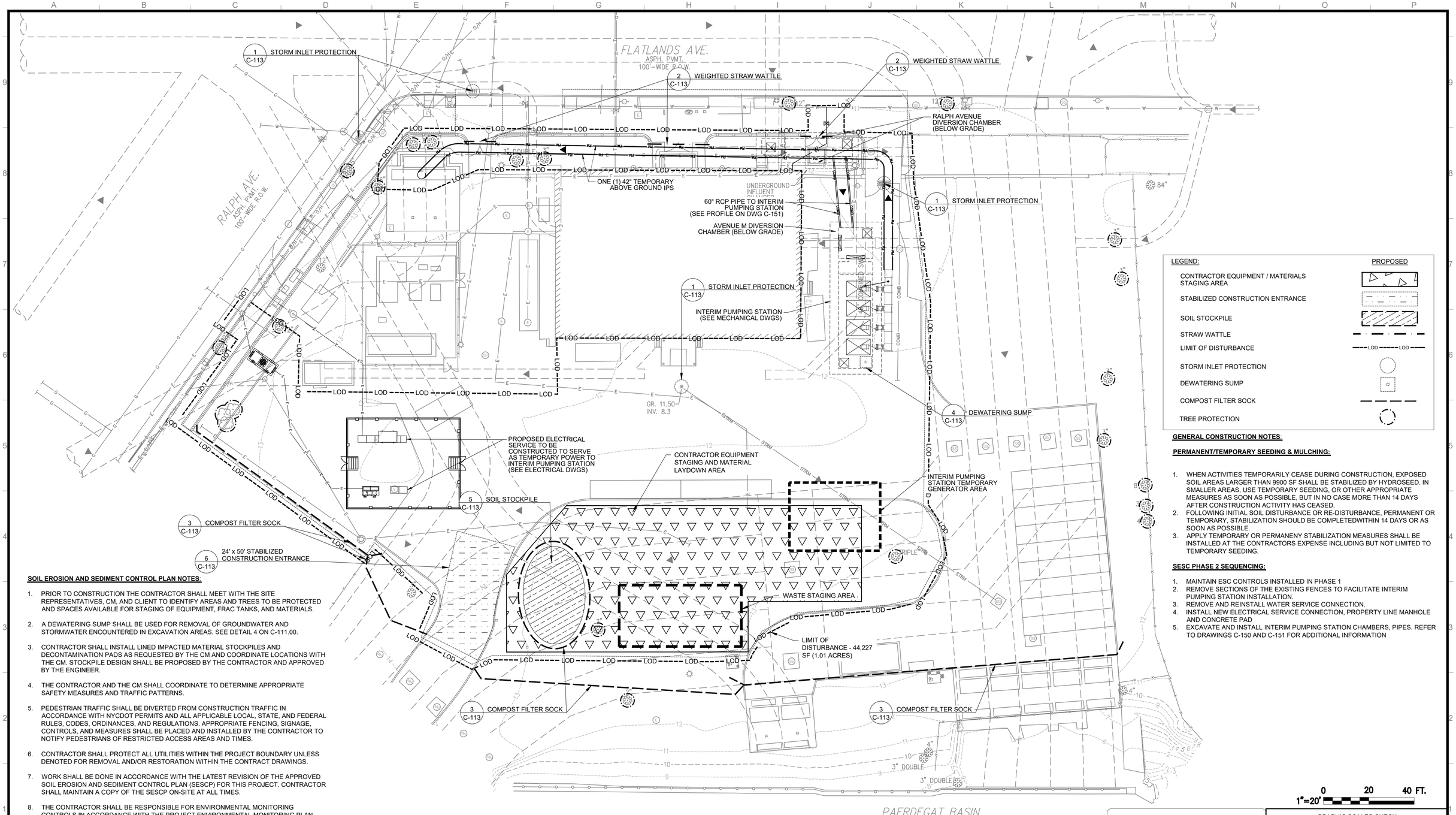

LEGEND:

	PROPOSED
CONTRACTOR EQUIPMENT / MATERIALS STAGING AREA	
STABILIZED CONSTRUCTION ENTRANCE	
SOIL STOCKPILE	
STRAW WATTLE	
LIMIT OF DISTURBANCE	LOD LOD
STORM INLET PROTECTION	
DEWATERING SUMP	
COMPOST FILTER SOCK	
TREE PROTECTION	

GENERAL CONSTRUCTION NOTES:

PERMANENT/TEMPORARY SEEDING & MULCHING:

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SESC PHASE 2 SEQUENCING:

1. MAINTAIN ESC CONTROLS INSTALLED IN PHASE 1
2. REMOVE SECTIONS OF THE EXISTING FENCES TO FACILITATE INTERIM PUMPING STATION INSTALLATION.
3. REMOVE AND REINSTALL WATER SERVICE CONNECTION.
4. INSTALL NEW ELECTRICAL SERVICE CONNECTION, PROPERTY LINE MANHOLE AND CONCRETE PAD
5. EXCAVATE AND INSTALL INTERIM PUMPING STATION CHAMBERS, PIPES. REFER TO DRAWINGS C-150 AND C-151 FOR ADDITIONAL INFORMATION

SOIL EROSION AND SEDIMENT CONTROL PLAN NOTES:

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8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ENVIRONMENTAL MONITORING CONTROLS IN ACCORDANCE WITH THE PROJECT ENVIRONMENTAL MONITORING PLAN.

1"=20' 0 20 40 FT.

PAERDEGAT SOIL EROSION AND SEDIMENT CONTROL PLAN

SCALE: 1"= 20'

BID SET

SUBMITTAL DATE: OCTOBER 2026

GRAPHIC SCALES CHECK BEFORE USE

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DRAWN BY: D. KENNEDY, P.E.
CHECKED BY: JEI CHON
DESIGN LEAD: STEPHEN FUNG, P.E.
PROJECT MANAGER: AIMEE BOULET, P.E.

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STATE OF NEW YORK STEPHEN FUNG 108763-01 LICENSED PROFESSIONAL ENGINEER

Environmental Protection

ACCOUNTABLE MANAGER: JOHN GOULAS, P.E.
PORTFOLIO MANAGER: KEVIN ELLENWOOD, P.E.
EXECUTIVE DIRECTOR: NAYANKUMAR SHAH, P.E.

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CAPITAL PROJECT WP-269
RECONSTRUCTION OF
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CONTRACT PS-318
CIVIL
SOIL EROSION AND SEDIMENT CONTROL PLAN
PHASE 2

DATE: OCTOBER 2026
SCALE: 1" = 20'
SHEET NO: 18 OF 274
DRAWING NO. C-110.00

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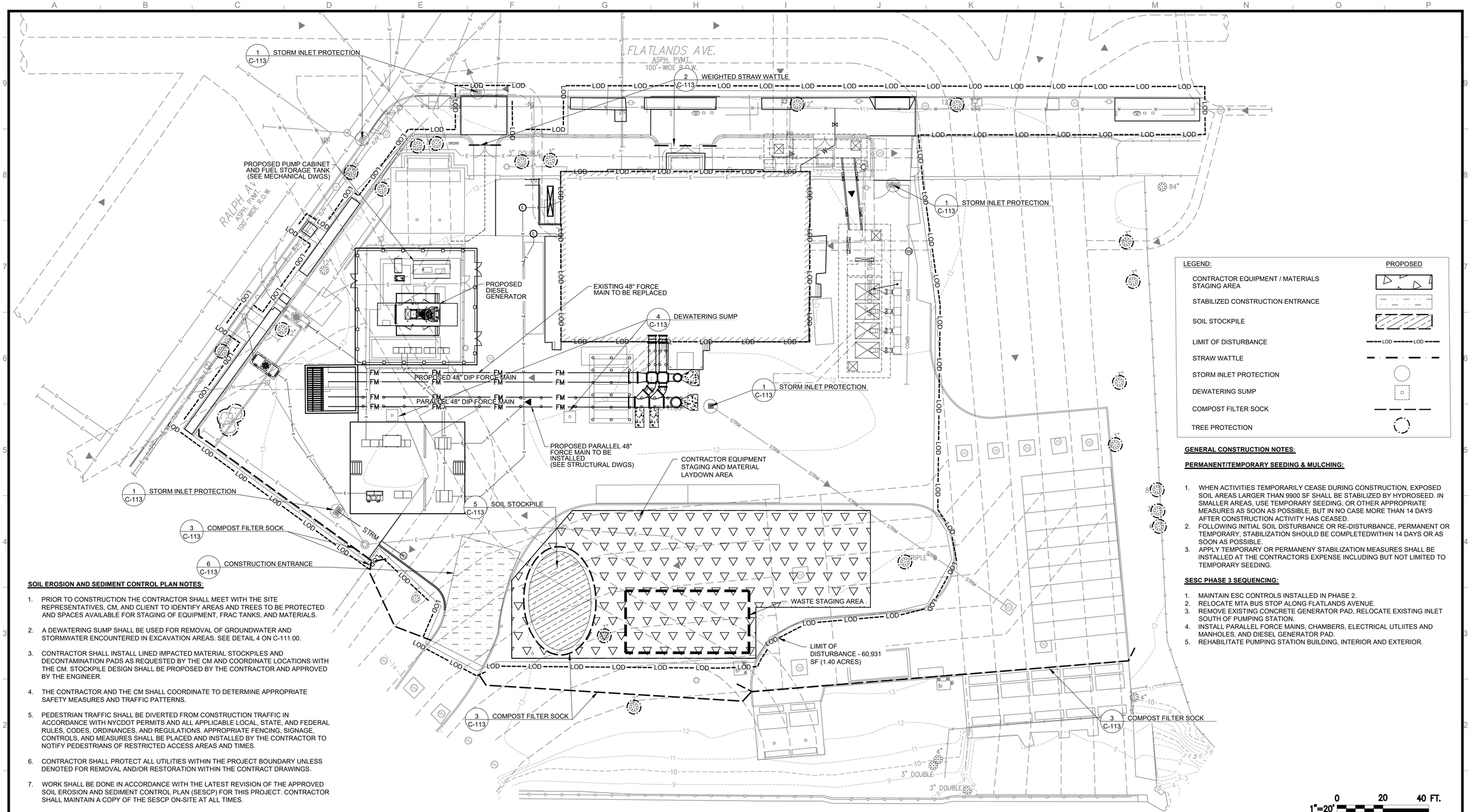

LEGEND:

	PROPOSED
CONTRACTOR EQUIPMENT / MATERIALS STAGING AREA	
STABILIZED CONSTRUCTION ENTRANCE	
SOIL STOCKPILE	
LIMIT OF DISTURBANCE	LOD LOD
STRAW WATTLE	
STORM INLET PROTECTION	
DEWATERING SUMP	
COMPOST FILTER SOCK	
TREE PROTECTION	

GENERAL CONSTRUCTION NOTES:

PERMANENT/TEMPORARY SEEDING & MULCHING:

1. WHEN ACTIVITIES TEMPORARILY CEASE DURING CONSTRUCTION, EXPOSED SOIL AREAS LARGER THAN 9900 SF SHALL BE STABILIZED BY HYDROSEED. IN SMALLER AREAS, USE TEMPORARY SEEDING, OR OTHER APPROPRIATE MEASURES AS SOON AS POSSIBLE, BUT IN NO CASE MORE THAN 14 DAYS AFTER CONSTRUCTION ACTIVITY HAS CEASED.
2. FOLLOWING INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE, PERMANENT OR TEMPORARY, STABILIZATION SHOULD BE COMPLETEDWITHIN 14 DAYS OR AS SOON AS POSSIBLE.
3. APPLY TEMPORARY OR PERMANENY STABILIZATION MEASURES SHALL BE INSTALLED AT THE CONTRACTORS EXPENSE INCLUDING BUT NOT LIMITED TO TEMPORARY SEEDING.

SESC PHASE 3 SEQUENCING:

1. MAINTAIN ESC CONTROLS INSTALLED IN PHASE 2.
2. RELOCATE MTA BUS STOP ALONG FLATLANDS AVENUE.
3. REMOVE EXISTING CONCRETE GENERATOR PAD, RELOCATE EXISTING INLET SOUTH OF PUMPING STATION.
4. INSTALL PARALLEL FORCE MAINS, CHAMBERS, ELECTRICAL UTLIITES AND MANHOLES, AND DIESEL GENERATOR PAD.
5. REHABILITATE PUMPING STATION BUILDING, INTERIOR AND EXTERIOR.

SOIL EROSION AND SEDIMENT CONTROL PLAN NOTES:

1. PRIOR TO CONSTRUCTION THE CONTRACTOR SHALL MEET WITH THE SITE REPRESENTATIVES, CM, AND CLIENT TO IDENTIFY AREAS AND TREES TO BE PROTECTED AND SPACES AVAILABLE FOR STAGING OF EQUIPMENT, FRAC TANKS, AND MATERIALS.
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PAERDEGAT SOIL EROSION AND SEDIMENT CONTROL PLAN

SCALE: 1"= 20'

1"=20' 0 20 40 FT.

BID SET

SUBMITTAL DATE: OCTOBER 2026

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EXECUTIVE DIRECTOR: NAYANKUMAR SHAH, P.E.

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CAPITAL PROJECT WP-269
RECONSTRUCTION OF
PAERDEGAT PUMPING STATION
CONTRACT PS-318
CIVIL
SOIL EROSION AND SEDIMENT CONTROL PLAN
PHASE 3

DATE: OCTOBER 2026
SCALE: 1" = 20'
SHEET NO: 19 OF 274
DRAWING NO. C-111.00

All inquiries regarding this drawing(s) or project should be made to NYC Environmental Protection, Bureau of Engineering Design and Construction.

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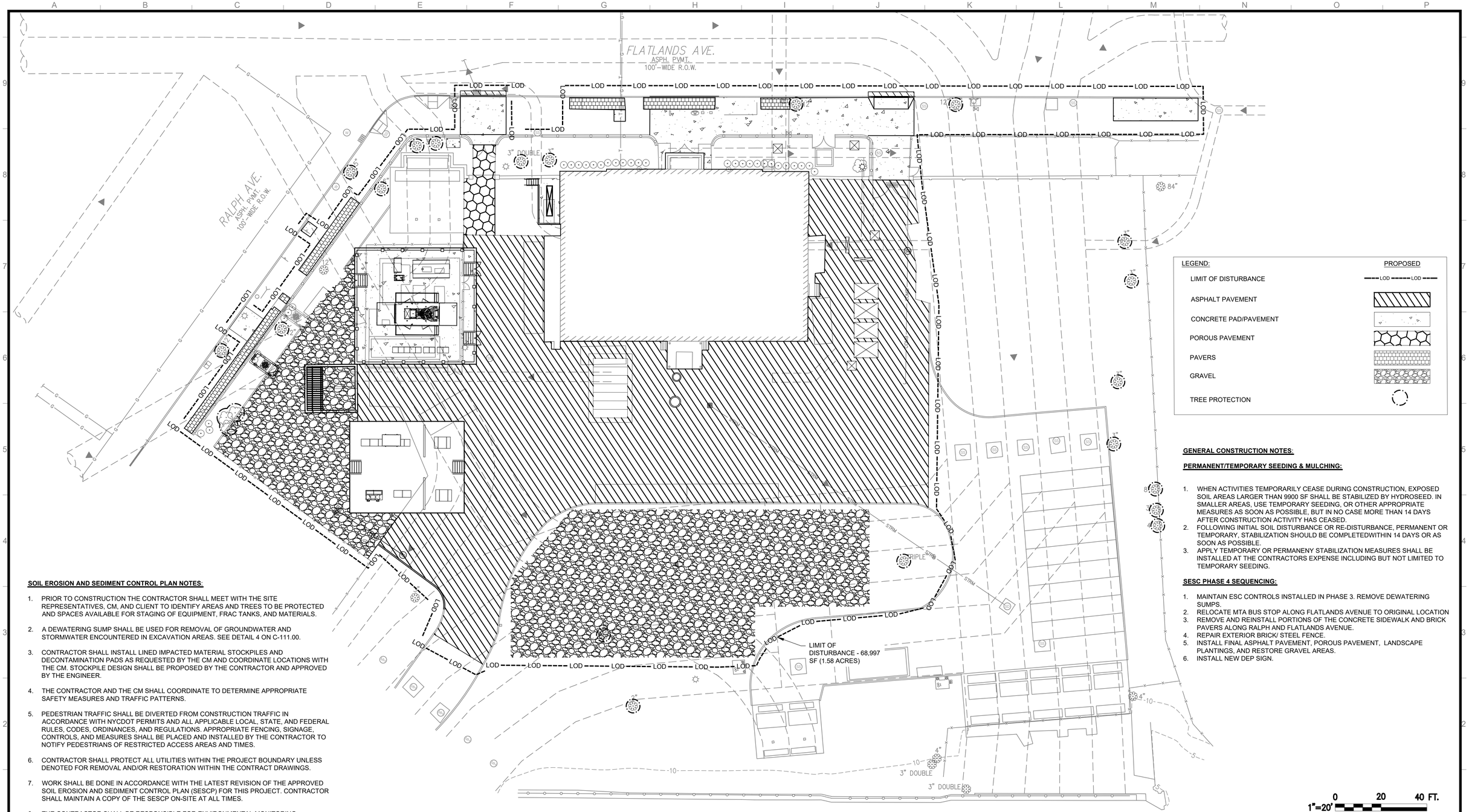

SOIL EROSION AND SEDIMENT CONTROL PLAN NOTES:

1. PRIOR TO CONSTRUCTION THE CONTRACTOR SHALL MEET WITH THE SITE REPRESENTATIVES, CM, AND CLIENT TO IDENTIFY AREAS AND TREES TO BE PROTECTED AND SPACES AVAILABLE FOR STAGING OF EQUIPMENT, FRAC TANKS, AND MATERIALS.
2. A DEWATERING SUMP SHALL BE USED FOR REMOVAL OF GROUNDWATER AND STORMWATER ENCOUNTERED IN EXCAVATION AREAS. SEE DETAIL 4 ON C-111.00.
3. CONTRACTOR SHALL INSTALL LINED IMPACTED MATERIAL STOCKPILES AND DECONTAMINATION PADS AS REQUESTED BY THE CM AND COORDINATE LOCATIONS WITH THE CM. STOCKPILE DESIGN SHALL BE PROPOSED BY THE CONTRACTOR AND APPROVED BY THE ENGINEER.
4. THE CONTRACTOR AND THE CM SHALL COORDINATE TO DETERMINE APPROPRIATE SAFETY MEASURES AND TRAFFIC PATTERNS.
5. PEDESTRIAN TRAFFIC SHALL BE DIVERTED FROM CONSTRUCTION TRAFFIC IN ACCORDANCE WITH NYCDOT PERMITS AND ALL APPLICABLE LOCAL, STATE, AND FEDERAL RULES, CODES, ORDINANCES, AND REGULATIONS. APPROPRIATE FENCING, SIGNAGE, CONTROLS, AND MEASURES SHALL BE PLACED AND INSTALLED BY THE CONTRACTOR TO NOTIFY PEDESTRIANS OF RESTRICTED ACCESS AREAS AND TIMES.
6. CONTRACTOR SHALL PROTECT ALL UTILITIES WITHIN THE PROJECT BOUNDARY UNLESS DENOTED FOR REMOVAL AND/OR RESTORATION WITHIN THE CONTRACT DRAWINGS.
7. WORK SHALL BE DONE IN ACCORDANCE WITH THE LATEST REVISION OF THE APPROVED SOIL EROSION AND SEDIMENT CONTROL PLAN (SESCP) FOR THIS PROJECT. CONTRACTOR SHALL MAINTAIN A COPY OF THE SESCP ON-SITE AT ALL TIMES.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ENVIRONMENTAL MONITORING CONTROLS IN ACCORDANCE WITH THE PROJECT ENVIRONMENTAL MONITORING PLAN.

GENERAL CONSTRUCTION NOTES:

PERMANENT/TEMPORARY SEEDING & MULCHING:

1. WHEN ACTIVITIES TEMPORARILY CEASE DURING CONSTRUCTION, EXPOSED SOIL AREAS LARGER THAN 9900 SF SHALL BE STABILIZED BY HYDROSEED. IN SMALLER AREAS, USE TEMPORARY SEEDING, OR OTHER APPROPRIATE MEASURES AS SOON AS POSSIBLE, BUT IN NO CASE MORE THAN 14 DAYS AFTER CONSTRUCTION ACTIVITY HAS CEASED.
2. FOLLOWING INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE, PERMANENT OR TEMPORARY, STABILIZATION SHOULD BE COMPLETEDWITHIN 14 DAYS OR AS SOON AS POSSIBLE.
3. APPLY TEMPORARY OR PERMANENY STABILIZATION MEASURES SHALL BE INSTALLED AT THE CONTRACTORS EXPENSE INCLUDING BUT NOT LIMITED TO TEMPORARY SEEDING.

SESC PHASE 4 SEQUENCING:

1. MAINTAIN ESC CONTROLS INSTALLED IN PHASE 3. REMOVE DEWATERING SUMPS.
2. RELOCATE MTA BUS STOP ALONG FLATLANDS AVENUE TO ORIGINAL LOCATION
3. REMOVE AND REINSTALL PORTIONS OF THE CONCRETE SIDEWALK AND BRICK PAVERS ALONG RALPH AND FLATLANDS AVENUE.
4. REPAIR EXTERIOR BRICK/ STEEL FENCE.
5. INSTALL FINAL ASPHALT PAVEMENT, POROUS PAVEMENT, LANDSCAPE PLANTINGS, AND RESTORE GRAVEL AREAS.
6. INSTALL NEW DEP SIGN.

PAERDEGAT SOIL EROSION AND SEDIMENT CONTROL PLAN

SCALE: 1"= 20'

BID SET

SUBMITTAL DATE: OCTOBER 2026

GRAPHIC SCALES CHECK BEFORE USE

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DRAWN BY: D. KENNEDY, P.E.
CHECKED BY: JEI CHON
DESIGN LEAD: STEPHEN FUNG, P.E.
PROJECT MANAGER: AIMEE BOULET, P.E.

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STATE OF NEW YORK · STEPHEN FUNG · 108763-01 · LICENSED PROFESSIONAL ENGINEER

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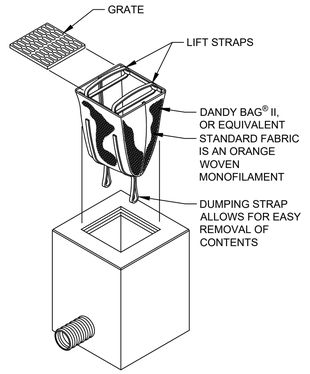

INLET PROTECTION NOTES:

1. STORM INLET DIMENSIONS AND TYPE VARY AND SHALL BE FIELD VERIFIED BY THE CONTRACTOR. THE CONTRACTOR IS RESPONSIBLE FOR PROCURING, INSTALLING, AND MAINTAINING STORM INLET PROTECTION THAT SUFFICIENTLY COVERS AND PROTECTS THE ENTIRE STORM INLET OPENING.
2. INSTALLATION: REMOVE THE GRATE FROM CATCH BASIN. IF USING OPTIONAL OIL ABSORBENTS; PLACE ABSORBENT PILLOW IN UNIT. STAND THE GRATE ON END. MOVE THE TOP LIFTING STRAPS OUT OF THE WAY AND PLACE THE GRATE INTO THE DANDY BAG II, OR EQUIVALENT, SO THAT THE GRATE IS BELOW THE TOP STRAPS AND ABOVE THE LOWER STRAPS. HOLDING THE LIFTING DEVICES, INSERT THE GRATE INTO THE INLET.
3. MAINTENANCE: INSPECT AFTER EACH STORM EVENT AND AT REGULAR INTERVALS. REMOVE ALL ACCUMULATED SEDIMENT AND DEBRIS FROM VICINITY OF UNIT. IF THE CONTAINMENT AREA IS MORE THAN 1/3 FULL OF SEDIMENT, THE UNIT MUST BE EMPTIED. TO EMPTY UNIT, LIFT THE UNIT OUT OF THE INLET USING THE LIFTING STRAPS AND REMOVE THE GRATE. IF USING OPTIONAL OIL ABSORBENTS; REPLACE ABSORBENT WHEN NEAR SATURATION.
4. INLET PROTECTION SHALL BE REMOVED UPON COMPLETION OF THE PROJECT.

1 C-113 STORM INLET PROTECTION
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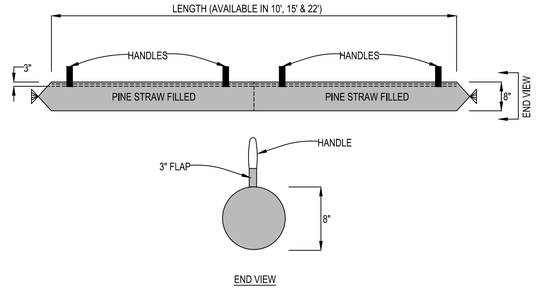
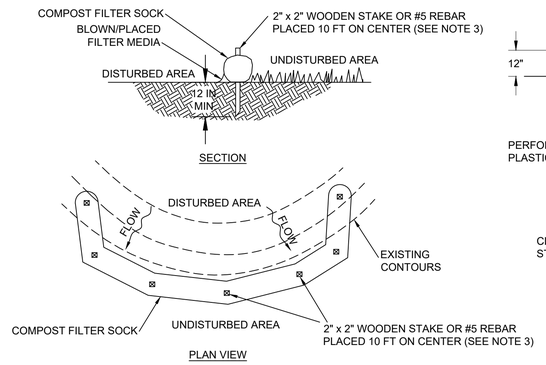


WEIGHTED STRAW WATTLE NOTES:

1. WEIGHTED STRAW WATTLES SHALL BE 8" DIAMETER, MODEL # TLW 10 BY SILT SAVER EROSION AND SEDIMENT CONTROL PRODUCTS (OR EQUIVALENT).
2. WATTLES SHALL BE INSTALLED PER MANUFACTURER RECOMMENDATIONS.
3. TRAFFIC SHALL NOT BE PERMITTED TO CROSS WATTLES.
4. ACCUMULATED SEDIMENT SHALL BE REMOVED WHEN IT REACHES 1/2 THE ABOVE GROUND HEIGHT OF THE BARRIER AND DISPOSED IN THE MANNER DESCRIBED ELSEWHERE IN THE PLAN.
5. WATTLES SHALL BE INSPECTED WEEKLY AND AFTER EACH RUNOFF EVENT. DAMAGED WATTLES SHALL BE REPAIRED ACCORDING TO MANUFACTURER'S SPECIFICATIONS OR REPLACED WITHIN 24 HOURS OF INSPECTION.
6. WATTLES SHALL BE REMOVED UPON COMPLETION OF THE PROJECT.

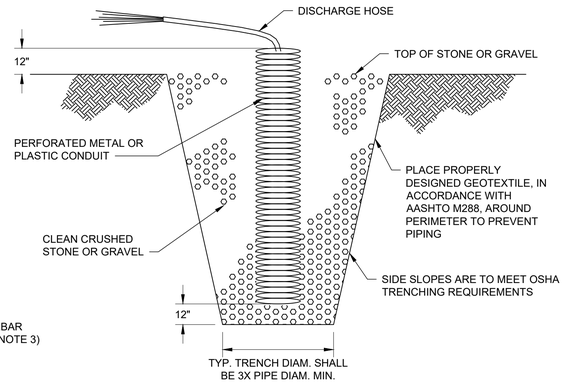
2 C-113 WEIGHTED STRAW WATTLES
NTS



COMPOST FILTER SOCK NOTES:

1. COMPOST FILTER SOCKS SHALL BE FILTREXX SILTSOXX ORIGINAL 12" DIAMETER, OR ENGINEER APPROVED EQUIVALENT.
2. COMPOST FILTER SOCK SHALL BE PLACED AT EXISTING LEVEL GRADE. BOTH ENDS OF THE BARRIER SHALL BE EXTENDED AT LEAST 8 FEET UP SLOPE AT 45 DEGREES TO THE MAIN BARRIER ALIGNMENT. MAXIMUM SLOPE LENGTH ABOVE ANY BARRIER SHALL NOT EXCEED THAT SPECIFIED FOR THE SIZE OF THE SOCK AND THE SLOPE OF ITS TRIBUTARY AREA.
3. ANCHORING ON CONCRETE OR PAVEMENT SHALL BE WITH 50 LB (MIN.) SANDBAGS EVERY 10 FT ON CENTER.
4. TRAFFIC SHALL NOT BE PERMITTED TO CROSS COMPOST FILTER SOCKS.
5. ACCUMULATED SEDIMENT SHALL BE REMOVED WHEN IT REACHES 1/2 THE ABOVE GROUND HEIGHT OF THE BARRIER AND DISPOSED IN THE MANNER DESCRIBED ELSEWHERE IN THE PLAN.
6. COMPOST FILTER SOCKS SHALL BE INSPECTED WEEKLY AND AFTER EACH RUNOFF EVENT. DAMAGED SOCKS SHALL BE REPAIRED ACCORDING TO MANUFACTURER'S SPECIFICATIONS OR REPLACED WITHIN 24 HOURS OF INSPECTION.
7. BIODEGRADABLE COMPOST FILTER SOCKS SHALL BE REPLACED AFTER 6 MONTHS; PHOTODEGRADABLE SOCKS AFTER 1 YEAR. POLYPROPYLENE SOCKS SHALL BE REPLACED ACCORDING TO MANUFACTURER'S RECOMMENDATIONS.
8. UPON STABILIZATION OF THE AREA TRIBUTARY TO THE SOCK, STAKES AND SOCK SHALL BE REMOVED.

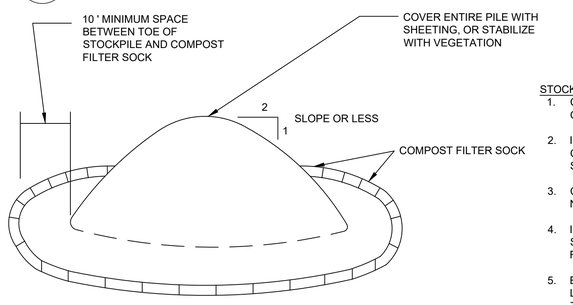
3 C-113 COMPOST FILTER SOCK
NTS



DEWATERING SUMP NOTES:

1. OVERALL SUMP PIT DIMENSIONS SHALL BE COMPATIBLE WITH ANTICIPATED SEEPAGE RATES AND PUMP SIZE TO BE USED.
2. THE STANDPIPE DIAMETER AND NUMBER OF PERFORATIONS SHALL BE COMPATIBLE WITH THE PUMP SIZE BEING USED.
3. PERFORATIONS IN THE STANDPIPE SHALL BE EITHER CIRCULAR OR SLOTS. PERFORATION SIZE SHALL NOT EXCEED $\frac{1}{2}$ INCH IN DIAMETER.
4. CRUSHED STONE OR GRAVEL SHALL BE NO SMALLER THAN AASHTO #57 SIZE NOR LARGER THAN #3 SIZE. CRUSHED STONE SHALL EXTEND A MINIMUM OF 12 INCHES BELOW THE BOTTOM OF THE STANDPIPE.
5. A PROPERLY DESIGNED GEOTEXTILE SHALL BE PLACED BETWEEN THE EXISTING SOILS AND THE CRUSHED STONE OR GRAVEL BACKFILL TO PREVENT EXCESSIVE MOVEMENT OF FINE SOIL PARTICLES FROM THE SURROUNDING EXISTING SOILS.
6. THE STANDPIPE SHALL EXTEND A MINIMUM OF 12 INCHES ABOVE THE SURROUNDING GROUND.
7. BOTTOM OF TRENCH DIAMETER SHALL BE A MINIMUM OF 3 TIMES THE PIPE DIAMETER.
8. THE DEWATERING DISCHARGE LOCATION SHALL BE TO THE EXISTING ON-SITE SANITARY SEWER SPILLWAY, OR AS SPECIFIED BY THE REQUIRED DEWATERING PERMIT.

4 C-113 DEWATERING SUMP
NTS



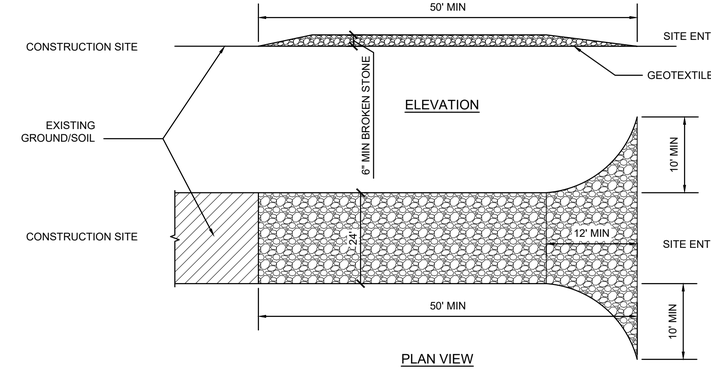
INSTALLATION NOTES

1. AREAS CHOSEN FOR STOCKPILING SHALL BE DRY AND STABLE.
2. MAXIMUM SLOPE OF STOCKPILE SHALL BE 1:2.
3. UPON COMPLETION OF SOIL STOCKPILING, EACH PILE SHALL BE SURROUNDED WITH SILT FENCING, THEN STABILIZED WITH VEGETATION OR COVERED.
4. SEE DETAIL 3 FOR INSTALLATION OF COMPOST FILTER SOCK.
5. FOR WINTER STABILIZATION, STOCKPILES MUST HAVE A BARRIER INSTALLED AT LEAST 15 FEET FROM THE TOE OF THE STOCKPILE TO PREVENT SOIL MIGRATION AND TO CAPTURE LOOSE SOIL, PER NYS STANDARDS AND SPECIFICATIONS FOR EROSION AND SEDIMENT CONTROL.

STOCKPILE OPERATION AND MAINTENANCE REQUIREMENTS:

1. CONDUCT FREQUENT INSPECTIONS OF THE SOIL STOCKPILE TO IDENTIFY ANY SIGNS OF EROSION, SEDIMENT RUNOFF, OR INSTABILITY.
2. IMPLEMENT EROSION CONTROL MEASURES SUCH AS SILT FENCING, EROSION CONTROL BLANKETS, OR SEDIMENT TRAPS AROUND THE PERIMETER OF THE STOCKPILE TO PREVENT SOIL EROSION AND SEDIMENT RUNOFF.
3. COVERING: COVER THE SOIL STOCKPILE WITH TARPS OR OTHER MATERIALS WHEN NOT IN USE TO PREVENT EROSION CAUSED BY WIND AND RAIN.
4. IMPLEMENT MEASURES TO MANAGE STORMWATER RUNOFF FROM THE SOIL STOCKPILE, SUCH AS CONSTRUCTING DIVERSION CHANNELS OR BERMS TO DIRECT RUNOFF AWAY FROM SENSITIVE AREAS.
5. ENSURE THAT THE SOIL STOCKPILE IS PROPERLY STABILIZED TO PREVENT LANDSLIDES OR COLLAPSES. THIS MAY INVOLVE COMPACTING THE SOIL, GRADING THE SURFACE, OR INSTALLING RETAINING STRUCTURES IF NECESSARY.
6. REGULARLY MONITOR THE CONDITION OF THE SOIL STOCKPILE AND SURROUNDING AREAS FOR ANY SIGNS OF EROSION, SEDIMENTATION, OR INSTABILITY.
7. MAINTAIN AND REPAIR EROSION CONTROL MEASURES AS NEEDED TO ENSURE THEIR EFFECTIVENESS IN PREVENTING SOIL EROSION AND SEDIMENT RUNOFF.
8. PROPERLY MANAGE ANY WASTE MATERIALS GENERATED FROM THE SOIL STOCKPILE, SUCH AS EXCESS SOIL OR DEBRIS, BY DISPOSING OF THEM IN ACCORDANCE WITH LOCAL REGULATIONS.
9. KEEP DETAILED RECORDS OF OPERATION AND MAINTENANCE ACTIVITIES CONDUCTED ON THE SOIL STOCKPILE, INCLUDING INSPECTIONS, REPAIRS, AND ANY WASTE DISPOSAL ACTIVITIES.

5 C-113 SOIL STOCKPILE
NTS



STABILIZED CONSTRUCTION ENTRANCE NOTES:

1. STONE SIZE - USE 1-4 INCH STONE, OR RECLAIMED OR RECYCLED CONCRETE EQUIVALENT.
2. LENGTH - NOT LESS THAN 50 FEET.
3. THICKNESS - NOT LESS THAN SIX (6) INCHES.
4. WIDTH - TWENTY-FOUR (24) FEET FOR SINGLE ENTRANCE TO SITE.
5. GEOTEXTILE - SHALL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING OF STONE.
6. SURFACE WATER - ALL SURFACE WATER FLOWING OR DIVERTED TOWARD THE CONSTRUCTION ACCESS SHALL BE PIPED BENEATH THE ENTRANCE. IF PIPING IS IMPRACTICAL, A MOUNTABLE BERM WITH 5:1 SLOPES WILL BE PERMITTED.
7. MAINTENANCE - THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY, ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED IMMEDIATELY.
8. WHEN WASHING VEHICLE WHEELS IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH STONE AND WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE.
9. PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED AFTER EACH RAIN.
10. IF ONE (1) CONSTRUCTION ENTRANCE LESS THAN 24 FT IN WIDTH IS PROVIDED, THE CONTRACTOR SHALL PROVIDE A FLAGGER AT THE SITE ENTRANCE/EXIT FOR SAFETY AND TO MANAGE THE CONSTRUCTION VEHICLE TRAFFIC. THE FLAGGER SHALL BE PROVIDED WHEN CONSTRUCTION IS ACTIVE AT THE SITE.

6 C-113 STABILIZED CONSTRUCTION ENTRANCE
NTS

PAERDEGAT SOIL EROSION AND SEDIMENT CONTROL DETAILS

BID SET

SUBMITTAL DATE: OCTOBER 2026

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PROJECT MANAGER: AIMEE BOULET, P.E.

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EXECUTIVE DIRECTOR: NAYANKUMAR SHAH, P.E.

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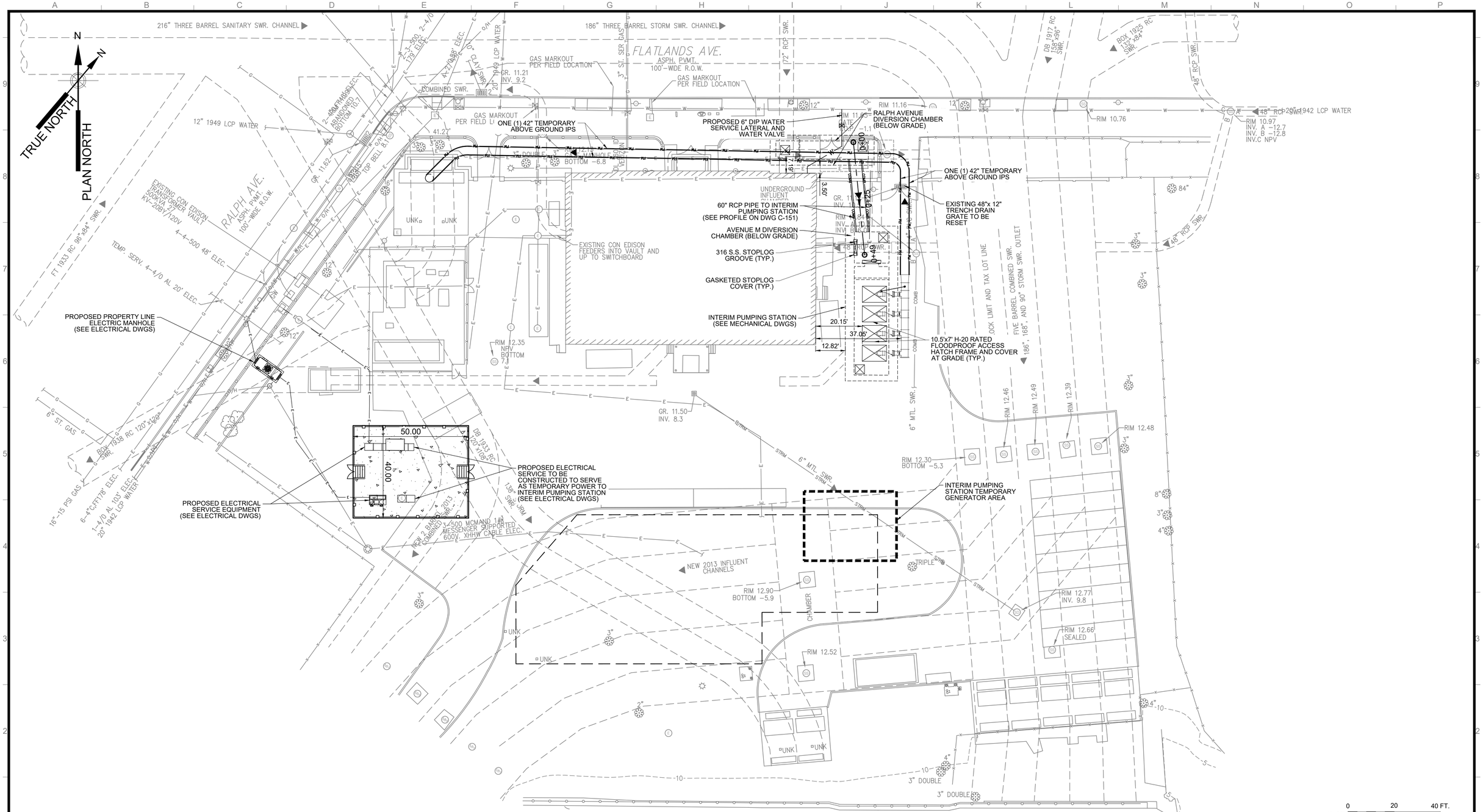

PAERDEGAT INTERIM BYPASS PUMPING PLAN

SCALE: 1"= 20'

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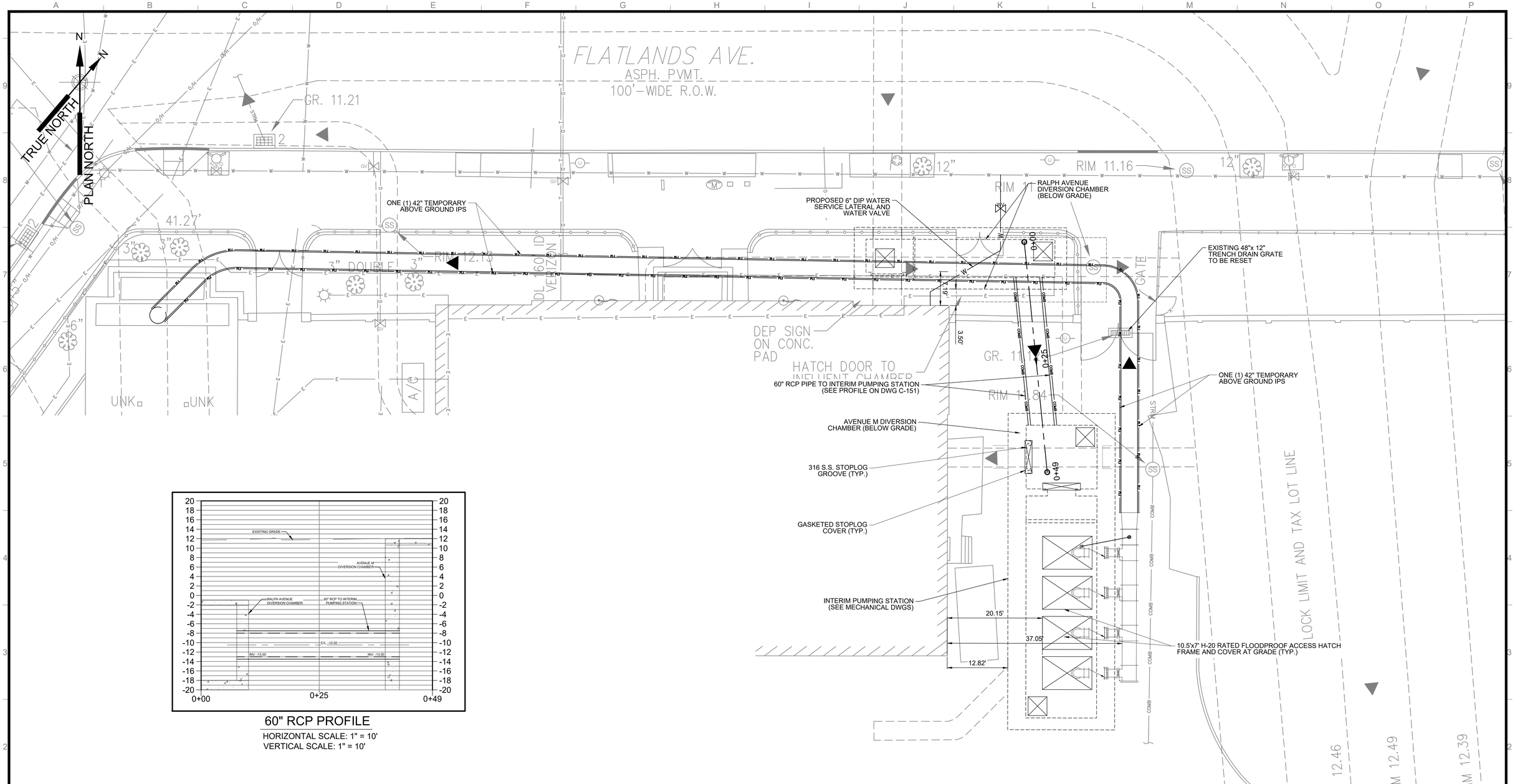

60" RCP PROFILE

HORIZONTAL SCALE: 1" = 10'
VERTICAL SCALE: 1" = 10'

0 10 20 FT.
1"=10'

PAERDEGAT ENLARGED INTERIM BYPASS PUMPING PLAN

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BUREAU OF ENGINEERING DESIGN & CONSTRUCTION
96-05 HORACE HARDING EXPRESSWAY 5th FLOOR
CORONA, NEW YORK 11368
www.nyc.gov/dep

CAPITAL PROJECT WP-269
RECONSTRUCTION OF
PAERDEGAT PUMPING STATION
CONTRACT PS-318
CIVIL
ENLARGED INTERIM BYPASS PUMPING PLAN

DATE: OCTOBER 2026
SCALE: 1" = 10'
SHEET NO: 23 OF 274
DRAWING NO. C-151.00

All inquiries regarding this drawing(s) or project should be made to NYC Environmental Protection, Bureau of Engineering Design and Construction.

C:\USERS\ADANIELSON\DC\ACCDOCS\AECOM\CI-AMER (USA) 60619010-PS-DES-5\PROJECT FILES\900 DESIGN COLLABORATION\05-CI\PAERDEGAT\C-150.00 - BYPASS PUMPING.DWG

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MAINTENANCE AND PROTECTION OF TRAFFIC GENERAL NOTES:

1. ALL MAINTENANCE AND PROTECTION OF TRAFFIC (MPT) WORK AND ALL TEMPORARY TRAFFIC CONTROL DEVICES SHALL CONFORM TO CONTRACT SPECIFICATIONS, THE NEW YORK STATE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (M.U.T.C.D.), AND NEW YORK STATE BUILDING CODE, EXCEPT AS MODIFIED BY THE CONTRACT DOCUMENTS OR AS OBSERVED BY THE ENGINEER TO SUIT FIELD CONDITIONS.

2. CONTRACTOR SHALL NOTIFY THE NEW YORK CITY DEPARTMENT OF TRANSPORTATION (NYCDOT) OFFICE OF CONSTRUCTION MITIGATION AND COORDINATION (OCMC) AT (212) 839-9637 AT LEAST TWENTY (20) DAYS BEFORE THE START OF CONSTRUCTION TO SCHEDULE A PRE-CONSTRUCTION MEETING. CONTRACTOR SHALL OBTAIN PERMIT FROM NYCDOT FOR THE STREET AND SIDEWALK CLOSURES AND DETOURS PRIOR TO COMMENCING THE WORK.

3. THE NEW YORK CITY POLICE DEPARTMENT - TRAFFIC DIVISION AT (212) 239-2500. THE NEW YORK CITY FIRE DEPARTMENT - OPERATIONS DIVISION AT (718) 694-2082. THE NEW YORK CITY EMERGENCY MEDICAL SERVICES, THE MTA-BRIDGES AND TUNNELS AND LOCAL HOSPITALS AT LEAST TWO (2) WEEKS IN ADVANCE OF THE BEGINNING OF WORK ON A TRAVEL LANE. NOTIFICATION SHALL BE IN WRITING AFTER RECEIPT OF CONCURRENCE FROM ENGINEER.

4. ALL RELOCATION WORK BY THE UTILITIES SUCH AS; CON EDISON, TELEPHONE, AND CABLE COMPANIES, SHALL PRECEDE THE CONTRACTORS START OF WORK ON ALL AFFECTED ROADWAYS IN THE IMPACTED CONTRACT AREA.

5. IF AT ANY TIME IN THE OPINION OF THE ENGINEER, CONDITIONS WARRANT MODIFICATIONS TO THE SCHEMES ON THIS OR ANY OTHER MPT DRAWINGS, PERFORM THE MODIFICATIONS INCLUDING RE-OPENING OF ANY LANE CLOSURES ON AN EMERGENCY BASIS AS OBSERVED BY THE ENGINEER.

6. DO NOT PLACE ANY NEW DETOUR IN OPERATION ON A FRIDAY, MONDAY OR ON THE DAY PRECEDING A HOLIDAY OR HOLIDAY WEEKEND UNLESS OTHERWISE APPROVED IN WRITING, BY THE ENGINEER AND WITH CONCURRENCE OF THE NYCDOT OFFICE OF CONSTRUCTION MITIGATION AND COORDINATION (OCMC) AND DETOUR IMPLEMENTATION GROUP. THIS NOTE APPLIES TO THE FOLLOWING HOLIDAYS: MEMORIAL DAY, INDEPENDENCE DAY, LABOR DAY, THANKSGIVING, CHRISTMAS, AND NEW YEAR'S DAY.

7. PRIOR TO ANY WORK PERMITS BEING ISSUED, A PRE-CONSTRUCTION MEETING WILL BE HELD TWENTY (20) DAYS IN ADVANCE BY THE OCMC-STREETS AND THE ENGINEER-IN-CHARGE. ARRANGEMENTS FOR THE MEETING WILL BE COORDINATED BY THE OCMC-STREETS.

8. PERFORM MAINTENANCE CLEANING OF THE PAVEMENT AREAS WITHIN THE CONTRACT LIMITS, WHEN ORDERED BY THE ENGINEER. MAINTENANCE CLEANING MEANS THE REMOVAL AND DISPOSAL OF DEBRIS FROM ANY SOURCE, WHICH IN THE OPINION OF THE ENGINEER, IMPEDES THE FLOW OF TRAFFIC OR STORM WATER. SWEEP TRAVEL LANES CLEAN BEFORE THEY ARE RE-OPENED TO THE PUBLIC.

9. TO ENSURE A SAFE TRAFFIC FLOW AT ALL TIMES, STORAGE OF MATERIALS AND EQUIPMENT, INCLUDING EMPLOYEES' CARS, ARE NOT PERMITTED WITHIN THE TRAVEL WAY OF THE ROADWAY. SEPARATE SUCH STORAGE AREAS FROM THE TRAVEL WAY BY A CLEAR SPACE OF 30 FT. MINIMUM WIDTH, UNLESS SUCH STORAGE IS PLACED BEHIND TEMPORARY CONCRETE BARRIER, TEMPORARY TIMBER SAFETY CURB OR OTHER PERMANENT ROADSIDE BARRIER INSTALLATION.

10. THE MPT SCHEMES SHOWN IN THE CONTRACT DOCUMENTS ARE TO PROTECT THE TRAVELING PUBLIC. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO PROTECT THE WORKERS AND TO PROVIDE THEM WITH SAFE ACCESS TO WORK SITES. WHEN WORKMEN ARE IN A CLOSED LANE ON A ROADWAY, USE A SHADOW VEHICLE WITH TRUCK MOUNTED ATTENUATOR (T.M.A.) AND FLASHING ARROW PANEL IN THE "CAUTION" MODE, EXCEPT WHERE SHOWN OTHERWISE. MAINTAIN AND PROTECT TRAFFIC WITHIN THE CONTRACT LIMITS FOR THE DURATION OF THE CONTRACT, AS SHOWN ON THE PLANS.

11. WHEN THE CONTRACTOR PERFORMS WORK AT NIGHT, THE WORK SITE SHALL BE ILLUMINATED TO THE SATISFACTION OF THE ENGINEER. THE ENGINEER SHALL BE THE SOLE JUDGE OF WHEN ILLUMINATION IS REQUIRED. THE CONTRACTOR SHALL SUPPLY AND USE MOBILE FLOOD LIGHT APPARATUS. SATISFACTORY ILLUMINATION SHALL BE DEFINED AS THAT WHICH SHEDS A MINIMUM OF FIVE (5) FOOT-CANDLES (LEVEL I ILLUMINATION) OVER THE AREA SPECIFIED BY THE ENGINEER TO BE ILLUMINATED. THE CONTRACTOR SHALL PROVIDE A LIGHT METER FOR THE ENGINEER TO MEASURE THE AMOUNT OF FOOT-CANDLES.

12. THE CONTRACTOR SHALL EMPLOY A ROAD TRAFFIC FLAGGER WITH APPROPRIATE SIGN WHENEVER OPERATIONS INTERFERE WITH TRAFFIC. EXAMPLES INCLUDE, BUT ARE NOT LIMITED TO DELIVERY /REMOVAL OF MATERIALS, LIFTING OPERATIONS AND IMPLEMENTATION OF THE MAINTENANCE AND PROTECTION OF TRAFFIC MEASURES. ALL FLAGGERS USED MUST BE FORMALLY TRAINED IN PROPER FLAGGING PROCEDURES AND FEDERAL HIGHWAY ADMINISTRATION (FHWA) CERTIFIED.

13. THE SOLE DUTY OF THE FLAGGER IS TO DIRECT TRAFFIC PROPERLY AT ALL TIMES. DO NOT USE FLAGGERS TO MOVE TEMPORARY SIGNS OR ASSIST IN OTHER WORKS. USE STOP/SLOW PADDLES AND FOLLOW STANDARD SIGNALING PROCEDURES REQUIRED BY M.U.C.T.D. EQUIP FLAGGERS WITH CLEAN WELL FITTING, ORANGE VESTS AND HARD HATS.

14. FOR WORK ZONE SPEED REDUCTIONS IMPLEMENTED DURING CONSTRUCTION, CONTACT NYCDOT OCMC TO SELECT AN APPROPRIATE SPEED LIMIT FOR WORK ZONE.

15. SUBMIT TO THE ENGINEER, AT LEAST ONE WEEK IN ADVANCE A PROPOSED SCHEDULE FOR EACH WEEK PERTAINING TO LANE CLOSING, INCLUDING LAYOUTS AND LOCATION FOR WORK AND ANY OTHER METHODS AVAILABLE TO IMPROVE TRAFFIC FLOW NOT SHOWN ON THE TYPICAL MPT OR DETOUR SHEETS. SEND A COPY OF THE NEW SCHEME TO THE NYCDOT OCMC FOR APPROVAL. PERFORM THIS WORK IN SUCH A MANNER AND SEQUENCE AS TO MAINTAIN THROUGH TRAFFIC AS SHOWN IN THE CONTRACT DOCUMENTS.

16. NO DEVIATION OR DEPARTURE FROM THE PLANS AND CONTRACT DOCUMENTS WILL BE PERMITTED WITHOUT PRIOR WRITTEN APPROVAL FROM THE DEPARTMENT OF TRANSPORTATION. SUBMIT REQUEST FOR SUCH MODIFICATIONS TO THE NYCDOT OFFICE OF CONSTRUCTION MITIGATION AND COORDINATION A MINIMUM OF TWENTY (20) DAYS IN ADVANCE FOR CONSIDERATION.

17. WORK CANNOT BE PERFORMED DURING THE NEW YORK CITY 5 BOROUGH BIKE TOUR AND THE NEW YORK CITY MARATHON, UNLESS GRANTED SPECIAL PERMISSION BY NYCDOT OCMC.

18. INSTALL ADVANCE LANE CLOSURE SIGNS AT THE LOCATIONS OF ANY POTENTIAL BACKUP WHICH MAY OCCUR AS A RESULT OF THE LANE CLOSURE.

19. NOTIFY THE NEW YORK CITY DEPT. OF TRANSPORTATION'S SITUATION ROOM, LOCAL POLICE PRECINCT, LOCAL FIRE HOUSE AND THE CHIEF OF EMERGENCY MEDICAL SERVICES, TWO (2) HOURS PRIOR TO PROPOSED TRAFFIC LANE REDUCTIONS OR STREET CLOSINGS FOR ANY PURPOSE. IMMEDIATELY NOTIFY THE SITUATION ROOM UPON RE-OPENING AND IN THE EVENT OF AN EMERGENCY CONDITION.

20. SUBMIT REQUESTS FOR LOCAL SIDE STREET CLOSURE IF THIS IS ESSENTIAL TO MEET THE PROJECT COMPLETION DATE. OBTAIN APPROVAL OF THE ENGINEER AND THE NYCDOT OCMC PRIOR TO START OF WORK AT THE SITE IN QUESTION.

21. CONCURRENT WITH CONSTRUCTION WORK OF THIS CONTRACT, OTHER PROJECTS ON THIS AND ON ADJACENT HIGHWAYS WILL BE UNDER CONSTRUCTION. SCHEDULE CONSTRUCTION ACTIVITIES IN COORDINATION WITH OTHER PROJECTS TO FACILITATE THE FLOW OF TRAFFIC. THE PERMISSIBLE WORK HOURS MAY BE MODIFIED AS DEEMED NECESSARY BY THE NYCDOT OCMC.

22. CONDUCT CRANE OPERATION OR THE USE OF ANY OTHER EQUIPMENT FOR ANY AND ALL WORK WITHIN THE STREETS IN ACCORDANCE WITH THE RULES, REGULATIONS AND REQUIREMENTS OF THE NYCDOT AND PROVISIONS OF THE NEW YORK CITY NOISE CONTROL CODE.

23. FURNISH, INSTALL, MAINTAIN AND REMOVE ALL NECESSARY SIGNS, FLASHING ARROW BOARDS AND VARIOUS MESSAGE SIGNS, AND OTHER TRAFFIC SAFETY DEVICES IN ACCORDANCE WITH N.Y.S.M.U.T.C.D. PROVIDE FLAGGERS TO AID IN DIRECTING THE FLOW OF TRAFFIC.

24. THE PLANS SHOW SCHEMATICALLY THE POSITION OF THE TEMPORARY CONSTRUCTION ITEMS. FIELD CONDITIONS MAY NECESSITATE VARYING THE CONFIGURATION SOMEWHAT. THE ACTUAL POSITIONING OF ANY TEMPORARY ITEM IS TO BE APPROVED BY THE ENGINEER.

25. ALL CONSTRUCTION SIGN DESIGNATIONS ARE REFERENCED FROM THE N.Y.S.M.U.T.C.D. UNLESS OTHERWISE NOTED.

26. THE SIGNING SHOWN ON THE MPT PLANS ARE THE MINIMUM REQUIRED. ADDITIONAL SIGNS MAY BE REQUIRED AS INSTRUCTED BY ENGINEER.

27. DISPLAY CONSTRUCTION SIGNS ONLY DURING THAT STAGE OF WORK TO WHICH THEY APPLY. REMOVE ALL SIGNS WHICH ARE INCONSISTENT WITH THE TRAFFIC PATTERN. SIMILARLY, THE APPROPRIATE SIGNS MUST BE COMPLETELY IN PLACE AND ON DISPLAY AS A PARTICULAR STAGE OF WORK COMMENCES.

    THIS RAPID TRANSITION MAY BE ACCOMPLISHED BY:

    A. COVERING THE SIGN PANELS WITH AN OPAQUE MATERIAL
    B. FOLDING DOWN CONSTRUCTION SIGNS WHICH HAVE A CENTER HINGED SIGN PANEL OR FOLDABLE SIGN SUPPORT.
    C. REMOVING CONSTRUCTION SIGNS WHICH OTHERWISE CANNOT BE FOLDED DOWN.

28. COVER EXISTING GUIDE, WARNING, AND REGULATORY SIGN MESSAGES THAT ARE RENDERED INAPPLICABLE BY CONSTRUCTION ACTIVITIES FOR THE DURATION OF SUCH ACTIVITIES.

29. ANY EXISTING PAVEMENT MARKINGS THAT INTERFERE OR CONFLICT WITH THE PROPOSED TEMPORARY OR PERMANENT PAVEMENT MARKINGS SHALL BE REMOVED.

30. THE CONTRACTOR WILL BE REQUIRED TO PROVIDE TEMPORARY CONES & SIGNS OR PAVEMENT MARKINGS IMMEDIATELY AFTER THE EXISTING PAVEMENT MARKINGS HAVE BEEN REMOVED.

31. WHEN A CROSSWALK IS CLOSED, THE CONTRACTOR SHALL INSTALL TEMPORARY SIGNS TO DIRECT PEDESTRIANS TO THE NEAREST ADJACENT CROSSWALK.

32. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PLACEMENT OF FINAL PAVEMENT MARKINGS IN THE ORIGINAL EXISTING CONFIGURATION AFTER COMPLETION OF WORK, OR AS ORDERED BY THE ENGINEER. THE ENGINEER SHALL NOTIFY THE BUREAU OF TRAFFIC OPERATIONS TO VERIFY THE PAVEMENT MARKINGS LAYOUT TWO WEEKS PRIOR TO START OF WORK.

33. ALL EXCAVATIONS SHALL BE ADEQUATELY FENCED TO PRECLUDE ENTRY BY THE PUBLIC.

34. THE CONTRACTOR IS ALLOWED TO PLACE STORAGE CONTAINERS/SITE TRAILERS ONLY ON LOCATIONS APPROVED BY THE ENGINEER AND FOR DURATIONS APPROVED BY THE ENGINEER.

35. CONTRACTOR WILL BE REQUIRED TO MEET D.E.P. NOISE LIMITS AT ALL TIMES.

36. IN REFERENCE TO THE M.U.T.C.D., APPLY THE FOLLOWING STIPULATIONS UNLESS OTHERWISE SPECIFIED BY THE ENGINEER:

    A. WHERE SIGNS ARE SHOWN IN BOTH DIAMOND AND RECTANGULAR SHAPES, ONLY DIAMOND SHAPES ARE PERMITTED, OR AS ORDERED BY THE ENGINEER.

    B. WHERE SIGNS ARE SHOWN IN ALTERNATE SIZES, USE THE LARGEST SIZE UNLESS OTHERWISE SPECIFIED BY THE ENGINEER, OR AS SHOWN ON THE PLANS.

37. INSTALL FLASHING BEACONS ON THE TEMPORARY CONSTRUCTION SIGNS AS INDICATED ON THE PLANS OR AS ORDERED BY THE ENGINEER.

38. THE BOTTOM OF TEMPORARY CONSTRUCTION SIGNS SHALL BE A MINIMUM OF 7 FEET ABOVE THE TRAVEL PAVEMENT AND THE EDGES OFFSET A MINIMUM OF 2 FEET CLEAR OF THE TRAVEL LANE, AS SHOWN ON THE CONTRACT DOCUMENTS. IF THE 2 FEET HORIZONTAL CLEARANCE CANNOT BE MET, THE CONTRACTOR MAY USE THE EQUIVALENT RECTANGULAR SIGN. IF THE 2 FEET CLEARANCE CANNOT BE MET USING RECTANGULAR SIGNS THE SIGN SHALL BE MOUNTED A MINIMUM OF 13 FEET ABOVE THE TRAVEL PAVEMENT. UNDER NO CIRCUMSTANCES WILL THE CLIPPING OF SIGNS OR USAGE OF PREVIOUSLY CLIPPED SIGNS BE ALLOWED.

39. WHERE SPECIFIED IN D.O.T. STIPULATIONS THE LANE CLOSURE SCHEMES ARE TO BE UTILIZED FOR DAYTIME APPLICATIONS ONLY. FIT THE FIRST TWO CHANNELIZING DEVICES AT THE BEGINNING OF LANE CLOSURE WITH WARNING LIGHTS IN ACCORDANCE WITH N.Y.S.M.U.T.C.D. SECTION 294.3 IN ADDITION, OBSERVE THE FOLLOWING:

    - USE TYPE A (LOW INTENSITY) OR TYPE B (HIGH INTENSITY) FLASHING WARNING LIGHTS AS THE FIRST TWO LIGHTS IN A LONGITUDINAL SERIES AND FOR MARKING ISOLATED HAZARDS.
    - USE TYPE C (LOW INTENSITY) STEADY BURNING WARNING LIGHTS ONLY ON TEMPORARY CONCRETE BARRIER OR OTHER NON-REFLECTIVE FEATURES LOCATED CLOSE TO TRAVEL LANES. DO NOT USE TYPE C LIGHTS ON REFLECTORIZED CHANNELIZING DEVICES UNLESS JUSTIFIED BY REDUCED VISIBILITY OR HEAVY FOG.

40. TO PROVIDE ADEQUATE VISIBILITY DISTANCE TO DRIVERS, DO NOT ALLOW SIGNS TO BE BLOCKED BY FOLIAGE, ROADWAY FEATURES, OR OTHER SIGNS AND TRAFFIC CONTROL DEVICES. NO STATIONARY MOUNTING OF CONSTRUCTION SIGNS SHALL BE PERMITTED ON UTILITY POLES OR OTHER ROADSIDE ELEMENTS. WHERE THE WARNING SIGNS CANNOT BE LOCATED TO BE VISIBLE UNDER HEADLIGHT ILLUMINATION, WARNING LIGHTS OR FLAGS SHALL BE ADDED TO ENHANCE VISIBILITY OR THE SIGN SHALL BE RELOCATED.

41. LAYOUT OF STREET, WIDTHS/LOCATIONS OF DRIVEWAYS, ETC. SHOWN ARE APPROXIMATE, CONTRACTOR SHALL PROVIDE ACCESS TO DRIVEWAYS AT ALL TIMES.

42. PROVISIONS FOR TRUCKS:

    a. 18 WHEELER: CONTRACTOR TO DEVELOP ALTERNATE ROUTE SCHEMES AROUND WORK ZONES AND SUBMIT FOR NYC DOT AND ENGINEER APPROVAL AT LEAST 10 DAYS IN ADVANCE.

    b. SINGLE UNIT TRUCK: IF NO TURN SIGNS ARE TO BE PLACED AT CERTAIN INTERSECTIONS, CONTRACTOR HAS TO DEVELOP ALTERNATE TRUCK ROUTE SCHEMES FOR THESE INTERSECTIONS AND SUBMIT FOR NYC DOT AND ENGINEER. APPROVAL AT LEAST TEN DAYS IN ADVANCE.

43. PROVISIONS FOR BUSES AND PASSENGERS:

    a. MAINTAIN ACCESS TO AND EXIT FROM BUSES, WITHIN THE CONTRACT AREA, AT ALL TIMES DURING EXECUTION OF WORK.

    b. CONTRACTOR SHALL NOTIFY NEW YORK CITY TRANSIT AUTHORITY (NYCTA) AND NYCDOT OF CONSTRUCTION WITHIN BUS STOP AREA AT LEAST FOUR WEEKS IN ADVANCE.

    c. DO NOT COMMENCE WORKING IN THE AREA OF ANY EXISTING BUS STOP UNTIL THE BUS STOP HAS BEEN TEMPORARILY RELOCATED, AS REQUIRED AND AS DIRECTED AND APPROVED BY THE NYCTA AND NYCDOT.

44. THE CONTRACTOR WILL NOT BE PERMITTED TO CONSTRUCT OPPOSITE SIDE OF STREET AT THE SAME TIME EXCEPT WHERE DIRECTED AND/OR APPROVED BY THE ENGINEER.

45. PROTECT PEDESTRIANS FROM ALL CONSTRUCTION OPERATIONS BY THE USE OF TEMPORARY PEDESTRIAN STEEL BARRICADES, TEMPORARY SIGNS, OR OTHER TRAFFIC CONTROL DEVICES AS SHOWN ON TYPICAL PLANS AND AS DIRECTED BY THE ENGINEER.

46. ISSUED NYCDOT - OCMC TRAFFIC STIPULATIONS SUPERSEDE AND TAKES PRECEDENT OVER THE SCHEMATIC MPT CONTRACT DRAWING(S) OR SPECIFICATION. IN THE CASE THERE ARE ANY DIFFERENCES BETWEEN THE CONTRACT DRAWINGS AND THE ISSUED NYCDOT - OCMC TRAFFIC STIPULATIONS, THE CONTRACTOR IS HEREBY INFORMED TO DEFER TO THE ISSUED STIPULATIONS

47. THE CONTRACTOR SHALL SUBMIT CHAIN LINK FENCE AND CONCRETE BARRIER PLANS WITH DESIGN CALCULATIONS SIGNED AND SEALED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF NEW YORK FOR REVIEW BEFORE MOBILIZATION. DESIGN WIND LOAD SHALL BE MINIMUM 60 MPH ON VERTICAL PROJECTION OF EXPOSED SURFACE AND/OR IN ACCORDANCE WITH THE LATEST ASCE MINIMUM DESIGN WIND LOADS FOR BUILDING AND OTHER STRUCTURES-CHAPTER ON WIND LOADS.

SIGN DATA TABLE:

SIGN	SIZE OF SIGN (S.F. WHERE APPLIC.)	IDENTIFICATION NUMBER	LETTER SIZE (IN.)	COLOR BACKGROUND	COLOR CHARACTERS	TYPE OF MOUNT
END ROAD WORK	18"x36" (4.5)	G20-2	4 4	ORANGE	BLACK	TEMP. MOUNTED SIGN
ROAD WORK AHEAD	36"x36" (9.0)	W20-1	5 5 5	ORANGE	BLACK	TEMP. MOUNTED SIGN
SHOULDER WORK	36"x36" (9.0)	W21-5	5 5	ORANGE	BLACK	TEMP. MOUNTED SIGN
	36"x36" (9.0)	W1-4BL, W1-4BR	5 5	ORANGE	BLACK	TEMP. MOUNTED SIGN
RIGHT LANE MUST TURN RIGHT	36"x36" (9.0)	R3-7R	5 5	WHITE	BLACK	TEMP. MOUNTED SIGN
SIDEWALK CLOSED	24"x12" (2.0)	R9-9	5 5	WHITE	BLACK	TEMP. MOUNTED SIGN
SIDEWALK CLOSED AHEAD CROSS HERE / SIDEWALK CLOSED AHEAD CROSS HERE	36"x36" (9.0)	R9-11L, R9-11R	5 5	WHITE	BLACK	TEMP. MOUNTED SIGN
RIGHT SHOULDER CLOSED	36"x36" (9.0)	W21-5a	5 5 5	ORANGE	BLACK	TEMP. MOUNTED SIGN
NO STOPPING ANY TIME / TEMPORARY CONSTRUCTION REGULATION	18"x18" (2.25)	SP-383BA (RIGHT)	-	RED ORANGE	WHITE BLACK	TEMP. MOUNTED SIGN
NO STOPPING ANY TIME / TEMPORARY CONSTRUCTION REGULATION	18"x18" (2.25)	SP-383BA (LEFT)	-	RED ORANGE	WHITE BLACK	TEMP. MOUNTED SIGN

BID SET

SUBMITTAL DATE: OCTOBER 2026

GRAPHIC SCALES CHECK BEFORE USE

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NO.	DATE	REVISIONS/DESCRIPTION	APPR'D.

DESIGNED BY: ALEX DANIELSON
DRAWN BY: ALEX DANIELSON
CHECKED BY: STEPHEN FUNG, P.E.
DESIGN LEAD: STEPHEN FUNG, P.E.
PROJECT MANAGER: AIMEE BOULET, P.E.

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STATE OF NEW YORK · STEPHEN FUNG · LICENSED PROFESSIONAL ENGINEER · 108763-01

Environmental Protection

ACCOUNTABLE MANAGER: JOHN GOULAS, P.E.
PORTFOLIO MANAGER: KEVIN ELLENWOOD, P.E.
EXECUTIVE DIRECTOR: NAYANKUMAR SHAH, P.E.

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CIVIL
MPT NOTES

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SHEET NO: 24 OF 274
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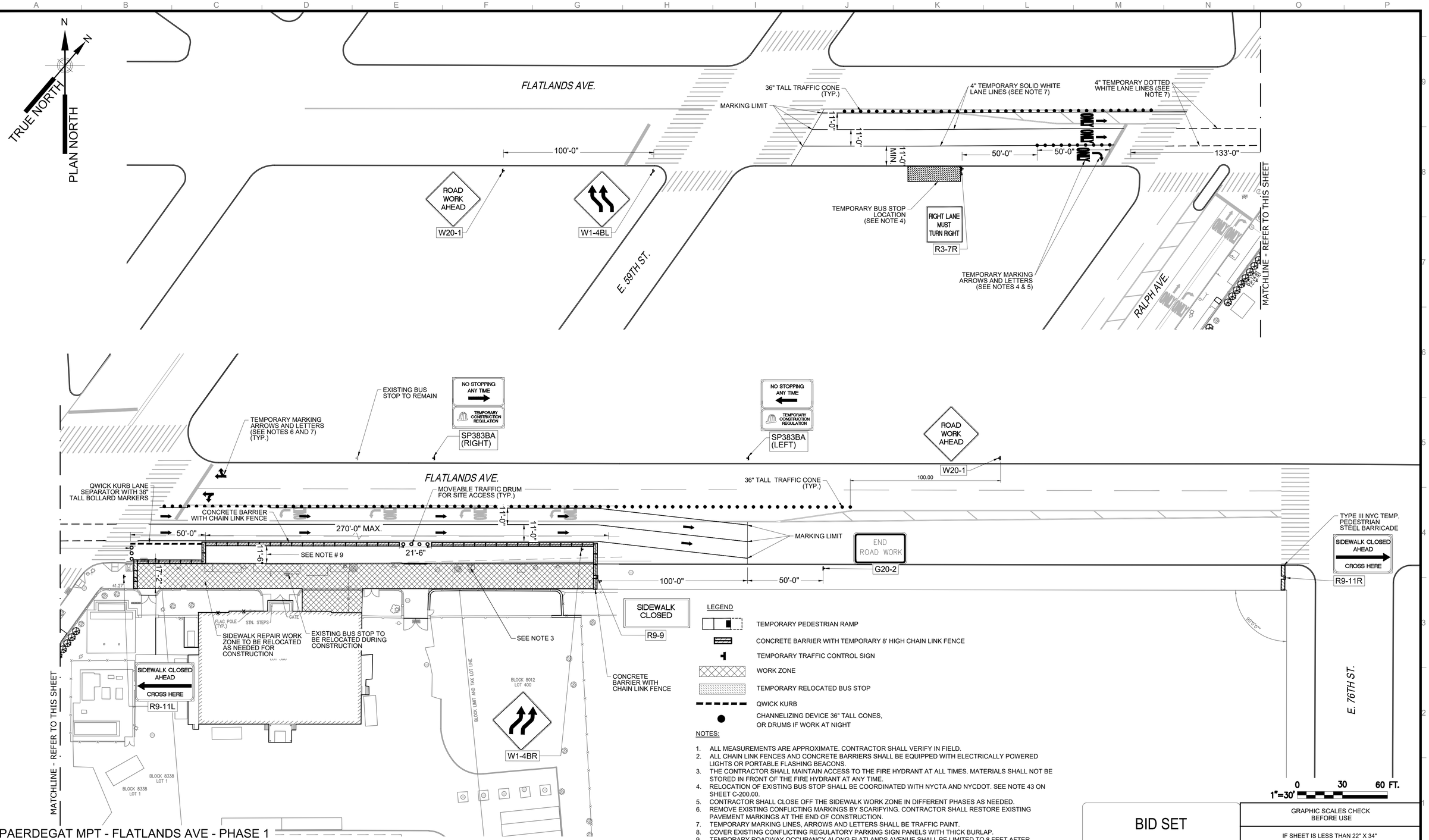

NOTES:

1. ALL MEASUREMENTS ARE APPROXIMATE. CONTRACTOR SHALL VERIFY IN FIELD.
2. ALL CHAIN LINK FENCES AND CONCRETE BARRIERS SHALL BE EQUIPPED WITH ELECTRICALLY POWERED LIGHTS OR PORTABLE FLASHING BEACONS.
3. THE CONTRACTOR SHALL MAINTAIN ACCESS TO THE FIRE HYDRANT AT ALL TIMES. MATERIALS SHALL NOT BE STORED IN FRONT OF THE FIRE HYDRANT AT ANY TIME.
4. RELOCATION OF EXISTING BUS STOP SHALL BE COORDINATED WITH NYCTA AND NYCDOT. SEE NOTE 43 ON SHEET C-200.00.
5. CONTRACTOR SHALL CLOSE OFF THE SIDEWALK WORK ZONE IN DIFFERENT PHASES AS NEEDED.
6. REMOVE EXISTING CONFLICTING MARKINGS BY SCARIFYING. CONTRACTOR SHALL RESTORE EXISTING PAVEMENT MARKINGS AT THE END OF CONSTRUCTION.
7. TEMPORARY MARKING LINES, ARROWS AND LETTERS SHALL BE TRAFFIC PAINT.
8. COVER EXISTING CONFLICTING REGULATORY PARKING SIGN PANELS WITH THICK BURLAP.
9. TEMPORARY ROADWAY OCCUPANCY ALONG FLATLANDS AVENUE SHALL BE LIMITED TO 8 FEET AFTER WORKING HOURS.

PAERDEGAT MPT - FLATLANDS AVE - PHASE 1

SCALE: 1"= 30'

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MPT PLAN - FLATLANDS AVE. - PHASE 1

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N

TRUE NORTH

PLAN NORTH

LEGEND

- TEMPORARY PEDESTRIAN RAMP
- CONCRETE BARRIER
- TEMPORARY 8' HIGH CHAIN LINK FENCE
- TEMPORARY TRAFFIC CONTROL SIGN
- WORK ZONE
- QWICK KURB

NOTES:

1. ALL MEASUREMENTS ARE APPROXIMATE. CONTRACTOR SHALL VERIFY IN FIELD.
2. ALL CHAIN LINK FENCES AND CONCRETE BARRIERS SHALL BE EQUIPPED WITH ELECTRICALLY POWERED LIGHTS OR PORTABLE FLASHING BEACONS.
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4. RELOCATION OF EXISTING BUS STOP SHALL BE COORDINATED WITH NYCTA AND NYCDOT. SEE NOTE 43 ON SHEET C-200.00.
5. CONTRACTOR SHALL CLOSE OFF THE SIDEWALK WORK ZONE IN DIFFERENT PHASES AS NEEDED.

FLATLANDS AVE.

QWICK KURB LANE SEPARATOR WITH 36" TALL BOLLARD MARKERS

8' HIGH CHAIN LINK FENCE LINED WITH ORANGE FLAME RESISTANT FABRIC

MOVEABLE TRAFFIC DRUM FOR SITE ACCESS

END ROAD WORK

G20-2

TEMPORARY SIDEWALK (5' MIN. WIDTH)

UNPINNED CONCRETE BARRIER

200'-0" MAX.

TEMPORARY PEDESTRIAN RAMP

RELOCATED BUS SIGN, TICKET MACHINES, AND BUS SHELTER. SEE NOTE 4. RESTORE TO ORIGINAL LOCATION AFTER SIDEWALK WORK IS COMPLETE.

133'-0"

100'-0"

50'-0"

5'-6"

10'-0"

10'-1"

21'-6"

50'-0"

17'-2"

41.27'

ROAD WORK AHEAD

W20-1

SHOULDER WORK

W21-5

RALPH AVE.

ONE WAY

FLAG POLE (TYP.)

STN. STEPS

GATE

SIDEWALK REPAIR WORK ZONE TO BE RELOCATED AS NEEDED FOR CONSTRUCTION

EXISTING BUS STOP TO BE RELOCATED DURING CONSTRUCTION

BLOCK 8338
LOT 300

BLOCK 8012
LOT 400

BLOCK LIMIT AND TAX LOT LINE

GRATE

GRASS

BLOCK 8338
LOT 1

BLOCK 8338
LOT 1

0 20 40 FT.
1"=20'

PAERDEGAT MPT - FLATLANDS AVE - PHASE 2

SCALE: 1"= 20'

BID SET

SUBMITTAL DATE: OCTOBER 2026

GRAPHIC SCALES CHECK BEFORE USE

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NO.	DATE	REVISIONS/DESCRIPTION	APPR'D.

DESIGNED BY: ALEX DANIELSON
CHECKED BY: STEPHEN FUNG, P.E.
DESIGN LEAD: STEPHEN FUNG, P.E.
PROJECT MANAGER: AIMEE BOULET, P.E.
DRAWN BY: ALEX DANIELSON

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STATE OF NEW YORK · STEPHEN FUNG · 108763-01 · LICENSED PROFESSIONAL ENGINEER

NYC Environmental Protection

ACCOUNTABLE MANAGER: JOHN GOULAS, P.E.
PORTFOLIO MANAGER: KEVIN ELLENWOOD, P.E.
EXECUTIVE DIRECTOR: NAYANKUMAR SHAH, P.E.

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CAPITAL PROJECT WP-269
RECONSTRUCTION OF
PAERDEGAT PUMPING STATION
CONTRACT PS-318
CIVIL
MPT PLAN - FLATLANDS AVE. - PHASE 2

DATE: OCTOBER 2026
SCALE: 1" = 20'
SHEET NO: 26 OF 274
DRAWING NO. C-202.00

All inquiries regarding this drawing(s) or project should be made to NYC Environmental Protection, Bureau of Engineering Design and Construction.

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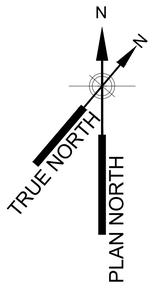
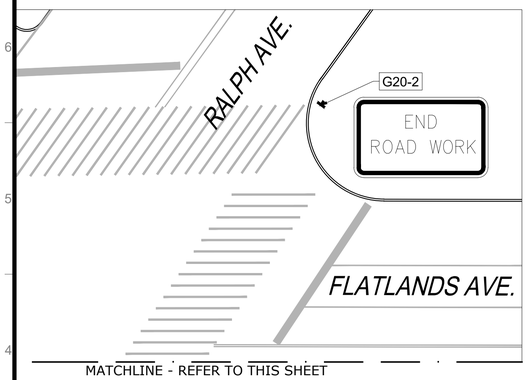


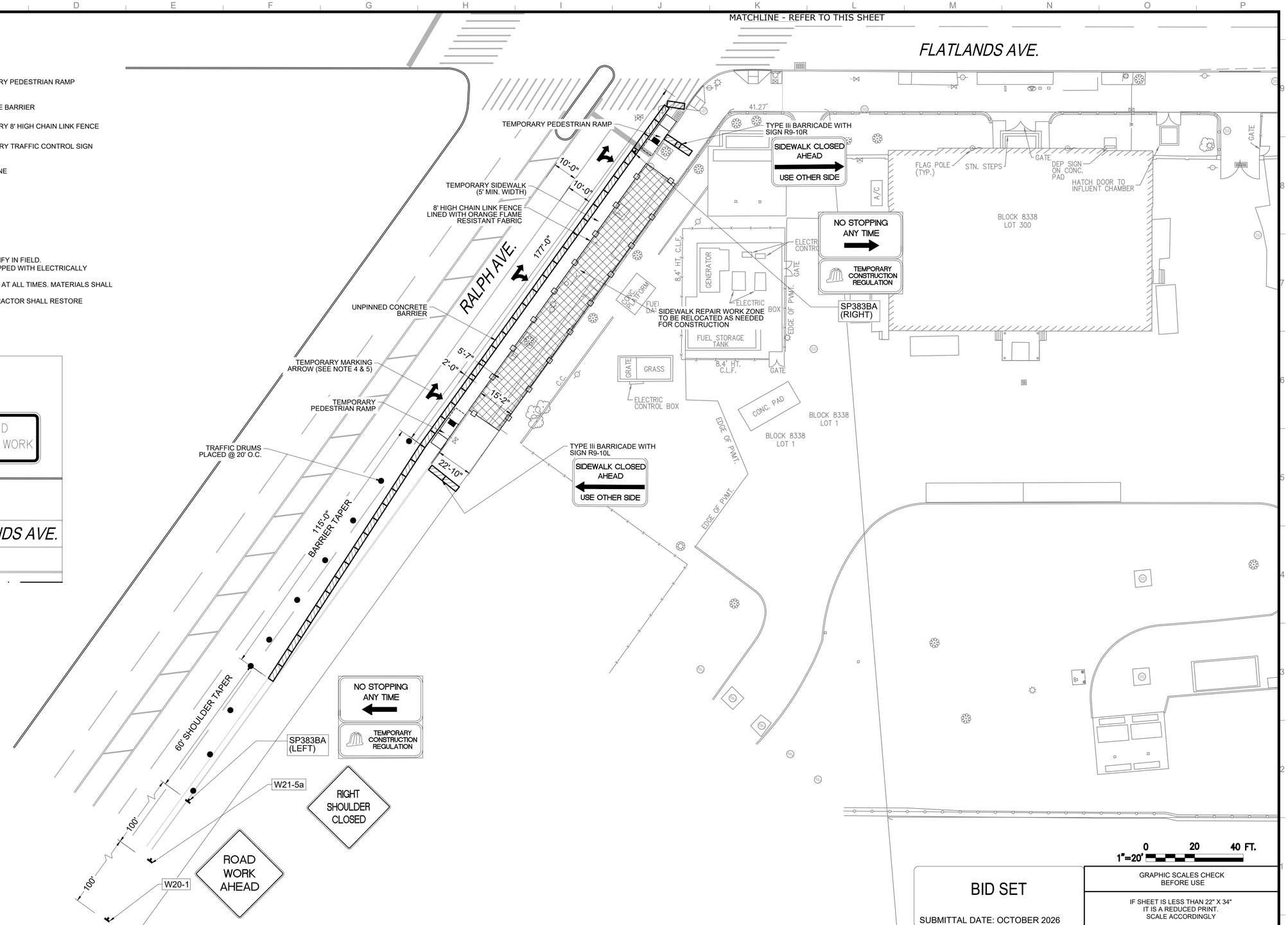
LEGEND

- TEMPORARY PEDESTRIAN RAMP
- CONCRETE BARRIER
- TEMPORARY 8' HIGH CHAIN LINK FENCE
- TEMPORARY TRAFFIC CONTROL SIGN
- WORK ZONE

NOTES:

1. ALL MEASUREMENTS ARE APPROXIMATE. CONTRACTOR SHALL VERIFY IN FIELD.
2. ALL CHAIN LINK FENCES AND CONCRETE BARRIERS SHALL BE EQUIPPED WITH ELECTRICALLY POWERED LIGHTS OR PORTABLE FLASHING BEACONS.
3. THE CONTRACTOR SHALL MAINTAIN ACCESS TO THE FIRE HYDRANT AT ALL TIMES. MATERIALS SHALL NOT BE STORED IN FRONT OF THE FIRE HYDRANT AT ANY TIME.
4. REMOVE EXISTING CONFLICTING MARKINGS BY SCARIFYING. CONTRACTOR SHALL RESTORE EXISTING PAVEMENT MARKINGS AT THE END OF CONSTRUCTION.
5. TEMPORARY MARKING ARROWS SHALL BE TRAFFIC PAINT.





0 20 40 FT.
1"=20'

PAERDEGAT MPT - RALPH AVE

SCALE: 1"= 20'

BID SET

SUBMITTAL DATE: OCTOBER 2026

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CIVIL
MPT PLAN - RALPH AVE.

DATE: OCTOBER 2026
SCALE: 1" = 20'
SHEET NO: 27 OF 274
DRAWING NO. C-203.00

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DIMENSIONS

I.
A. DIMENSIONS AND "WORK POINTS" GIVEN ON DRAWING SHALL BE FIELD VERIFIED BY THE CONTRACTOR. FIELD VERIFIED DIMENSIONS SHALL BE USED ON ALL SHOP DRAWINGS.

B. MASONRY DIMENSIONS, INCLUDING BRICK MASONRY AND CONCRETE MASONRY UNIT (CMU), ARE CALLED OUT AS NOMINAL UNLESS OTHERWISE NOTED. THE CONTRACTOR SHALL DETERMINE AND COORDINATE ALL MASONRY OPENINGS AND DIMENSIONS. THE NOMINAL BRICK COURSING ILLUSTRATED APPLIES TO NEW CONSTRUCTION ONLY.

C. DIMENSIONS FROM THE STRUCTURAL COLUMN LINE TO THE EXTERIOR FACE OF WALL ARE CALLED OUT AS ACTUAL. OVERALL BUILDING DIMENSIONS ARE CALLED OUT AS ACTUAL.

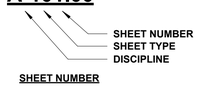
D. ALL DIMENSIONS REQUIRED TO ACCURATELY COORDINATE AND SEQUENCE THE WORK SHALL BE FIELD VERIFIED PRIOR TO THE FABRICATION OF ANY WORK.

II.
WHERE THE EXTENT OF A MATERIAL OR FINISH IS INDICATED BY ARROWS ON AN ELEVATION, IT IS INTENDED THAT THE MATERIAL OR FINISH CONTINUE UNINTERRUPTED UNTIL A CHANGE OF MATERIAL IS CALLED OUT. THE EXTENT OF A MATERIAL OR FINISH SHALL INCLUDE HIDDEN VIEWS CREATED BY CHANGES IN PLANE (SUCH AS WALL RETURNS) ALONG AN ELEVATED WALL SURFACE.

III.
THE CONTRACT DOCUMENTS DESCRIBE THE TECHNICAL REQUIREMENTS AND FINISHED APPEARANCE OF THIS PROJECT WITHOUT DESCRIBING ALL OF THE CONDITIONS OR REQUIREMENTS WHICH ARE NECESSARY TO PROVIDE COMPLETE BUILDING SYSTEMS AND ASSEMBLIES. STANDARD DETAILS SHALL APPLY AT SIMILAR CONDITIONS.

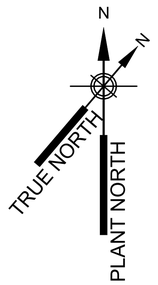
SYMBOLOGY LEGEND

SEE SHEETS FOR SPECIFIC SYMBOLS

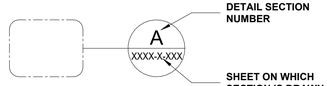


SHEET NUMBER

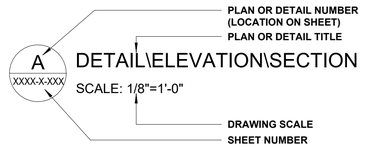
EXTERIOR ELEVATION REFERENCE



NORTH ARROW



DETAIL CALLOUT REFERENCE



PLAN OR DETAIL TITLE

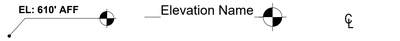
Room name

ROOM NAME

Room name
101

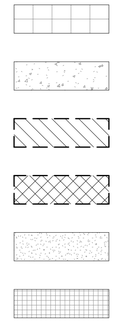
W/ ROOM NUMBER

DOOR TAG **ACCESSORY TAG** **WINDOW TAG** **LOUVER TAG**



SPOT ELEVATIONS **LEVEL HEADS** **CENTERLINE TAG**

PATTERN LEGEND



CERAMIC TILES

CONCRETE

EXISTING CONSTRUCTION TO BE REMOVED

EXISTING ITEM TO BE RELOCATED

MORTAR

RIGID INSULATION

GENERAL DEMOLITION NOTES

1. ALL WORK IS TO CONFORM TO ALL APPLICABLE. REQUIREMENTS OF LOCAL GOVERNING CODES, HEALTH CODE, FIRE DEPARTMENT REGULATIONS, NBFU AND UTILITY CODES, OSHA REGULATIONS AND 2020 NEW YORK STATE BUILDING CODE (NYS BC).

2. REMOVE SEALANT FROM ALL EXISTING MASONRY AROUND DOORS AND WINDOWS THAT ARE TO BE REMOVED. CLEAN RESIDUE AT ALL MASONRY TO REMAIN. REMOVE SEALANT, SCALING PAINT AND RUST FROM LINTELS.

3. SAW-CUT EXISTING MASONRY WORK TO ALLOW STITCHING OF MASONRY REPLACEMENT UNITS UNLESS OTHERWISE NOTED ON THE DRAWINGS.

CODE ANALYSIS NOTES:

1. WORK SHALL COMPLY WITH 2022 NYC BUILDING CODE WHICH INCLUDES 2015 IBC AND 2020 EXISTING BUILDING CODE FOR NEW YORK STATE (EBCNYS) WHICH ADOPTS WITH AMENDMENTS THE 2018 INTERNATIONAL EXISTING BUILDING CODE (IEBC).

2. EBCNYS COMPLIANCE IS ACHIEVED UNDER OPTION 2: WORK AREA COMPLIANCE METHOD. WORK INCLUDES REPAIRS AND ALTERATIONS WITH NO CHANGE OF OCCUPANCY OCCURRING.

3. WORK IS TO COMPLY WITH 2018 IEBC CHAPTER 7 ALTERATIONS LEVEL 1 (ALTERATIONS INCLUDE REMOVAL AND REPLACEMENT OR THE COVERING OF EXISTING MATERIALS, ELEMENTS, EQUIPMENT, OR FIXTURES USING NEW MATERIALS, ELEMENTS, EQUIPMENT, OR FIXTURES THAT SERVE THE SAME PURPOSE): 703.1 FIRE PROTECTION ALTERATIONS SHALL BE DONE IN A MANNER THAT MAINTAINS THE LEVEL OF FIRE PROTECTION PROVIDED. 704.1 MEANS OF EGRESS ALTERATIONS SHALL BE DONE IN A MANNER THAT MAINTAINS THE LEVEL OF PROTECTION FOR THE MEANS OF EGRESS.

4. NEW MATERIALS AND SYSTEMS WILL COMPLY WITH ENERGY REQUIREMENTS OF THE INTERNATIONAL ENERGY CONSERVATION CODE.

ABBREVIATION

@	AT
A/C	AIR CONDITIONING
AB	ANCHOR BOLT
ABV	ABOVE
AC	ACOUSTICAL
ACMU	ACOUSTICAL MASONRY UNIT
ACP	ACOUSTICAL CEILING PANELS
ACT	ACOUSTICAL CEILING TILE
ADA	AMERICANS WITH DISABILITIES ACT
ADD	ADDENDUM
ADJ	ADJUSTABLE
AFF	ABOVE FINISHED FLOOR
AHU	AIR HANDLING UNIT
ALT	ALTERNATE
ALUM	ALUMINUM
ANC	ANCHOR(AGE)
ANOD	ANODIZED
AP	ACCESS PANEL
APPROX	APPROXIMATE
ARCH	ARCHITECT(URAL)
ASPH	ASPHALT
AVB	AIR VAPOR BARRIER
BB	BOND BEAM
BD	BOARD
BIT	BITUMINOUS
BLDG	BUILDING
BLKG	BLOCKING
BM	BEAM
BOT	BOTTOM
BPL	BEARING PLATE
BR	BRICK
BRZ	BRONZE
BS	BOTH SIDES
BSMT	BASEMENT
BUR	BUILT UP ROOF
BW	BOTH WAYS
℄	CENTERLINE
CAB	CABINET
CB	CATCH BASIN
CEM	CEMENT
CF	CUBIC FOOT
CFL	COUNTER FLASHING
CHAM	CHAMFER
CHEM	CHEMICAL
CH'KD	CHECKERED
CHT	CEILING HEIGHT
CJT	CONTROL JOINT
CLG	CEILING
CLK	CAULK
CLR	CLEAR
CMU	CONCRETE MASONRY UNIT
CO	CONCRETE OPENING
COL	COLUMN
COMP	COMPRESS(ED)(ION)(IBLE)
CONC	CONCRETE
CONST	CONSTRUCTION
CONT	CONTINUOUS
CORR	CORRIDOR
CPG	COPING
CPT	CARPET
CPTT	CARPET TILE
CRS	COURSE(S)
CS	COUNTERSINK
CSMT	CASEMENT
CT	CERAMIC TILE
CTR	COUNTER
CTSK	COUNTERSUNK
D	DRAIN
DB	DARK BRONZE
DEMO	DEMOLISH, DEMOLITION
DET	DETAIL
DF	DRINKING FOUNTAIN
DH	DOUBLE HUNG
DIA, Ø	DIAMETER
DIM	DIMENSION
DK	DARK
DMPR	DAMPER
DN	DOWN
DO	DOOR OPENING
DP	DAMPPROOFING
DPR	DISPENSER
DR	DOOR
DS	DOWNSPOUT
DTA	DOVETAIL ANCHOR
DTS	DOVETAIL ANCHOR SLOT
DWG(S)	DRAWING(S)
E	EAST
EA	EACH
EB	EXPANSION BOLT
ED	EXIT DEVICE
EF	EXHAUST FAN
EFC	EPOXY FLOOR COATING
EIFS	EXTERIOR INSULATION FINISH SYSTEM
EJT	EXPANSION JOINT
EL	ELEVATION
EFC	EPOXY FLOOR COATING
ELEC	ELECTRIC(AL)
ELEV	ELEVATOR
EMBMT	EMBEDMENT
EMER	EMERGENCY
ENG	ENGINEERING
EPDM	ETHYLENE-PROPYLENE-DIENE-MONOMER
EQ	EQUAL
EQUIP	EQUIPMENT
ESTM	ESTIMATE
EWC	ELECTRIC WATER COOLER
EXH	EXHAUST
EXIST	EXISTING
EXP	EXPANSION
EXT	EXTERIOR
FA	FIRE ALARM
FACT	FACTORY
FAK	FIRST AID KIT
FAF	FLUID APPLIED FLOORING
FB	FACE BRICK
FBO	FURNISHED BY OTHERS
FD	FLOOR DRAIN
FE	FIRE EXTINGUISHER
FEC	FIRE EXTINGUISHER CABINET
FF	FACTORY FINISH
FFE	FINISHED FLOOR ELEVATION
FG	FIXED GLASS
FGL	FIBERGLASS
FIN	FINISH(ED)
FL	FOUNDATION LEVEL
FLG	FLASHING
FLR	FLOOR
FM	FLOOR MAT
FND	FOUNDATION
FNV	FEMININE NAPKIN VENDOR
FOC	FACE OF CONCRETE
FOM	FACE OF MASONRY
FOS	FACE OF STUDS
FPG	FIREPROOFING
FR	FRAME
FRP	FIBER REINFORCED POLYMER
FRT	FIRE RETARDANT TREATED
FTG	FOOTING
FUT	FUTURE
GA	GAUGE
GALV	GALVANIZED
GB	GRAB BAR
GC	GENERAL CONTRACTOR
GFMU	GROUND FACE MASONRY UNIT
GHM	GALVANIZED HOLLOW METAL
GKT	GASKET
GL	GLASS, GLAZING
GLB	GLASS BLOCK
GMU	GLAZED MASONRY UNIT
GPM	GALVANIZED PRESSED METAL
GRB	GRANITE BASE
GRD	GRADE, GRADING
GRT	GRANITE TILE
GSD	GALVANIZED SECURITY DOOR
GSF	GALVANIZED SECURITY FRAME
GT	GROUT
GWB	GYPSUM WALLBOARD
GYP	GYPSUM
H	HIGH
HC	HANDICAP(PED)
HD	HEAVY DUTY
HDWR	HARDWARE
HGT	HEIGHT
HK	HOOK
HM	HOLLOW METAL
HORIZ	HORIZONTAL
HP	HIGH POINT
HPC	HIGH PERFORMANCE COATING
HR	HOUR
HT, HGT	HEIGHT
HVAC	HEATING, VENTILATING, AND AIR CONDITIONING
HWC	HANDICAPPED WATER CLOSET
HWH	HOT WATER HEATER
HYDR	HYDRAULIC
ID	INSIDE DIAMETER
IL	INTERMEDIATE LEVEL
INSUL	INSULATION
INT	INTERIOR
JC	JANITOR'S CLOSET
JF	JOINT FILLER
JS	JANITOR'S SINK
JST	JOIST
JT	JOINT
KPL	KICK PLATE
L	LENGTH
LAB	LABORATORY
LAD	LADDER
LAV	LAVATORY
LF	LINEAR FOOT
LG	LONG
LH	LEFT HAND
LHR	LEFT HAND REVERSE
LL	LOWER LEVEL
LMSD	LAVATORY MOUNTED SOAP DISPENSER
LOC	LOCATION
LP	LOW POINT
LQH	LIQUID HARDENER
LTL	LINTEL
LVR	LOUVER
MAS	MASONRY
MAX	MAXIMUM
MECH	MECHANICAL
MET	METAL
MEZZ	MEZZANINE
MFR	MANUFACTURER
MH	MANHOLE
MIN	MINIMUM
MISC	MISCELLANEOUS
MO	MASONRY OPENING
MR	MOP RECEPTOR
MTD	MOUNTED
MTL	MATERIAL
N	NORTH
NAT	NATURAL
NIC	NOT IN CONTRACT
NO	NUMBER
NOM	NOMINAL
NSA	NON-SLIP SHAKE-ON AGGREGATE
NTS	NOT TO SCALE
OC	ON CENTER
OD	OUTSIDE DIAMETER
OH	OVERHEAD
OL	OPERATING LEVEL
OPNG	OPENING
OPP	OPPOSITE
OSB	ORIENTED STRAND BOARD
P	PAINT
PASS	PASSENGER
PB	PANIC BAR
PC	PROTECTIVE COATING
PCC	PRECAST CONCRETE
PERIM	PERIMETER
PFB	PREFABRICATE(D)
PG	PLATE GLASS
PL	PLATE
PLAM	PLASTIC LAMINATE
PLAS	PLASTER
PLYWD	PLYWOOD
PM	PRESSED METAL
PNL	PANEL
PR	PAIR
PS	PLASTIC SHEATHING
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PT	PRESSURE TREATED
PTD	PAPER TOWEL DISPENSER
PTN	PARTITION
PVC	POLYVINYL CHLORIDE
PVMT	PAVEMENT
QT	QUARRY TILE
R	RISER
RAD	RADIUS
RB	RUBBER BASE
RCP	REFLECTED CEILING PLAN
RD	ROOF DRAIN
REF	REFERENCE
REINF	REINFORCE(D), REINFORCING
REM	REMOVE
REQD	REQUIRED
RES	RESILIENT
RET	RETURN
REV	REVISION
RFG	ROOFING
RFH	ROOF HATCH
RFL	REFLECT(ED)(IVE)(OR)
RFM	RECESSED FLOOR MAT
RFS	RAISED FLOOR SYSTEM
RH	RIGHT HAND
RHR	RIGHT HAND REVERSE
RL	RAILING
RM	ROOM
RMKS	REMARKS
RMTF	RESINOUS MATRIX TERRAZZO FLOORING
RO	ROUGH OPENING
RS	RISER(S)
RTG	RATING
RU	ROLL UP
RV	ROOF VENT
S	SOUTH
SAAT	SPRAY APPLIED ACOUSTICAL TREATMENT
SCD	SEAT COVER DISPENSER
SCH	SCHEDULE
SDPR	SOAP DISPENSER
SECT	SECTION
SF	SQUARE FOOT
SFGL	SAFETY GLASS
SFT	STRUCTURAL FACING TILE
SH	SHELF, SHELVING
SHT	SHEET
SHTH	SHEATHING
SIM	SIMILAR
SK	SINK
SKLT	SKYLIGHT
SLNT	SEALANT
SP	SOUNDPROOF
SPEC	SPECIFICATION
SQ	SQUARE
SS	STAINLESS STEEL
SSK	SERVICE SINK
SSSD	STAINLESS STEEL SECURITY DOOR
STA	STAIN
STD	STANDARD
STL	STEEL
STOR	STORAGE
STRU	STRUCTURAL
SUS	SUSPEND(ED)
SV	SHEET VINYL
SYS	SYSTEM
T&B	TOP AND BOTTOM
TBS	TO BE SELECTED
TEMP	TEMPORARY
THK	THICK(NESS)
TO	TOP OF
TOC	TOP OF CONCRETE
TOM	TOP OF MASONRY
TOS	TOP OF STEEL
TOSL	TOP OF SLAB
TPL	TOP OF PLATE
TPTN	TOILET PARTITION
TR	TREAD(S)
TTD	TOILET TISSUE DISPENSER
TYP	TYPICAL
UC	UNDERCOUNTER
UNO	UNLESS NOTED OTHERWISE
UR	URINAL
UV	ULTRA VIOLET
VCT	VINYL COMPOSITION TILE
VERT	VERTICAL
VEST	VESTIBULE
VIF	VERIFY IN FIELD
VIN	VINYL
VNB	VINYL BASE
VR	VAPOR RETARDER
VT	VINYL TILE
VTR	VENT THROUGH ROOF
VWC	VINYL WALL COVERING
W	WEST
W/	WITH
W/O	WITHOUT
WC	WATER CLOSET
WD	WOOD
WG	WIRE GLASS
WH	WATER HEATER
WIN	WINDOW
WM	WIRE MESH
WP	WATERPROOFING
WPL	WALL PANEL
WPT	WORKING POINT
WR	WASTE RECEPTACLE
WWF	WELDED WIRE FABRIC

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CHECKED BY: CHEN LI, R.A.
DESIGN LEAD: GERALD OTTERSON, R.A.
PROJECT MANAGER: AIMEE BOULET, P.E.

DRAWN BY: LINDSAY TIBBITTS

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RECONSTRUCTION OF
PAERDEGAT PUMPING STATION
CONTRACT PS-318
ARCHITECTURAL
LEGENDS, NOTES, CODE ANALYSIS

DATE: OCTOBER 2026
SCALE: As indicated
SHEET NO: 28 OF 274
DRAWING NO. AG-001.00

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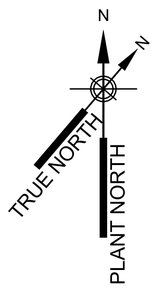

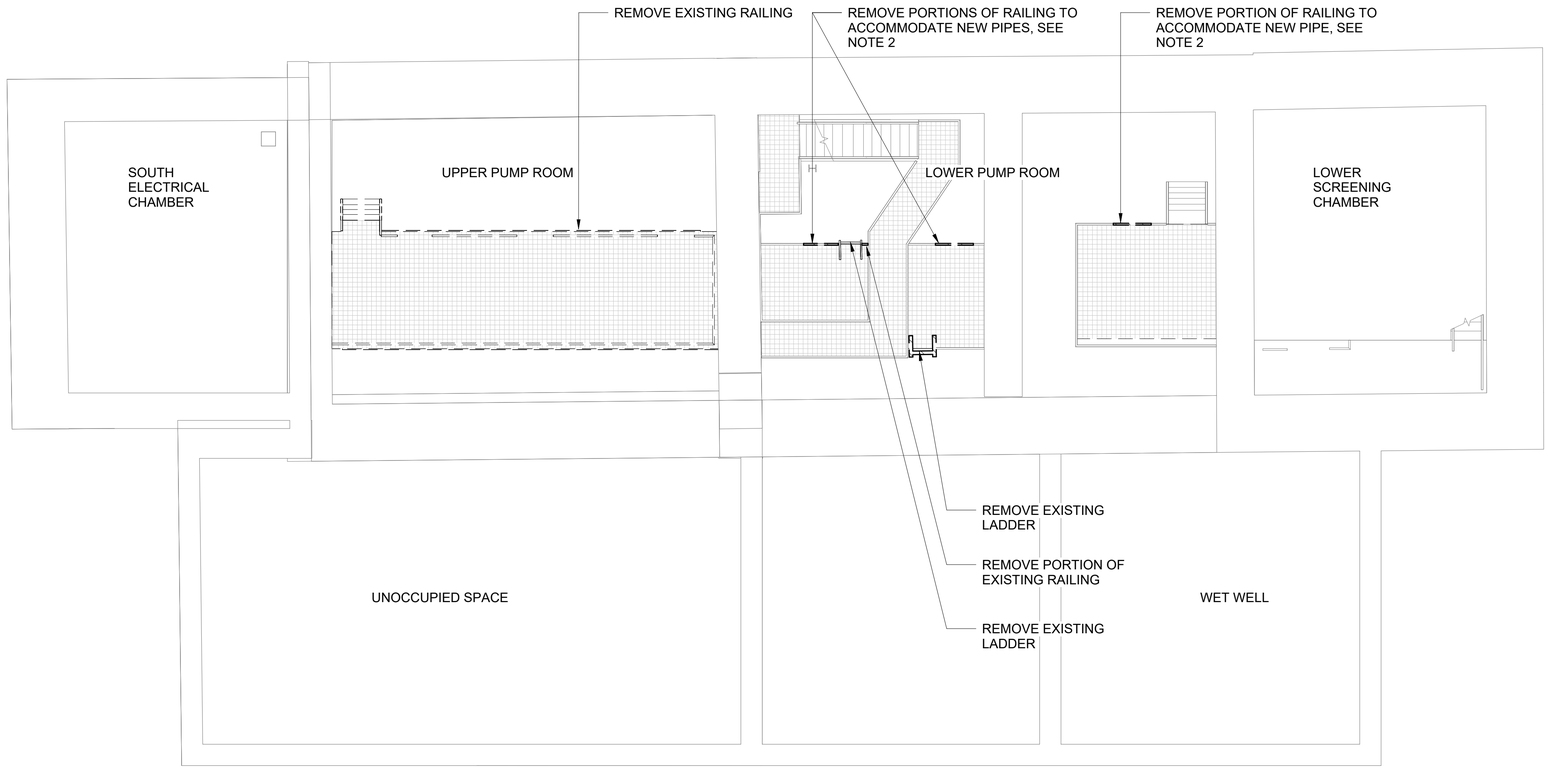

NOTES:
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2. WHERE PIPES, EQUIPMENT, OR OTHER OBSTRUCTIONS INTERFERE WITH STRAIGHT EXTENDED RUNS OF RAILINGS, PROVIDE FIELD BENDS IN RAILINGS TO PROVIED A MAIMUM CLEARANCE OF 3 INCHES BETWEEN OBSTACLE AND RAILING.

0 5 10 FT.
3/16"=1'-0"

DEMO - SECOND & THIRD LEVEL BELOW GROUND AT EL -12.00'

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

BID SET

SUBMITTAL DATE: OCTOBER 2026

GRAPHIC SCALES CHECK BEFORE USE

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NO.	DATE	REVISIONS/DESCRIPTION	APPR'D.

DESIGNED BY: LINDSAY TIBBITTS
CHECKED BY: CHEN LI, R.A.
DESIGN LEAD: GERALD OTTERSON, R.A.
PROJECT MANAGER: AIMEE BOULET, P.E.

DRAWN BY: LINDSAY TIBBITTS

AECOM
605 3RD AVENUE, 3RD FL.
NEW YORK, NY 10158, US

REGISTERED ARCHITECT CHEN LI 044261 STATE OF NEW YORK

NYC Environmental Protection

ACCOUNTABLE MANAGER: JOHN GOULAS, P.E.
PORTFOLIO MANAGER: KEVIN ELLENWOOD, P.E.
EXECUTIVE DIRECTOR: NAYANKUMAR SHAH, P.E.

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CAPITAL PROJECT WP-269
RECONSTRUCTION OF
PAERDEGAT PUMPING STATION
CONTRACT PS-318
ARCHITECTURAL
DEMO PLAN - SECOND AND THIRD LEVEL BELOW GROUND

DATE: OCTOBER 2026
SCALE: 3/16" = 1'-0"
SHEET NO: 29 OF 274
DRAWING NO. DA-101.00

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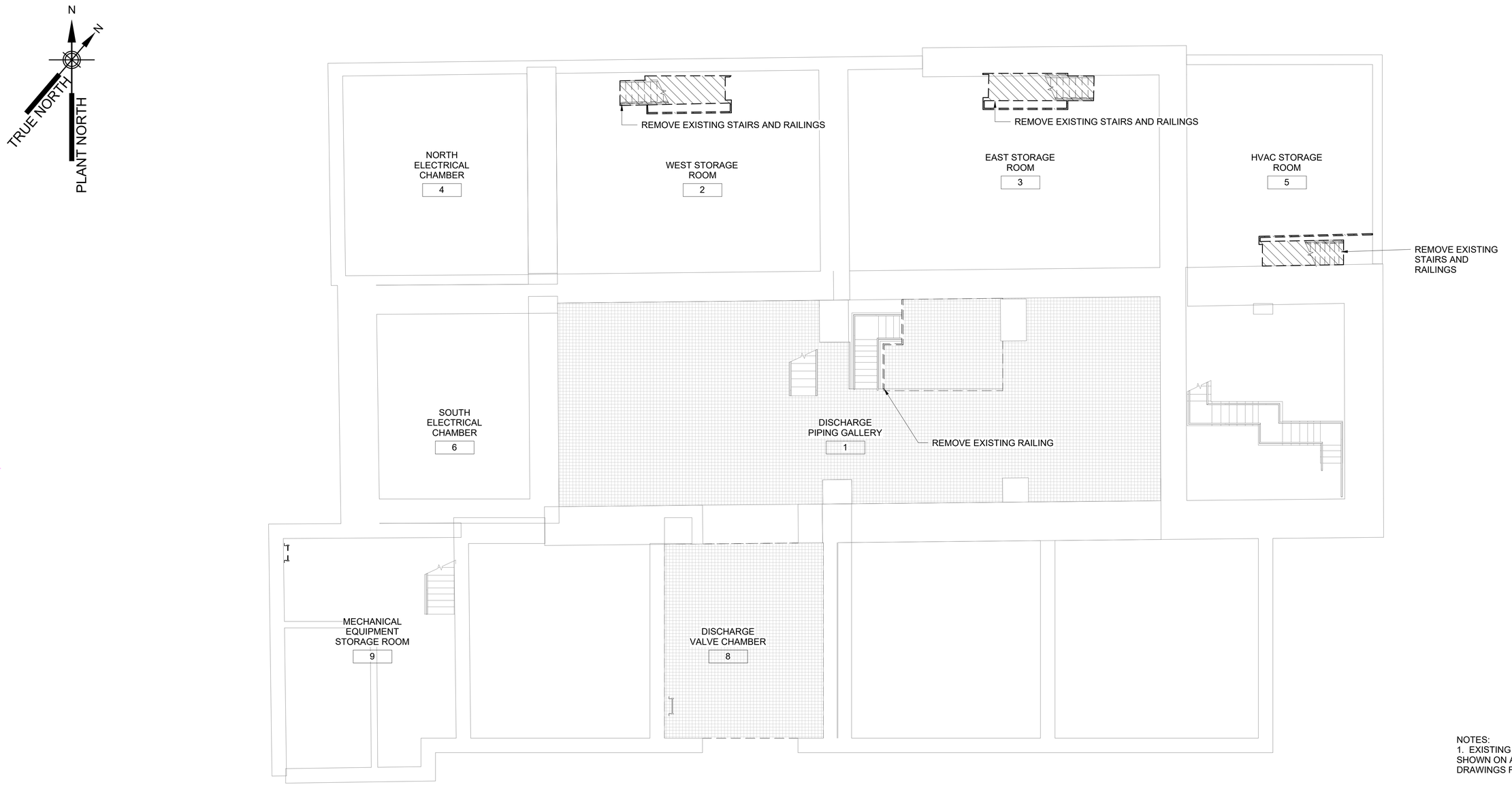

NOTES:
1. EXISTING EQUIPMENT NOT SHOWN ON ARCHITECTURAL DRAWINGS FOR CLARITY

0 5 10 FT.
3/16"=1'-0"

DEMO - FIRST LEVEL BELOW GROUND PLAN AT EL 2.83'

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

BID SET

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CONTRACT PS-318
ARCHITECTURAL
DEMO PLAN - FIRST LEVEL BELOW GROUND

DATE: OCTOBER 2026
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DRAWING NO. DA-102.00

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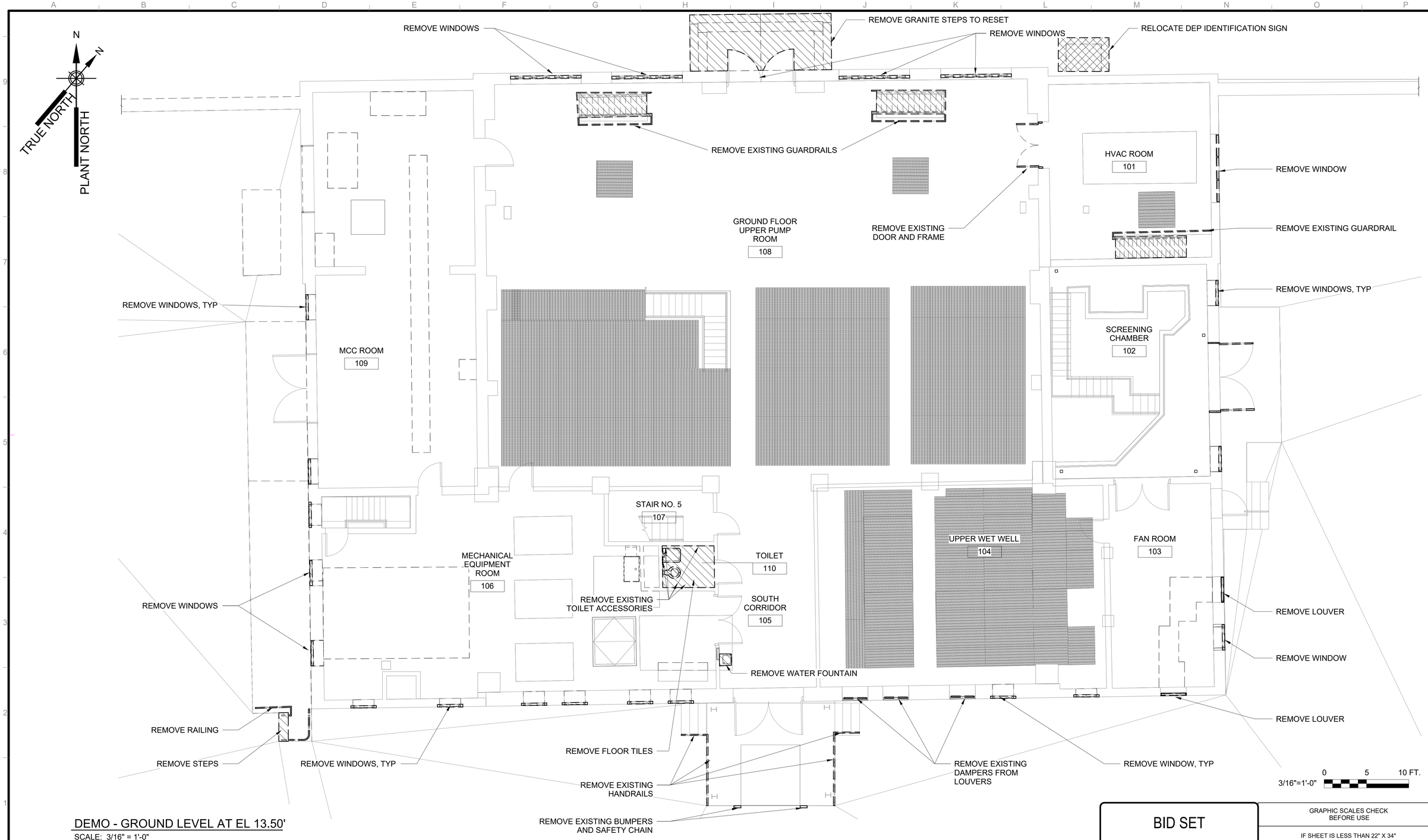

DEMO - GROUND LEVEL AT EL 13.50'

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

BID SET

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CONTRACT PS-318
ARCHITECTURAL
DEMO PLAN - GROUND LEVEL

DATE: OCTOBER 2026
SCALE: 3/16" = 1'-0"
SHEET NO: 31 OF 274
DRAWING NO. DA-103.00

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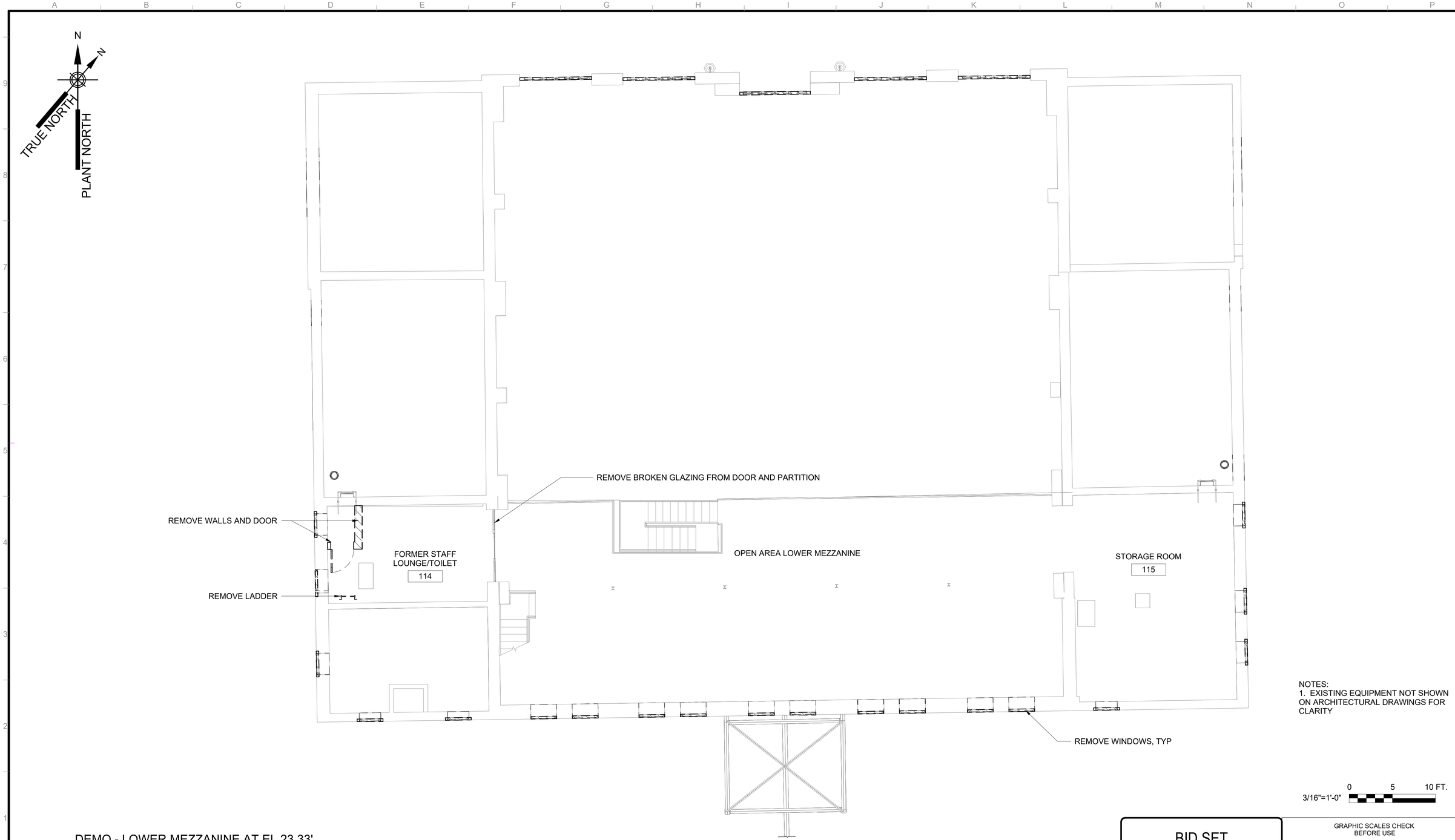

NOTES:
1. EXISTING EQUIPMENT NOT SHOWN ON ARCHITECTURAL DRAWINGS FOR CLARITY

DEMO - LOWER MEZZANINE AT EL 23.33'
SCALE: 3/16" = 1'-0"

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DEMO PLAN - LOWER MEZZANINE

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DRAWING NO. DA-104.00

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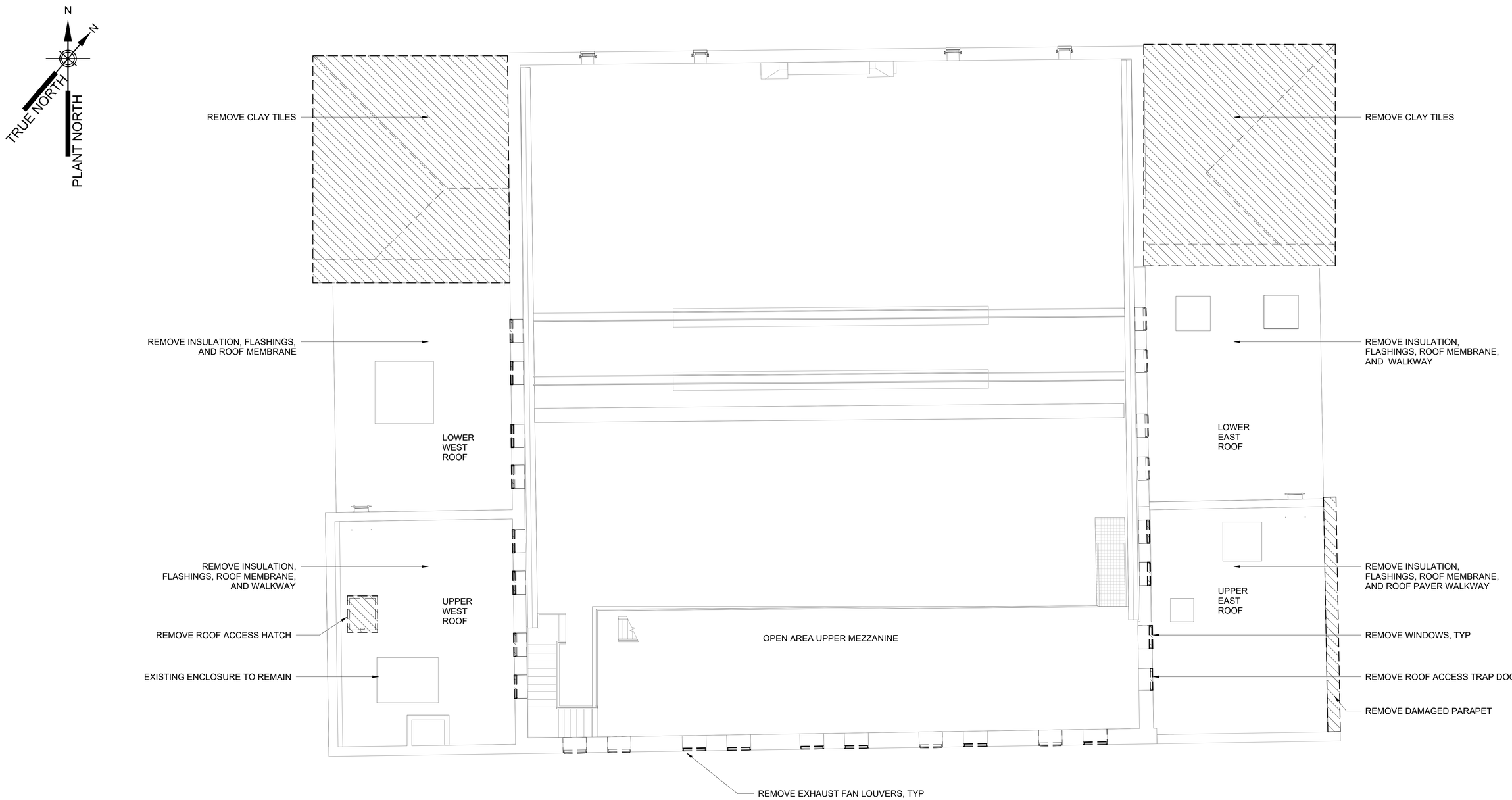

DEMO - EAST & WEST FLAT ROOFS AND UPPER MEZZANINE AT EL 33.50'

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

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CONTRACT PS-318
ARCHITECTURAL
DEMO PLAN - EAST AND WEST FLAT ROOFS AND UPPER MEZZANINE

DATE: OCTOBER 2026
SCALE: 3/16" = 1'-0"
SHEET NO: 33 OF 274
DRAWING NO. DA-105.00

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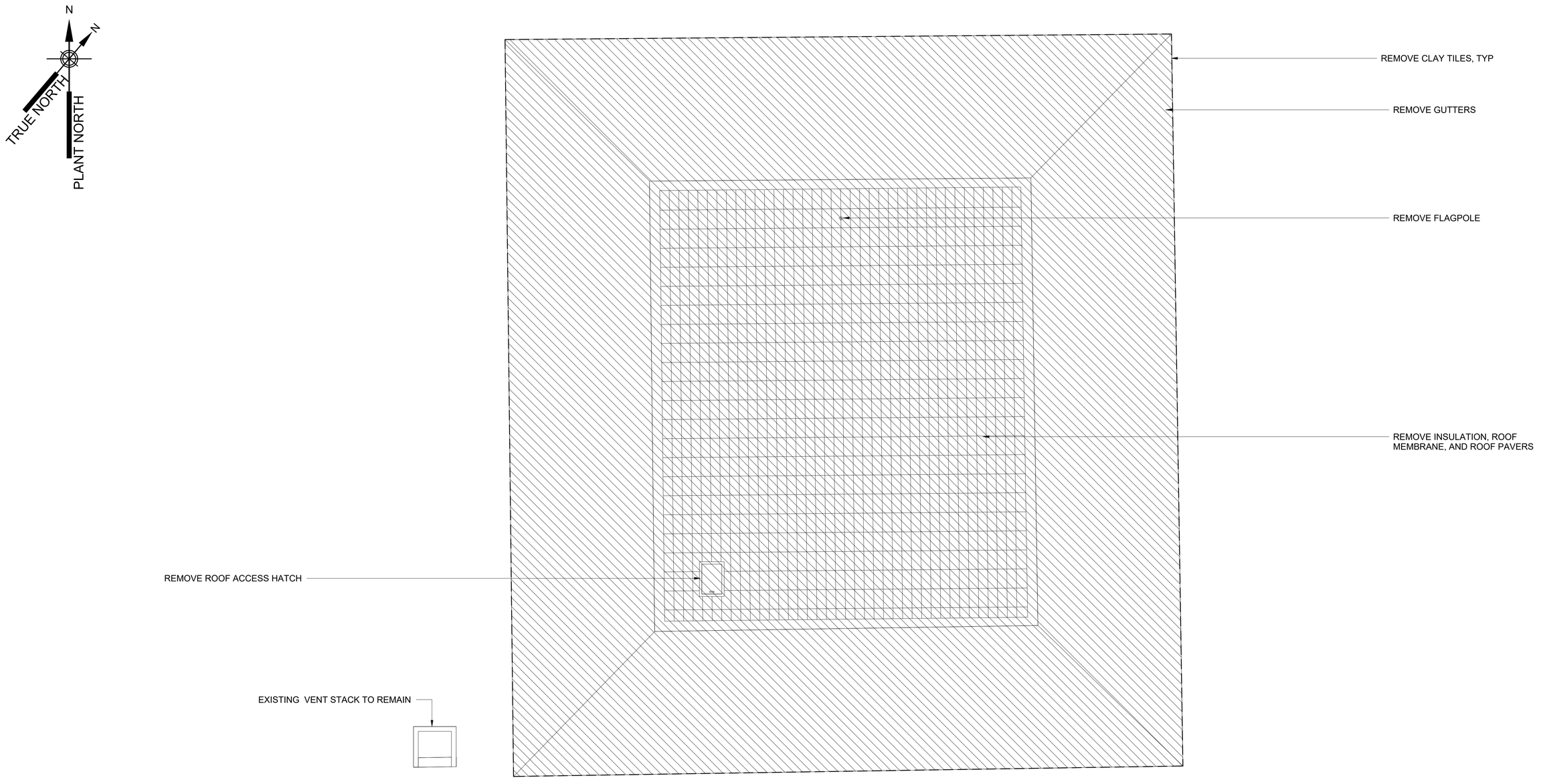

0 5 10 FT.
3/16"=1'-0"

DEMO - MAIN ROOF AT EL 55.42'

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

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PAERDEGAT PUMPING STATION
CONTRACT PS-318
ARCHITECTURAL
DEMO PLAN - MAIN ROOF

DATE: OCTOBER 2026
SCALE: 3/16" = 1'-0"
SHEET NO: 34 OF 274
DRAWING NO. DA-106.00

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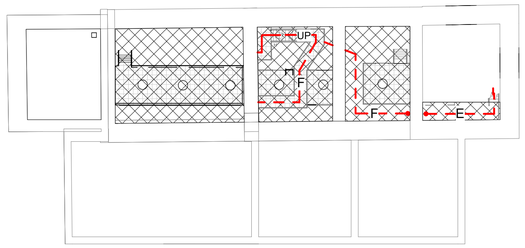


EGRESS DISTANCES	
PATH	EGRESS TRAVEL DISTANCE
A	166' - 9"
B	61' - 5 3/32"
C	64' - 11 3/32"
D	92' - 2"
E	88' - 9 29/32"
F	115' - 5 23/32"
G	74' - 10 13/32"

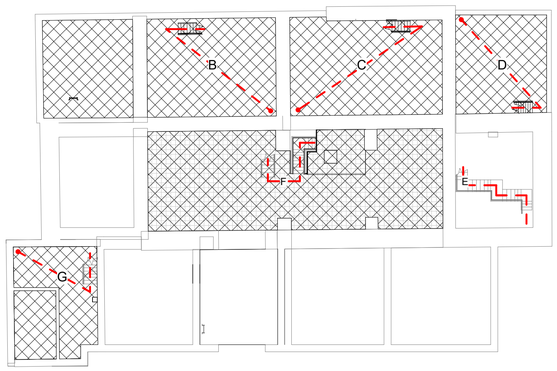
GROUP F-2 MAXIMUM TRAVEL DISTANCE 200'-0"

FLOOR AREA PER LEVEL	
LEVEL	AREA
2 & 3 BELOW GROUND	1,189
1 BELOW GROUND	3,638
GROUND	6,939
LOWER MEZZANINE	2,139
UPPER MEZZANINE	767
TOTAL	14,672

FLOOR AREA

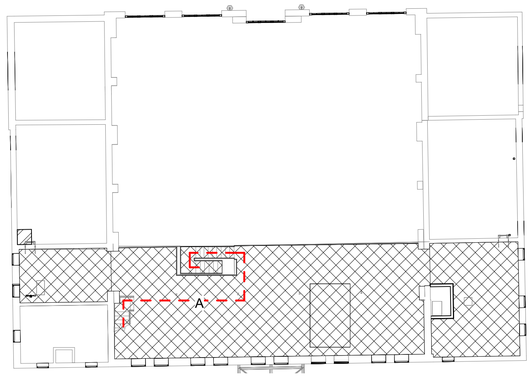
1 SECOND & THIRD LEVEL BELOW GROUND EGRESS

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



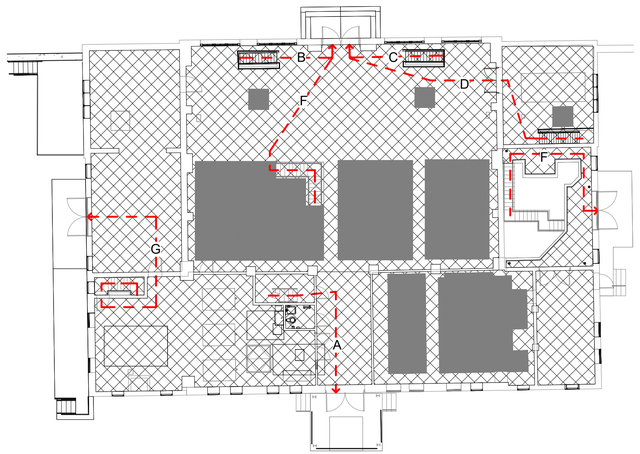
2 FIRST LEVEL BELOW GROUND EGRESS

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



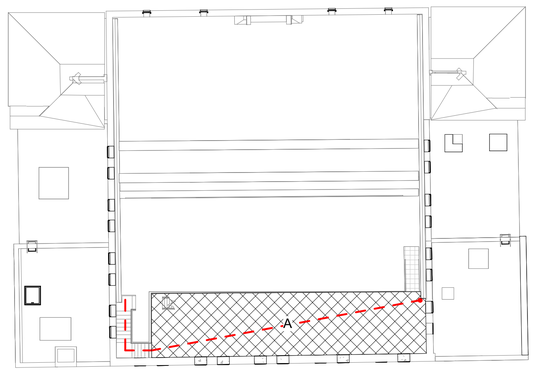
4 A-201.00 LOWER MEZZANINE EGRESS

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



3 A-109.00 GROUND FLOOR EGRESS

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



5 A-201.00 EAST AND WEST FLAT ROOFS AND UPPER MEZZANINE EGRESS

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

ZONING CALCULATIONS

OCCUPANCY CLASSIFICATION,
CONSTRUCTION CLASSIFICATION AND AREA LIMITS

HEIGHT OF BUILDING:	
STORIES ABOVE GRADE	1
STORIES BELOW GRADE	3
MAXIMUM HEIGHT/ACTUAL HEIGHT	40'-0"/39'-11 1/2"
ALLOWABLE AREA:	18,375 SQ FT
ACTUAL AREA:	14,700 SQ FT
OCCUPANCY CLASSIFICATION:	F-2
OCCUPANCY GROUP:	FACTORY INDUSTRIAL (LOW HAZARD)
CONSTRUCTION CLASSIFICATION	TYPE II-B
ROOF CONSTRUCTION OF ONE STORY BUILDING	FIRE PROTECTION OF STRUCTURAL MEMB IS MORE THAN 20'-0" ABOVE FINISH FLOOR

MINIMUM FIRE RESISTANCE RATING OF CONSTRUCTION ELEMENTS AS OUTLINED IN TABLE 601/602 AND CHAPTER 7 OF THE NYC BUILDING CODE

STRUCTURAL ELEMENT	FIRE RATING REQUIREMENT
STRUCTURAL FRAME: COLUMNS/GIRDERS	0 HR RATING
NON LOAD BEARING AND LOAD BEARING WALLS	0 HR RATING
ROOF INCLUDING BEAMS AND JOISTS:	0 HR RATING

ZONING NOTES

BLOCK NO. :	8338	
LOT NO. :	300	
ZONE	M1-1	
MAP NO.	23A	
LOT AREA	REQUIRED:	EXISTING:
FRONT YARD REQUIREMENT EXT. NON-COMPLIANT	20 FEET	15 FEET
SIDE YARD REQUIREMENT COMPLIES	0 FEET	68 FEET
REAR YARD REQUIREMENT COMPLIES	20 FEET	199 FEET

CODE ANALYSIS NOTES:

1. OCCUPANCY CLASSIFICATION/GROUP: PER NEW YORK CITY BUILDING CODE 2022 306.3 THE PEARDEGAT PUMPING STATION IS LOW-HAZARD FACTORY INDUSTRIAL, GROUP F-2
2. MAXIMUM EXIT ACCESS TRAVEL DISTANCE: FOR AN UNSPRINKLERED F-2 OCCUPANCY IS 200 FEET PER NEW YORK CITY BUILDING CODE 2022 TABLE 1017.2.
3. EGRESS TRAVEL DISTANCE IS MEASURED ALONG THE NOSINGS OF STAIRS THAT ARE NOT FIRE STAIRS.
4. ALLOWABLE AREA: PER NEW YORK CITY BUILDING CODE 2022, THE ALLOWABLE AREA FACTOR FOR A TYPE II-B CONSTRUCTION, F-2 OCCUPANCY THAT IS NOT FULLY SPRINKLERED IS 10,500 SQFT (TABLE 506.2 [a])
ALL FOUR BUILDING FACADES ARE AT LEAST 30 FEET FROM THE CURB, GIVING THE MAXIMUM AREA INCREASE FACTOR DUE TO FRONTAGE OF 75% (506.3)
10,500 + (75% x 10,500) = 18,375 SQFT

0 10 20 30 FT.
1/16"=1'-0"

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CAPITAL PROJECT WP-269
RECONSTRUCTION OF
PAERDEGAT PUMPING STATION
CONTRACT PS-318
ARCHITECTURAL
EGRESS

DATE: OCTOBER 2026
SCALE: As indicated
SHEET NO: 35 OF 274
DRAWING NO. A-100.00

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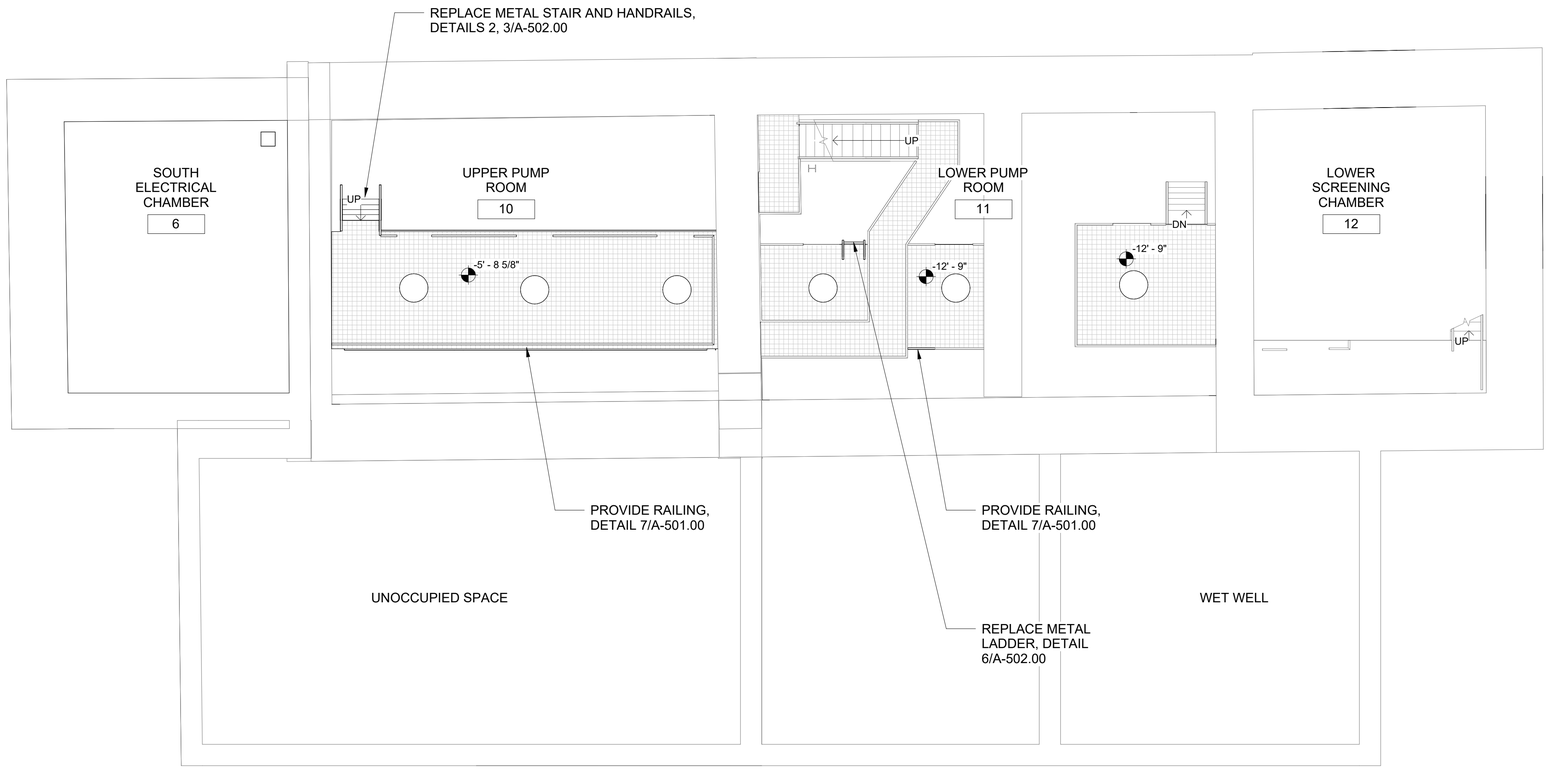

NOTES:
1. WALLS AND CEILING OF PUMP ROOMS TO BE PAINTED IN ACCORDANCE WITH SPECIFICATION 09 91 00
2. CONCRETE FLOORS TO BE COATED IN ACCORDANCE WITH SPECIFICATION 03 35 16
3. WHERE PIPES, EQUIPMENT, OR OTHER OBSTRUCTIONS INTERFERE WITH STRAIGHT EXTENDED RUNS OF RAILINGS, PROVIDE FIELD BENDS IN RAILINGS TO PROVIED A MAXIMUM CLEARANCE OF 3 INCHES BETWEEN OBSTACLE AND RAILING.

0 5 10 FT.
3/16"=1'-0"

SECOND & THIRD LEVEL BELOW GROUND AT EL -12.00'

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REGISTERED ARCHITECT CHEN LI 044961 STATE OF NEW YORK

Environmental Protection

ACCOUNTABLE MANAGER: JOHN GOULAS, P.E.
PORTFOLIO MANAGER: KEVIN ELLENWOOD, P.E.
EXECUTIVE DIRECTOR: NAYANKUMAR SHAH, P.E.

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BUREAU OF ENGINEERING DESIGN & CONSTRUCTION
96-05 HORACE HARDING EXPRESSWAY 5th FLOOR
CORONA, NEW YORK 11368
www.nyc.gov/dep

CAPITAL PROJECT WP-269
RECONSTRUCTION OF
PAERDEGAT PUMPING STATION
CONTRACT PS-318
ARCHITECTURAL
SECOND AND THIRD LEVEL BELOW GROUND PLAN

DATE: OCTOBER 2026
SCALE: 3/16" = 1'-0"
SHEET NO: 36 OF 274
DRAWING NO. A-101.00

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NOTES:
1. WALLS AND CEILING OF PUMP ROOMS TO BE PAINTED IN ACCORDANCE WITH SPECIFICATION 09 91 00
2. CONCRETE FLOORS TO BE COATED IN ACCORDANCE WITH SPECIFICATION 03 35 16

0 5 10 FT.
3/16"=1'-0"

FIRST LEVEL BELOW GROUND PLAN AT EL 2.83'

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

BID SET

SUBMITTAL DATE: OCTOBER 2026

GRAPHIC SCALES CHECK BEFORE USE

IF SHEET IS LESS THAN 22" X 34" IT IS A REDUCED PRINT. SCALE ACCORDINGLY

NO.	DATE	REVISIONS/DESCRIPTION	APPR'D.

DESIGNED BY: LINDSAY TIBBITTS
CHECKED BY: CHEN LI, R.A.
DESIGN LEAD: GERALD OTTERSON, R.A.
PROJECT MANAGER: AIMEE BOULET, P.E.

DRAWN BY: LINDSAY TIBBITTS

AECOM
605 3RD AVENUE, 3RD FL.
NEW YORK, NY 10158, US

REGISTERED ARCHITECT CHEN LI 044261 STATE OF NEW YORK

NYC Environmental Protection

ACCOUNTABLE MANAGER: JOHN GOULAS, P.E.
PORTFOLIO MANAGER: KEVIN ELLENWOOD, P.E.
EXECUTIVE DIRECTOR: NAYANKUMAR SHAH, P.E.

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BUREAU OF ENGINEERING DESIGN & CONSTRUCTION
96-05 HORACE HARDING EXPRESSWAY 5th FLOOR
CORONA, NEW YORK 11368
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CAPITAL PROJECT WP-269
RECONSTRUCTION OF
PAERDEGAT PUMPING STATION
CONTRACT PS-318
ARCHITECTURAL
FIRST LEVEL BELOW GROUND PLAN

DATE: OCTOBER 2026
SCALE: 3/16" = 1'-0"
SHEET NO: 37 OF 274
DRAWING NO. A-102.00

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PROVIDE STEPS AND RAILINGS, DETAILS 1, 8, 9, 10/A-501.00

REBUILD BRICK FENCE

WOODEN GATE

6 A-109.00

DN

REPLACE WINDOWS, TYP

W2

PROVIDE REMOVABLE STAINLESS STEEL RAILINGS, DETAILS 3, 4/A-501.00

PROVIDE FIXED STAINLESS STEEL GUARDRAIL, DETAILS 1, 2/A-501.00

REPLACE WINDOWS, TYP

W4

PROVIDE STOPLOG PANEL SUPPORT, TYP, DETAIL 5/A-505.00

REPLACE DOCK BUMPER, FULL LENGTH OF DOCK, DETAIL 8/A-502.00

W4

W1

DN

PROVIDE LOUVERS

L1

L3

DN

REPLACE STAINLESS STEEL HANDRAILS, DETAIL 1, 9, 10/A-501.00

REPLACE CONCRETE STEPS

MCC ROOM
109

PROVIDE OPENINGS IN GRATING FOR PIPES, VIF

PROVIDE REMOVABLE STOPLOG SUPPORTS, DETAIL 2, 4/A-505.00

PROVIDE EMBEDDED STAINLESS STEEL PLATE, DETAIL 1/A-505.00

W7

W7

DN

REPLACE GUARDRAILS, DETAILS 1, 2/A-501.00

4 A-505.00

RESET GRANITE STEPS

PROVIDE STOPLOG SUPPORTS, DETAIL 3/A-505.00

W7

W7

DN

REPLACE WINDOWS, TYP, DETAILS AH, AJ, AS/A-504.00

GROUND FLOOR UPPER PUMP ROOM
108

REPLACE DOOR AND FRAME

101A

HVAC ROOM
101

L2

L2

L2

REPLACE LOUVERS AND WINDOWS ABOVE, DETAILS SH, SJ/A-504.00, LJ, LS/A-505.00

REPLACE GUARDRAIL, DETAILS 1, 2/A-501.00

DN

DN

W5

REPLACE WINDOWS, TYP

SCREENING CHAMBER
102

W5

PROVIDE STOPLOG PANEL SUPPORT, TYP, DETAIL 5/A-505.00

STAIR NO. 5
107
UP

MECHANICAL EQUIPMENT ROOM
106

TOILET
110

REPLACE TOILET ACCESSORIES

REPLACE TILE FLOOR

SOUTH CORRIDOR
105

PATCH WALL TO MATCH ADJACENT SURFACES

UPPER WET WELL
104

FAN ROOM
103

PROVIDE OPENINGS IN GRATING FOR DUCTS, VIF

L1

REPLACE LOUVER

L1

PROVIDE LOUVER

W1

W1

W1

W1

W1

W1

W1

W1

W1

PROVIDE WINDOW

PROVIDE STOPLOG PANEL SUPPORT, TYP, DETAIL 5/A-505.00

REPLACE FIXED STAINLESS STEEL HANDRAILS, DETAILS 1, 2/A-501.00

PROVIDE REMOVABLE STAINLESS STEEL RAILING, DETAILS 3, 4/A-501.00

REPLACE WINDOWS, TYP DETAILS SH, SJ, SS/A-504.00

REPLACE DAMPERS ON EXISTING LOUVERS

REPLACE WINDOW, DETAILS SH, SJ, SS/A-504.00

PROVIDE OPENING IN GRATING FOR PIPE, VIF

REPLACE DOCK BUMPER, DETAIL 8/A-502.00

3/16"=1'-0"

0 5 10 FT.

BUILDING GROUND LEVEL AT EL 13.50'

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

BID SET

SUBMITTAL DATE: OCTOBER 2026

GRAPHIC SCALES CHECK BEFORE USE

IF SHEET IS LESS THAN 22" X 34" IT IS A REDUCED PRINT. SCALE ACCORDINGLY

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DRAWN BY: LINDSAY TIBBITTS
CHECKED BY: CHEN LI, R.A.
DESIGN LEAD: GERALD OTTERSON, R.A.
PROJECT MANAGER: AIMEE BOULET, P.E.

AECOM
605 3RD AVENUE, 3RD FL.
NEW YORK, NY 10158, US

REGISTERED ARCHITECT CHEN LI 046981 STATE OF NEW YORK

Environmental Protection

ACCOUNTABLE MANAGER
JOHN GOULAS, P.E.
PORTFOLIO MANAGER
KEVIN ELLENWOOD, P.E.
EXECUTIVE DIRECTOR
NAYANKUMAR SHAH, P.E.

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96-05 HORACE HARDING EXPRESSWAY 5th FLOOR
CORONA, NEW YORK 11368
www.nyc.gov/dep

CAPITAL PROJECT WP-269
RECONSTRUCTION OF
PAERDEGAT PUMPING STATION
CONTRACT PS-318
ARCHITECTURAL
GROUND LEVEL BUILDING PLAN

DATE: OCTOBER 2026
SCALE: 3/16" = 1'-0"
SHEET NO: 38 OF 274
DRAWING NO. A-103.00

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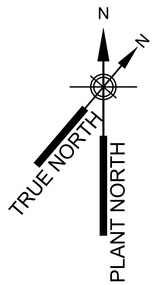
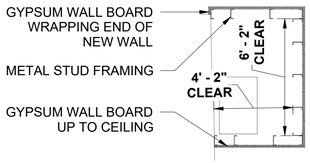


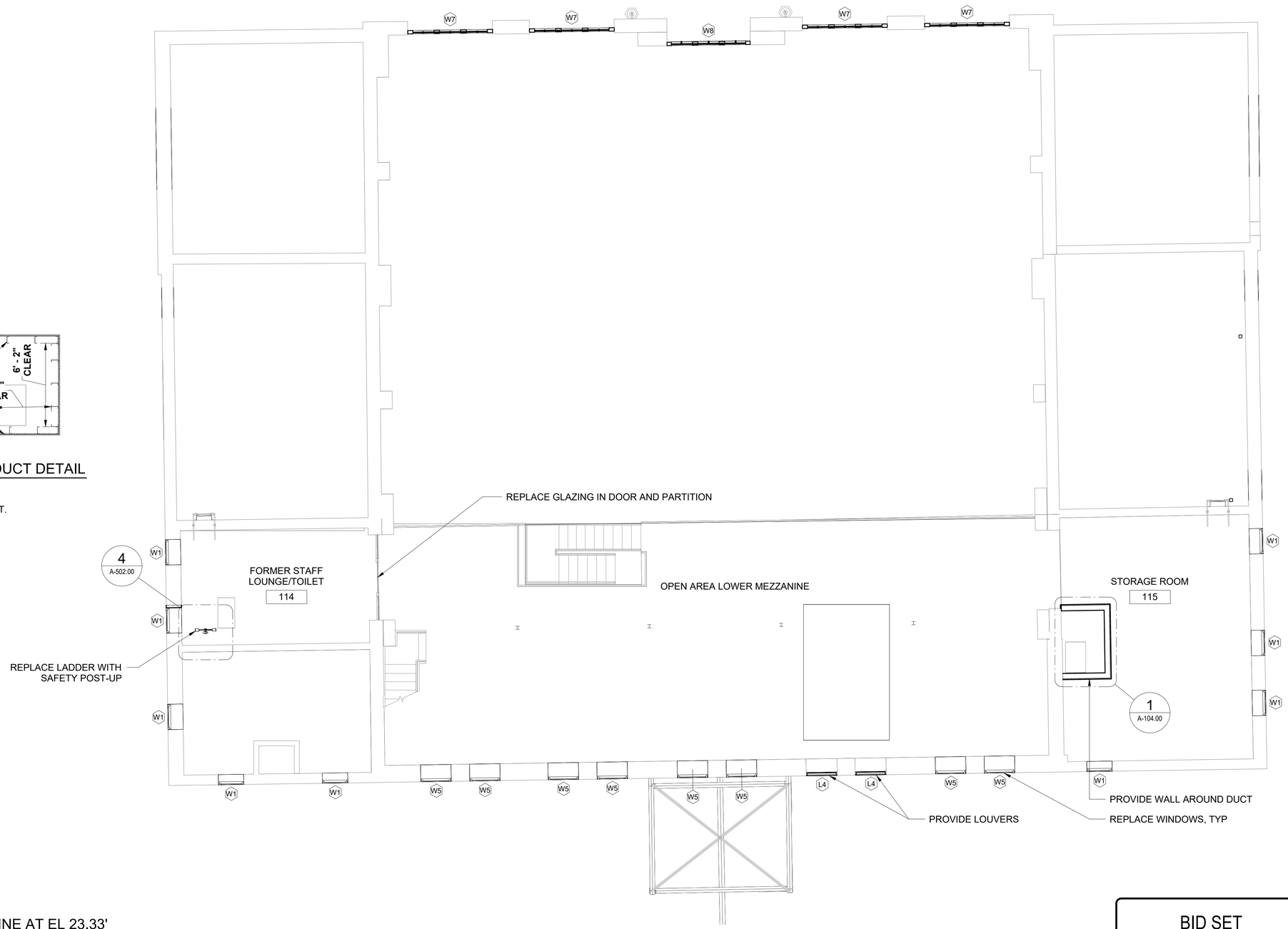


1 A-104.00 WALL AROUND DUCT DETAIL

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

0 4 8 FT.

1/4"=1'-0"



0 5 10 FT.

3/16"=1'-0"

LOWER MEZZANINE AT EL 23.33'

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

BID SET

SUBMITTAL DATE: OCTOBER 2026

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NEW YORK, NY 10158, US

REGISTERED ARCHITECT CHEN LI 040981 STATE OF NEW YORK

NYC Environmental Protection

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CAPITAL PROJECT WP-269
RECONSTRUCTION OF
PAERDEGAT PUMPING STATION
CONTRACT PS-318
ARCHITECTURAL
LOWER MEZZANINE PLAN

DATE: OCTOBER 2026
SCALE: As indicated
SHEET NO: 39 OF 274
DRAWING NO. A-104.00

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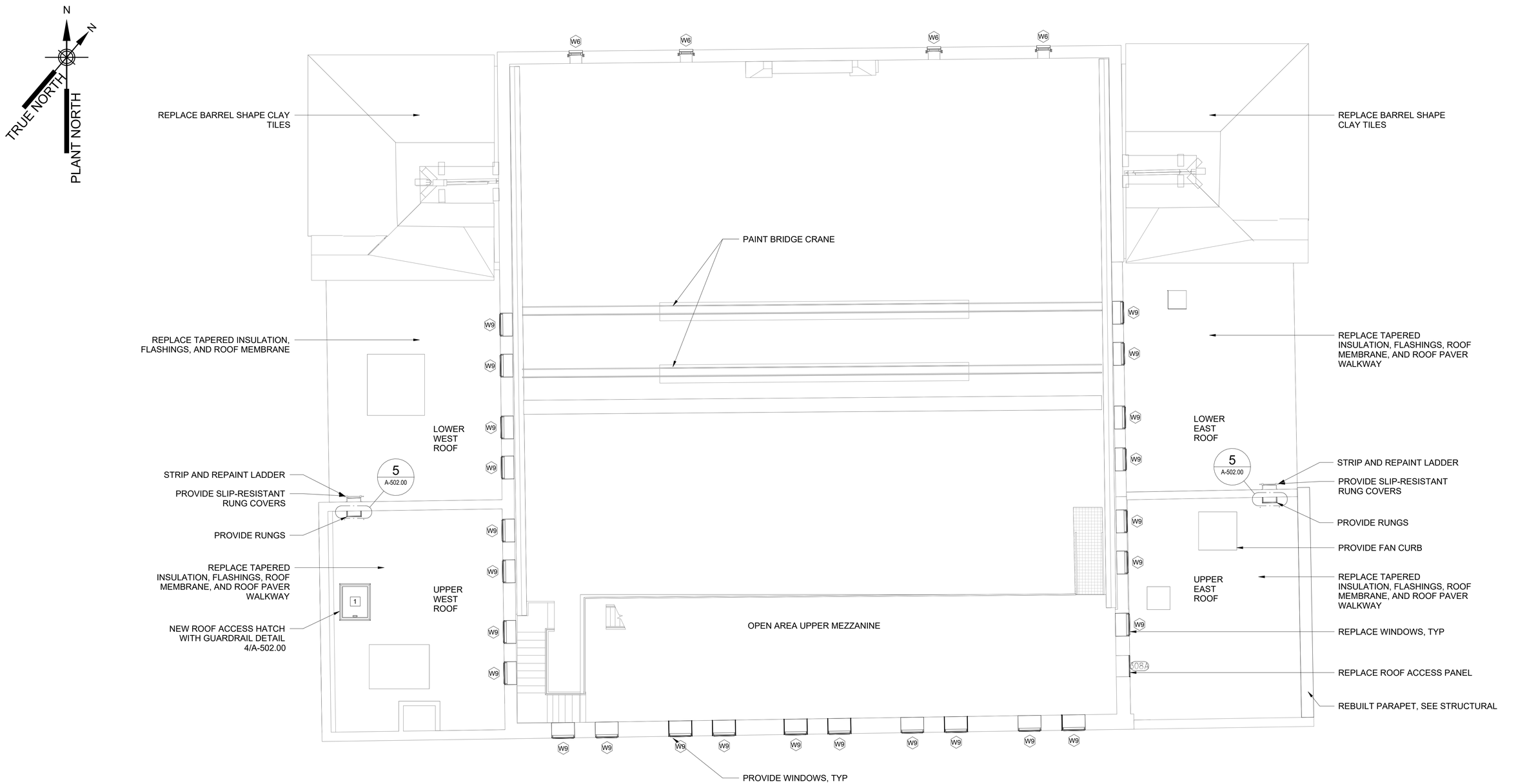

0 5 10 FT.

3/16"=1'-0"

EAST & WEST FLAT ROOFS AND UPPER MEZZANINE AT EL 33.50'

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

BID SET

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CAPITAL PROJECT WP-269
RECONSTRUCTION OF
PAERDEGAT PUMPING STATION
CONTRACT PS-318
ARCHITECTURAL
E AND W FLAT ROOFS AND UPPER MEZZANINE PLAN

DATE: OCTOBER 2026
SCALE: 3/16" = 1'-0"
SHEET NO: 40 OF 274
DRAWING NO. A-105.00

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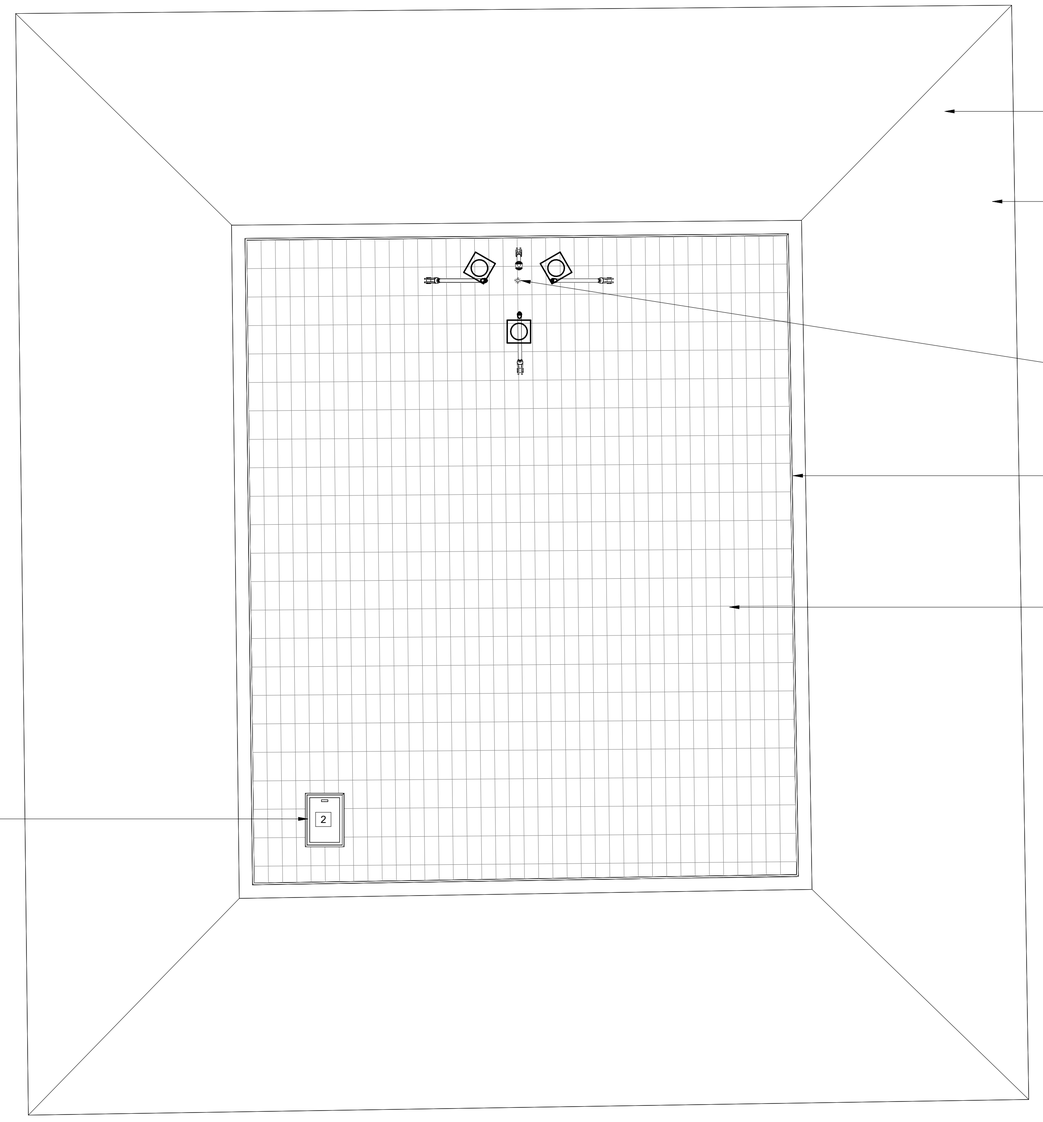

ROOF HATCH SCHEDULE		
TAG	SIZE	ROOF
1	2'-9" BY 3'-4" VIF	UPPER WEST
2	2'-0" BY 3'-1" VIF	MAIN

0 5 10 FT.
3/16"=1'-0"

MAIN ROOF PLAN AT EL 55.42'

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

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CAPITAL PROJECT WP-269
RECONSTRUCTION OF
PAERDEGAT PUMPING STATION
CONTRACT PS-318
ARCHITECTURAL
MAIN ROOF PLAN

DATE: OCTOBER 2026
SCALE: 3/16" = 1'-0"
SHEET NO: 41 OF 274
DRAWING NO. A-106.00

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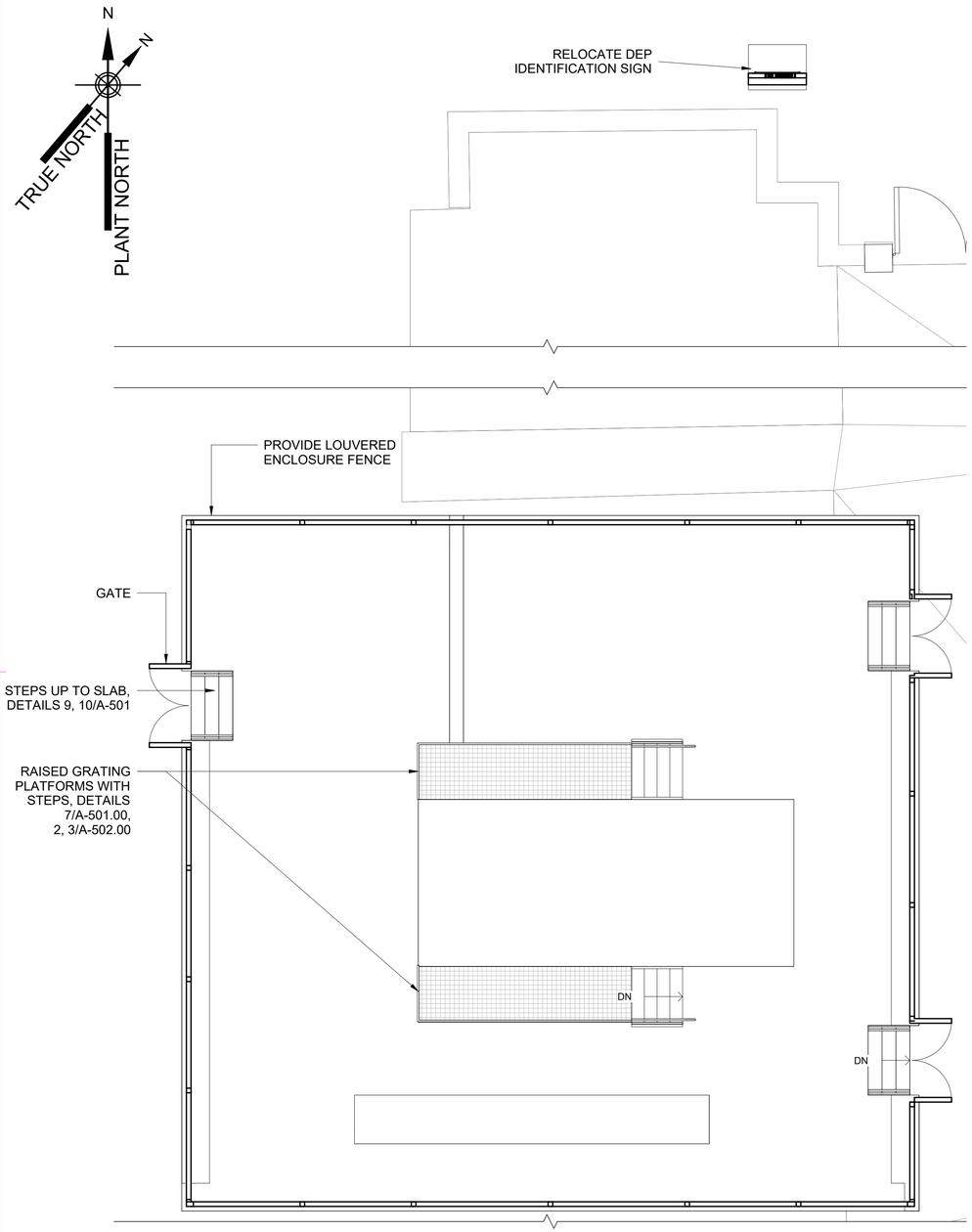
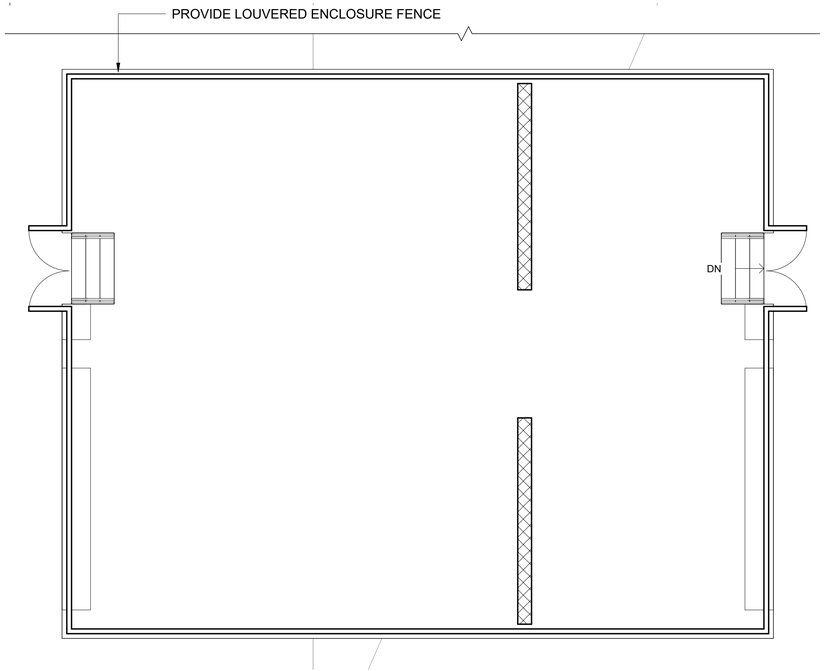


GENERATOR ENCLOSURE AT EL 13.50'

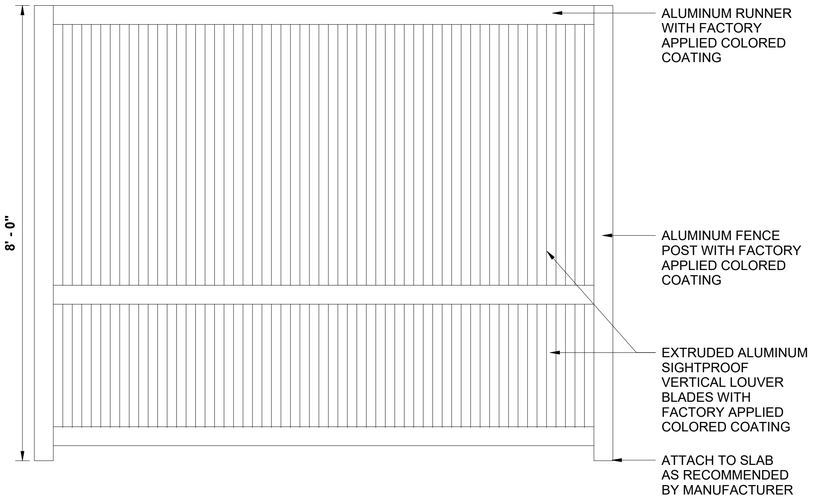
SCALE: 3/16" = 1'-0"

3/16"=1'-0" 0 5 10 FT.



ELECTRICAL ENCLOSURE AT EL 13.50'

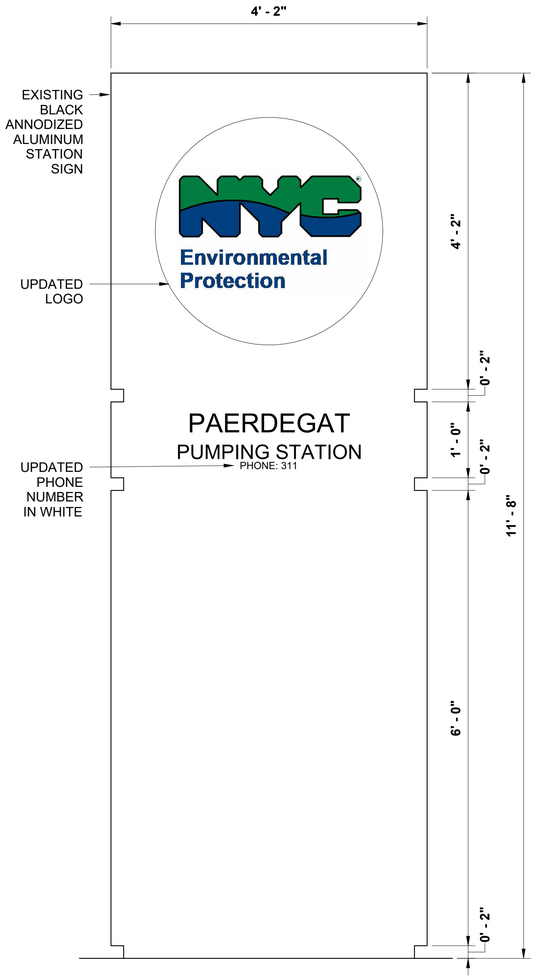
SCALE: 3/16" = 1'-0"



1 LOUVERED ENCLOSURE ELEVATION

SCALE: 3/4" = 1'-0"

3/4"=1'-0" 0 1 2 3 FT.



2 STATION SIGN

SCALE: 1" = 1'-0"

1"=1'-0" 0 1 2 FT.

BID SET

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NYC Environmental Protection

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96-05 HORACE HARDING EXPRESSWAY 5th FLOOR
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CAPITAL PROJECT WP-269
RECONSTRUCTION OF
PAERDEGAT PUMPING STATION
CONTRACT PS-318
ARCHITECTURAL
GENERATOR AND ELECTRICAL ENCLOSURES

DATE: OCTOBER 2026
SCALE: As indicated
SHEET NO: 42 OF 274
DRAWING NO. A-107.00

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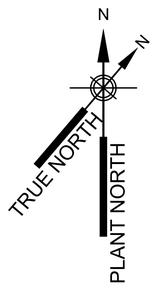
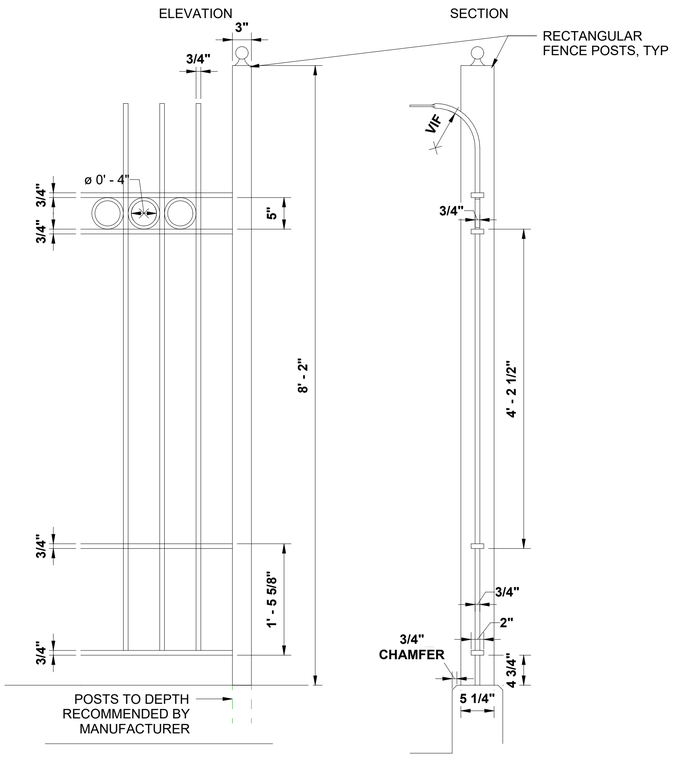
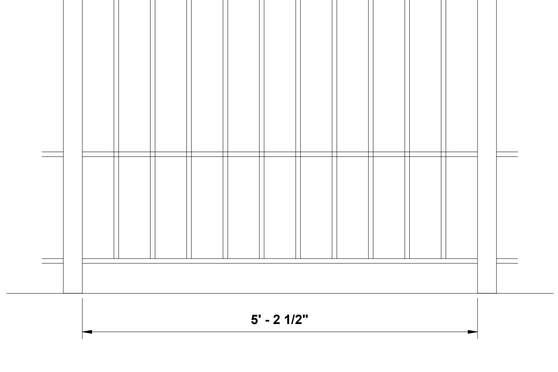




1 IRON FENCE

SCALE: 1" = 1'-0"



2 IRON FENCE PANEL

SCALE: 1" = 1'-0"

0 1 2 FT.
1"=1'-0"

BID SET

SUBMITTAL DATE: OCTOBER 2026

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NEW YORK, NY 10158, US

REGISTERED ARCHITECT CHEN LI 044991 STATE OF NEW YORK

Environmental Protection

ACCOUNTABLE MANAGER	JOHN GOULAS, P.E.
PORTFOLIO MANAGER	KEVIN ELLENWOOD, P.E.
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CAPITAL PROJECT WP-269
RECONSTRUCTION OF
PAERDEGAT PUMPING STATION
CONTRACT PS-318
ARCHITECTURAL
EXISTING IRON FENCE RESTORATION

DATE: OCTOBER 2026
SCALE: 1" = 1'-0"
SHEET NO: 43 OF 274
DRAWING NO. A-108.00

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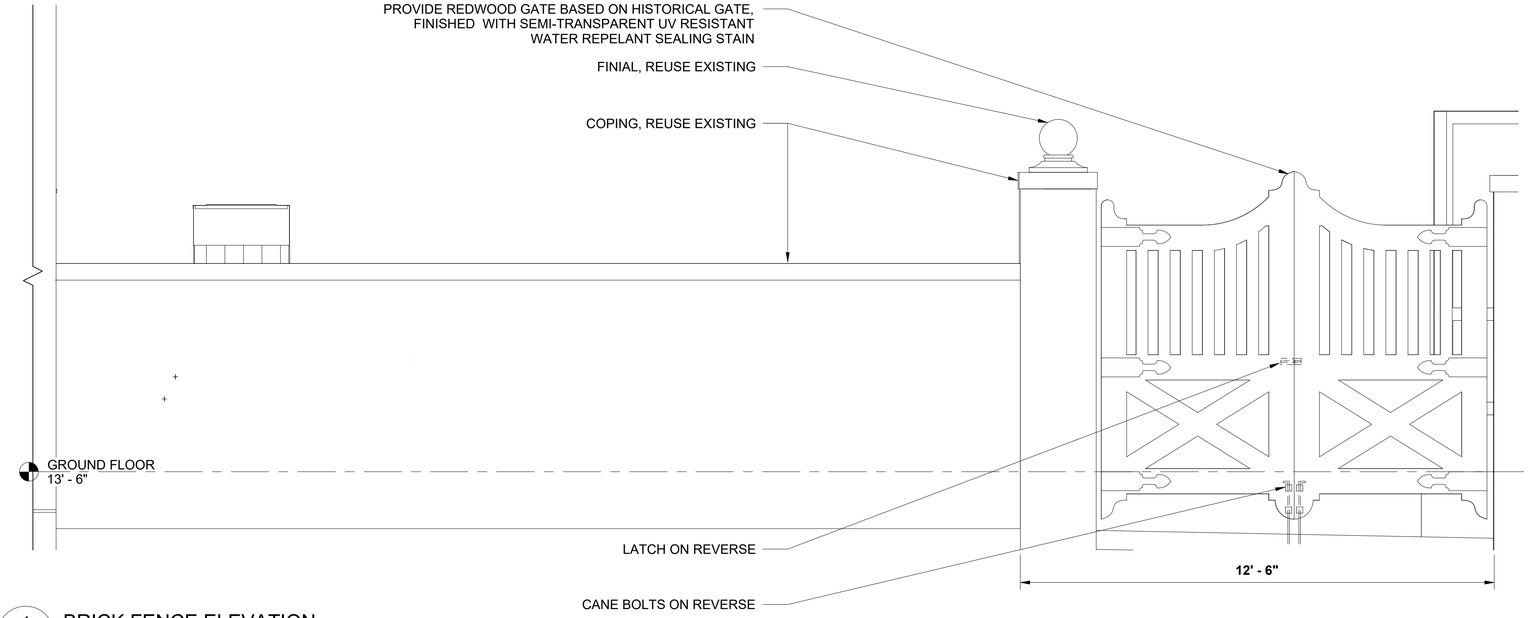
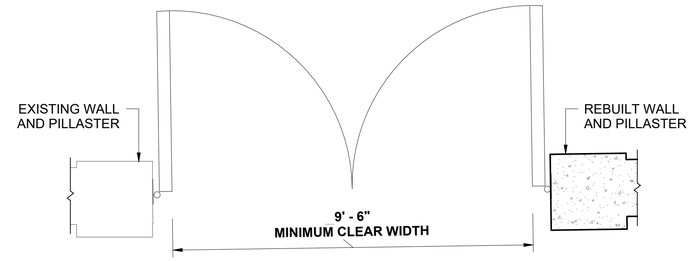


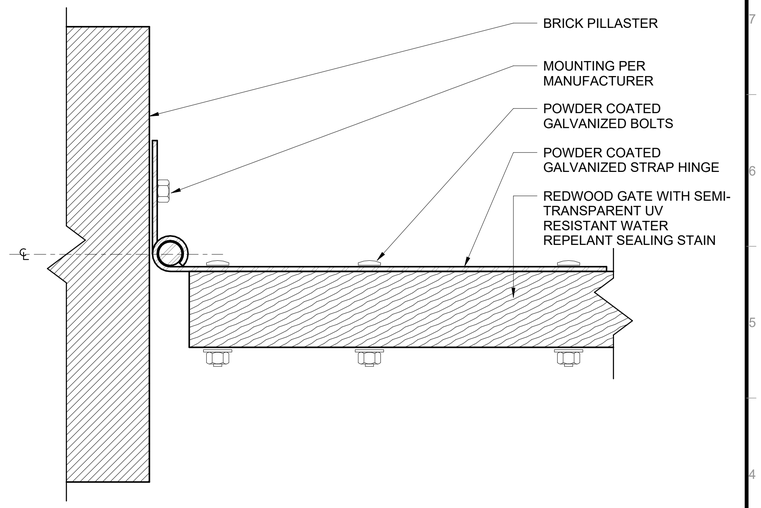
1 XA-103 BRICK FENCE ELEVATION

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



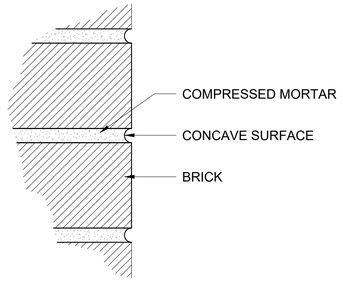
2 NEW WOODEN GATE IN PLAN

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



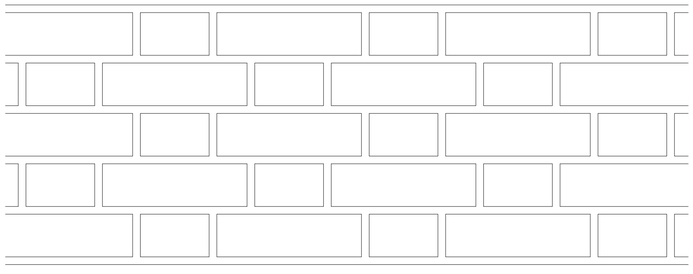
3 WOODEN GATE HINGE

SCALE: 3" = 1'-0"



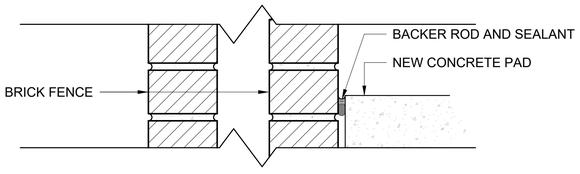
4 MORTAR JOINT SECTION DETAIL

SCALE: 6" = 1'-0"



5 FENCE BOND

SCALE: 3" = 1'-0"



6 A-103.00 JOINT BETWEEN BRICK FENCE AND CONCRETE PAD

SCALE: 3" = 1'-0"

1/2"=1'-0" 0 1 2 4 FT.

6"=1'-0" 0 1 2 5 IN.

3"=1'-0" 0 3 6 9 IN.

BID SET

SUBMITTAL DATE: OCTOBER 2026

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DRAWN BY: LINDSAY TIBBITTS
CHECKED BY: CHEN LI, R.A.
DESIGN LEAD: GERALD OTTERSON, R.A.
PROJECT MANAGER: AIMEE BOULET, P.E.

AECOM
605 3RD AVENUE, 3RD FL.
NEW YORK, NY 10158, US

REGISTERED ARCHITECT CHEN LI 046981 STATE OF NEW YORK

Environmental Protection

ACCOUNTABLE MANAGER: JOHN GOULAS, P.E.
PORTFOLIO MANAGER: KEVIN ELLENWOOD, P.E.
EXECUTIVE DIRECTOR: NAYANKUMAR SHAH, P.E.

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CAPITAL PROJECT WP-269
RECONSTRUCTION OF
PAERDEGAT PUMPING STATION
CONTRACT PS-318
ARCHITECTURAL
REBUILT BRICK FENCE

DATE: OCTOBER 2026
SCALE: As indicated
SHEET NO: 44 OF 274
DRAWING NO. A-109.00

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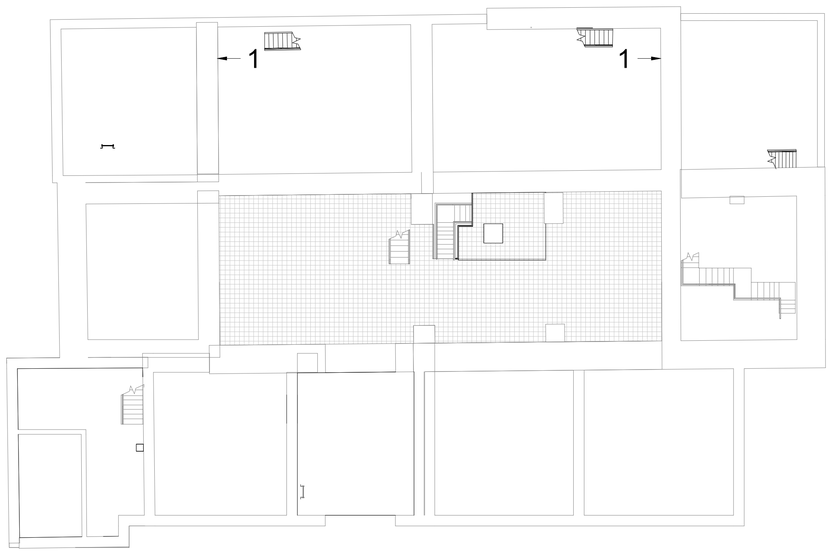
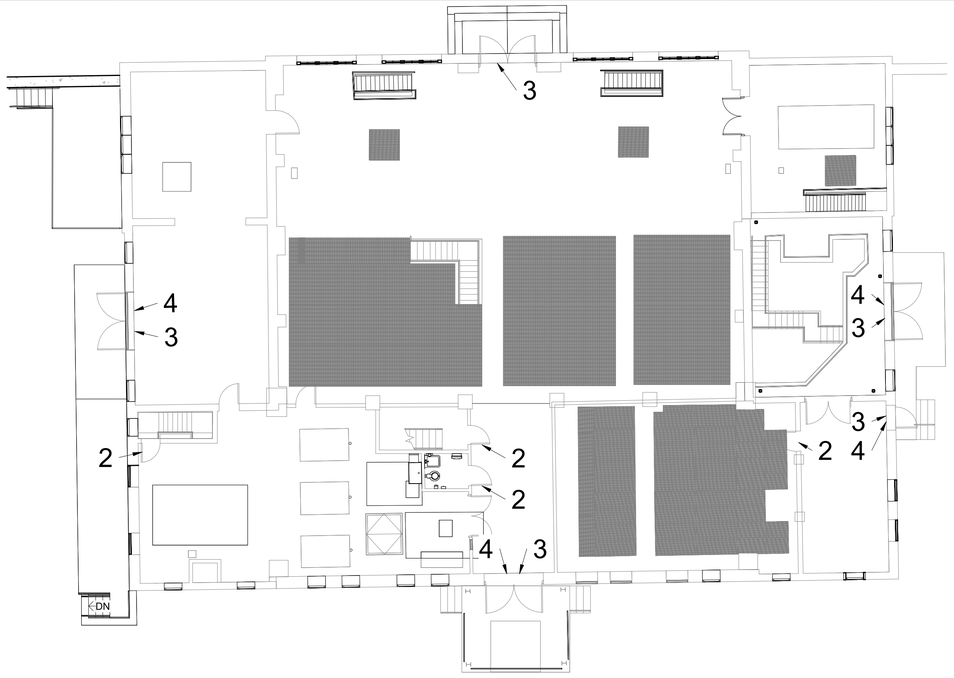


FIRST LEVEL BELOW GROUND SIGNAGE PLAN

SCALE: 3/32" = 1'-0"



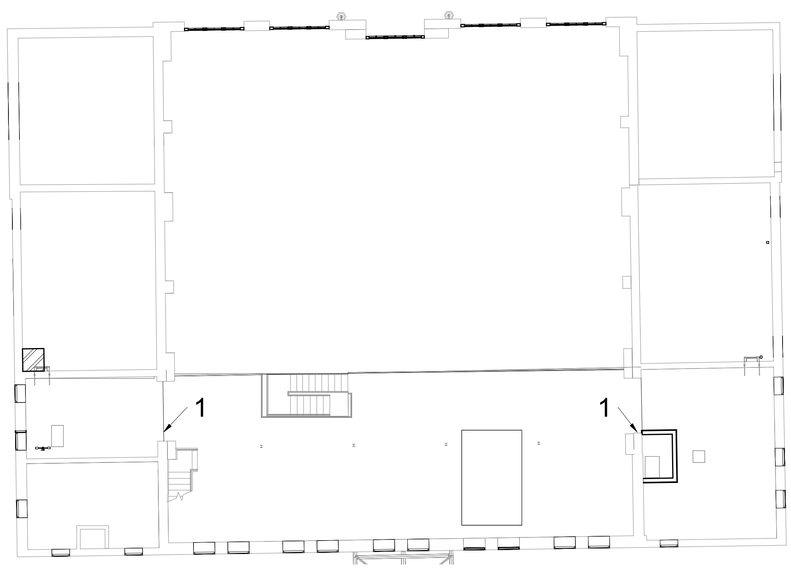
GROUND FLOOR SIGNAGE PLAN

SCALE: 3/32" = 1'-0"

0 5 10 15 20 FT.

3/32"=1'-0"

SIGNAGE LEGEND				
#	TEXT	TEXT COLOR	GROUND COLOR	MOUNTING
1	NO STORAGE	RED	WHITE	WALL
2	NOT AN EXIT	RED	WHITE	DOOR
3	EXIT	RED	WHITE	DOOR
4	NOT AN EXIT WHEN STOPLOGS ARE INSTALLED	RED	WHITE	DOOR

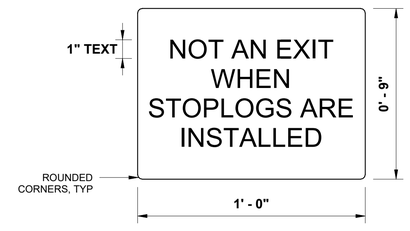


LOWER MEZZANINE SIGNAGE PLAN

SCALE: 3/32" = 1'-0"

1 NO STORAGE SIGN DETAIL

SCALE: 3" = 1'-0"



2 STOPLOG SIGN DETAIL

SCALE: 3" = 1'-0"

3"=1'-0" 0 3 6 9 IN.

BID SET

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PROJECT MANAGER: AIMEE BOULET, P.E.

AECOM
605 3RD AVENUE, 3RD FL.
NEW YORK, NY 10158, US

REGISTERED ARCHITECT CHEN LI 044991 STATE OF NEW YORK

Environmental Protection

ACCOUNTABLE MANAGER	JOHN GOULAS, P.E.
PORTFOLIO MANAGER	KEVIN ELLENWOOD, P.E.
EXECUTIVE DIRECTOR	NAYANKUMAR SHAH, P.E.

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CAPITAL PROJECT WP-269
RECONSTRUCTION OF
PAERDEGAT PUMPING STATION
CONTRACT PS-318
ARCHITECTURAL
SIGNAGE PLANS

DATE: OCTOBER 2026

SCALE: As indicated

SHEET NO: 45 OF 274

DRAWING NO. A-110.00

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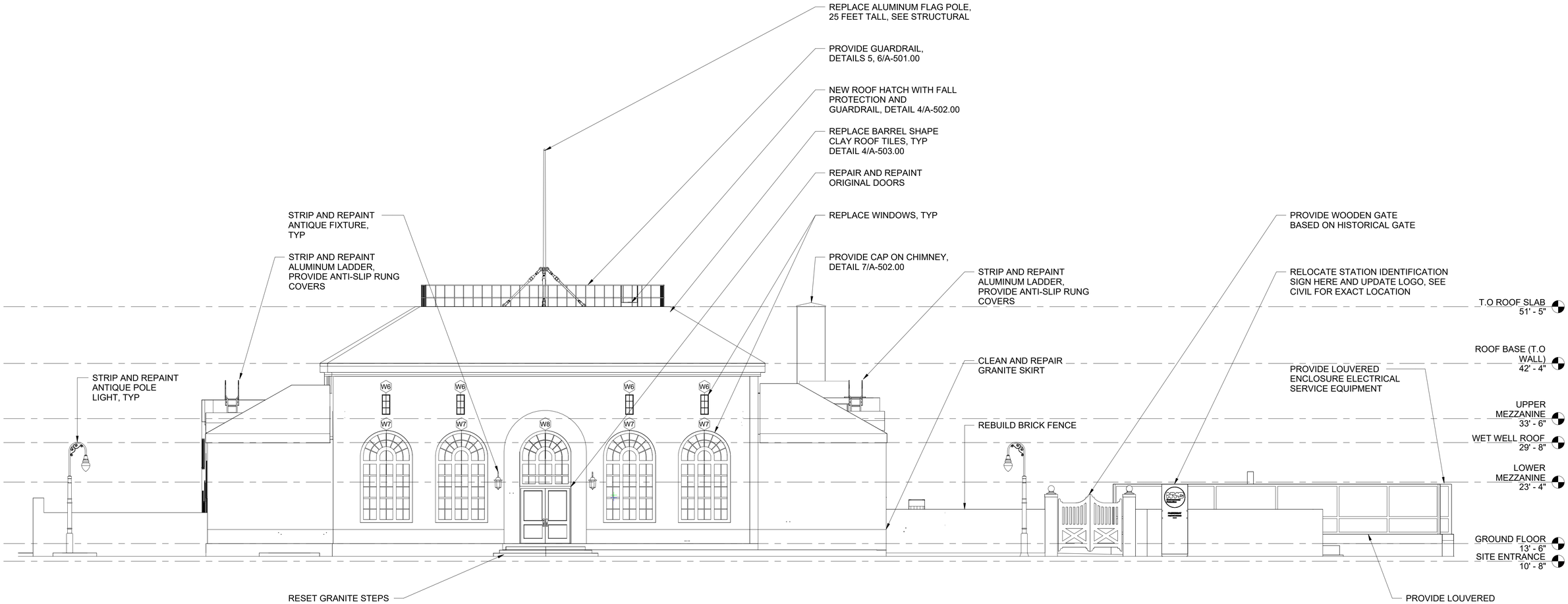

1 XA-103 NORTH ELEVATION

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

0 5 10 15 FT.

1/8"=1'-0"

BID SET

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CAPITAL PROJECT WP-269
RECONSTRUCTION OF
PAERDEGAT PUMPING STATION
CONTRACT PS-318
ARCHITECTURAL
NORTH ELEVATION

DATE: OCTOBER 2026
SCALE: 1/8" = 1'-0"
SHEET NO: 46 OF 274
DRAWING NO. A-201.00

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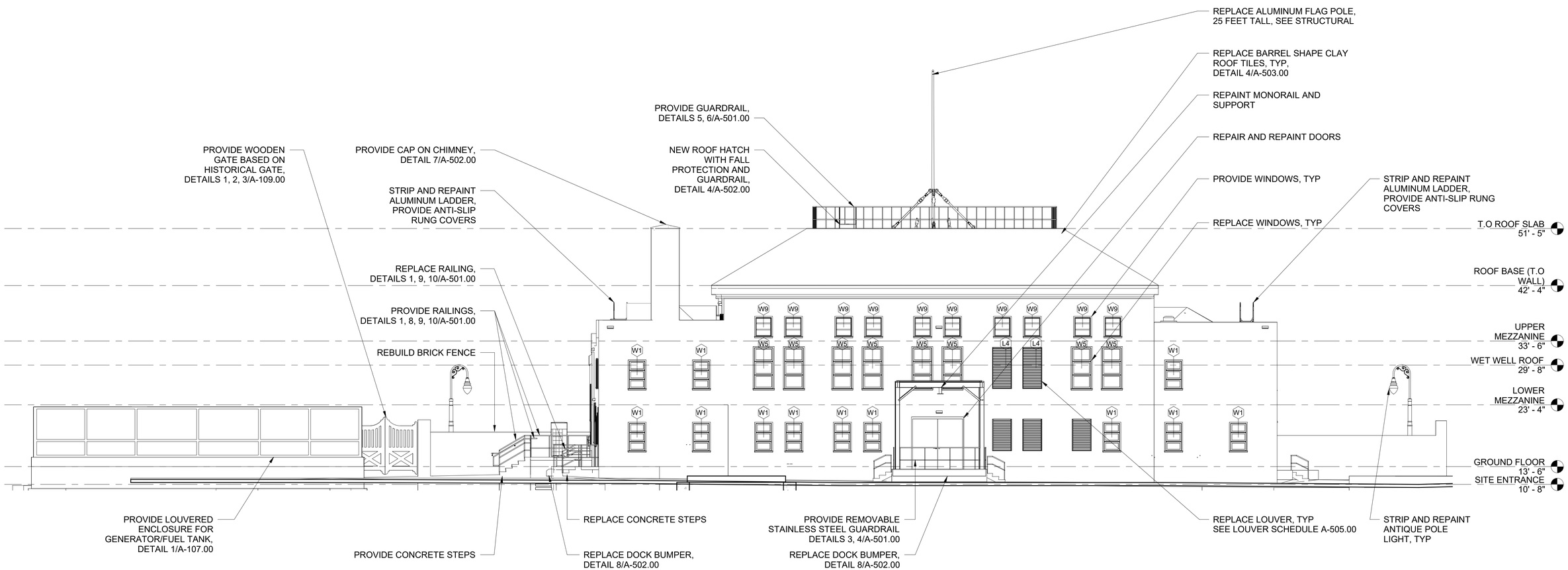

1 / XA-103 SOUTH ELEVATION

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

0 5 10 15 FT.

1/8"=1'-0"

BID SET

SUBMITTAL DATE: OCTOBER 2026

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PROJECT MANAGER: AIMEE BOULET, P.E.

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Environmental Protection

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CAPITAL PROJECT WP-269
RECONSTRUCTION OF
PAERDEGAT PUMPING STATION
CONTRACT PS-318
ARCHITECTURAL
SOUTH ELEVATION

DATE: OCTOBER 2026
SCALE: 1/8" = 1'-0"
SHEET NO: 47 OF 274
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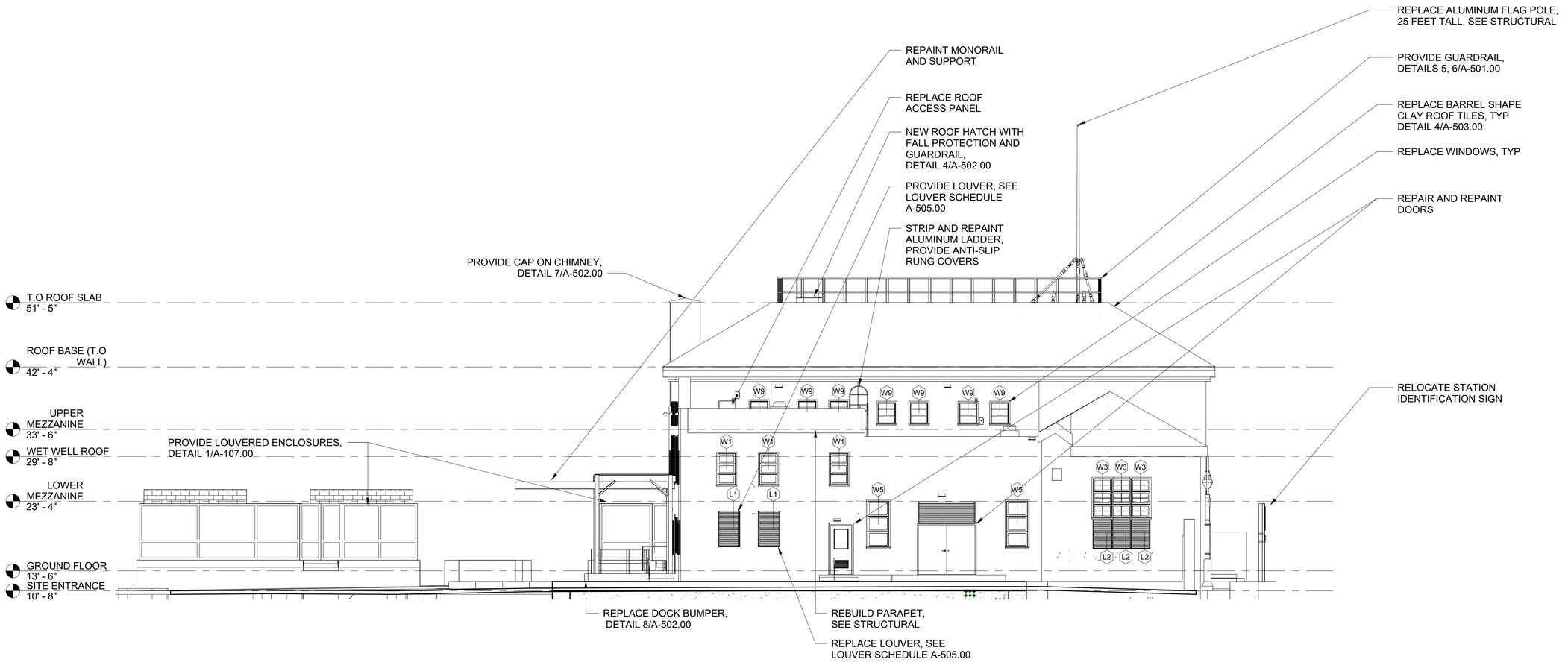

1 / XA-103 EAST ELEVATION

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

1/8"=1'-0" 0 5 10 15 FT.

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RECONSTRUCTION OF
PAERDEGAT PUMPING STATION
CONTRACT PS-318
ARCHITECTURAL
EAST ELEVATION

DATE: OCTOBER 2026
SCALE: 1/8" = 1'-0"
SHEET NO: 48 OF 274
DRAWING NO. A-203.00

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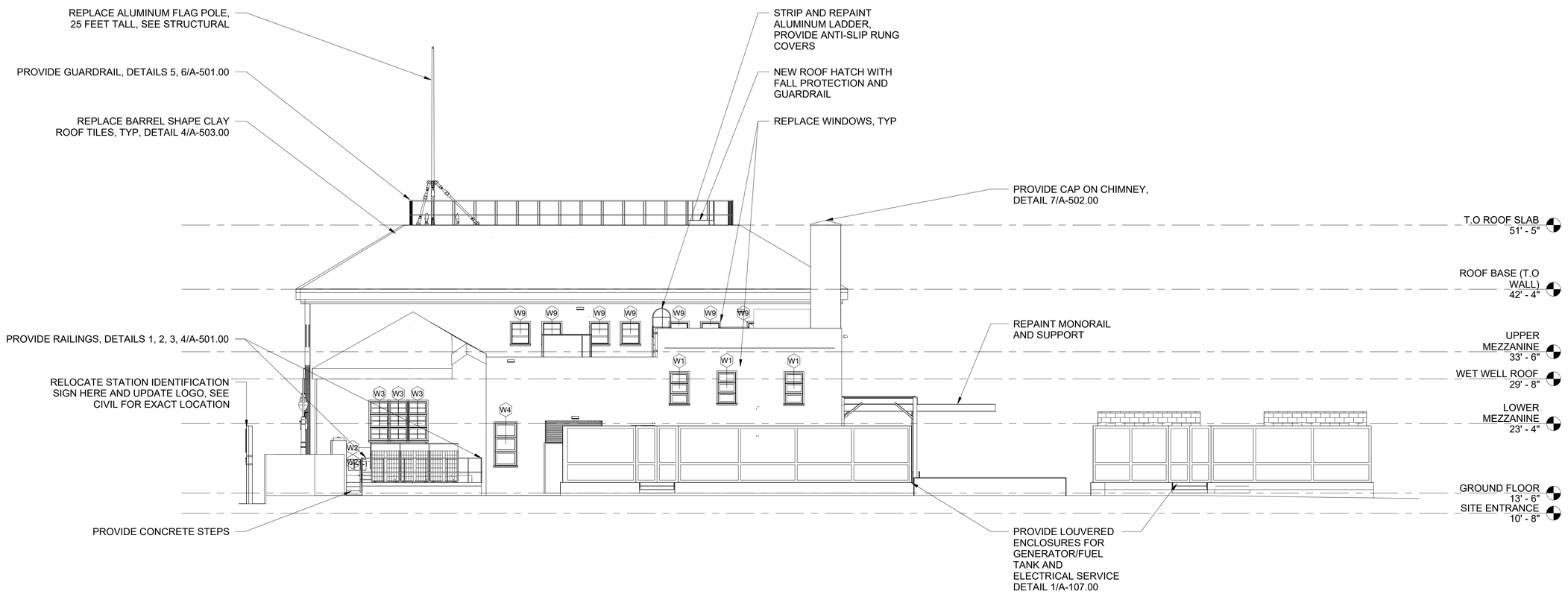

1 WEST ELEVATION

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

0 5 10 15 FT.

1/8"=1'-0"

BID SET

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CONTRACT PS-318
ARCHITECTURAL
WEST ELEVATION

DATE: OCTOBER 2026
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SHEET NO: 49 OF 274
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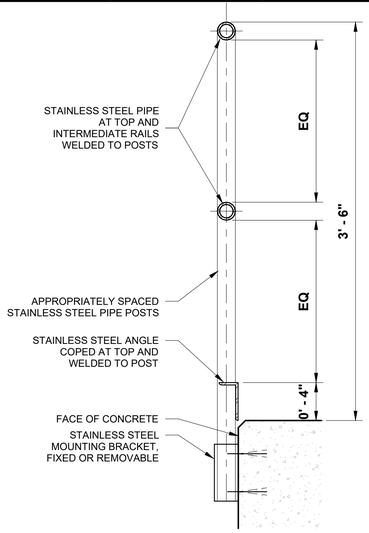
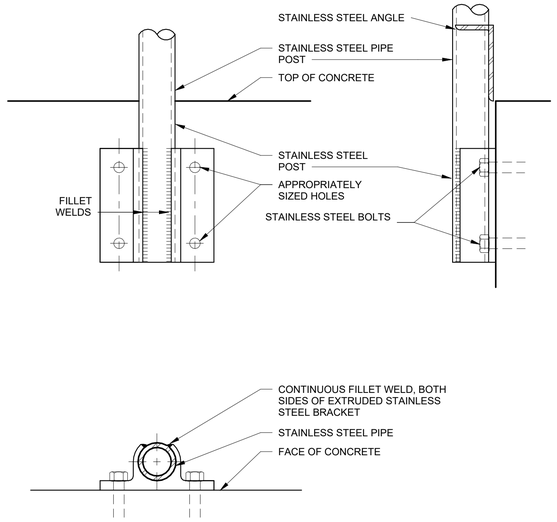


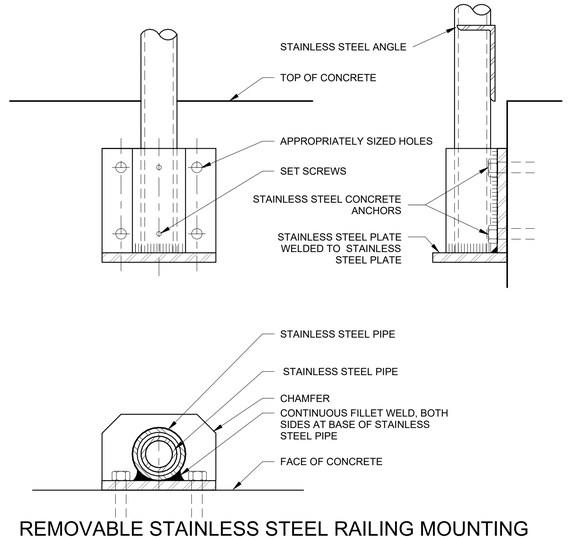
1 SIDE MOUNTED STAINLESS STEEL GUARDRAIL

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



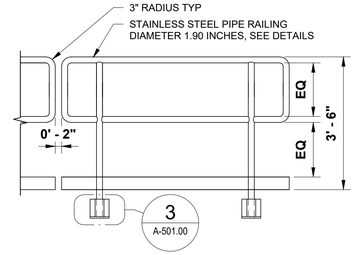
2 STAINLESS STEEL GUARDRAIL MOUNTING BRACKET

SCALE: 3" = 1'-0"



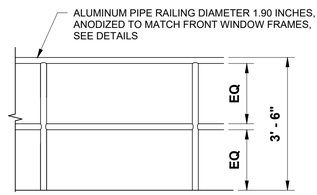
3 A-501.00 REMOVABLE STAINLESS STEEL RAILING MOUNTING BRACKET

SCALE: 3" = 1'-0"



4 REMOVABLE STAINLESS STEEL RAILING

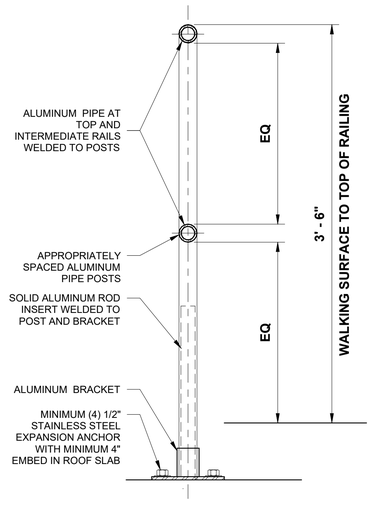
SCALE: 1/2" = 1'-0"



5 ANODIZED ALUMINUM ROOF RAILING

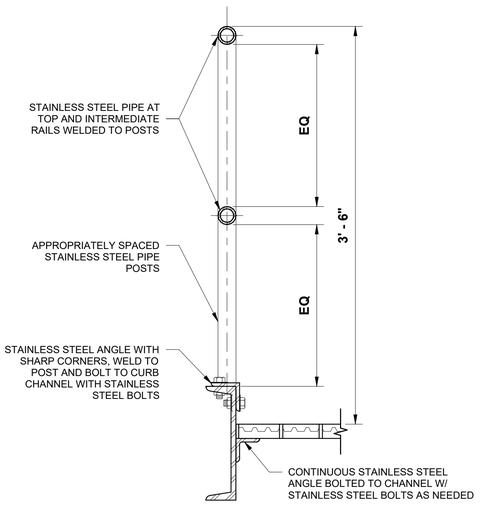
SCALE: 1/2" = 1'-0"

0 3 6 9 IN.
3"=1'-0"



6 ALUMINUM GUARDRAIL

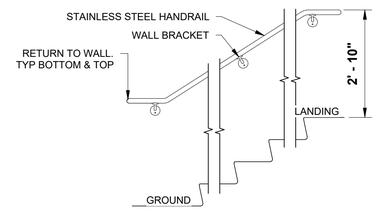
SCALE: 1 1/2" = 1'-0"



7 GRATING MOUNTED STAINLESS STEEL GUARDRAIL

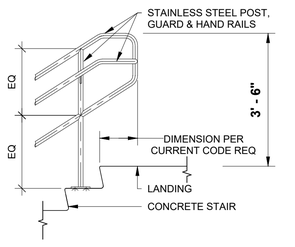
SCALE: 1 1/2" = 1'-0"

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



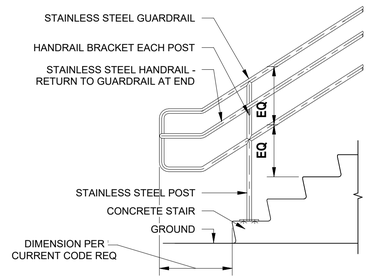
8 WALL MOUNTED HANDRAIL

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



9 GUARDRAIL AT TOP OF CONCRETE STAIR

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



10 GUARDRAIL AT BASE OF CONCRETE STAIR

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

0 1 2 4 FT.
1/2"=1'-0"

BID SET

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CHECKED BY: CHEN LI, R.A.
DESIGN LEAD: GERALD OTTERSON, R.A.
PROJECT MANAGER: AIMEE BOULET, P.E.

AECOM
605 3RD AVENUE, 3RD FL.
NEW YORK, NY 10158, US

REGISTERED ARCHITECT CHEN LI 044091 STATE OF NEW YORK

Environmental Protection

ACCOUNTABLE MANAGER: JOHN GOULAS, P.E.
PORTFOLIO MANAGER: KEVIN ELLENWOOD, P.E.
EXECUTIVE DIRECTOR: NAYANKUMAR SHAH, P.E.

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CORONA, NEW YORK 11368
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CAPITAL PROJECT WP-269
RECONSTRUCTION OF
PAERDEGAT PUMPING STATION
CONTRACT PS-318
ARCHITECTURAL
DETAILS 1

DATE: OCTOBER 2026
SCALE: As indicated
SHEET NO: 50 OF 274
DRAWING NO. A-501.00

All inquiries regarding this drawing(s) or project should be made to NYC Environmental Protection, Bureau of Engineering Design and Construction.

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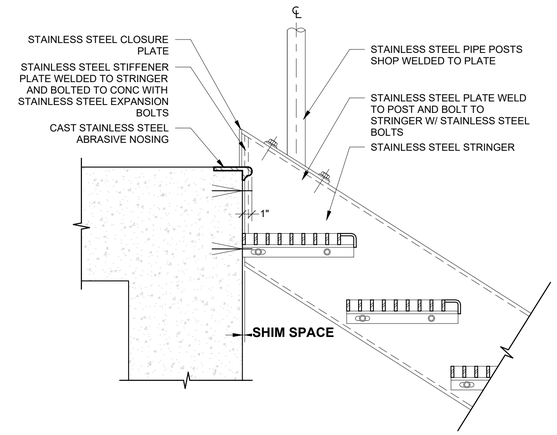
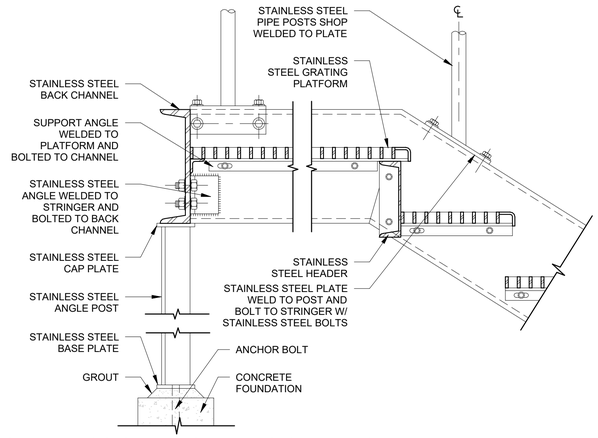
10/12/2026 10:59:43 AM



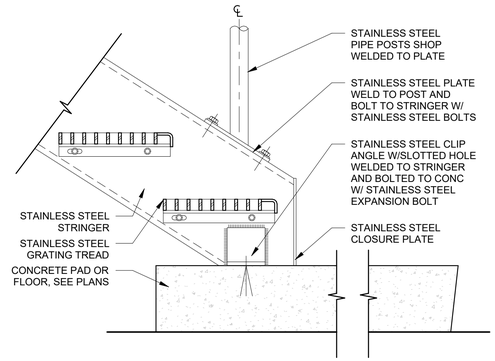
1 STAINLESS STEEL GRATING STAIR TOP DETAIL AT CONCRETE LANDING

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



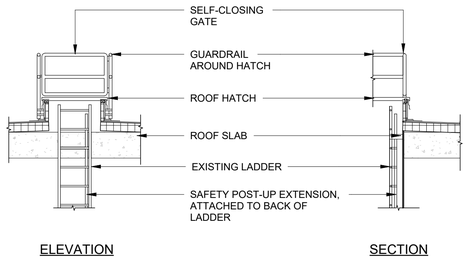
2 STAINLESS STEEL GRATING STAIR TOP DETAIL AT METAL PLATFORM

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



3 STAINLESS STEEL GRATING STAIR BOTTOM DETAIL AT CONCRETE PAD

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

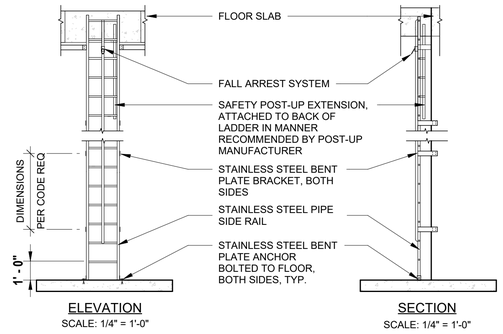


4 LADDER MOUNTED SAFETY POST-UP

A-104.00

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

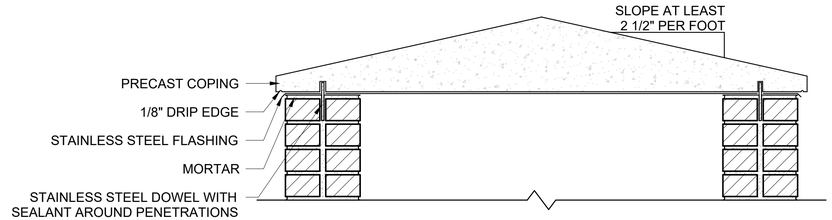
1/4"=1'-0" 0 4 8 FT.



6 STAINLESS STEEL LADDER WITH FALL ARREST SYSTEM

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

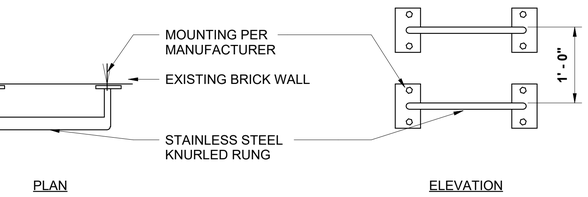
1/4"=1'-0" 0 4 8 FT.



7 CHIMNEY CAP

A-106.00

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

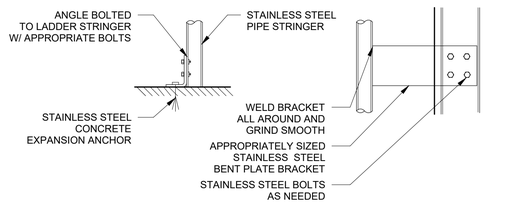


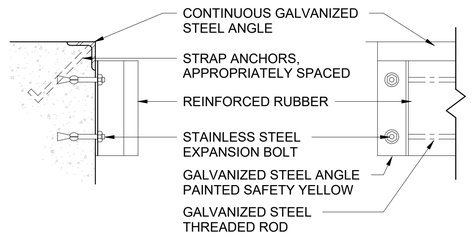
5 WALL-MOUNTED RUNGS

A-105.00

SCALE: 1" = 1'-0"

1"=1'-0" 0 1 2 FT.





8 DOCK BUMPER

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

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

BID SET

SUBMITTAL DATE: OCTOBER 2026

GRAPHIC SCALES CHECK BEFORE USE

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Environmental Protection

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CAPITAL PROJECT WP-269
RECONSTRUCTION OF PAERDEGAT PUMPING STATION
CONTRACT PS-318
ARCHITECTURAL DETAILS 2

DATE: OCTOBER 2026
SCALE: As indicated
SHEET NO: 51 OF 274
DRAWING NO. A-502.00

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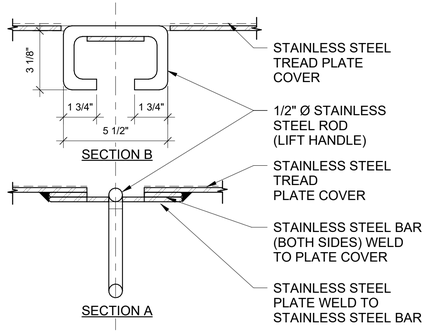
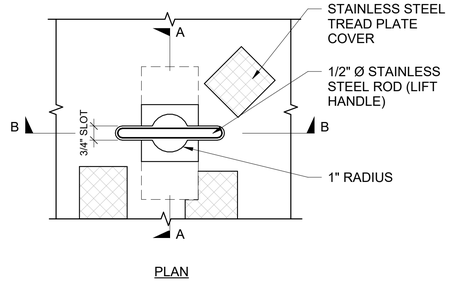
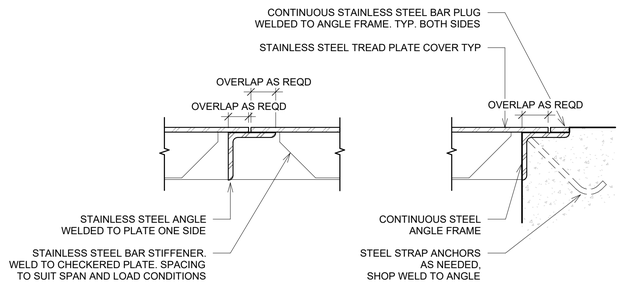




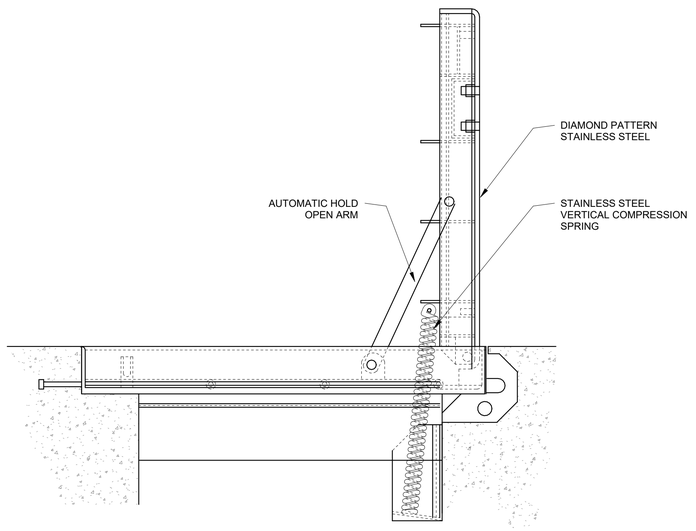
1 PLATE COVER LIFT HANDLE

SCALE: 3" = 1'-0"



2 STAINLESS STEEL PLATE COVER

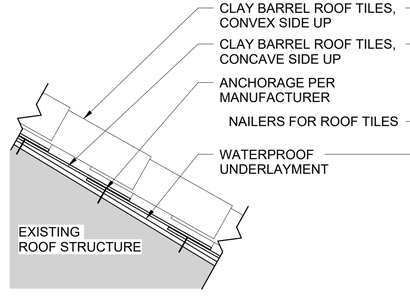
SCALE: 3" = 1'-0"



3 FLOODPROOF HATCH

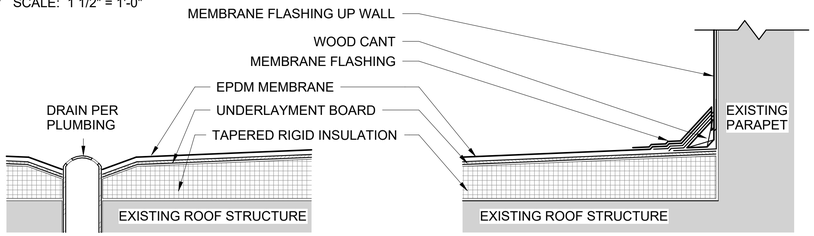
SCALE: 1 1/2" = 1'-0"

0 3 6 9 IN.
3"=1'-0"



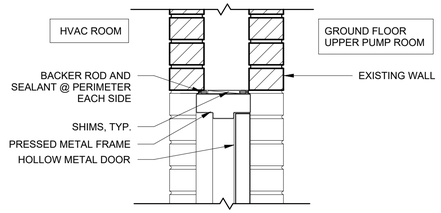
4 ROOF TILE SECTIONS

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



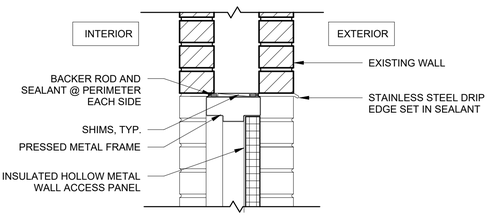
5 ROOF MEMBRANE SECTIONS

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



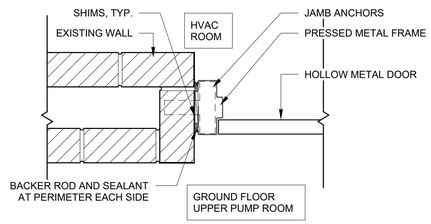
IH HVAC ROOM DOOR HEAD

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



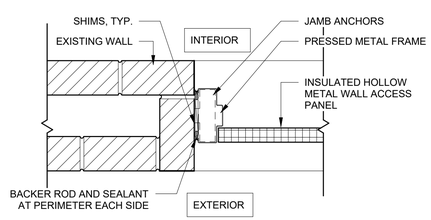
RH ROOF ACCESS PANEL HEAD

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



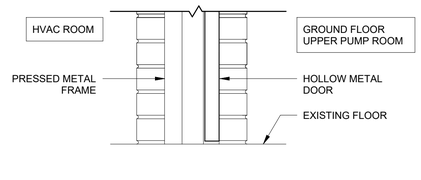
IJ HVAC ROOM DOOR JAMB

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



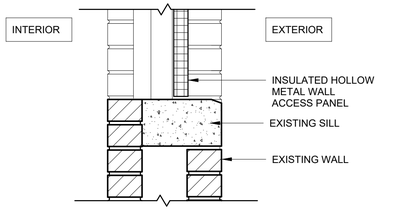
RJ ROOF ACCESS PANEL JAMB

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



IS HVAC ROOM DOOR SILL

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



RS ROOF ACCESS PANEL SILL

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

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

SCHEDULE OF NEW DOORS AND WALL ACCESS PANELS							
DOOR OR ACCESS PANEL NUMBER	HEIGHT	WIDTH	INTERIOR OR EXTERIOR	DETAIL			HARDWARE
				HEAD	JAMB	SILL	
101A	6' - 8" VIF	5' - 2" VIF	INTERIOR	IH	IJ	IS	REPLACE IN KIND
308A	3' - 0" VIF	2' - 4" VIF	EXTERIOR	RH	RJ	RS	REPLACE IN KIND

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REGISTERED ARCHITECT CHEN LI 040981 STATE OF NEW YORK

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CAPITAL PROJECT WP-269
RECONSTRUCTION OF
PAERDEGAT PUMPING STATION
CONTRACT PS-318
ARCHITECTURAL
DETAILS 3

DATE: OCTOBER 2026
SCALE: As indicated
SHEET NO: 52 OF 274
DRAWING NO. A-503.00

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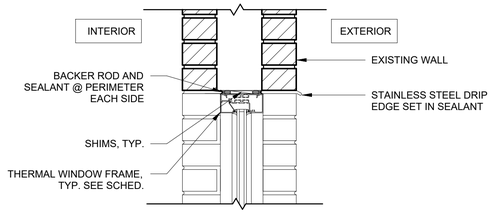
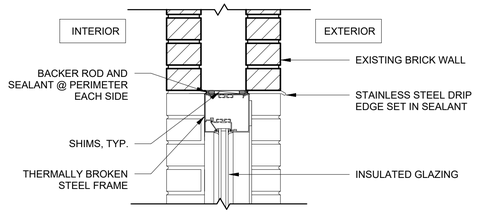
WINDOW SCHEDULE					
WINDOW	TAG	LEVEL	HEIGHT	WIDTH	Count
THREE HORIZONTAL PANEL WINDOW 60 INCH	W1	GROUND FLOOR	4' - 4 1/2"	2' - 6"	10
THREE HORIZONTAL PANEL WINDOW 60 INCH	W1	LOWER MEZZANINE	4' - 4 1/2"	2' - 6"	9
WIDE FIXED WINDOW	W2	GROUND FLOOR	2' - 0"	8' - 0"	1
THREE HORIZONTAL PANEL WINDOW 66 INCH	W3	GROUND FLOOR	5' - 6"	2' - 8"	1
THREE HORIZONTAL PANEL WINDOW 72 INCH	W4	GROUND FLOOR	6' - 0"	3' - 0"	2
THREE HORIZONTAL PANEL WINDOW 78 INCH	W5	GROUND FLOOR	6' - 6"	3' - 0"	2
THREE HORIZONTAL PANEL WINDOW 78 INCH	W5	LOWER MEZZANINE	6' - 6"	3' - 0"	8
SMALL FRONT WINDOW	W6	UPPER MEZZANINE	3' - 5 1/4"	1' - 5 3/4"	4
LARGE ARCHED WINDOW	W7	Ground Floor	14' - 9"	8' - 4 1/4"	4
ARCHED WINDOW ABOVE DOOR	W8	Lower Mezzanine	8' - 11"	8' - 2 1/2"	1
FIXED WINDOW 30 BY 36 INCH	W9	UPPER MEZZANINE	3' - 0"	2' - 6"	25



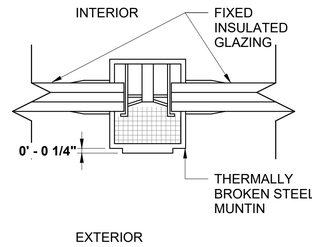
SH STANDARD WINDOW HEAD

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



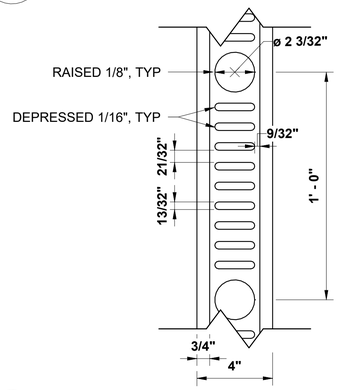
AH ARCHED WINDOW HEAD

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



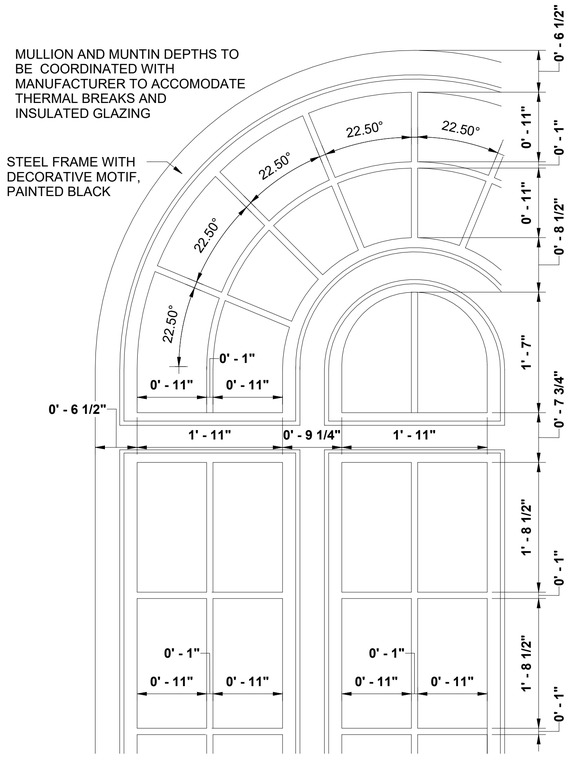
1 ARCHED WINDOW MUNTINS IN PLAN

SCALE: 3" = 1'-0"



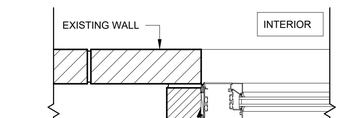
2 MUNTIN DECORATIVE MOTIF DETAIL

SCALE: 3" = 1'-0"



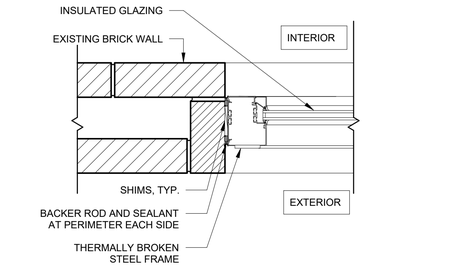
3 ARCHED WINDOW MULLION AND MUNTIN DIMENSIONS

SCALE: 1" = 1'-0"



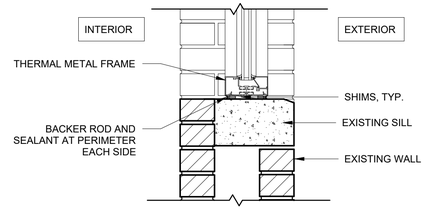
SJ STANDARD WINDOW JAMB

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



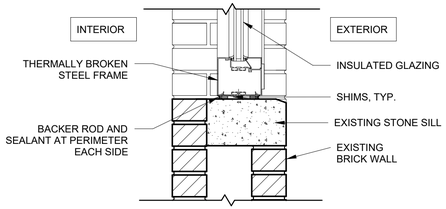
AJ ARCHED WINDOW JAMB

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



SS STANDARD WINDOW SILL

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



AS ARCHED WINDOW SILL

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

3"=1'-0" 0 3 6 9 IN.

1"=1'-0" 0 1 2 FT.

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

BID SET

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ARCHITECTURAL
WINDOW SCHEDULE AND DETAILS

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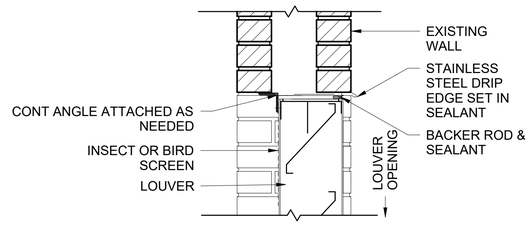
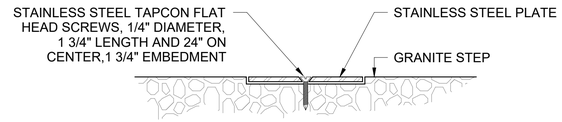
LOUVER SCHEDULE				
LOUVER TAG	LEVEL	HEIGHT	WIDTH	COUNT
L1	GROUND FLOOR	5' - 0"	3' - 0"	3
L2	GROUND FLOOR	4' - 4"	2' - 8"	3
L3	GROUND FLOOR	6' - 0"	3' - 0"	1
L4	LOWER MEZZANINE	6' - 6"	3' - 0"	2

STOPLOG SCHEDULE			
LOCATION	DRY SIDE	STOPLOG STYLE	DOOR WIDTH
EXTERIOR	FAN ROOM	PARALLEL STOPLOG	3' - 0"
EXTERIOR	SCREENING CHAMBER	PARALLEL STOPLOG	8' - 0"
EXTERIOR	SOUTH CORRIDOOR	PARALLEL STOPLOG	8' - 0"
EXTERIOR	MCC ROOM	PARALLEL STOPLOG	8' - 0"
EXTERIOR	GROUND FLOOR UPPER PUMP ROOM	PERPENDICULAR STOPLOG	7' - 10"
INTERIOR	FAN ROOM	PARALLEL STOPLOG	6' - 4"
INTERIOR	FAN ROOM	PARALLEL STOPLOG	2' - 10"



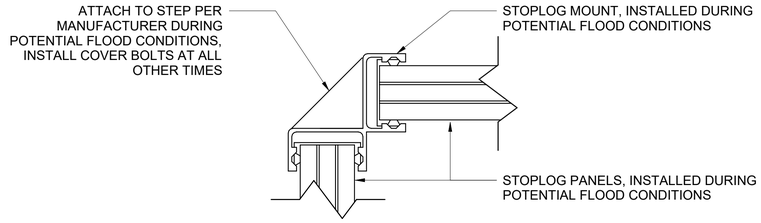
LH LOUVER HEAD

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



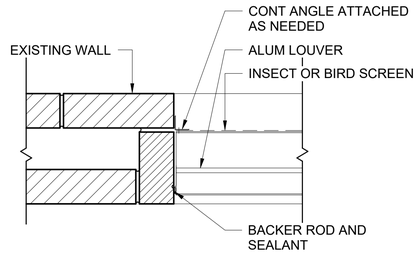
1 EMBEDDED STAINLESS STEEL PLATE DETAIL

SCALE: 3" = 1'-0"



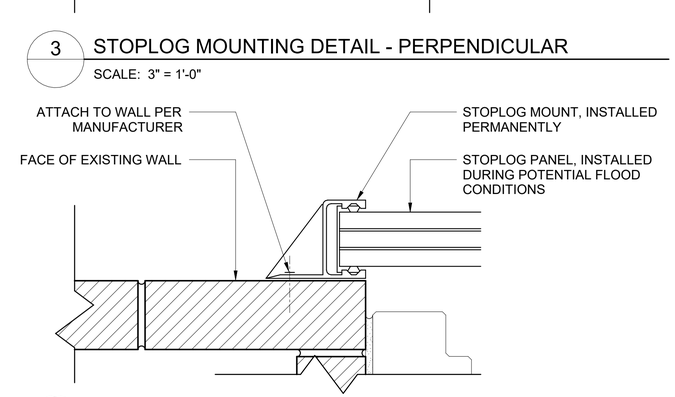
2 STOPLOG SUPPORT DETAIL - REMOVABLE

SCALE: 3" = 1'-0"



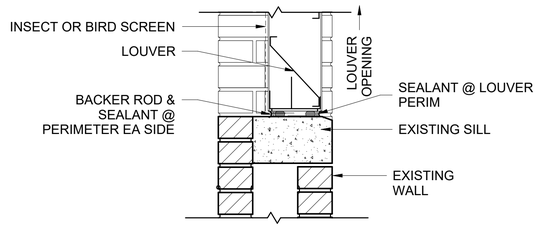
LJ LOUVER JAMB

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



3 STOPLOG MOUNTING DETAIL - PERPENDICULAR

SCALE: 3" = 1'-0"

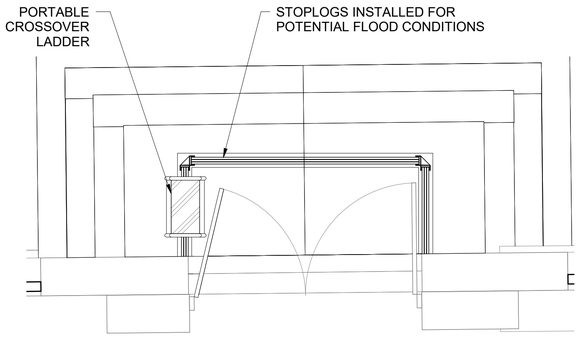


LS LOUVER SILL

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

0 1 1-1/2 FT.

1 1/2"=1'-0"



4 ENTRY DOOR WITH STOPLOGS IN PLACE

A-103.00

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

0 1 2 3 5 FT.

3/8"=1'-0"

5 STOPLOG MOUNTING DETAIL - PARALLEL

SCALE: 3" = 1'-0"

0 3 6 9 IN.

3"=1'-0"

BID SET

SUBMITTAL DATE: OCTOBER 2026

GRAPHIC SCALES CHECK BEFORE USE

IF SHEET IS LESS THAN 22" X 34" IT IS A REDUCED PRINT. SCALE ACCORDINGLY

NO.	DATE	REVISIONS/DESCRIPTION	APPR'D.

DESIGNED BY: LINDSAY TIBBITTS
DRAWN BY: LINDSAY TIBBITTS
CHECKED BY: CHEN LI, R.A.
DESIGN LEAD: GERALD OTTERSON, R.A.
PROJECT MANAGER: AIMEE BOULET, P.E.

AECOM
605 3RD AVENUE, 3RD FL.
NEW YORK, NY 10158, US

REGISTERED ARCHITECT CHEN LI 044091 STATE OF NEW YORK

Environmental Protection

ACCOUNTABLE MANAGER: JOHN GOULAS, P.E.
PORTFOLIO MANAGER: KEVIN ELLENWOOD, P.E.
EXECUTIVE DIRECTOR: NAYANKUMAR SHAH, P.E.

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NEW YORK CITY ENVIRONMENTAL PROTECTION
BUREAU OF ENGINEERING DESIGN & CONSTRUCTION
96-05 HORACE HARDING EXPRESSWAY 5th FLOOR
CORONA, NEW YORK 11368
www.nyc.gov/dep

CAPITAL PROJECT WP-269
RECONSTRUCTION OF
PAERDEGAT PUMPING STATION
CONTRACT PS-318
ARCHITECTURAL
LOUVER AND STOPLOG SCHEDULE AND DETAILS

DATE: OCTOBER 2026
SCALE: As indicated
SHEET NO: 54 OF 274
DRAWING NO. A-505.00

Autodesk Docs://CI-AMER (USA) 60619010-PS-DES-5/PAER-A-MODEL_AECOM.rvt
10/12/2026 10:59:45 AM
All inquiries regarding this drawing(s) or project should be made to NYC Environmental Protection, Bureau of Engineering Design and Construction.

GENERAL NOTES

GENERAL:

1. ALL WORK SHALL CONFORM TO THE FOLLOWING CODES:
   a. THE NEW YORK CITY BUILDING CODE 2022
   b. ACI 318-14 - "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE".
   c. ACI 350 (LATEST EDITION) - "CODE REQUIREMENTS FOR ENVIRONMENTAL ENGINEERING CONCRETE STRUCTURES".
   d. ACI 530/530.1-13 "BUILDING CODE REQUIREMENTS AND SPECIFICATION FOR MASONRY STRUCTURES".
   e. AISC (LATEST EDITION) - SPECIFICATIONS FOR DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS AND THE CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES.
   f. AWS D1.1 (LATEST EDITION) "STRUCTURAL WELDING CODE".
   g. OSHA - OCCUPATIONAL SAFETY & HEALTH ADMINISTRATION REGULATIONS, STANDARDS - 29CFR.
2. ALL CONSTRUCTION SHALL BE UNDER NEW YORK CITY SPECIAL INSPECTION REQUIREMENTS.
3. COORDINATE ALL WORK OF THESE DRAWINGS WITH WORK REQUIRED ON ARCHITECTURAL AND MECHANICAL DRAWINGS AND NOTIFY THE CONTRACTING OFFICER OF ANY DISCREPANCIES BEFORE PROCEEDING WITH ANY WORK.
4. THE PROJECT SPECIFICATIONS ARE A PART OF THE CONTRACT DOCUMENTS.
5. THE DRAWINGS AND SPECIFICATIONS REPRESENT THE COMPLETED STRUCTURE. THEY DO NOT INDICATE THE METHOD OF CONSTRUCTION. THE CONTRACTOR MUST PROVIDE ALL MEASURES AND MEANS NECESSARY TO PROTECT PERSONS AND STRUCTURES DURING CONSTRUCTION. SUCH MEASURES MUST INCLUDE, BUT NOT BE LIMITED TO BRACING, SHORING, ETC. OBSERVATIONS BY THE ARCHITECT, ENGINEER, OR CONTRACTING OFFICER DOES NOT INCLUDE THE REVIEW OF THESE MEASURES.
6. SPECIFICATIONS TAKE PRECEDENCE OVER GENERAL NOTES AND DETAILS ON THE STRUCTURAL DRAWINGS IN CASE OF A CONFLICT. TYPICAL DETAILS MUST BE USED WHENEVER APPLICABLE, EXCEPT WHERE NOTED OTHERWISE. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION.
7. ALL WORK NOT DETAILED OR NOTED MUST BE CONSTRUCTED IN ACCORDANCE WITH OTHER SIMILAR WORK SHOWN ON THE DRAWINGS AND TYPICAL DETAILS. DIMENSIONS MUST TAKE PRECEDENCE OVER GENERAL NOTES AND TYPICAL DETAILS. DRAWINGS MUST NOT BE SCALED FOR CONSTRUCTION PURPOSES.
8. NO PIPES OR DUCTS ARE TO BE PLACED IN OR PENETRATE THROUGH STRUCTURAL MEMBERS UNLESS SPECIFICALLY DESIGNED AND DETAILED OR PERMITTED AS PER THE TYPICAL DETAILS.
9. REFER TO ARCHITECTURAL DRAWINGS FOR THE FOLLOWING:
   a. SIZE AND LOCATION OF DOOR AND WINDOW OPENINGS; EXCEPT AS NOTED ON THESE DRAWINGS.
   b. SIZE AND LOCATION OF INTERIOR AND EXTERIOR NON-BEARING PARTITIONS.
   c. SIZE AND LOCATION OF CURBS, FLOOR DRAINS, SLOPES, DEPRESSED AREAS, CHANGES IN LEVEL, RAMPS, CHAMFERS, GROOVES, INSERTS, ETC.
   d. SIZE AND LOCATION OF FLOOR AND ROOF OPENINGS; EXCEPT AS NOTED ON THESEDRAWINGS.
   e. DIMENSIONS NOT SHOWN ON THESE DRAWINGS.
10. REFER TO MECHANICAL, PLUMBING, AND ELECTRICAL DRAWINGS FOR THE FOLLOWING:
    a. PIPE RUNS. SLEEVES, HANGERS, EQUIPMENT, AND SLAB OPENINGS; EXCEPT AS NOTED ON THESE DRAWINGS.
    b. ELECTRICAL CONDUIT, BOXES, OUTLETS.
    c. CONCRETE INSERTS FOR ELECTRICAL, MECHANICAL, AND PLUMBING FIXTURES.
    d. SIZE AND LOCATION OF MACHINE AND EQUIPMENT BASES. CONTRACTOR'S ENGINEER MUST DESIGN SEISMIC ANCHORAGE FOR MECHANICAL AND ELECTRICAL EQUIPMENT PER SPECIFICATIONS.
11. REFER TO APPLICABLE BUILDING CODE FOR ASTM REFERENCES, REVISIONS AND ISSUE, UNLESS OTHERWISE NOTED.
12. CONTRACTOR MUST INVESTIGATE THE SITE DURING CLEARING AND EXCAVATION FOR UNSUITABLE CONDITIONS. UNCONSOLIDATED AND UNDOCUMENTED FILLS, BURIED STRUCTURES, UTILITIES, ETC CONTRACTOR MUST IMMEDIATELY NOTIFY THE CONTRACTING OFFICER OF ANY SITE CONDITIONS NOT REFLECTED ON THE DRAWINGS, OR DIFFERENCES FROM MAXIMUM OR MINIMUM DIMENSIONS INDICATED, INCLUDING CONFLICT IN GRADES, ADVERSE SOIL CONDITIONS, GROUND WATER PRESENT, DEEPENED FOOTINGS, UNCOVERED AND UNEXPECTED UTILITY LINES, ETC.
13. CONTRACTOR IS SOLELY RESPONSIBLE FOR THE STABILITY OF THE STRUCTURE WHILE UNDER CONSTRUCTION. CONSTRUCTION MATERIALS MUST BE SPREAD OUT IF PLACED ON STRUCTURAL FRAME SUCH THAT THE LOADING DOES NOT EXCEED THE DESIGN LIVE LOADS. PROVIDE SHORING AND BRACING WHERE DESIGN STRENGTH HAS NOT BEEN ATTAINED AND/OR STRUCTURE IS NOT COMPLETE.
14. THE CONTRACTOR MUST DETERMINE THE LOCATION OF UTILITY SERVICES IN AREAS TO BE EXCAVATED, REQUEST A MARK OU TOF ALL UTILITIES, OBTAIN A DIG NUMBER AND CALL 811 BEFORE BEGINNING EXCAVATION. EXERCISE CAUTION IN EXCAVATING AND TRENCHING.
15. STRUCTURAL DRAWINGS TO BE USED IN CONJUNCTION WITH ARCHITECTURAL DRAWINGS.
16. THE PROJECT UNITS ARE IMPERIAL UNITS UNLESS OTHERWISE NOTED.
17. REPRODUCTION OF CONTRACT DRAWINGS SHALL NOT BE USED AS SHOP DRAWINGS WITHOUT WRITTEN APPROVAL OF THE CONTRACTING OFFICER'S REPRESENTATIVE.
18. ALL DIMENSIONS ARE TO STRUCTURAL ELEMENTS AND DO NOT INCLUDE ARCHITECTURAL TREATMENTS SUCH AS PLASTER FINISH OR SPRAY-ON FIRE PROOFING. CONCRETE AND MASONRY OPENINGS THAT ARE INDICATED ON THE FACILITY DRAWINGS MAY VARY WITH THE EQUIPMENT PROVIDED. THE CONTRACTOR SHALL COORDINATE OPENING REQUIREMENTS WITH ALL TRADES.
19. IMPLEMENTATION OF JOB SITE SAFETY IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
20. THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING AND COORDINATING DIMENSIONS AND INSTALLATION DETAILS OR PURCHASED EQUIPMENT WITH THE SUPPORTING STRUCTURE. ANY CONFLICT BETWEEN THESE ITEMS AND THE BUILDING STRUCTURE IS TO BE BROUGHT TO THE ATTENTION OF THE CONTRACTING OFFICERS REPRESENTATIVE FOR RESOLUTION.

STEEL:

1. ALL STRUCTURAL STEEL SHALL BE FABRICATED AND ERECTED IN ACCORDANCE WITH THE LATEST EDITION OF THE A.I.S.C. "SPECIFICATION FOR THE DESIGN FABRICATION, AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS".
2. ALL STEEL SHALL BE ASTM A992 GRADE 50 HAVING A SPECIFIED MINIMUM YIELD POINT OF 50 KSI EXCEPT AS OTHERWISE NOTED. CHANNELS, ANGLES AND PLATES SHALL BE ASTM A36, FY = 36 KSI. STRUCTURAL TUBING SHALL BE ASTM A500, GRADE B, FY = 46 KSI. STEEL PIPE SHALL BE ASTM A53 GRADE B, FY = 35 KSI. RODS SHALL BE ASTM A572, FY = 50 KSI.
3. ALL EXPOSED EXTERIOR STEEL SHALL BE GALVANIZED, UNLESS OTHERWISE NOTED, AND SHALL CONFORM TO ASTM A123. GALVANIZING OF CONNECTION BOLTS, NUTS AND WASHERS SHALL CONFORM TO ASTM A153.

STEEL CONTINUED:

4. STRUCTURAL STEEL SHALL BE FABRICATED BY AN AISC CERTIFIED STRUCTURAL STEEL FABRICATOR.
5. CONNECTION MATERIAL SHALL CONFORM TO THE FOLLOWING ASTM DESIGNATIONS, LATEST EDITION: HIGH-STRENGTH BOLTS: A325 WELDING ELECTRODES: AWS-A5.1, E70 SERIES.
6. ALL BOLTS SHALL BE 3/4 INCH DIAMETER MINIMUM, OPEN HOLES 13/16 INCH DIAMETER UNLESS OTHERWISE NOTED. USE LARGER BOLT DIAMETERS WHERE SPECIFIED OR REQUIRED BY LOADING. LIMIT USE OF SHORT SLOTTED HOLES.
7. ALL SHOP CONNECTIONS SHALL BE HIGH-STRENGTH BOLTED OR WELDED.
8. ALL FIELD CONNECTIONS SHALL BE BOLTED WITH HIGH-STRENGTH BOLTS EXCEPT WHERE DETAILS SHOW WELDING.
9. ALL WELDERS SHALL BE AWS CERTIFIED.
10. ALL WELDING SHALL BE INSPECTED BY AN APPROVED WELDING AGENCY WHICH SHALL ISSUE AN AFFIDAVIT THAT ALL WELDING HAS BEEN INSPECTED AND FOUND TO BE IN CONFORMITY WITH DETAILS.
11. ALL WELDING IS SUBJECT TO COMPLETE VISUAL INSPECTION AND AS FOLLOWS:
    - MAGNETIC PARTICLE INSPECTION PER ASTM E709-RANDOM TESTING APPROXIMATELY 10% LINEAR INCHES OF WELD MADE
    - ULTRASOUND INSPECTION - 100% OF GROOVE WELDS IN TENSION
      - 25% OF GROOVE WELDS IN COMPRESSION
      - ALL TENSION WELDS
12. ALL FILLET WELDS SHALL BE A MINIMUM OF 1/4 INCH UNLESS NOTED OTHERWISE.
13. PROVISIONS SHALL BE MADE FOR CONNECTIONS OF OTHER TRADES, INCLUDING CUTTING AND PUNCHING OF STRUCTURAL MEMBERS WHERE REQUIRED BY THE DRAWINGS, OR FOR WHICH INFORMATION IS FURNISHED PRIOR TO FABRICATION.
14. STIFFENERS SHALL BE GROUND TO BEAR.
15. ALL INTERIOR STEEL WORK SHALL HAVE A SHOP COAT OF PRIMER, EXCEPT FOR MEMBERS TO RECEIVE SPRAYED-ON FIREPROOFING.
16. THERE SHALL BE NO FIELD CUTTING OF STRUCTURAL STEEL MEMBERS FOR THE WORK OF OTHER TRADES WITHOUT THE PRIOR APPROVAL OF THE ARCHITECT/ENGINEER.
17. ALL COLUMN BASES, COLUMN ENDS AT SPLICES AND OTHER COLUMN BEARING CONNECTIONS SHALL BE MILLED FOR COMPLETE TRUE BEARING.
18. ALL BEAMS ADJACENT TO MASONRY WALLS SHALL HAVE ADJUSTABLE CHANNEL TYPE ANCHORS, AS MANUFACTURED BY HOHMAN & BARNARD OR APPROVED EQUAL, FOR STRAP ANCHORS AT 16' O C
19. SUBMIT STEEL SHOP DRAWINGS FOR REVIEW PRIOR TO FABRICATION. STRUCTURAL STEEL SHOP DRAWINGS AND CONNECTION DESIGNS SHALL BE STAMPED AND SIGNED BY A PROFESSIONAL ENGINEER, LICENSED IN THE STATE OF NEW YORK.
20. INSTALL STEEL ANCHORS AS REQUIRED FOR FALL PROTECTION SYSTEM WHILE ERECTING STEEL AS PER OSHA STANDARDS REQUIREMENTS.

MASONRY

1. ALL MASONRY WORK SHALL CONFORM TO ALL THE REQUIREMENTS OF THE NEW YORK CITY BUILDING CODE AND ACI 530 BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES AND AMENDMENTS, AND ACI 530.1 SPECIFICATIONS FOR MASONRY STRUCTURES.
2. CONCRETE MASONRY UNITS SHALL CONFORM TO ASTM C-129 AND SHALL HAVE SUFFICIENT COMPRESSIVE STRENGTH TO PROVIDE THE REQUIRED MASONRY COMPRESSIVE STRENGTH (WITH TYPE 'M' MORTAR) F'M, AS INDICATED. UNITS SHALL HAVE A COMPRESSIVE STRENGTH OF 3,000 PSI OVER THE NET AREA.
3. MORTAR FOR MASONRY SHALL BE TYPE "M" CONFORMING TO ASTM C-270. MORTAR COLOR FOR EXPOSED MASONRY TO CONFORM TO ARCHITECTURAL DRAWINGS.
4. GROUT SHALL CONFORM TO ASTM C-476.
5. NO AIR ENTRAINING ADMIXTURES SHALL BE USED IN MORTAR. CALCIUM CHLORIDE OR ADMIXTURES CONTAINING CALCIUM CHLORIDE SHALL NOT BE USED IN MORTAR OR GROUT.
6. REINFORCING BARS FOR REINFORCED MASONRY SHALL BE IN ACCORDANCE WITH ASTM A-615 GRADE 60.
7. GROUT FOR FILLING REINFORCED AND NON-REINFORCED CELLS SHALL BE FLUID AND PLACED BY ACCEPTABLE GROUTING PROCEDURES. GROUT SHALL BE PLACED IN MAXIMUM 4 FOOT LIFTS AND CONSOLIDATED IN PLACE BY VIBRATING OR OTHER METHODS WHICH INSURE COMPLETE FILLING OF THE CELLS. ALL CELLS CONTAINING REINFORCING AND/OR ANCHOR BOLTS SHALL BE FULLY GROUTED.
8. ALL MASONRY SHALL BE CONSTRUCTED WITH FULL BED MORTAR AND FLUSH JOINTS.
9. PROVIDE VERTICAL REINFORCING BARS INDICATED IN SCHEDULE AT ENDS AND AT EACH SIDE OF CORNERS OF WALLS, AT EACH SIDE OF OPENINGS AND AT SPACING INDICATED.
10. PROVIDE U-BLOCK @ ROOF, FLOOR LEVELS, TOP OF WALLS AND @4'-0" O C VERT SPACING. REINFORCE WITH 2-#5 CONTINUOUS BOTTOM.
11. PROVIDE STANDARD DUR-O-WALL 9 GAGE WIRE REINFORCING AT 16 INCHES O C FOR FULL HEIGHT OF WALL. SEE ARCH'L DRAWINGS FOR MORE DETAILS.
12. WHERE CMU IS SUPPORTED BY STEEL MEMBERS PROVIDE 5/8 "∅ RODS X 2'-6" LONG WELDED TO TOP OF SUPPORTING STEEL. GROUT REINFORCED CMU CELLS SOLID (TYP).

CONCRETE:

1. REINFORCED CONCRETE IN THE FOUNDATION (I.E. FOUNDATION WALLS, GRADE BEAM, PILE CAPS, PIER & SLAB ON GROUND) SHALL BE OF NATURAL AGGREGATES CONFORMING TO ASTM C-33 AND SHALL DEVELOP A MINIMUM COMPRESSIVE STRENGTH OF 6000 PSI @ 28 DAYS UNLESS OTHERWISE NOTED. REINFORCED CONCRETE FOR THE SUPERSTRUCTURE SHALL BE AIR-ENTRAINED NORMAL WEIGHT CONCRETE WITH A MINIMUM COMPRESSIVE STRENGTH OF 6000 PSI AT 28 DAYS AND A MAXIMUM WATER-TO-CEMENT RATIO OF 0.40.
2. SLABS ON METAL DECK - LIGHTWEIGHT AGGREGATES CONFORMING TO ASTM C-330; AND SHALL DEVELOP A COMPRESSIVE STRENGTH OF 3500 PSI @ 28 DAYS; CONCRETE SHALL BE AIR ENTRAINED WITH MAXIMUM 6% AND AGGREGATES SHALL BE A ROTARY KILN PRODUCT WITH A MINIMUM SPLITTING STRENGTH OF 312 PSI
3. REINFORCEMENT SHALL BE HIGH TENSILE GRADE DEFORMED BARS CONFORMING TO: ASTM A-615 GRADE 60, EXCEPT #3 BARS WHICH SHALL CONFORM TO ASTM A-615 GRADE 40, WELDED WIRE FABRIC SHALL CONFORM TO ASTM A-185.
4. CALCIUM CHLORIDE, ADMIXTURES CONTAINING THIOCYANATE OR ADMIXTURES CONTAINING MORE THAN 0.05 PERCENT CHLORIDE IONS SHALL NOT BE USED
5. FOLLOW ACI RULES AS TO STIRRUPS. ANCHORAGE, TEMPERATURE REINFORCEMENT AND SPACING OF BARS IN BEAMS UNLESS OTHERWISE NOTED.
6. ALL CONCRETE EXPOSED TO THE WEATHER TO BE AIR ENTRAINED AND SHALL CONFORM TO ASTM C-260.
7. REINFORCING BARS SPLICED AT POINTS OF STRESS TO BE LAPPED A MINIMUM OF 40 DIAMETERS.
8. ALL HORIZONTAL WALL REINFORCING SHALL BE CONTINUOUS. LAP TO BE 36 DIAMETERS MINIMUM.
9. PROVIDE SUPPORTS FOR REINFORCEMENT IN ACCORDANCE WITH ACI STANDARDS.
10. MINIMUM BEARING ON WALL SHALL BE 8" FOR BEAMS AND 4" FOR SLABS, EXCEPT AS NOTED OTHERWISE.
11. KEYS IN ALL WALLS 12" OR SMALLER SHALL BE 2"X4"; IN THICKER WALLS, 2"X 8".
12. CONTRACTOR SHALL NOTE AND PROVIDE ALL MISCELLANEOUS CURBS, EQUIPMENT AND MECHANICAL BASES THAT ARE REQUIRED BY THE ARCHITECTURAL AND MECHANICAL DRAWINGS.
13. ALL CONCRETE FILL AREAS ARE TO BE REINFORCED WITH WELDED WIRE FABRIC 6X6 W1.4 X W1.4.
14. ALL REINFORCING BARS TO BE EPOXY COATED.
15. ALL REINFORCING BARS SHALL BE ACCURATELY PLACED AND SECURELY WIRED TO PREVENT DISLOCATION FROM PROPER POSITION. INDICATE ALL CONCRETE COVER ON THE SHOP DRAWINGS SUBMITTED FOR REVIEW.

CONCRETE PROTECTION FOR REINFORCEMENT	
CONDITION	MINIMUM COVER
CAST AGAINST PERMANENTLY EXPOSED TO EARTH	3"
CONCRETE EXPOSED TO EARTH AND WEATHER	2" FOR #6 THRU #14 BARS 1 1/2" FOR #5 AND SMALLER
CONCRETE NOT EXPOSED TO EARTH AND WEATHER	1" FOR SLAB, WALL 1 1/2" FOR BEAM AND COLUMN PRIMARY REINF, TIES AND STIRRUPS AND SPIRALS

PRECAST CONCRETE

1. THE DESIGN, FABRICATION & ERECTION OF ALL PRECAST CONCRETE (P.C.) SHALL BE THE RESPONSIBILITY OF THE P.C. MANUFACTURER.
2. THE P.C. MANUFACTURER SHALL SUBMIT CALCULATIONS AND SHOP DRAWINGS, BEARING THE SIGN AND DATED SEAL OF A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF MARYLAND, FOR ALL P.C. MEMBERS. THE SHOP DRAWINGS SHALL INCLUDE ALL REINFORCING, INSERTS, BEARING PADS, OPENINGS, BEARING PLATES AND ANCHORS. ALL SHOP DRAWINGS AND CALCULATIONS SHALL BE REVIEWED AND APPROVED BY THE ENGINEER OF RECORD PRIOR TO ANY FABRICATION OF PRECAST PIECES.
3. THE P.C. MANUFACTURER SHALL BE A P.C.I. CERTIFIED PLANT AND SHALL MAINTAIN DETAILED FABRICATION AND QUALITY CONTROL PROCEDURES AS REQUIRED TO SATISFY IN IBC 2018 AND SECTION 1704.4
4. ALL P.C. CONCRETE SHALL HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 6000 PSI. CONCRETE PERMANENTLY EXPOSED TO EARTH OR WEATHER SHALL BE AIR-ENTRAINED TO 5% (+/-1%) WITH AN ADMIXTURE THAT CONFORMS TO ASTM C260.
5. ALL NON-SHRINK GROUT SHALL HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 5000 PSI AND SHALL CONFORM TO ASTM C1107
6. UNLESS GREATER STRENGTH IS REQUIRED BY THE P.C. MANUFACTURER, ALL REINFORCING MATERIALS SHALL CONFORM TO THE FOLLOWING:

REINFORCING	ASTM	MIN STRENGTH
REINFORCING BARS	A615	60 KSI

7. ALL REINFORCING BARS SHALL BE EPOXY-COATED IN ACCORDANCE WITH ASTM A775.
8. THE P.C. MANUFACTURER SHALL PROVIDE MINIMUM CLEAR COVER TO REINFORCING IN ACCORDANCE WITH ACI 318-14.
9. CONNECTION DETAILS SHOWN ARE SCHEMATIC ONLY. ALL CONNECTION DETAILS SHALL BE DESIGNED BY THE P.C. MANUFACTURER TO SUIT THE SPECIFIED LOADINGS. ALL CONNECTIONS SHALL ACCOUNT FOR THERMAL MOVEMENT, SHRINKAGE AND CREEP OF THE P.C. MEMBERS.
10. ALL WELDED PLATES, INSERTS, ANCHOR BOLTS, WELDING, LIFTING HARDWARE, GROUT SLEEVES, ETC. SHALL BE DESIGNED AND PROVIDED BY THE P.C. MANUFACTURER. UNLESS OTHERWISE NOTED, ALL CONNECTIONS CONNECTING CONCRETE PRECAST ELEMENTS AND THEIR EMEDS AND ATTACHMENTS SHALL BE STAINLESS STEEL TYPE S31600. AVOID CONTACT BETWEEN STAINLESS STEEL EMBEDS AND REINFORCING REBAR.
11. PRECAST MANUFACTURER SHALL PROVIDE AND COORDINATE WITH THE G.C. ALL REQUIRED EMBEDS & PRECAST ATTACHMENTS WHICH NEED TO BE EMBED INTO THE CAST-IN-PLACE CONCRETE PORTION. INFORMATION SHALL BE SUBMITTED TO THE A/E FOR REVIEW & APPROVAL PRIOR TO ANY FABRICATION AND/OR INSTALLATION OF WORK.
12. STRUCTURAL PRECAST ELEMENTS TO HAVE GRADE FINISH B, UNLESS OTHERWISE NOTED.
13. ALL STEEL AND FASTENERS SHALL BE STAINLESS STEEL TYPE S31600.
14. STAINLESS STEEL NUTS AND BOLTS / RODS SHALL BE DELIVERED AS MATED ASSEMBLIES.

STRUCTURAL METAL DECK

1. ALL METAL FLOOR & ROOF DECKING SHALL BE FORMED FROM GALVANIC STEEL SHEETS CONFORMING TO ASTM A653 WITH A MINIMUM YIELD STRENGTH OF 33,000PSI.
2. MATERIAL FOR FLOOR DECK SHALL BE COMPOSITE DECK TYPE AND SHALL BE FORMED WITH INTEGRAL LOCKING LUGS TO PROVIDE A MECHANICAL BOND BETWEEN CONCRETE AND DECK.
3. GALVANIZING SHALL CONFORM TO THE REQUIREMENTS OF ASTM A525 COATING CLASS G90.
4. DEPTH AND GAGE OF DECK SHALL BE AS NOTED ON PLANS.
5. THE METAL DECK SHALL BE CONTINUOUS OVER THREE (3) SPANS OR MORE WHERE POSSIBLE. USE SINGLE OR DOUBLE SPAN ONLY WHERE REQUIRED BY FRAMING GEOMETRY.
6. ALL STEEL FLOOR DECK SHALL BE CAPABLE OF SUPPORTING THE WET WEIGHT OF THE CONCRETE AND ANYOTHER CONSTRUCTION LOADS. DEFLECTION DUE TO WET WEIGHT OF THE CONCRETE SHALL NOT EXCEED 1/180 OF ANY SPAN OR 1/2".
7. PROVIDE 3" MINIMUM BEARING AT SUPPORTS UNLESS OTHERWISE NOTED.
8. ALL DECK SHALL BE WELDED TO STRUCTURAL STEEL BY QUALIFIED WELDERS USING PRE-QUALIFIED PROCEDURES. METAL DECK SHALL BE ATTACHED TO ALL SUPPORTS WITH 5/8" DIAMETER PUDDLE WELDS AT 12" O.C. AND 6" O.C. AT ALL PERIMETER SUPPORTS. SIDE LAPS BETWEEN ADJACENT DECK UNITS SHALL BE LOCKED BY WELDING AT INTERVALS NOT EXCEEDING 24 INCHES ON CENTER OR HALF OF THE SPAN BETWEEN SUPPORTS, WHICHEVER IS LESS.
9. PROVIDE ALL DECK CLOSURES, COLUMN CLOSURES, POUR STOPS, CANT STRIPS, SUMP PLATES AND SUPPLEMENTAL FRAMING AT OPENINGS AS REQUIRED FOR SUPPORT OF MDETAL DECK. PROVIDE ALL MISCELLANEOUS EDGE ANGLES TO SUPPORT DECK WHERE PRIMARY STEEL DOES NOT OCCUR. THESE ITEMS ARE NOT SHOWN ON THE DESIGN DRAWINGS BUT SHALL BE FURNISHED BY THE METAL DECK CONTRACTOR WHERE REQUIRED.
10. ALL OPENINGS SHALL BE COORDINATED WITH ARCHITECTURAL AND MEP DRAWINGS. FOR HOLES 4 INCHES OR LESS NO REINFORCING IS REQUIRED. FOR HOLES OVER 6 INCHES BUT NOT MORE THAN 10 INCHES, PROVIDE 12 GAGE REINFORCING PLATE WELDED IN PLACE TO ADJACENT FLUTES. FRAME OTHER OPENINGS AS SHOWN ON DRAWINGS.

BID SET

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DRAWN BY: UNGELLI PICARDAL, P.E.
CHECKED BY: MOHAMED YOUSEF, P.E.
DESIGN LEAD: MOSTAFA ELMORSI, P.E.
PROJECT MANAGER: AIMEE BOULET, P.E.

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STATE OF NEW YORK MOSTAFA SAAD ELDINE ELMORSI 085873 LICENSED PROFESSIONAL ENGINEER

NYC Environmental Protection

ACCOUNTABLE MANAGER	JOHN GOULAS, P.E.
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EXECUTIVE DIRECTOR	NAYANKUMAR SHAH, P.E.

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CAPITAL PROJECT WP-269
RECONSTRUCTION OF PAERDEGAT PUMPING STATION
CONTRACT PS-318
STRUCTURAL
GENERAL NOTES

DATE: OCTOBER 2026
SCALE: AS INDICATED
SHEET NO: 55 OF 274
DRAWING NO. SG-001.00

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DESIGN CRITERIA

ITEM	VALUE
BUILDING OCCUPANCY CATEGORY:	IV

DEAD LOADS:

THE SELF-WEIGHT OF EACH MATERIAL SHALL BE CALCULATED USING THE FOLLOWING BULK DENSITIES, MATERIAL AND SELF-WEIGHT.

MATERIAL	UNIT WEIGHT (PCF)
REINFORCED CONCRETE	150
STEEL	490
SOIL	120

LIVE LOADS:

CONCRETE PAD LOADS	PER MEP DRAWINGS
CATWALKS FOR MAINTENANCE	100 PSF
EQUIPMENT LOAD	AS SHOWN ON PLANS
MECHANICAL EQUIPMENT AND PUMP ROOM	100 PSF
SIDEWALKS	300 PSF
STAIRS AND EXITS	100 PSF
STORAGE (LIGHT)	125 PSF
WALKWAYS AND ELEVATED PLATFORMS	100 PSF

SNOW LOADS:

GROUND SNOW LOAD	25 PSF
SNOW LOAD IMPORTANCE FACTOR	Is = 1.2
SNOW EXPOSURE FACTOR	Ce= 1.0
THERMAL FACTOR	Ct = 1.1

FLOOD LOADS:

FLOOD ZONE	AE
DESIGN FLOOD ELEVATION	14.5 (NAVD88)
BASE FLOOD ELEVATION	13.5 (NAVD88)
GROUNDWATER ELEVATION PER GEOTECH REPORT	9.2 (NAVD88)

WIND LOADS:

BASIC WIND SPEED	132 MPH
WIND IMPORTANCE FACTOR	Iw = 1.15
EXPOSURE CATEGORY	C

SEISMIC LOADS:

MAPPED SPECTRAL ACCELERATION FOR SHORT PERIOD	Ss = 0.296 G
MAPPED SPECTRAL ACCELERATION FOR 1 SECOND PERIOD	S1 = 0.061 G
DESIGN SPECTRAL RESPONSE ACCELERATION FOR SHORT PERIOD	Sds = 0.45 G
DESIGN SPECTRAL RESPONSE ACCELERATION FOR 1 SECOND PERIOD	Sd1 = 0.17 G
SITE CLASS	E
SEISMIC IMPORTANCE FACTOR	Ie = 1.5
SEISMIC DESIGN CATEGORY	D
ANALYSIS PROCEDURE	EQUIVALENT LATERAL FORCE PROCEDURE
STRUCTURAL FORCE RESISTING SYSTEM (GENERATOR PAD)	SPECIAL RC SHEAR WALLS
RESPONSE MODIFICATION FACTOR	R = 5
DEFLECTION AMPLIFICATION FACTOR	Cd = 5
STRUCTURE OVERSTRENGTH FACTOR	Ωo = 2.5

SHOP DRAWINGS

SHOP DRAWING SUBMITTALS SHALL INCLUDE THE FOLLOWING (U.N.O):

A. CONCRETE MIX DESIGN.
B. FOUNDATION REINFORCING BARS.
C. STRUCTURAL STEEL. SHOP DRAWINGS AND CALCULATIONS SIGNED AND SEALED BY CONTRACTOR RETAINED PROFESSIONAL ENGINEER LICENSED IN THE STATE OF NEW YORK.
D. STAIRS SHOP DRAWINGS & CALCULATIONS SIGNED & SEALED BY A CONTRACTOR RETAINED PROFESSIONAL ENGINEER LICENSED IN THE STATE OF NEW YORK.

SPECIAL INSPECTIONS

SPECIAL INSPECTIONS SHALL BE PROVIDED BY THE CONTRACTOR AND SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 1704 OF NYC BUILDING CODE AND COORDINATED WITH "TESTING" AND " GENERAL REQUIREMENTS" SPECIFICATIONS. THE FOLLOWING AREAS OF WORK REQUIRE SPECIAL INSPECTIONS IN ACCORDANCE WITH THE LISTED BUILDING CODE SECTIONS/LOCATIONS:

A. SOILS - SECTION 1704.7.
B. DEEP FOUNDATION - SECTION 1704.8.
C. CONCRETE - SECTION 1704.4 PER TABLE 1704.4.
D. CONCRETE TEST CYLINDERS SECTION 1905.
E. CONCRETE DESIGN MIX SECTION 1905.
F. STEEL - SECTION 1704.3 PER TABLE 1704.3.
G. FINAL INSPECTION.

EXISTING CONDITIONS

1. WORK SHALL CONFORM TO THE LATEST EDITION OF ALL APPLICABLE REFERENCES, SPECIFICATIONS AND TO GOVERNING BUILDING CODES AND REQUIREMENTS OF AUTHORITIES HAVING JURISDICTION.
2. CONTRACTOR SHALL SUBMIT SIGNED AND SEALED DRAWINGS AND CALCULATIONS BY A REGISTERED PROFESSIONAL ENGINEER IN THE STATE OF NEW YORK CONTAINING BRACING AND SHORING NECESSARY TO SUPPORT ALL DEMOLITION OPERATIONS, AND ADJOINING STRUCTURES AS NEEDED THROUGH ALL SEQUENCES OF THE DEMOLITION AND CONSTRUCTION OF NEW SLABS.
3. THE CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS (AS-BUILT CONSTRUCTION) IN FIELD BEFORE PROCEEDING WITH NEW WORK. ANY DEVIATIONS, FROM THAT SHOWN ON THE EXISTING DRAWINGS, SHALL BE REPORTED TO THE ENGINEER.
4. DO NOT DISTURB EXISTING FRAMING THAT IS TO REMAIN AND SUPPORT THE NEW LOADS IN THE FUTURE. PROVIDE ALL TEMPORARY SUPPORTS AS REQUIRED.
5. CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR PROVIDING ALL TEMPORARY SHORING, BRACING; AND SUPPORTS, ETC IN ORDER TO MAINTAIN SAFETY DURING CONSTRUCTION.
6. ALL NEW OPENINGS TO BE CUT IN EXISTING BEAMS, SLABS AND WALLS SHALL BE DONE WITH A SAW IN ORDER NOT TO DISTURB THE INTEGRITY OF THE EXISTING REMAINING CONCRETE AND THE REINFORCEMENT THAT IS TO BE LEFT INTACT UNLESS OTHERWISE NOTED ON DRAWINGS.
7. VIBRATORY HAMMERS SHALL NOT BE PERMITTED. HOE RAMS WILL NOT BE PERMITTED WITHIN 25 FEET OF EXISTING STRUCTURES.
8. WHERE EXISTING WORK IS TO BE CUT, THE CONTRACTOR SHALL PROVIDE ALL NEEDLING, SHORING, BRACING AND WEDGING AS REQUIRED AND SHALL BE SOLELY RESPONSIBLE FOR THE SAFETY OF THE STRUCTURE DURING THE PERFORMANCE OF HIS WORK.
9. THE CONTRACTOR SHALL REPAIR AND PATCH ANY AREAS THAT ARE ALTERED OR DAMAGED DURING THE PROCESS OF ALTERATION.
10. ALL CRACKS AND DAMAGES IN THE REMAINING CONCRETE WALLS AND SLABS INSIDE THE EXISTING BUILDING SHALL BE REPAIRED AS PER PROJECT SPECIFICATIONS.
11. THE CONTRACTOR SHALL MAKE CONTINUOUS OBSERVATIONS OF THE EXISTING STRUCTURE DURING THE PERFORMANCE OF HIS WORK. SHOULD ANY CONDITIONS, (SUCH AS CRACKS IN MASONRY AND PARTITIONS, ADDITIONAL DEFLECTIONS; ETC.), BECOME EVIDENT, HE SHALL NOTIFY THE ENGINEER.
12. EXISTING CONCRETE SURFACE PREPARATION: INTENTIONALLY ROUGHEN EXISTING CONCRETE SURFACES WHERE NEW CONCRETE IS BEING PLACED AGAINST THE EXISTING CONCRETE AND CONNECTED BY DRILLING AND EPOXY GROUTING. THE ENTIRE COMMON SURFACE WHERE THE EXISTING CONCRETE ABUTS THE NEW SHALL BE COATED WITH AN EPOXY BONDING AGENT. FOLLOW ALL ADDITIONAL REQUIREMENTS OF SURFACE REPARATION AS REQUIRED BY THE BONDING AGENT MANUFACTURER AND AS SHOWN IN THE PROJECT SPECIFICATIONS.
13. DEMOLITION SHALL BE SUBJECT TO SPECIAL INSPECTION IN ACCORDANCE WITH THE LATEST EDITION OF NYC BUILDING CODE.
14. THE CONTRACTOR SHALL INCORPORATE A SITE DEWATERING PLAN AS REQUIRED. THE PLAN SHALL CONSIDER EFFECTS TO ADJACENT STRUCTURES.

DEFERRED DESIGN SUBMITTALS:

1. DEFERRED DESIGN SUBMITTALS ARE ELEMENTS AND SCOPE OF THE BUILDING CONSTRUCTION DEFERRED TO THE CONTRACTORS ENGINEER FOR DESIGN.
2. THE CONTRACTOR SHALL EMPLOY THE SERVICES OF A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF NEW YORK TO PERFORM THE DESIGN FOR ALL DEFERRED DESIGN SUBMITTALS.
3. THE CONTRACTOR SHALL SUBMIT DRAWINGS AND COMPUTATIONS, SIGNED AND SEALED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF NEW YORK FOR REVIEW BY THE ENGINEER OF RECORD FOR THE BUILDING. THE ENGINEER OF RECORD WILL REVIEW SUBMITTALS FOR CONFORMANCE WITH THE BUILDING DESIGN INTENT AND LOADS IMPOSED ON THE BUILDING STRUCTURE.
4. DEFERRED DESIGN SUBMITTALS INCLUDE THE FOLLOWING:
   A. STEEL CONNECTIONS
   B. SUPPORT OF EXCAVATION
   C. DEMOLITION
   D. TEMPORARY SHORING/BRACING
   E. STAINLESS STEEL STAIRS
   F. SHEET PILING
   G. MICROPILE
   H. PRECAST PANEL

FOUNDATIONS

1. THE FOUNDATION DESIGN IS BASED ON THE FOLLOWING CRITERIA (REFER TO GEOTECHNICAL MEMORANDUM BY AECOM DATED NOVEMBER 2023):

A. PILE SPECIFICATIONS:
- MAXIMUM ALLOWABLE PILE DOWNDRAG LOAD = 135 KIPS
- MAXIMUM ALLOWABLE NET COMPRESSIVE CAPACITY = 120 KIPS
- MAXIMUM ALLOWABLE TENSILE CAPACITY = 250 KIPS
- MAXIMUM ALLOWABLE LATERAL CAPACITY = 10.6 KIPS
- STEEL CASING OUTSIDE DIAMETER = 10.75 IN
- STEEL CASING THICKNESS = 0.5000 IN
- REINFORCING BAR: 1 # 11
- MINIMUM CASING LENGTH (MEASURED FROM BOTTOM OF SLAB) = 29 FT
- MINIMUM ESTIMATED BOND LENGTH (MEASURED FROM BOTTOM OF CASING) = 60 FT
- MINIMUM ESTIMATED TOTAL LENGTH (MEASURED FROM BOTTOM OF SLAB) = MINIMUM CASING LENGTH + MINIMUM ESTIMATED BOND LENGTH

B. THE STEEL CASING MUST HAVE MINIMUM YIELD STRENGTHS OF 50,000 POUNDS PER SQUARE INCH (PSI).

C. THE REINFORCING BAR MUST HAVE A MINIMUM YIELD STRENGTH OF 75,000 PSI.

D. THE GROUT MUST HAVE MINIMUM COMPRESSION STRENGTH OF 5,000 PSI.

E. THE CENTER TO CENTER SPACING OF MICROPILES SHOULD BE AT LEAST 3 TIMES THE OUTSIDE DIAMETER OF THE CASING, BUT NOT LESS THAN 3 FEET.

G. THE ESTIMATED TOTAL LENGTH ASSUMES THAT PILE CAPACITY WILL BE OBTAINED WITHIN THE MEDIUM DENSE SAND MATERIAL BELOW THE FILL AS SHOWN IN THE BORINGS PERFORMED BY JERSEY BORING AND DRILLING, INC. BETWEEN MAY 1, 2023 AND MAY 10, 2023. ALL CASINGS MUST EXTEND AT LEAST TO THE BOTTOM OF THE FILL LAYER.

H. THE BOND LENGTH IS ESTIMATED AND MUST BE VERIFIED BASED ON THE RESULTS OF STATIC COMPRESSION LOAD TESTS PERFORMED PRIOR TO THE INSTALLATION OF PRODUCTION PILES. THE NEW YORK CITY BUILDING CODE (CODE) REQUIRES THAT 2 LOAD TESTS BE PERFORMED. THE MAXIMUM TEST LOAD SHOULD BE MAINTAINED FOR A MINIMUM OF 24 HOURS AND IN ACCORDANCE WITH CODE REQUIREMENTS.

I. BECAUSE THE REQUIRED LATERAL LOAD IS GREATER THAN 1 TON, THE CODE REQUIRES THAT TWO LATERAL LOAD TESTS BE PERFORMED. THE LATERAL LOAD TESTS MUST BE PERFORMED IN ACCORDANCE WITH ASTM D-3966 USING THE QUICK LOAD TEST OPTION AND IN ACCORDANCE WITH CODE REQUIREMENTS. THE ALLOWABLE LATERAL LOAD FOR A FREE-HEAD PILE WILL BE ONE-HALF THE LOAD THAT PRODUCES 1 INCH OF LATERAL MOVEMENT AT THE GROUND SURFACE. THE ALLOWABLE LATERAL LOAD FOR A FIXED-HEAD PILE SHALL BE BASED ON THE LATERAL PILE LOAD RESULTS AND THE RESULTS OF LATERAL PILE ANALYSES.

J. MICROPILES MUST BE INSTALLED BY A CONTRACTOR WITH EXPERIENCE ON SIMILAR PROJECTS. THE CONTRACTOR SHALL SUBMIT A CONSTRUCTION PROCEDURE TO THE ENGINEER FOR REVIEW AND APPROVAL PRIOR TO BEGINNING THE WORK. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO USE AN INSTALLATION METHOD THAT WILL NOT CAUSE DAMAGE TO ADJACENT STRUCTURES. THE USE OF AIR OR UNDERREAMERS TO ADVANCE THE CASING THROUGH THE OVERBURDEN MAY CAUSE DAMAGE TO ADJACENT STRUCTURES IF THE AIR CANNOT BE CONTAINED IN THE CASING. CONTROL OF THE AIR WILL DEPEND ON THE DRILLER'S EQUIPMENT, PROCEDURES, AND EXPERIENCE. THE USE OF AIR DURING ADVANCE OF THE CASING SHALL BE CLOSELY MONITORED BY THE SPECIAL INSPECTOR. IF THE DRILLER CANNOT CONTROL THE AIR, THEY WILL HAVE TO SWITCH TO ANOTHER METHOD, WHICH TYPICALLY CONSISTS OF USING WATER WITH NO AIR. THE USE OF WATER TO ADVANCE THE CASING MAY BE MUCH SLOWER THAN USING AIR; THEREFORE, THIS SHALL BE TAKEN INTO CONSIDERATION WHEN OBTAINING PRICING FROM THE CONTRACTOR.

K. ALL ASPECTS OF MICROPILE INSTALLATION SHALL BE INSPECTED ON A FULL-TIME BASIS BY A QUALIFIED PERSONNEL AND AS REQUIRED BY CODE.

ABBREVIATIONS

@	AT
ACI	AMERICAN CONCRETE INSTITUTE
ADD'L	ADDITIONAL
ARCH/ARCH'L	ARCHITECTURAL
B O STL	BOTTOM OF STEEL
BOT	BOTTOM
BM	BEAM
CANT	CANTILEVER
CL	CENTERLINE
CLR	CLEARANCE
COL	COLUMN
CONC	CONCRETE
CONT	CONTINUOUS
CMU	CONCRETE MASONRY UNIT
DEMO	DEMOLITION
DET	DETAIL
DIA	DIAMETER
DOT	DEPARTMENT OF TRANSPORTATION
DOWLS/DWLS	DOWELS
DWG	DRAWING
EA	EACH
EF	EACH FACE
EL	ELEVATION
ELECT	ELECTRICAL
EMBED	EMBEDDED/ EMBEDMENT
EQ	EQUAL
ES	EACH SIDE
EW	EACH WAY
EXIST	EXISTING
EXPAN/EXP	EXPANSION
FDN	FOUNDATION
FTG	FOOTING
GALV	GALVANIZED
GB	GRADE BEAM
HORIZ	HORIZONTAL
HP	HIGH POINT/HP STEEL SHAPE
HVAC	HEATING VENTILATION AIR CONDITIONING
ID	INSIDE DIAMETER
KB	KNEE BRACE
KSI	KIPS PER SQ INCH
LG	LONG
LLBB	LONG LEG BACK-TO-BACK
LLV	LONG LEG VERTICAL
LT/LW	LIGHT WEIGHT
MAX	MAXIMUM
MECH'L	MECHANICAL
MEP	MECHANICAL/ ELECTRICAL/PLUMBING
MIN	MINIMUM
NAVD88	NORTH AMERICA VERTICAL DATUM OF 1988
NO	NUMBER
OC, O/C	ON CENTER
OD	OUTSIDE DIAMETER
OPNG/OPN'G	OPENING
PC	PILE CAP
PL/ $\mathrm{P_L}$	PLATE
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
REINF	REINFORCING/ REINFORCEMENT
REQ'D	REQUIRED
SIM	SIMILAR
SOG	SLAB ON GRADE
STD	STANDARD
STL	STEEL
T&B/T&BOT	TOP AND BOTTOM
TO	TOP OF
TYP	TYPICAL
T/CONC	TOP OF CONCRETE
UNO	UNLESS NOTED OTHERWISE
UON	UNLESS OTHERWISE NOTED
VERT	VERTICAL
VIF	VERIFIED IN FIELD
W/	WITH
WF	WIDE FLANGE
WT	STRUCTURAL TEE
WWF	WELDED WIRE FABRIC

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CAPITAL PROJECT WP-269
RECONSTRUCTION
OF PAERDEGAT PUMPING STATION
CONTRACT PS-318
STRUCTURAL
GENERAL NOTES, ABBREVIATIONS

DATE: OCTOBER 2026
SCALE: AS INDICATED
SHEET NO: 56 OF 274
DRAWING NO. SG-002.00

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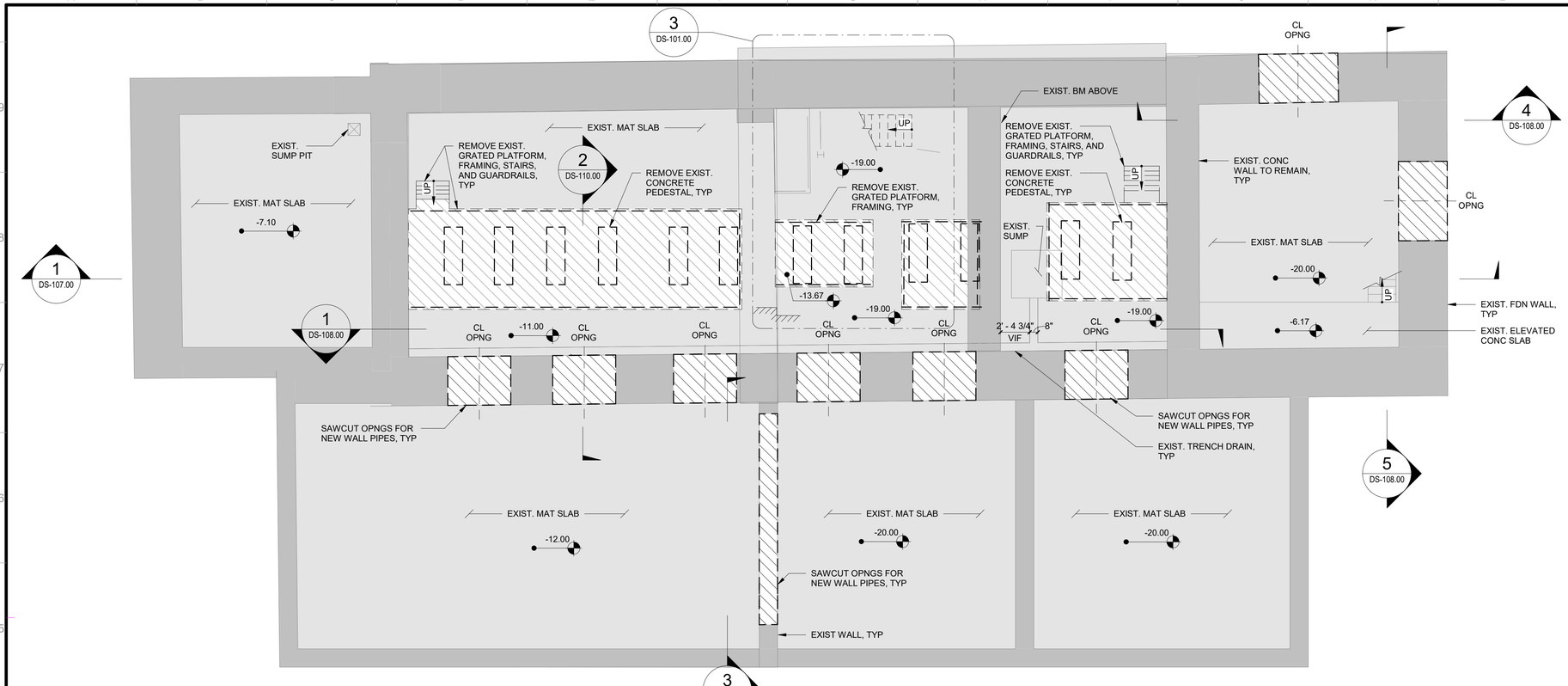
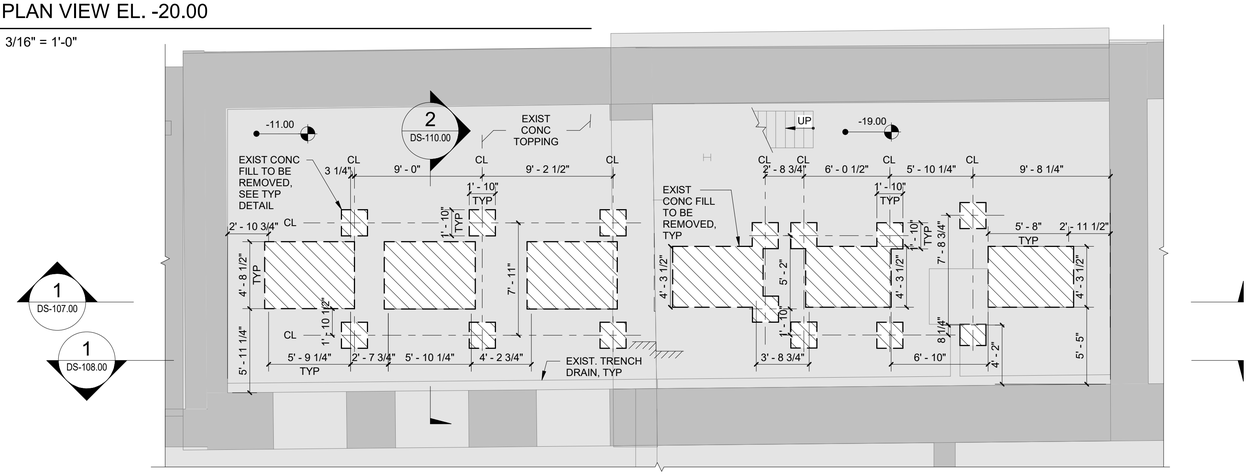


DEMOLITION SCREENING CHAMBER, WET WELL, LOWER PUMP ROOM, UPPER PUMP ROOM - PLATFORM LEVEL PLAN VIEW EL. -20.00

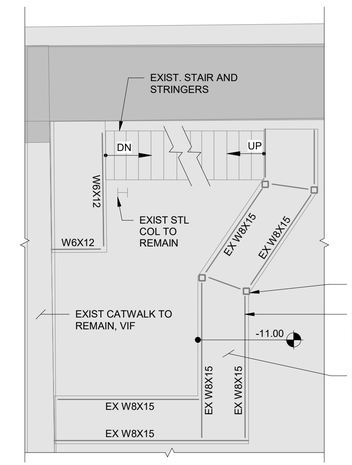
1 DS-101.00 — 3/16" = 1'-0"



DEMOLITION LOWER PUMP ROOM, UPPER PUMP ROOM PLAN VIEW EL. -12.00

2 DS-101.00 — 3/16" = 1'-0"

3/16"=1'-0" 0 5 10 FT.



3 DS-101.00 — EXIST CATWALK PART PLAN

1/4" = 1'-0"

1/4"=1'-0" 0 4 8 FT.

DEMOLITION NOTES / LEGEND:

1. FOR GENERAL NOTES SEE DRAWINGS SG-001 & SG-002.
2. CONTRACTOR TO VERIFY EXISTING FIELD CONDITIONS PRIOR TO DEMOLITION OF EXISTING SLAB OR OTHER BUILDING ELEMENTS.
3. ALL EXISTING FRAMING SHOWN IS BASED ON LIMITED FIELD OBSERVATIONS AND VARIOUS EXISTING DRAWINGS MADE AVAILABLE TO THE ENGINEER OF RECORD.
4. REFER TO ARCHITECTURAL DRAWINGS FOR DIMENSIONAL INFORMATION NOT SHOWN ON PLAN.
5. REFER TO MECHANICAL DRAWINGS FOR MECHANICAL UNIT LOCATIONS.
6. REFER TO DS-110 DRAWING FOR TYPICAL DEMOLITION DETAILS.
7. INDICATES EXISTING SLAB OPENING
8. INDICATES DEMOLITION EXTENT
9. INDICATES SLAB CHANGE IN ELEVATION

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DEMOLITION SCREENING CHAMBER, WET WELL, LOWER PUMP ROOM, UPPER PUMP ROOM

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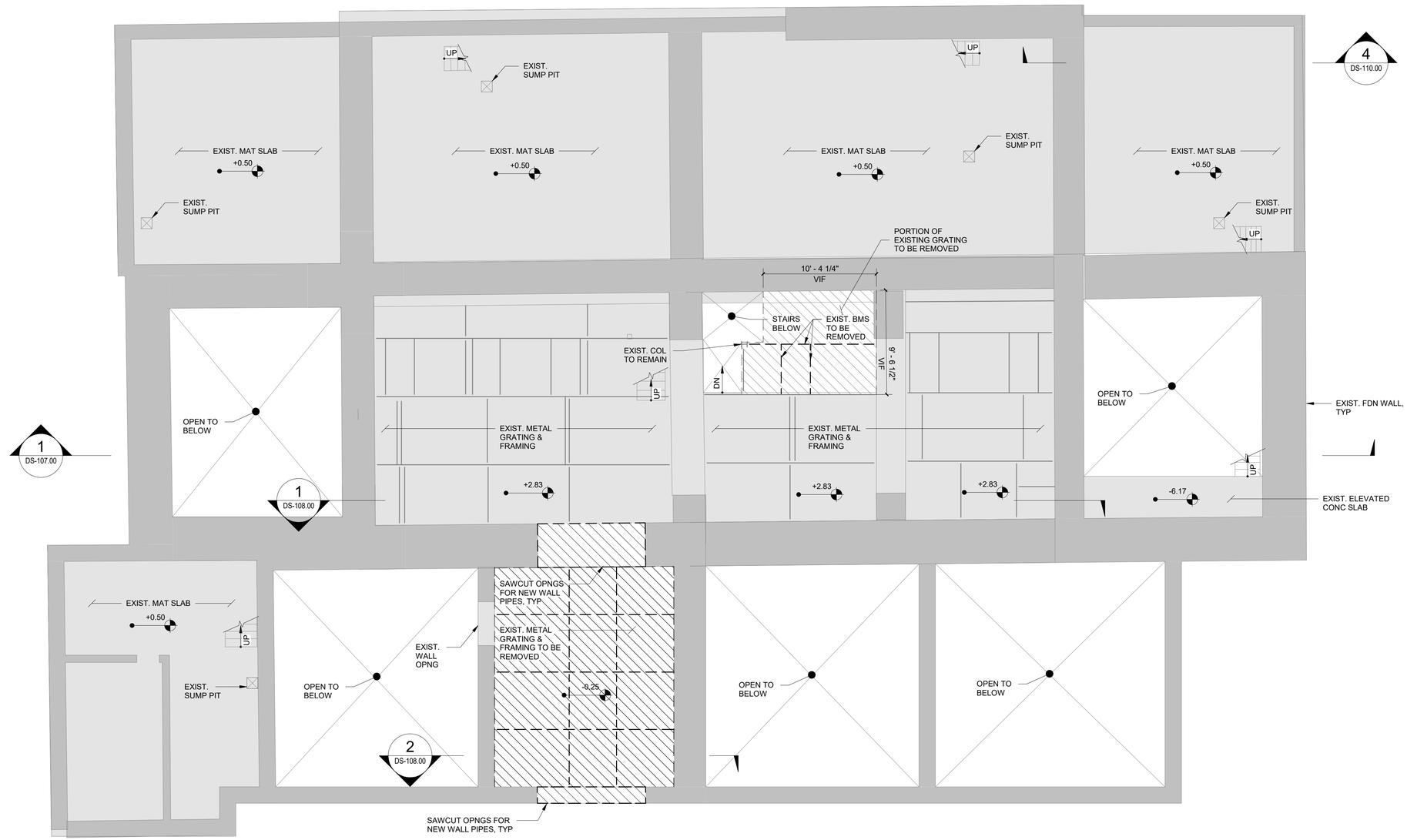

DEMOLITION DISCHARGE PIPING GALLERY, STORAGE ROOMS, ELECTRICAL CHAMBERS
PLAN VIEW EL. 2.83

1 DS-102.00

3/16" = 1'-0"

DEMOLITION NOTES / LEGEND:

1. FOR GENERAL NOTES SEE DRAWINGS SG-001 & SG-002.
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9. INDICATES SLAB CHANGE IN ELEVATION

N
TRUE NORTH
PLANT NORTH

0 5 10 FT.
3/16"=1'-0"

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NEW YORK, NY 10158, US

STATE OF NEW YORK · MOSTAFA HAAD ELDING ELMORSI · LICENSED PROFESSIONAL ENGINEER · 085573

Environmental Protection

ACCOUNTABLE MANAGER: JOHN GOULAS, P.E.
PORTFOLIO MANAGER: KEVIN ELLENWOOD, P.E.
EXECUTIVE DIRECTOR: NAYANKUMAR SHAH, P.E.

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NEW YORK CITY ENVIRONMENTAL PROTECTION
BUREAU OF ENGINEERING DESIGN & CONSTRUCTION
96-05 HORACE HARDING EXPRESSWAY 5th FLOOR
CORONA, NEW YORK 11368
www.nyc.gov/dep

CAPITAL PROJECT WP-269
RECONSTRUCTION OF PAERDEGAT PUMPING STATION
CONTRACT PS-318
STRUCTURAL
DEMOLITION DISCHARGE PIPING GALLERY, STORAGE ROOMS, ELECTRICAL CHAMBERS

DATE: OCTOBER 2026
SCALE: AS INDICATED
SHEET NO: 58 OF 274
DRAWING NO. DS-102.00

All inquiries regarding this drawing(s) or project should be made to NYC Environmental Protection, Bureau of Engineering Design and Construction.

Autodesk Docs://CI-AMER (USA) 60619010-PS-DES-5/PAER-S-MODEL_AECOM.rvt
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EXIST. CONC PAD TO BE REMOVED

EXIST MASONRY WALL AND FOUNDATION TO BE REMOVED

EXIST. CONC SLAB +13.50

EXIST. CONC PAD TO BE REMOVED

EXIST. CONC WALL BELOW, TYP

EXIST STAIR OPNG

EXIST. OPNG TO REMAIN

EXIST. OPNG TO REMAIN

EXIST. OPNG TO REMAIN

EXIST. CONC PAD TO BE REMOVED

EXIST. CONC SLAB +13.50

EXIST. CONC BEAM, TYP

EXIST. OPNG TO REMAIN

3 DS-110.00

4 DS-110.00

STAIR OPNG

EXISTING SIGN FOUNDATION TO BE REMOVED

EXIST. CONC PAD TO REMAIN

EXIST OPNG TO REMAIN

+13.50

STAIR OPNG

EXIST. CONC SLAB

REMOVE EXIST SLAB ON GRADE

EXIST. CONC PAD TO BE REMOVED

+13.50

EXIST STAIR OPNG

EXIST. STL FRAMING, TYP

EXIST. STL FRAMING, TYP

EXIST. GRATING

EXIST. GRATING

EXIST. STL FRAMING, TYP

EXIST. GRATING

REMOVE AND REPLACE CORRODED BRIDGE CRANE SUPPORT COLUMNS AND BASE PLATES

EXIST. SLAB ON GRADE

+12.92

+13.00

1 DS-107.00

EXIST. COL ABOVE, TYP

ACCESS HATCH AND LADDER TO BE REMOVED

STAIR OPNG

EXIST. CONC WALL BELOW

EXIST. CONC WALL BELOW

UP

EXIST. CONC BM BELOW

EXIST. FDN WALL BELOW, TYP

UP

EXIST BM TO REMAIN, TYP, VIF

EXIST BM

EXIST. CONC WALL BELOW

EXIST CONC WALL BELOW TO REMAIN, TYP

EXIST BM

3 1/2"

17' - 3"

+13.50

7' - 8 1/2" VIF

6' - 1" VIF

REMOVE EXISTING SLAB

EXIST. CONC SLAB

+13.50

EXIST. GRATING & FRAMING TO REMAIN

EXIST. GRATING & FRAMING TO REMAIN

+13.50

EXIST. CONC SLAB

REMOVE TOP BRICK LAYERS AT LOADING PLATFORM

EXIST CONC SLAB AT LOADING PLATFORM TO BE REMOVED WITHOUT DAMAGING EXIST BRICK WALL

EXIST BM

EXIST BM

10' - 9 1/4"

1' - 4 1/2"

EXIST BM

EXIST BM

1' - 1"

EXIST BM 1' - 0"

3' - 6 1/4"

EXIST. CONC BM BELOW

EXIST SLAB OPNG

11' - 0" VIF

REMOVE EXIST SLAB

6' - 5 1/4" VIF

1' - 1" VIF

EXIST. CONC WALL BELOW

EXIST BRICK WALL

EXIST BM

EXIST. CONC WALL BELOW TO REMAIN, TYP

UP

6' - 9 3/4"

EXIST CONC SLAB TO BE REMOVED

PARTIALLY REMOVE EXIST CONC PAD, SEE S-103.00 FOR EXTENT OF NEW PAD

EXIST. CONC PAD TO REMAIN, TYP

REMOVE EXIST CONC PAD

5' - 10 1/4" VIF

EXIST. CONC WALL BELOW

UP

+13.08

UP

EXIST SLAB TO REMAIN

EXIST DOCK LEVELLER TO BE REMOVED

7' - 4"

7' - 4"

PORTION OF EXISTING SLAB TO BE REMOVED, EACH SIDE

EXIST STEEL COL TO REMAIN, TYP

EXIST. CONC PAD TO BE REMOVED

N

TRUE NORTH

PLANT NORTH

0 5 10 FT.

3/16"=1'-0"

DEMOLITION NOTES / LEGEND:

1. FOR GENERAL NOTES SEE DRAWINGS SG-001 & SG-002.
2. CONTRACTOR TO VERIFY EXISTING FIELD CONDITIONS PRIOR TO DEMOLITION OF EXISTING SLAB OR OTHER BUILDING ELEMENTS.
3. ALL EXISTING FRAMING SHOWN IS BASED ON LIMITED FIELD OBSERVATIONS AND VARIOUS EXISTING DRAWINGS MADE AVAILABLE TO THE ENGINEER OF RECORD.
4. REFER TO ARCHITECTURAL DRAWINGS FOR DIMENSIONAL INFORMATION NOT SHOWN ON PLAN.
5. REFER TO MECHANICAL DRAWINGS FOR MECHANICAL UNIT LOCATIONS.
6. REFER TO DS-110 DRAWING FOR TYPICAL DEMOLITION DETAILS.
7. INDICATES EXISTING SLAB OPENING
8. INDICATES DEMOLITION EXTENT
9. INDICATES SLAB CHANGE IN ELEVATION

DEMOLITION GROUND FLOOR (MCC RM, OPEN AREA, HVAC RM, SCREENING CHAMBER, FAN RM, WET WELL, CORRIDOR, MECH EQUIP RM) PLAN VIEW EL. 13.50

1 DS-103.00

3/16" = 1'-0"

BID SET

SUBMITTAL DATE: OCTOBER 2026

GRAPHIC SCALES CHECK BEFORE USE

IF SHEET IS LESS THAN 22" X 34" IT IS A REDUCED PRINT. SCALE ACCORDINGLY

NO.	DATE	REVISIONS/DESCRIPTION	APPR'D.

DESIGNED BY: UNGELLI PICARDAL, P.E.
CHECKED BY: MOHAMED YOUSEF, P.E.
DESIGN LEAD: MOSTAFA ELMORSI, P.E.
PROJECT MANAGER: AIMEE BOULET, P.E.

DRAWN BY: UNGELLI PICARDAL, P.E.

AECOM
605 THIRD AVENUE, 3rd FL.
NEW YORK, NY 10158, US

STATE OF NEW YORK — MOSTAFA SAAD ELDINE ELMORSI — LICENSED PROFESSIONAL ENGINEER — 085573

NYC Environmental Protection

ACCOUNTABLE MANAGER: JOHN GOULAS, P.E.
PORTFOLIO MANAGER: KEVIN ELLENWOOD, P.E.
EXECUTIVE DIRECTOR: NAYANKUMAR SHAH, P.E.

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CAPITAL PROJECT WP-269
RECONSTRUCTION OF PAERDEGAT PUMPING STATION
CONTRACT PS-318
STRUCTURAL
DEMOLITION GROUND FLOOR (MCC RM, OPEN AREA, HVAC RM, SCREENING CHAMBER, FAN RM)

DATE: OCTOBER 2026
SCALE: AS INDICATED
SHEET NO: 59 OF 274
DRAWING NO. DS-103.00

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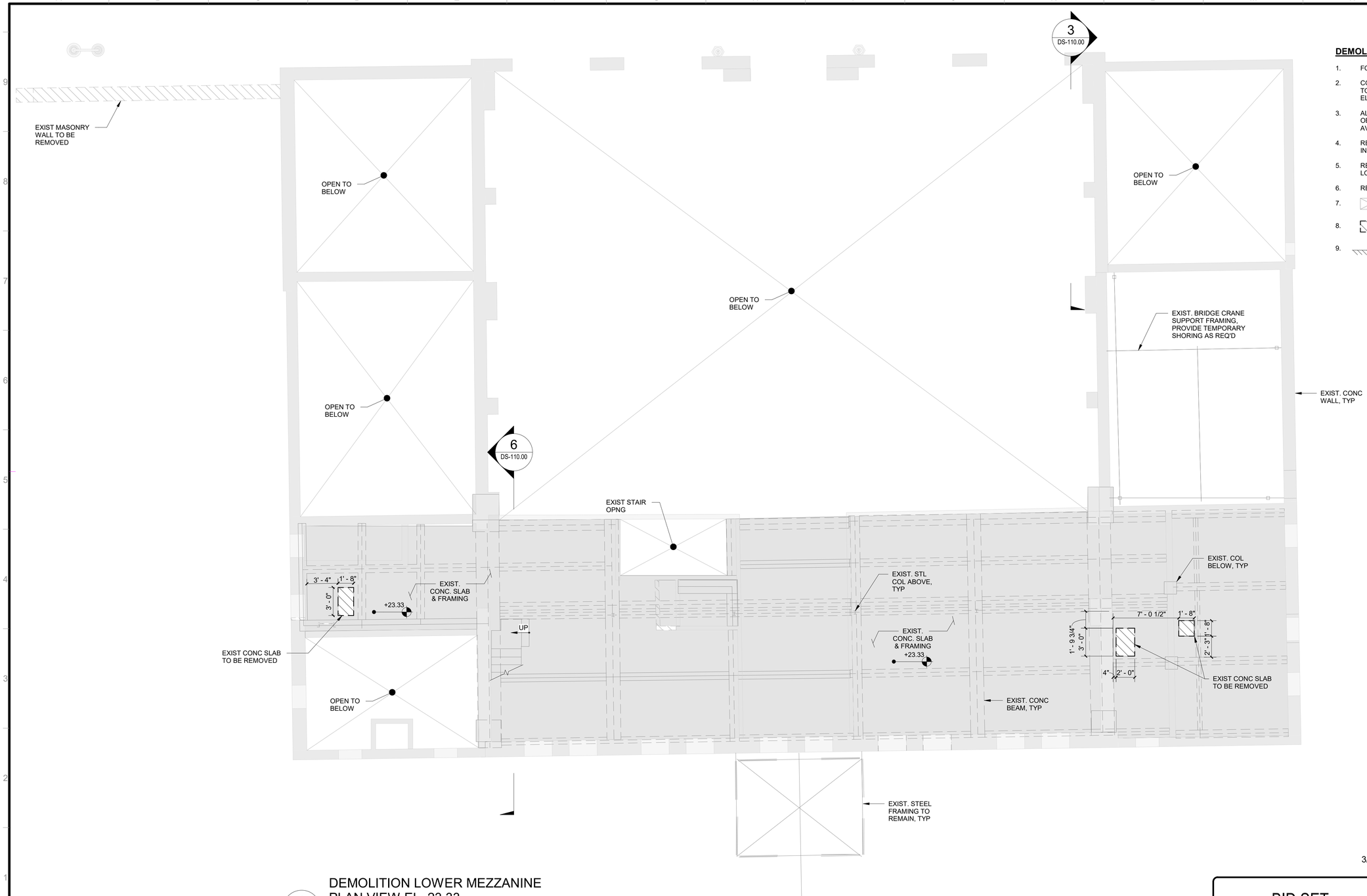

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9. INDICATES SLAB CHANGE IN ELEVATION

1 DS-104.00

DEMOLITION LOWER MEZZANINE
PLAN VIEW EL. 23.33

3/16" = 1'-0"

BID SET

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DRAWN BY: UNGELLI PICARDAL, P.E.

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CAPITAL PROJECT WP-269
RECONSTRUCTION OF PAERDEGAT PUMPING STATION
CONTRACT PS-318
STRUCTURAL
DEMOLITION LOWER MEZZANINE

DATE: OCTOBER 2026
SCALE: AS INDICATED
SHEET NO: 60 OF 274
DRAWING NO. DS-104.00

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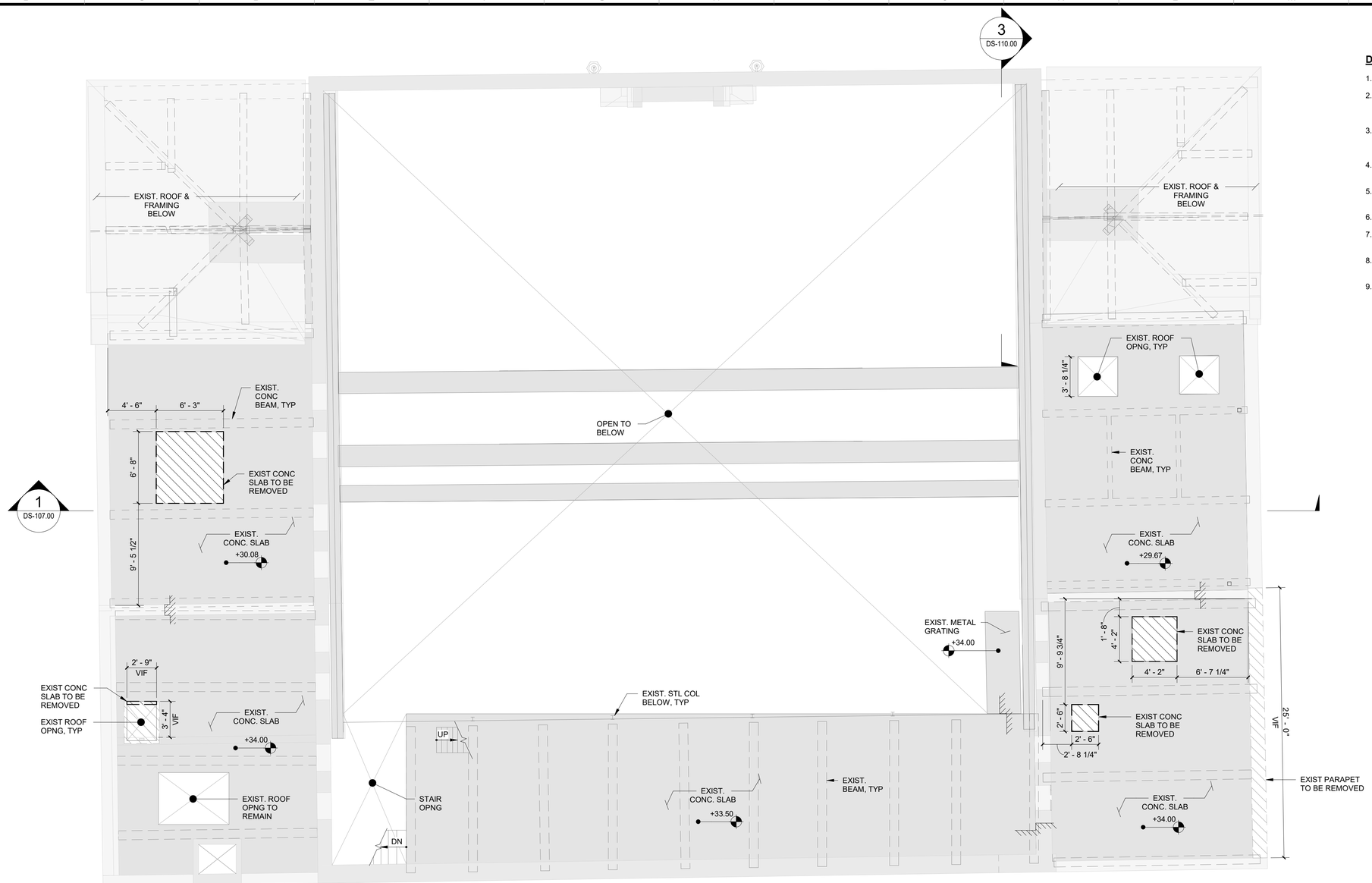

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9. INDICATES SLAB CHANGE IN ELEVATION

N

TRUE NORTH

PLANT NORTH

0 5 10 FT.

3/16"=1'-0"

DEMOLITION EAST AND WEST FLAT ROOFS AND UPPER MEZZANINE PLAN VIEW EL. 33.50

1 / DS-105.00

3/16" = 1'-0"

BID SET

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STATE OF NEW YORK MOSTAFA SAAD ELDINE ELMORSI 085513 LICENSED PROFESSIONAL ENGINEER

NYC Environmental Protection

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CONTRACT PS-318
STRUCTURAL
DEMOLITION EAST AND WEST FLAT ROOFS AND UPPER MEZZANINE

DATE: OCTOBER 2026
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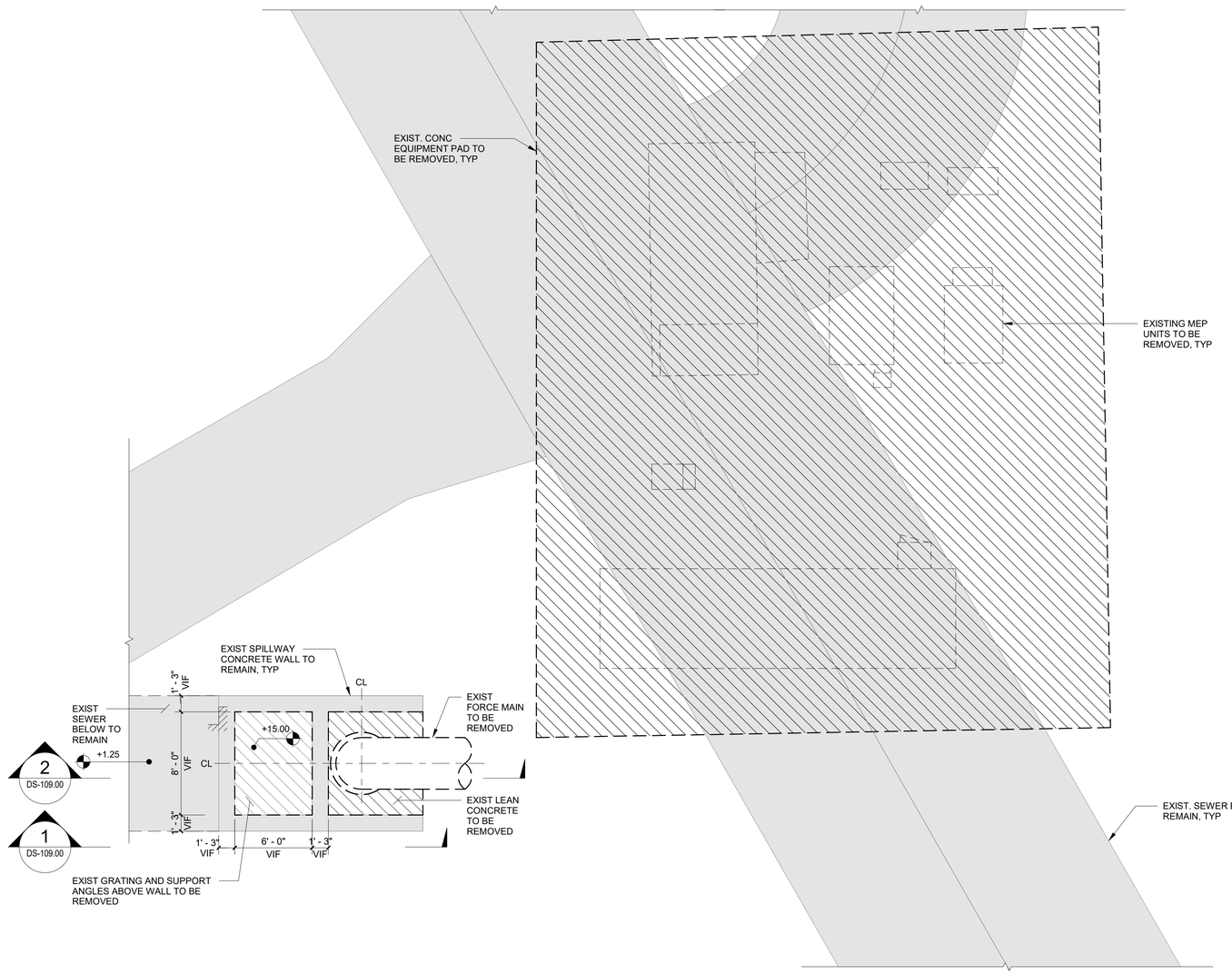

1 DS-106.00 GENERATOR AND SPILLWAY AREA PLAN VIEW EL. 15.00

3/16" = 1'-0"

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8. INDICATES DEMOLITION EXTENT
9. INDICATES SLAB CHANGE IN ELEVATION

N

TRUE NORTH

PLANT NORTH

0 5 10 FT.

3/16"=1'-0"

BID SET

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CAPITAL PROJECT WP-269
RECONSTRUCTION OF PAERDEGAT PUMPING STATION
CONTRACT PS-318
STRUCTURAL
DEMOLITION GENERATOR AND SPILLWAY AREA

DATE: OCTOBER 2026
SCALE: AS INDICATED
SHEET NO: 62 OF 274
DRAWING NO. DS-106.00

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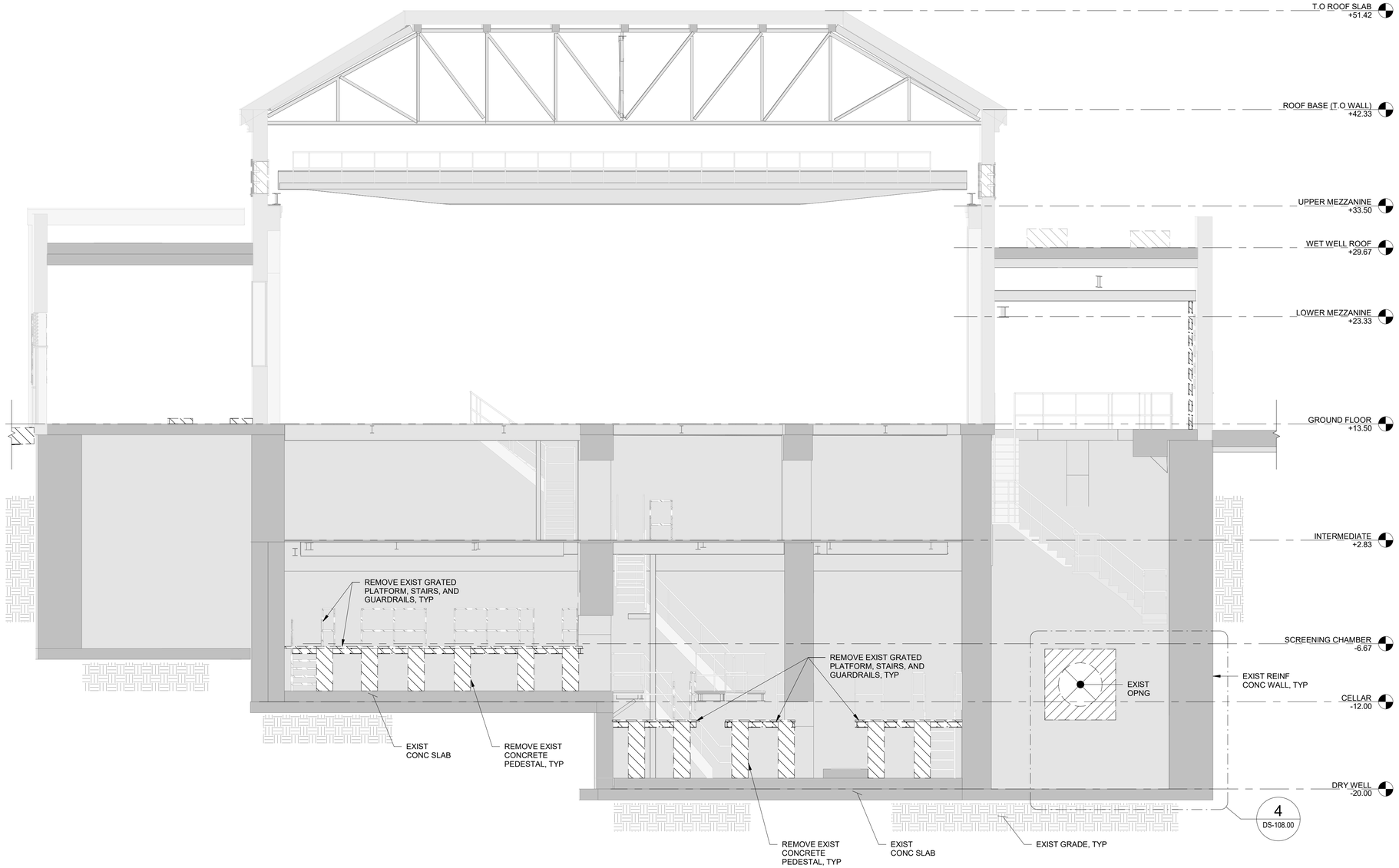

1 DS-101.00 DEMOLITION SECTION 1

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

3/16"=1'-0" 0 5 10 FT.

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RECONSTRUCTION OF PAERDEGAT PUMPING STATION
CONTRACT PS-318
STRUCTURAL
DEMOLITION SECTION VIEW 1

DATE: OCTOBER 2026
SCALE: AS INDICATED
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DRAWING NO. DS-107.00

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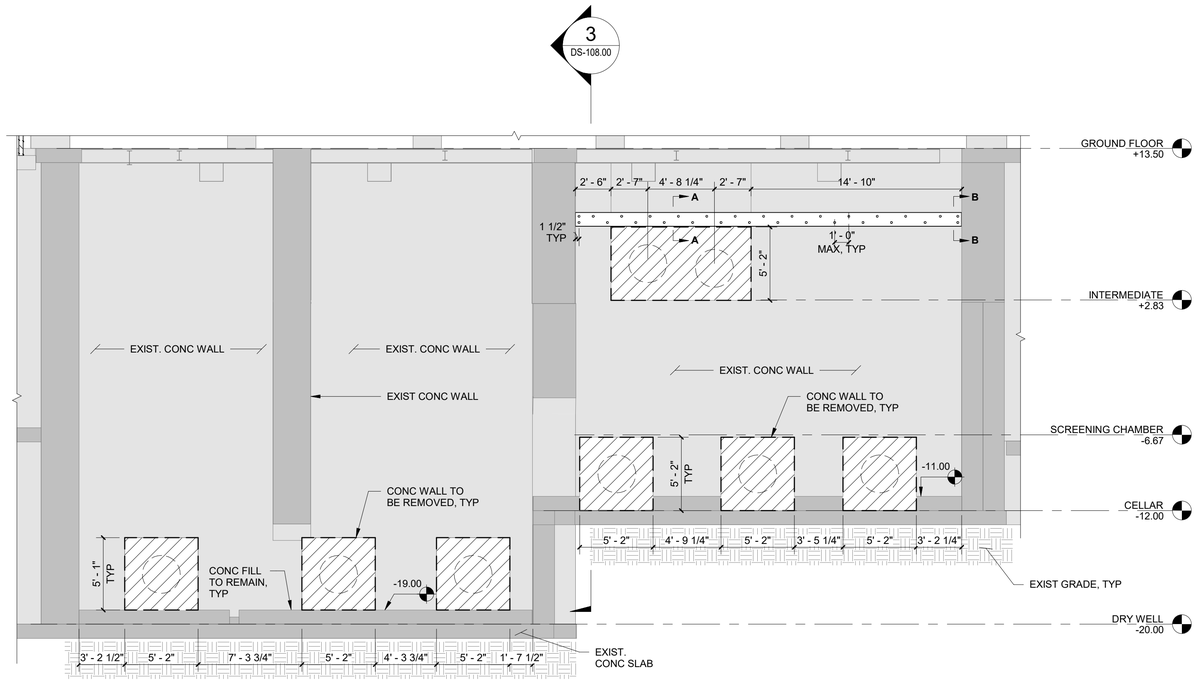
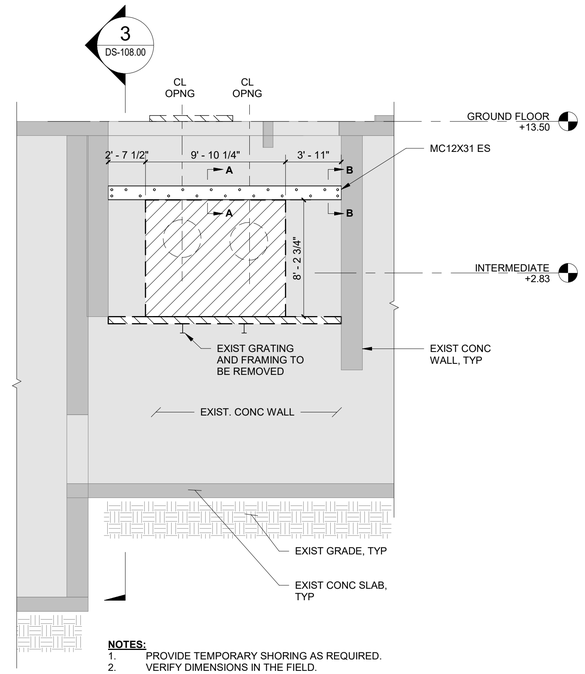


NOTES:
1. PROVIDE TEMPORARY SHORING AS REQUIRED.
2. VERIFY DIMENSIONS IN THE FIELD.

1 DEMOLITION SECTION 1
1 / DS-101.00

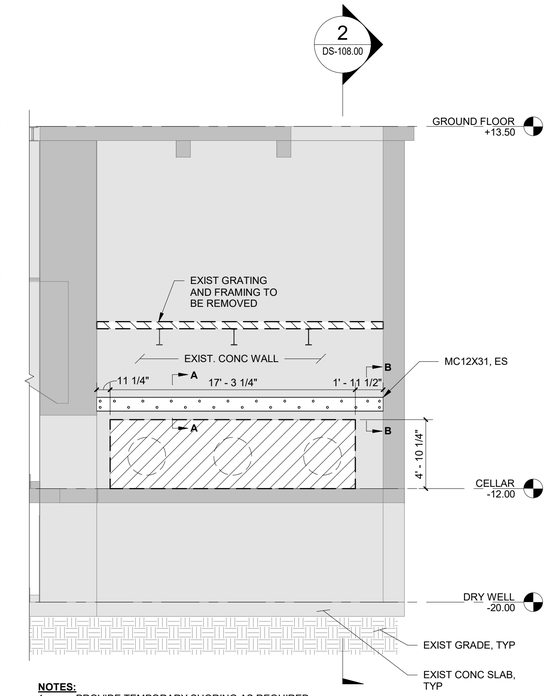
SCALE: 3/16" = 1'-0"



NOTES:
1. PROVIDE TEMPORARY SHORING AS REQUIRED.
2. VERIFY DIMENSIONS IN THE FIELD.

2 DEMOLITION SECTION 3
2 / DS-102.00

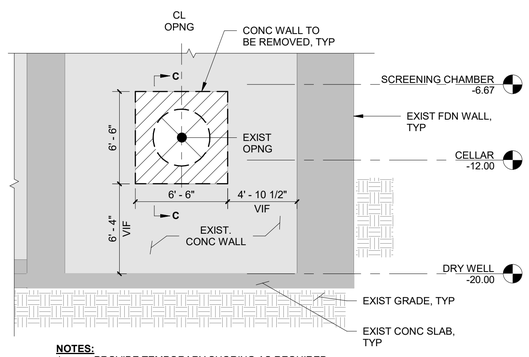
SCALE: 3/16" = 1'-0"



NOTES:
1. PROVIDE TEMPORARY SHORING AS REQUIRED.
2. VERIFY DIMENSIONS IN THE FIELD.

3 DEMOLITION SECTION 2
3 / DS-101.00

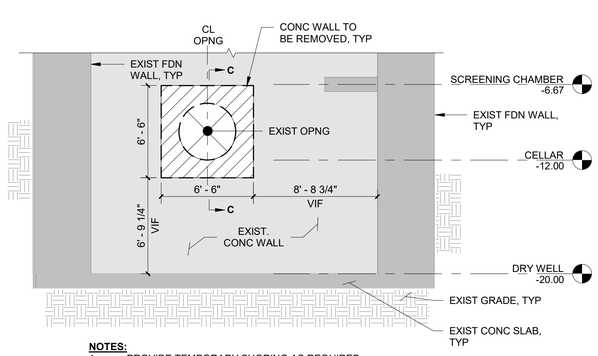
SCALE: 3/16" = 1'-0"



NOTES:
1. PROVIDE TEMPORARY SHORING AS REQUIRED.
2. VERIFY DIMENSIONS IN THE FIELD.

4 WET WELL DEMOLITION SECTION 1
4 / DS-108.00

3/16" = 1'-0"



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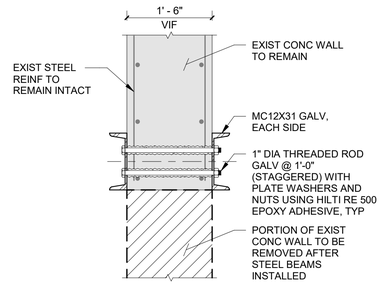
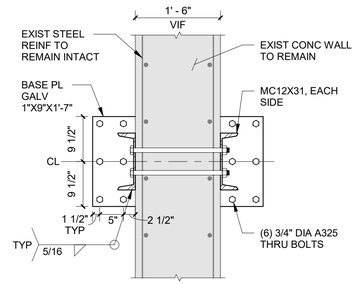
2. VERIFY DIMENSIONS IN THE FIELD.

5 WET WELL DEMOLITION SECTION 2
5 / DS-108.00

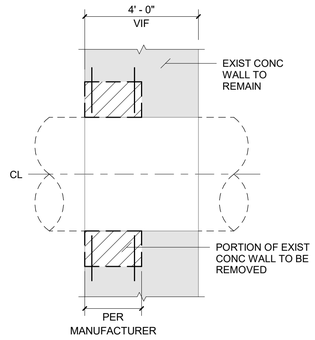
3/16" = 1'-0"



SECTION A-A



SECTION B-B



NOTES:
1. SEE 1/DS-110 FOR BALANCE OF INFO.

SECTION C-C

0 5 10 FT.

3/16"=1'-0"

BID SET

SUBMITTAL DATE: OCTOBER 2026

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DRAWN BY: UNGELLI PICARDAL, P.E.
CHECKED BY: MOHAMED YOUSEF, P.E.
DESIGN LEAD: MOSTAFA ELMORSI, P.E.
PROJECT MANAGER: AIMEE BOULET, P.E.

AECOM
605 THIRD AVENUE, 3rd FL.
NEW YORK, NY 10158, US

STATE OF NEW YORK · MOSTAFA SAAD ELDINE ELMORSI · LICENSED PROFESSIONAL ENGINEER · 085573

Environmental Protection

ACCOUNTABLE MANAGER
JOHN GOULAS, P.E.
PORTFOLIO MANAGER
KEVIN ELLENWOOD, P.E.
EXECUTIVE DIRECTOR
NAYANKUMAR SHAH, P.E.

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www.nyc.gov/dep

CAPITAL PROJECT WP-269
RECONSTRUCTION
OF PAERDEGAT PUMPING STATION
CONTRACT PS-318
STRUCTURAL
DEMOLITION SECTION VIEW 2

DATE: OCTOBER 2026
SCALE: AS INDICATED
SHEET NO: 64 OF 274
DRAWING NO. DS-108.00

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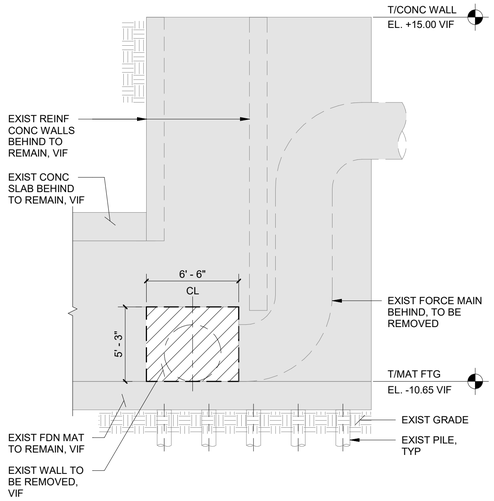
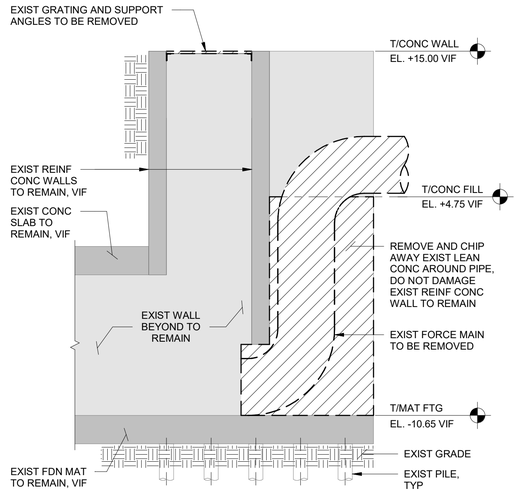


NOTES:
1. PROVIDE TEMPORARY SHORING AS REQUIRED.
2. VERIFY DIMENSIONS IN THE FIELD.

1 DS-109.00 SPILLWAY DEMOLITION SECTION 1

3/16" = 1'-0"



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2. VERIFY DIMENSIONS IN THE FIELD.

2 DS-109.00 SPILLWAY DEMOLITION SECTION 2

3/16" = 1'-0"

3/16"=1'-0" 0 5 10 FT.

BID SET

SUBMITTAL DATE: OCTOBER 2026

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CAPITAL PROJECT WP-269
RECONSTRUCTION
OF PAERDEGAT PUMPING STATION
CONTRACT PS-318
STRUCTURAL
DEMOLITION SPILLWAY SECTION

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DRAWING NO. DS-109.00

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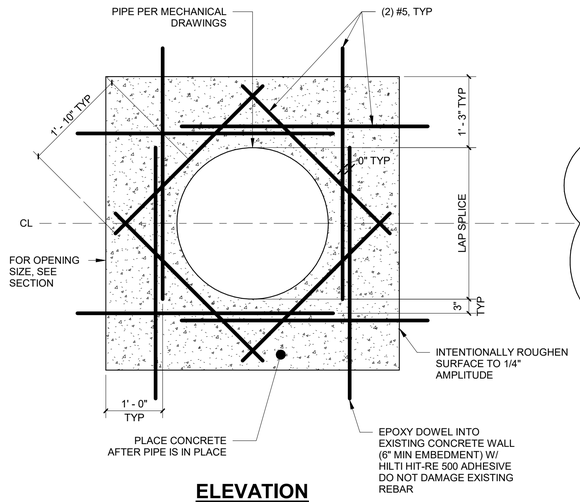
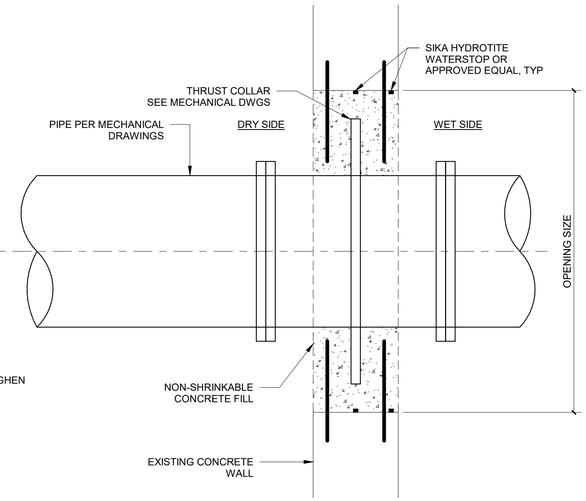


ELEVATION



SECTION

NOTE:

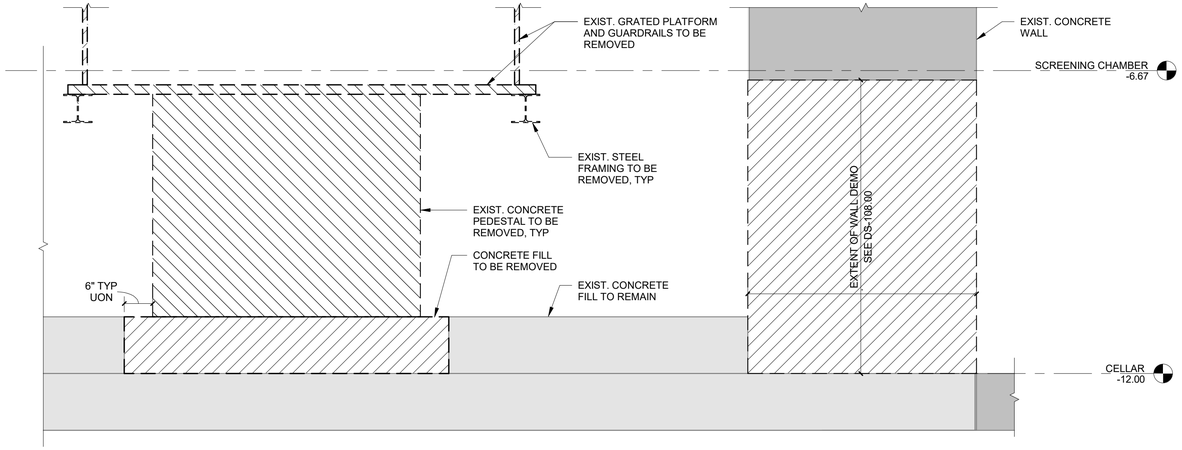
1. WHERE MORE THAN ONE WALL PIPE OPENING IS NEEDED, WALL DEMO SHALL BE STAGGERED TO ENSURE WALL STABILITY DURING CONSTRUCTION.

1 DS-110.00 — TYPICAL WALL OPNG DETAIL

3/4" = 1'-0"

0 1 2 3 FT.

3/4"=1'-0"

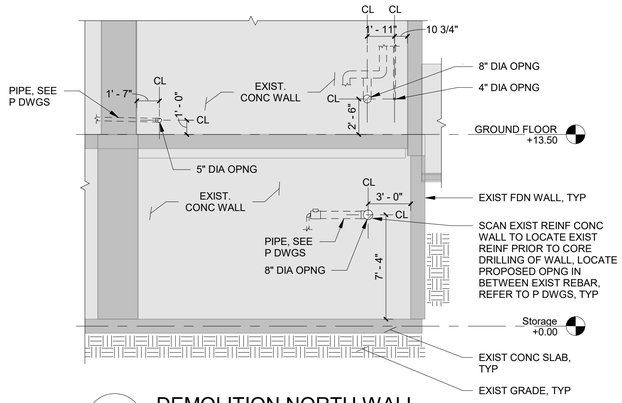


2 DS-101.00 — CONCRETE PEDESTAL DEMO

SCALE: 3/4" = 1'-0"

0 1 2 3 FT.

3/4"=1'-0"

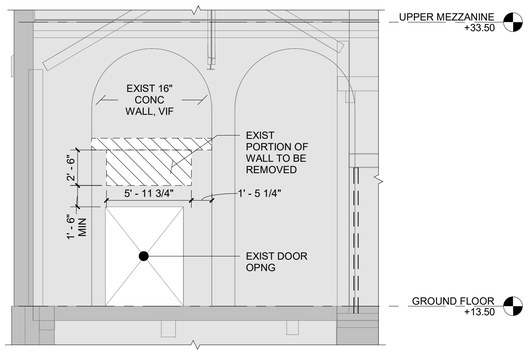


4 DS-110.00 — DEMOLITION NORTH WALL

3/16" = 1'-0"

0 5 10 FT.

3/16"=1'-0"



NOTES:

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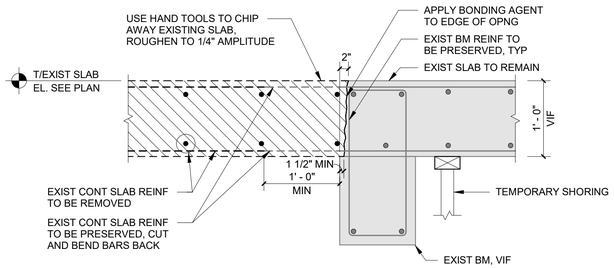
2. VERIFY DIMENSIONS IN THE FIELD.

3 DS-110.00 — DEMOLITION EAST WALL

3/16" = 1'-0"

0 5 10 FT.

3/16"=1'-0"

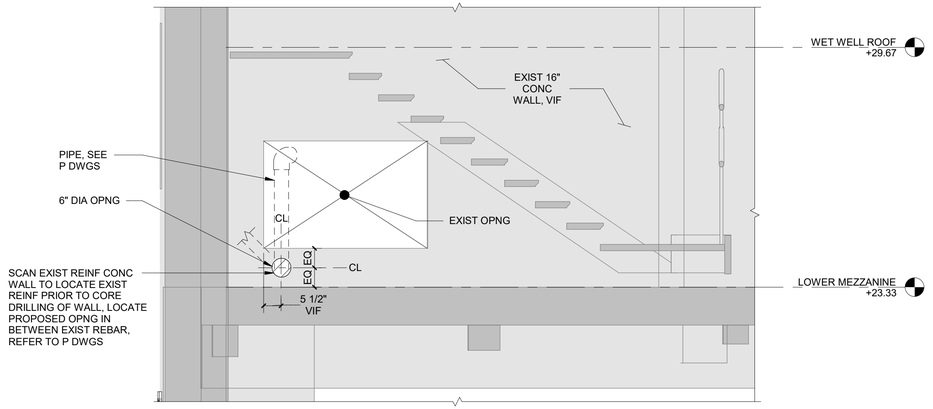


5 DS-110.00 — DEMOLITION DETAIL SLAB AT MECH EQPT RM

1" = 1'-0"

0 1 2 FT.

1"=1'-0"



6 DS-110.00 — DEMOLITION WEST WALL

1/2" = 1'-0"

0 1 2 4 FT.

1/2"=1'-0"

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STATE OF NEW YORK — MOSTAFA SAAD ELDINE ELMORSI — LICENSED PROFESSIONAL ENGINEER — 085573

Environmental Protection

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CAPITAL PROJECT WP-269
RECONSTRUCTION
OF PAERDEGAT PUMPING STATION
CONTRACT PS-318
STRUCTURAL
DEMOLITION STANDARD DETAILS 1

DATE: OCTOBER 2026
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SHEET NO: 66 OF 274
DRAWING NO. DS-110.00

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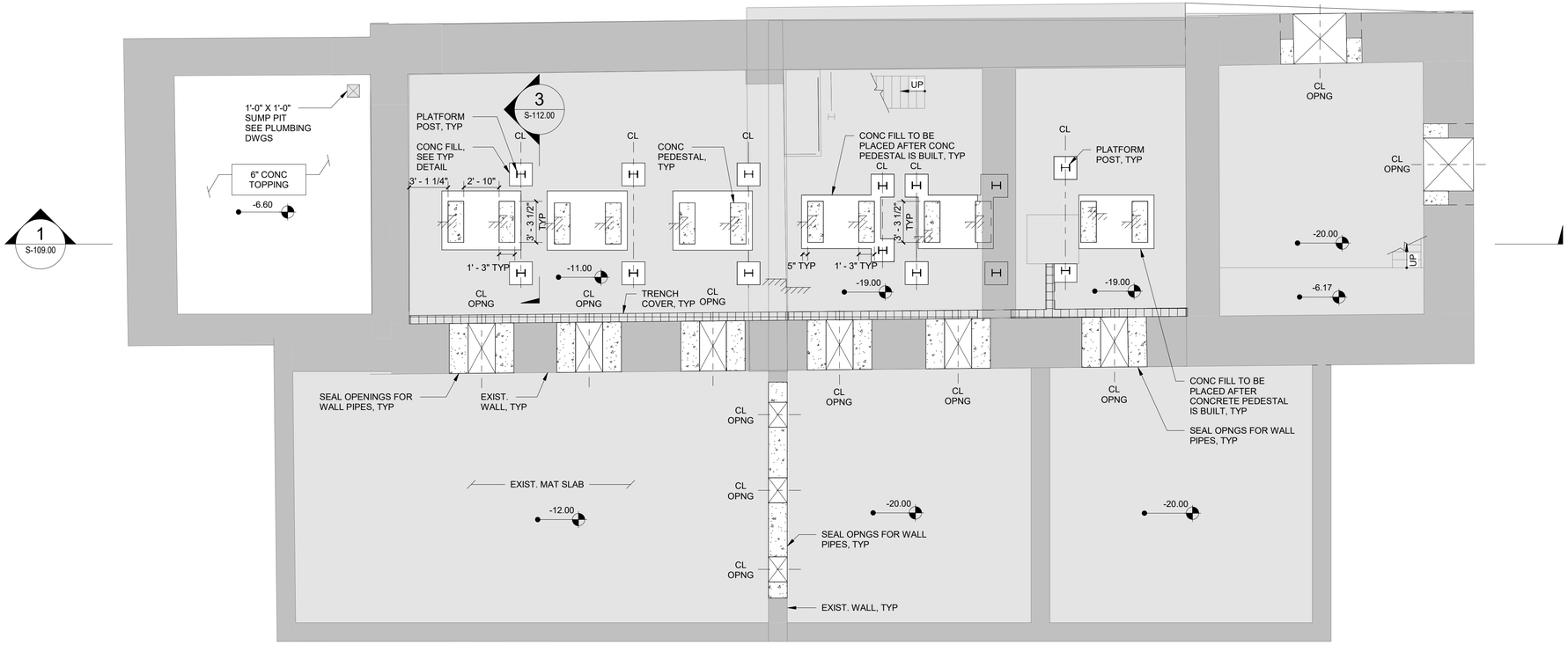
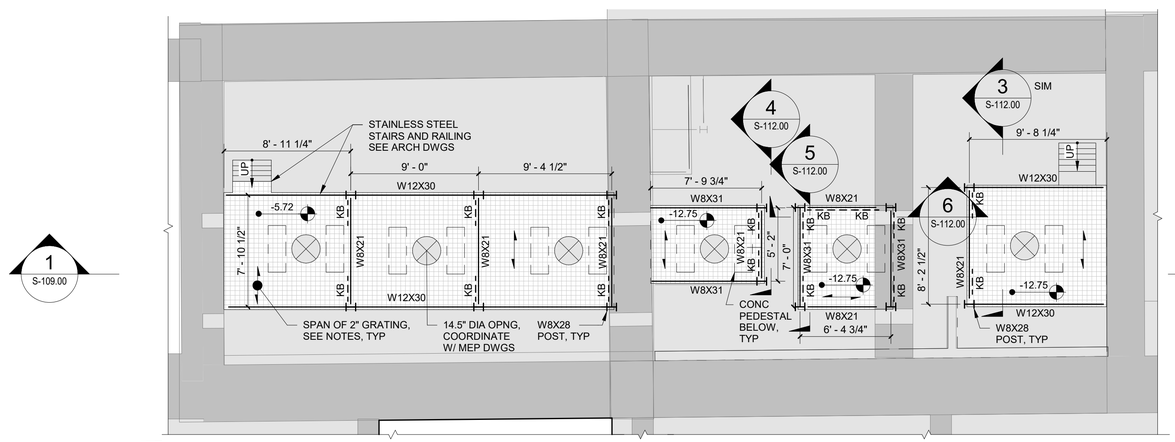


SCREENING CHAMBER, WET WELL, LOWER PUMP ROOM, UPPER PUMP ROOM PLAN
PLAN VIEW EL. -20.00

1 S-101.00

3/16" = 1'-0"



PUMP PLATFORM PLAN
PLAN VIEW EL. -12'-9"

2 S-101.00

3/16" = 1'-0"

NOTES / LEGEND:

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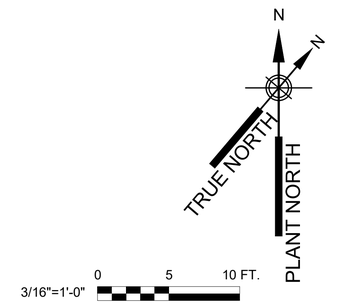
2. REFER TO ARCHITECTURAL DRAWINGS FOR DIMENSIONAL INFORMATION NOT SHOWN ON PLAN.
3. REFER TO MECHANICAL DRAWINGS FOR MECHANICAL UNIT LOCATIONS.
4. REFER TO S-122 THRU S-132 DRAWINGS FOR TYPICAL DETAILS.
5. INDICATES EXISTING SLAB OPENING
6. INDICATES SLAB OPENING
7. INDICATES CONCRETE SLAB
8. INDICATES GRATING
9. INDICATES STEEL BEAM
10. INDICATES GRATING SPAN. GRATING SHALL BE HOT-DIPPED GALVANIZED, 2" X 3/16" PLAIN BEARING BARS AT 1 3/16" SPACING ASTM A-1011 CS TYPE B Fy = 30 KSI, WITH CROSS BARS 4" APART (STEEL LIGHT-DUTY WELDED 19-W-4) AS MANUFACTURED BY OHIO GRATINGS, INC IKG INDUSTRIES, GRATING PACIFIC, INC. OR APPROVED EQUAL.
11. INDICATES CHANGE IN ELEVATION



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CAPITAL PROJECT WP-269
RECONSTRUCTION OF PAERDEGAT PUMPING STATION
CONTRACT PS-318
STRUCTURAL
SCREENING CHAMBER, WET WELL, LOWER PUMP ROOM, UPPER PUMP ROOM

DATE: OCTOBER 2026
SCALE: AS INDICATED
SHEET NO: 67 OF 274
DRAWING NO. S-101.00

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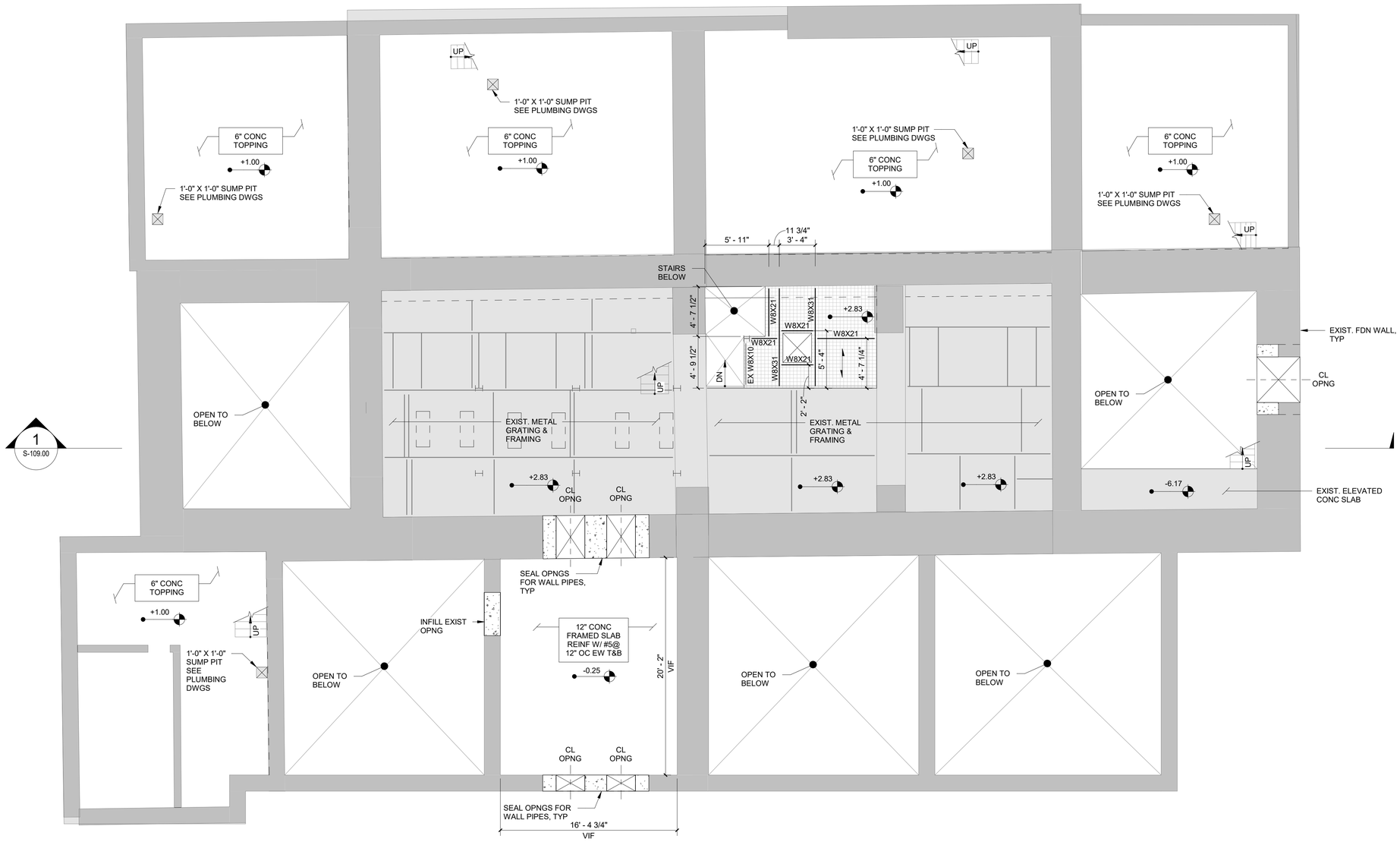

1
S-109.00

1
S-102.00

DISCHARGE PIPING GALLERY, STORAGE ROOMS, ELECTRICAL CHAMBERS
PLAN VIEW EL. 2.83

3/16" = 1'-0"

NOTES / LEGEND:

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11. VERIFY EXISTING CONDITIONS OF PARAPET. IF DURING DEMOITION, EXISTING PARAPET IS FOUND TO BE UNREINFORCED MASONRY, PROVIDE KICKERS AND BEAMS AS INDICATED ON PLAN. SEE TYPICAL PARAPET BRACE DETAIL.

N
TRUE NORTH
PLANT NORTH

0 5 10 FT.
3/16"=1'-0"

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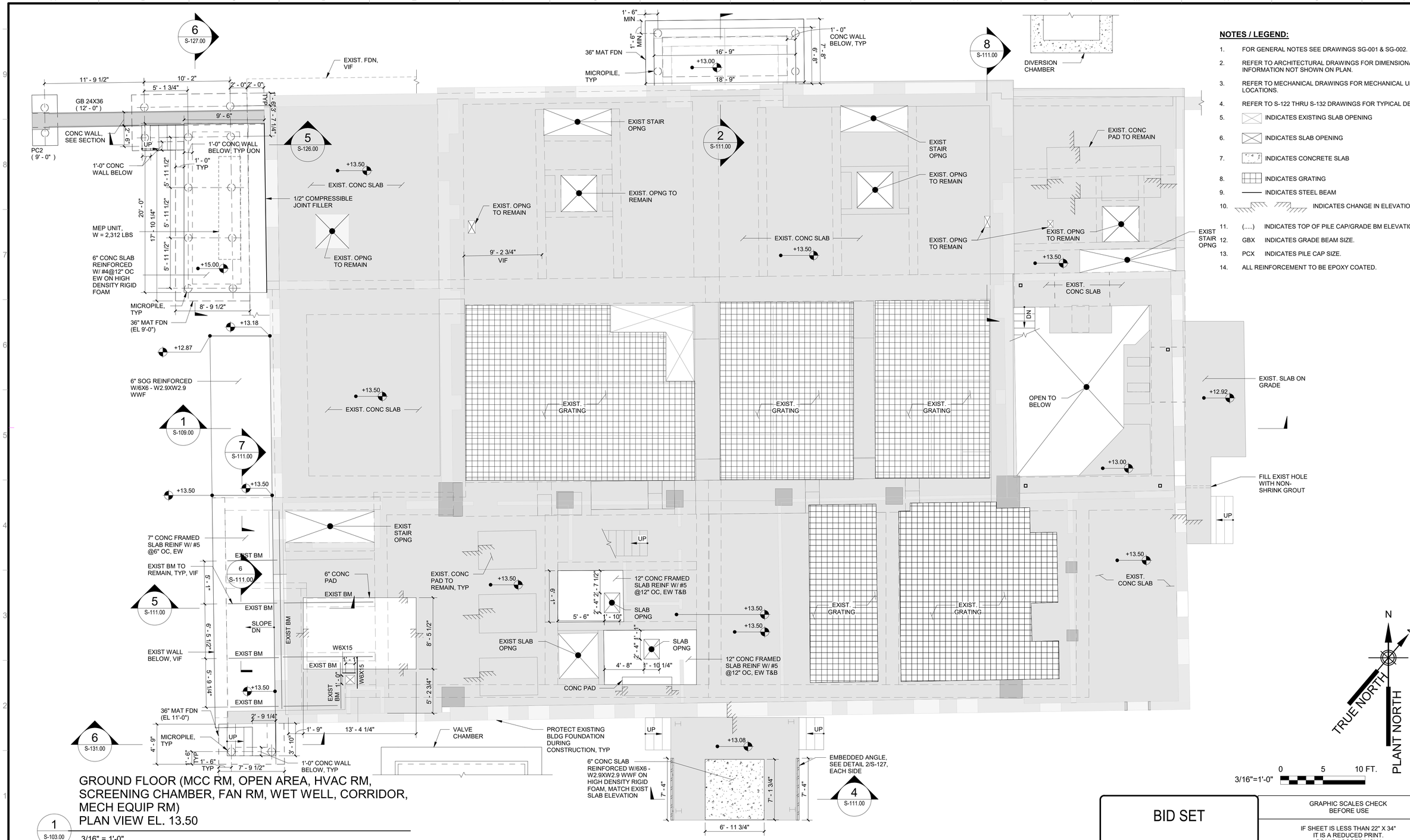

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7. INDICATES CONCRETE SLAB
8. INDICATES GRATING
9. INDICATES STEEL BEAM
10. INDICATES CHANGE IN ELEVATION
11. (.....) INDICATES TOP OF PILE CAP/GRADE BM ELEVATION UNO.
12. GBX INDICATES GRADE BEAM SIZE.
13. PCX INDICATES PILE CAP SIZE.
14. ALL REINFORCEMENT TO BE EPOXY COATED.

GROUND FLOOR (MCC RM, OPEN AREA, HVAC RM, SCREENING CHAMBER, FAN RM, WET WELL, CORRIDOR, MECH EQUIP RM)
PLAN VIEW EL. 13.50

1 / S-103.00

3/16" = 1'-0"

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CONTRACT PS-318
STRUCTURAL
GROUND FLOOR (MCC RM, OPEN AREA, HVAC RM, SCREENING CHAMBER, FAN RM)

DATE: OCTOBER 2026
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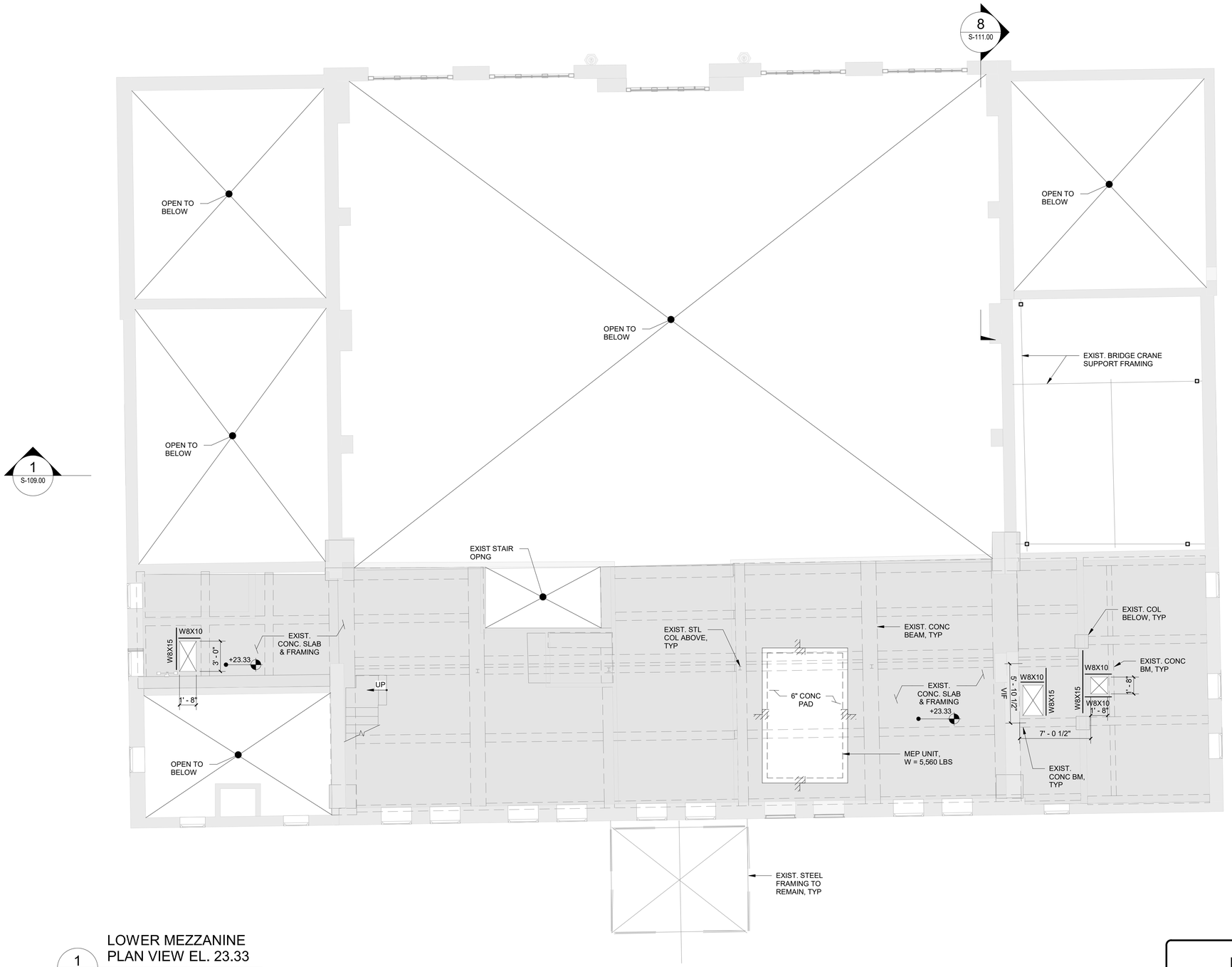

1 S-104.00

LOWER MEZZANINE
PLAN VIEW EL. 23.33

3/16" = 1'-0"

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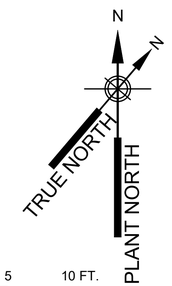
11. VERIFY EXISTING CONDITIONS OF PARAPET. IF DURING DEMOITION, EXISTING PARAPET IS FOUND TO BE UNREINFORCED MASONRY, PROVIDE KICKERS AND BEAMS AS INDICATED ON PLAN. SEE TYPICAL PARAPET BRACE DETAIL.



3/16"=1'-0" 0 5 10 FT.

BID SET

SUBMITTAL DATE: OCTOBER 2026

GRAPHIC SCALES CHECK BEFORE USE

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NO.	DATE	REVISIONS/DESCRIPTION	APPR'D.

DESIGNED BY: UNGELLI PICARDAL, P.E.
DRAWN BY: UNGELLI PICARDAL, P.E.
CHECKED BY: MOHAMED YOUSEF, P.E.
DESIGN LEAD: MOSTAFA ELMORSI, P.E.
PROJECT MANAGER: AIMEE BOULET, P.E.

AECOM
605 THIRD AVENUE, 3rd FL.
NEW YORK, NY 10158, US

STATE OF NEW YORK MOSTAFA SAAD ELDINE ELMORSI LICENSED 085573 PROFESSIONAL ENGINEER

NYC Environmental Protection

ACCOUNTABLE MANAGER: JOHN GOULAS, P.E.
PORTFOLIO MANAGER: KEVIN ELLENWOOD, P.E.
EXECUTIVE DIRECTOR: NAYANKUMAR SHAH, P.E.

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BUREAU OF ENGINEERING DESIGN & CONSTRUCTION
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CORONA, NEW YORK 11368
www.nyc.gov/dep

CAPITAL PROJECT WP-269
RECONSTRUCTION
OF PAERDEGAT PUMPING STATION
CONTRACT PS-318
STRUCTURAL
LOWER MEZZANINE

DATE: OCTOBER 2026
SCALE: AS INDICATED
SHEET NO: 70 OF 274
DRAWING NO. S-104.00

All inquiries regarding this drawing(s) or project should be made to NYC Environmental Protection, Bureau of Engineering Design and Construction.

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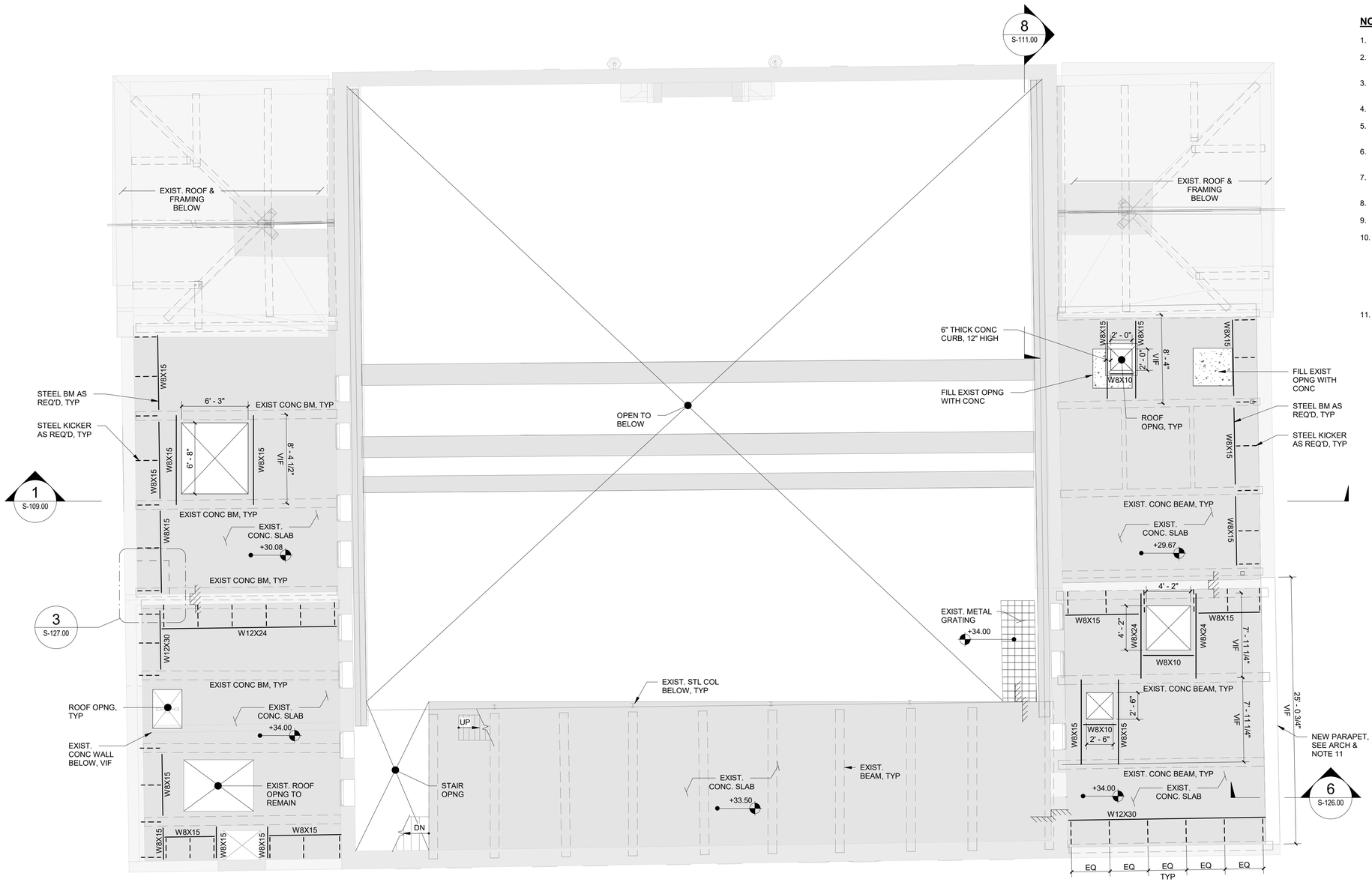

NOTES / LEGEND:

1. FOR GENERAL NOTES SEE DRAWINGS SG-001 & SG-002.
2. REFER TO ARCHITECTURAL DRAWINGS FOR DIMENSIONAL INFORMATION NOT SHOWN ON PLAN.
3. REFER TO MECHANICAL DRAWINGS FOR MECHANICAL UNIT LOCATIONS.
4. REFER TO S-122 THRU S-132 DRAWINGS FOR TYPICAL DETAILS.
5. INDICATES EXISTING SLAB OPENING
6. INDICATES SLAB OPENING
7. INDICATES CONCRETE SLAB
8. INDICATES GRATING
9. INDICATES STEEL BEAM
10. INDICATES GRATING SPAN. GRATING SHALL BE HOT-DIPPED GALVANIZED, 2" X 3/16" PLAIN BEARING BARS AT 1 3/16" SPACING ASTM A-1011 CS TYPE B Fy = 30 KSI, WITH CROSS BARS 4" APART (STEEL LIGHT-DUTY WELDED 19-W-4) AS MANUFACTURED BY OHIO GRATINGS, INC IKG INDUSTRIES, GRATING PACIFIC, INC. OR APPROVED EQUAL.
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N

TRUE NORTH

PLANT NORTH

3/16"=1'-0" 0 5 10 FT.

EAST AND WEST FLAT ROOFS AND UPPER MEZZANINE PLAN VIEW EL. 33.50

1 / S-105.00

3/16" = 1'-0"

BID SET

SUBMITTAL DATE: OCTOBER 2026

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STATE OF NEW YORK MOSTAFA SAAD ELDINE ELMORSI 085573 LICENSED PROFESSIONAL ENGINEER

Environmental Protection

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PORTFOLIO MANAGER: KEVIN ELLENWOOD, P.E.
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CAPITAL PROJECT WP-269
RECONSTRUCTION OF PAERDEGAT PUMPING STATION
CONTRACT PS-318
STRUCTURAL
EAST AND WEST FLAT ROOFS AND UPPER MEZZANINE

DATE: OCTOBER 2026
SCALE: AS INDICATED
SHEET NO: 71 OF 274
DRAWING NO. S-105.00

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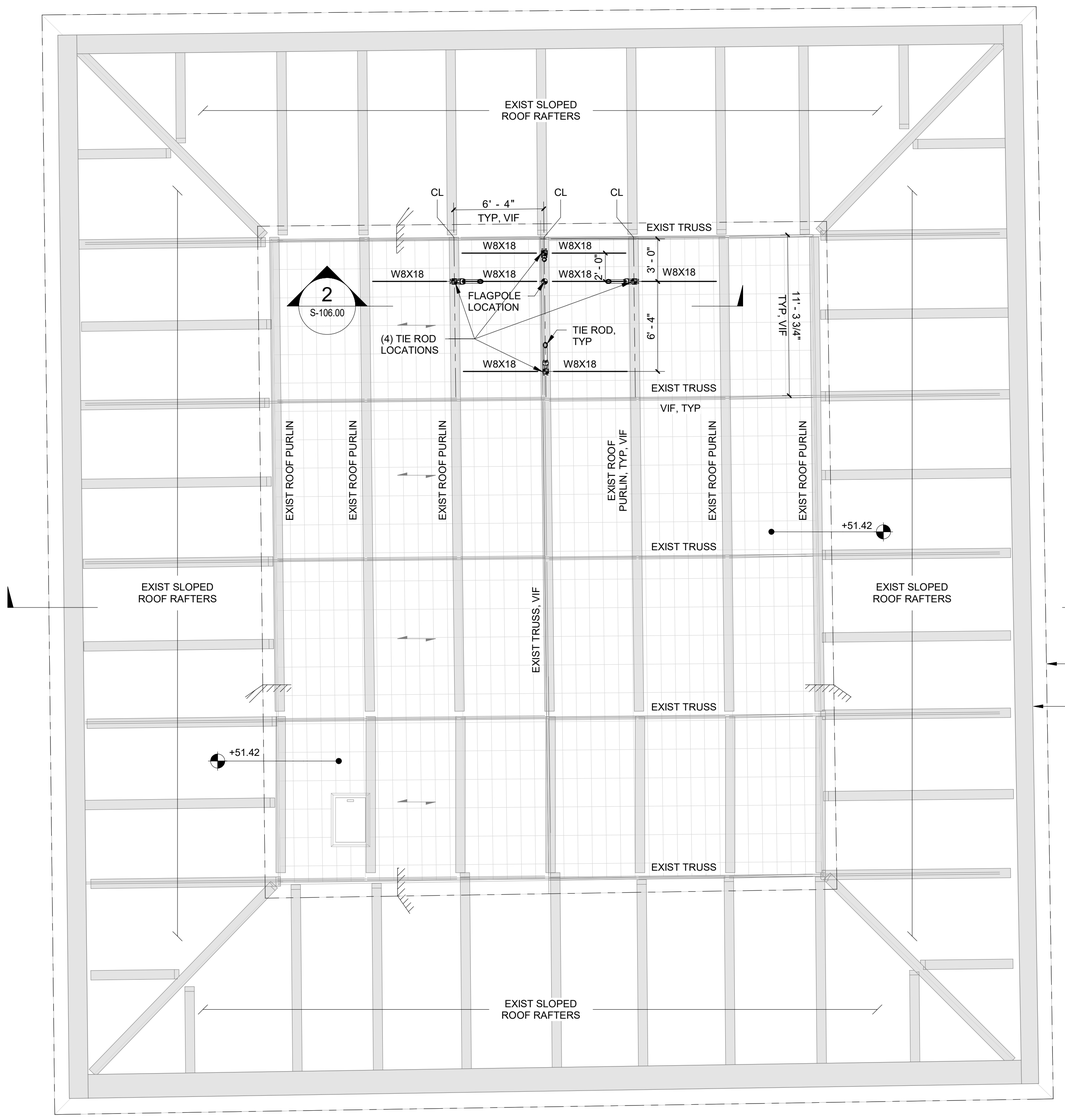
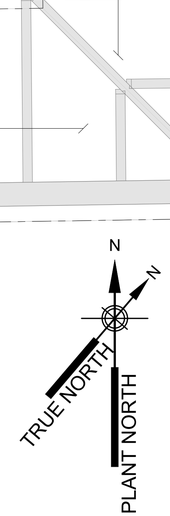
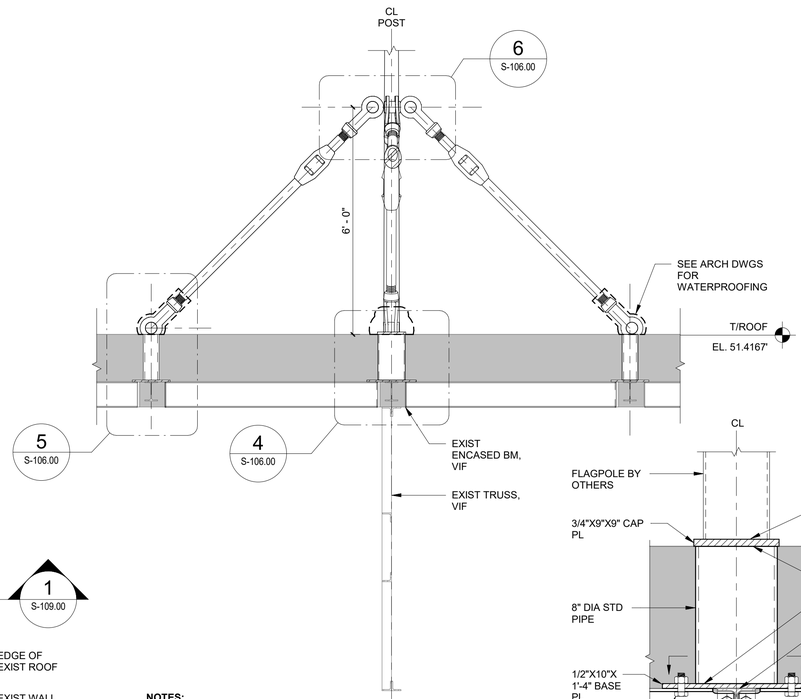


1 S-106.00 ROOF FRAMING PLAN VIEW EL. 51.4167'

3/16" = 1'-0"

3/16"=1'-0" 0 5 10 FT.





NOTES:
1. FLAGPOLE TO BE 25' MAX HEIGHT. FLAGPOLE AND FLAG SIZE TO MATCH WITH EXISTING.

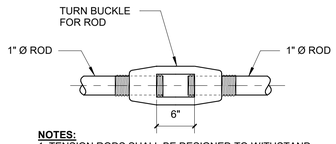
2 S-106.00 FLAGPOLE SECTION

1/2" = 1'-0"

1/2"=1'-0" 0 1 2 4 FT.

NOTES / LEGEND:

1. FOR GENERAL NOTES SEE DRAWINGS SG-001 & SG-002.
2. REFER TO ARCHITECTURAL DRAWINGS FOR DIMENSIONAL INFORMATION NOT SHOWN ON PLAN.
3. INDICATES EXISTING SLAB OPENING.
4. INDICATES EXISTING ROOF METAL DECK SPAN, VERIFY IN FIELD.
5. INDICATES SLOPE DOWN.

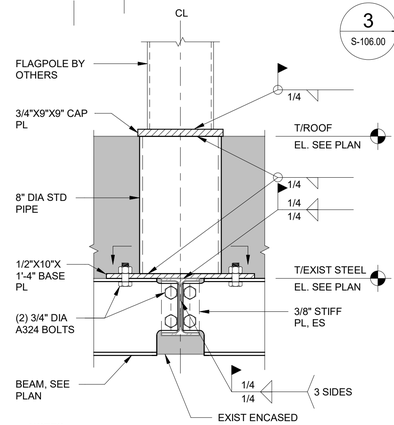


NOTES:
1. TENSION RODS SHALL BE DESIGNED TO WITHSTAND 5K ULTIMATE LOAD.

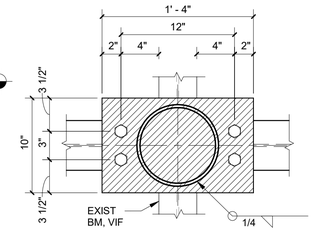
3 S-106.00 TURN BUCKLE DETAIL

1" = 1'-0"

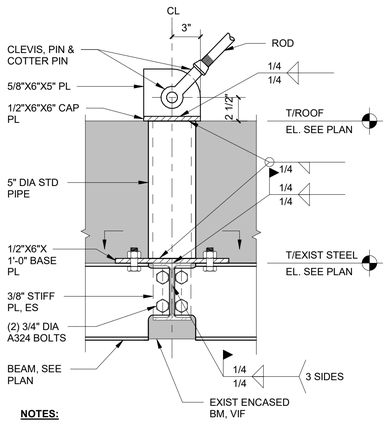
1"=1'-0" 0 1 2 FT.



NOTES:
1. FIELD VERIFY EXISTING TIE ROD MOUNT CONNECTION. RE-USE IF UNDAMAGED.



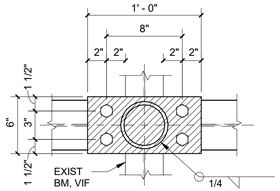
PLAN



NOTES:
1. FIELD VERIFY EXISTING TIE ROD MOUNT CONNECTION. RE-USE IF UNDAMAGED.

5 S-106.00 TIE ROD CONNECTION DETAIL 1

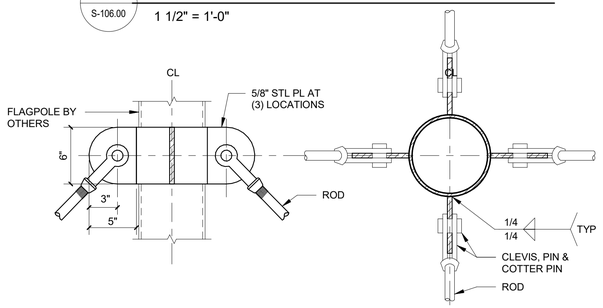
1 1/2" = 1'-0"



PLAN

4 S-106.00 FLAGPOLE BASE CONNECTION DETAIL

1 1/2" = 1'-0"



PLAN

6 S-106.00 TIE ROD CONNECTION DETAIL 2

1 1/2" = 1'-0"

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

BID SET

SUBMITTAL DATE: OCTOBER 2026

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DRAWN BY: UNGELLI PICARDAL, P.E.

AECOM
605 THIRD AVENUE, 3rd FL.
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Environmental Protection

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EXECUTIVE DIRECTOR	NAYANKUMAR SHAH, P.E.

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CAPITAL PROJECT WP-269
RECONSTRUCTION OF PAERDEGAT PUMPING STATION
CONTRACT PS-318
STRUCTURAL
ROOF PLAN & FLAG POLE DETAILS

DATE: OCTOBER 2026
SCALE: AS INDICATED
SHEET NO: 72 OF 274
DRAWING NO. S-106.00

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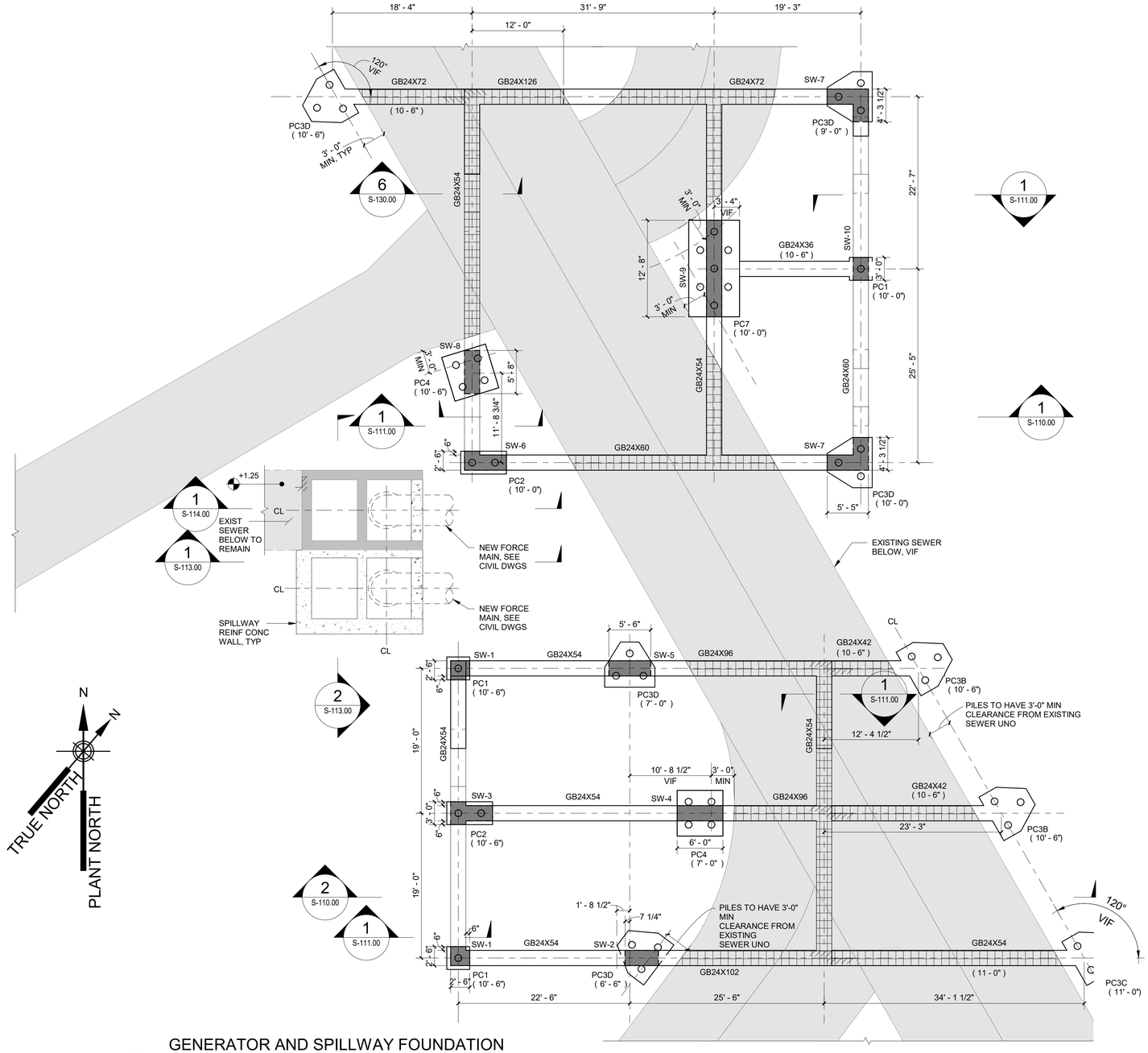

1 S-107.00 GENERATOR AND SPILLWAY FOUNDATION PLAN VIEW EL. 8.00

1/8" = 1'-0"

0 5 10 15 FT.

1/8"=1'-0"

NOTES / LEGEND:

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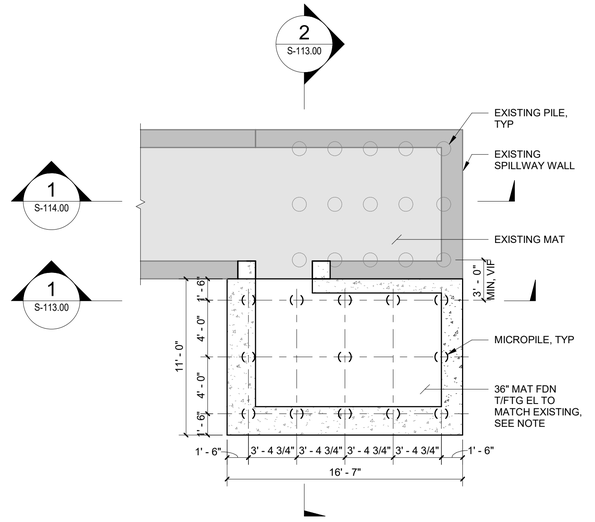
2. REFER TO ARCHITECTURAL DRAWINGS FOR DIMENSIONAL INFORMATION NOT SHOWN ON PLAN.
3. REFER TO S-122 THRU S-132 DRAWINGS FOR TYPICAL DETAILS.
4. FOR ALL PROPOSED AND EXISTING UNDERGROUND UTILITY CONNECTIONS, SEE CIVIL, PLUMBING, ELECTRICAL AND SITE SURVEY DRAWINGS.
5. PILES SHALL BE EXTENDED TO INVERT LEVEL OF SEWER LINE OR LOWER.
6. PILE CAPS AND GRADE BEAMS TO BE CENTERED ON WALLS UNO.
7. PCX INDICATES PILE CAP SIZE.
8. GBX INDICATES GRADE BEAM SIZE.
9. (.....) INDICATES TOP OF PILE CAP/GRADE BM ELEVATION UNO.
10. INDICATES STEP DOWN.
11. INDICATES STEP UP.
12. TOP OF GRADE BEAM ELEVATION TO BE LOCATED AT TOP OF SLAB UNO.
13. ALL REINFORCEMENT TO BE EPOXY COATED.
14. INDICATES EXTENTS FOR NON-STRUCTURAL COMPRESSIBLE STYROFOAM ABOVE EXISTING TUNNEL UNDER FOUNDATION BEAMS.
15. SW-X INDICATES SHEAR WALL, REINFORCE WITH #5@6" OC EACH FACE, EACH WAY.



NOTES:

1. MAT FOOTING TO BE 36" DEEP WITH f'c = 6000 PSI NORMAL WEIGHT CONCRETE.
2. MAT TO BE REINFORCED WITH #8@10" EW, TOP AND BOTTOM.

2 S-107.00 SPILLWAY FOUNDATION PLAN

3/16" = 1'-0"

0 5 10 FT.

3/16"=1'-0"

BID SET

SUBMITTAL DATE: OCTOBER 2026

GRAPHIC SCALES CHECK BEFORE USE

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Environmental Protection

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PORTFOLIO MANAGER
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CAPITAL PROJECT WP-269
RECONSTRUCTION OF PAERDEGAT PUMPING STATION
CONTRACT PS-318
STRUCTURAL
GENERATOR AND SPILLWAY FOUNDATION

DATE: OCTOBER 2026
SCALE: AS INDICATED
SHEET NO: 73 OF 274
DRAWING NO. S-107.00

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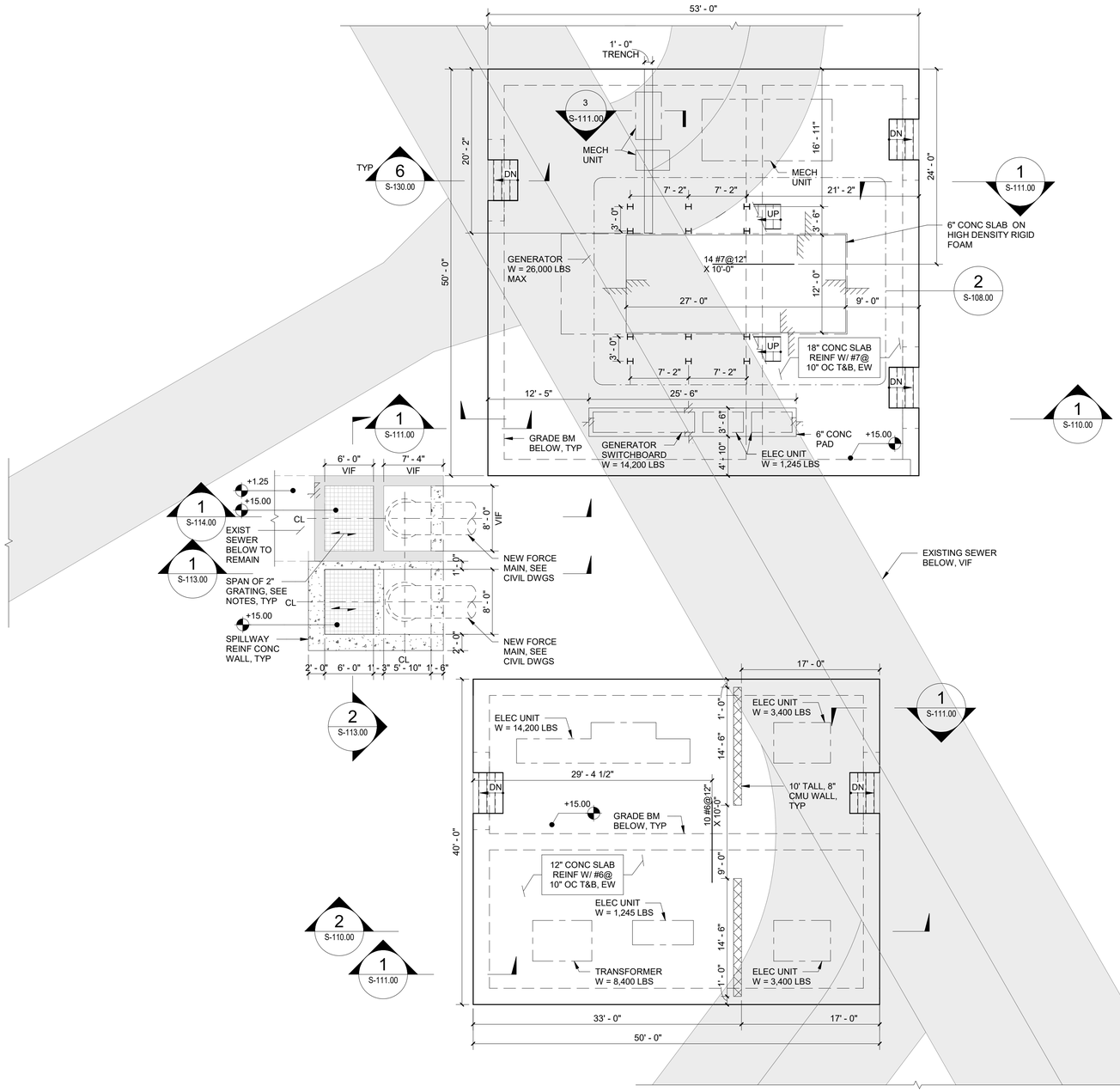

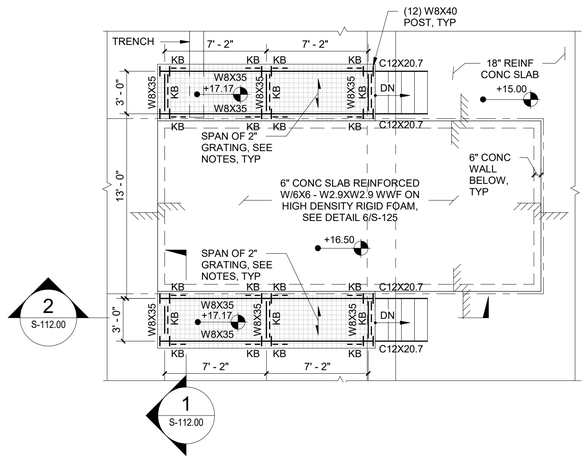

NOTES / LEGEND:

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2. REFER TO ARCHITECTURAL DRAWINGS FOR DIMENSIONAL INFORMATION NOT SHOWN ON PLAN.
3. REINFORCEMENT AS INDICATED ON PLAN. ALL REINFORCEMENT TO BE EPOXY COATED.
4. ALL REBARS PARALLEL TO NORTH-SOUTH DIRECTION ARE SECOND LAYER FROM TOP AND BOTTOM OF SLABS. ALL REBARS PARALLEL TO EAST-WEST DIRECTION ARE FIRST LAYER FROM TOP & BOTTOM OF SLABS.
5. PROVIDE (3) #5 TOP AND BOTTOM ADDITIONAL REBARS CONTINUOUS ALL AROUND THE SLAB PERIMETER AND SLAB OPENINGS. PROVIDE DOWELED HOOKS AT REBAR ENDS.
6. REFER TO S-122 THRU S-132 DRAWINGS FOR TYPICAL DETAILS.
7. REFER TO MECHANICAL DRAWINGS FOR MECHANICAL UNIT LOCATIONS.
8. REFER TO ELECTRICAL DRAWINGS FOR ELECTRICAL UNIT LOCATIONS.
9. FOR ALL PROPOSED AND EXISTING UNDERGROUND UTILITY CONNECTIONS, SEE CIVIL, PLUMBING, ELECTRICAL AND SITE SURVEY DRAWINGS.
10. TOP OF STEEL ELEVATION TO BE EL 17'-0".
11. ALL STEEL TO BE HOT-DIP GALVANIZED.
12. ——— INDICATES ADDITIONAL TOP REINFORCEMENT.
13. – – – INDICATES ADDITIONAL BOTTOM REINFORCEMENT.
14. ◄——► INDICATES GRATING SPAN. GRATING SHALL BE HOT-DIPPED GALVANIZED, 2" X 3/16" PLAIN BEARING BARS AT 1 3/16" SPACING ASTM A-1011 CS TYPE B Fy = 30 KSI, WITH CROSS BARS 4" APART (STEEL LIGHT-DUTY WELDED 19-W-4) AS MANUFACTURED BY OHIO GRATINGS, INC IKG INDUSTRIES, GRATING PACIFIC, INC. OR APPROVED EQUAL.

GENERATOR AND SPILLWAY AREA PLAN VIEW EL. 15.00

1
S-108.00

1/8" = 1'-0"

0 5 10 15 FT.

1/8"=1'-0"

GENERATOR PLATFORM FRAMING

2
S-108.00

3/16" = 1'-0"

0 5 10 FT.

3/16"=1'-0"

N

TRUE NORTH

PLANT NORTH

BID SET

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CAPITAL PROJECT WP-269
RECONSTRUCTION
OF PAERDEGAT PUMPING STATION
CONTRACT PS-318
STRUCTURAL
GENERATOR AND SPILLWAY AREA

DATE: OCTOBER 2026
SCALE: AS INDICATED
SHEET NO: 74 OF 274
DRAWING NO. S-108.00

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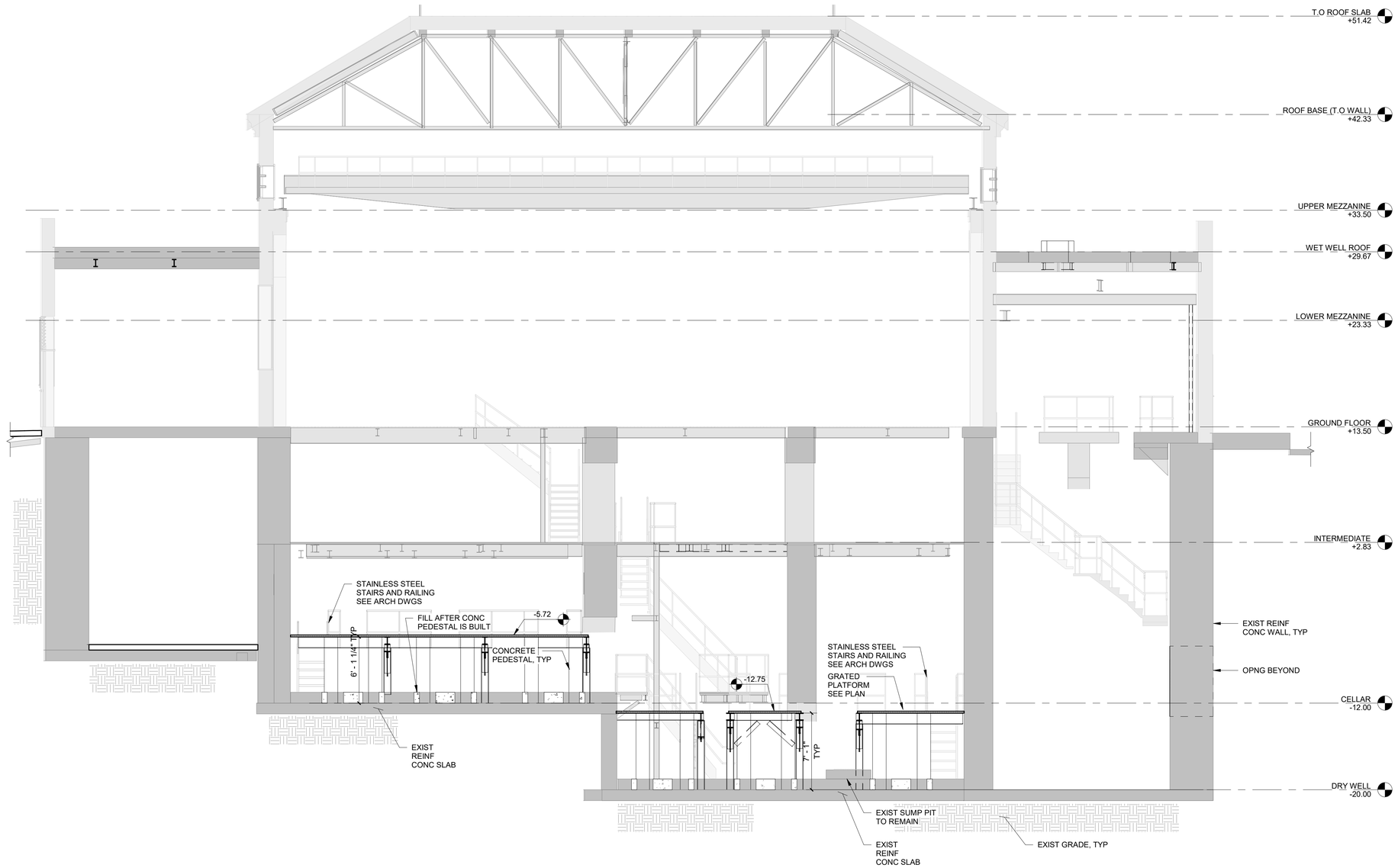

1 S-101.00 SECTION

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

3/16"=1'-0" 0 5 10 FT.

BID SET

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96-05 HORACE HARDING EXPRESSWAY 5th FLOOR
CORONA, NEW YORK 11368
www.nyc.gov/dep

CAPITAL PROJECT WP-269
RECONSTRUCTION OF PAERDEGAT PUMPING STATION
CONTRACT PS-318
STRUCTURAL
SECTION VIEW 1

DATE: OCTOBER 2026
SCALE: AS INDICATED
SHEET NO: 75 OF 274
DRAWING NO. S-109.00

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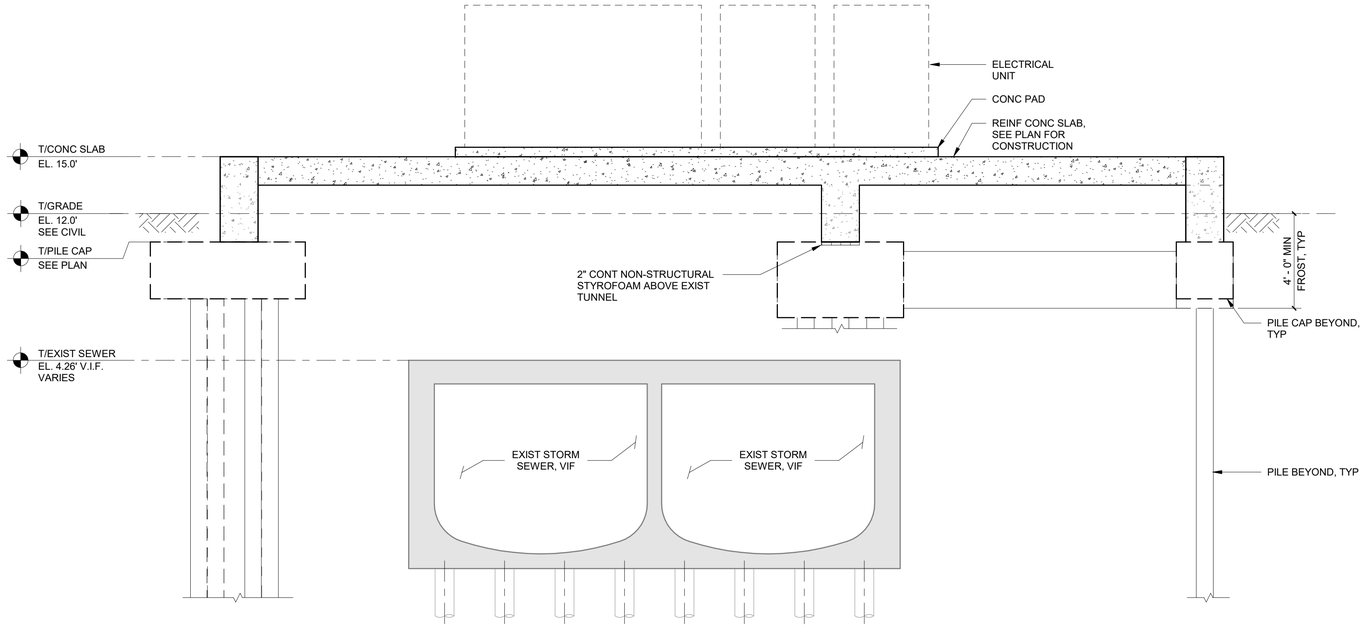
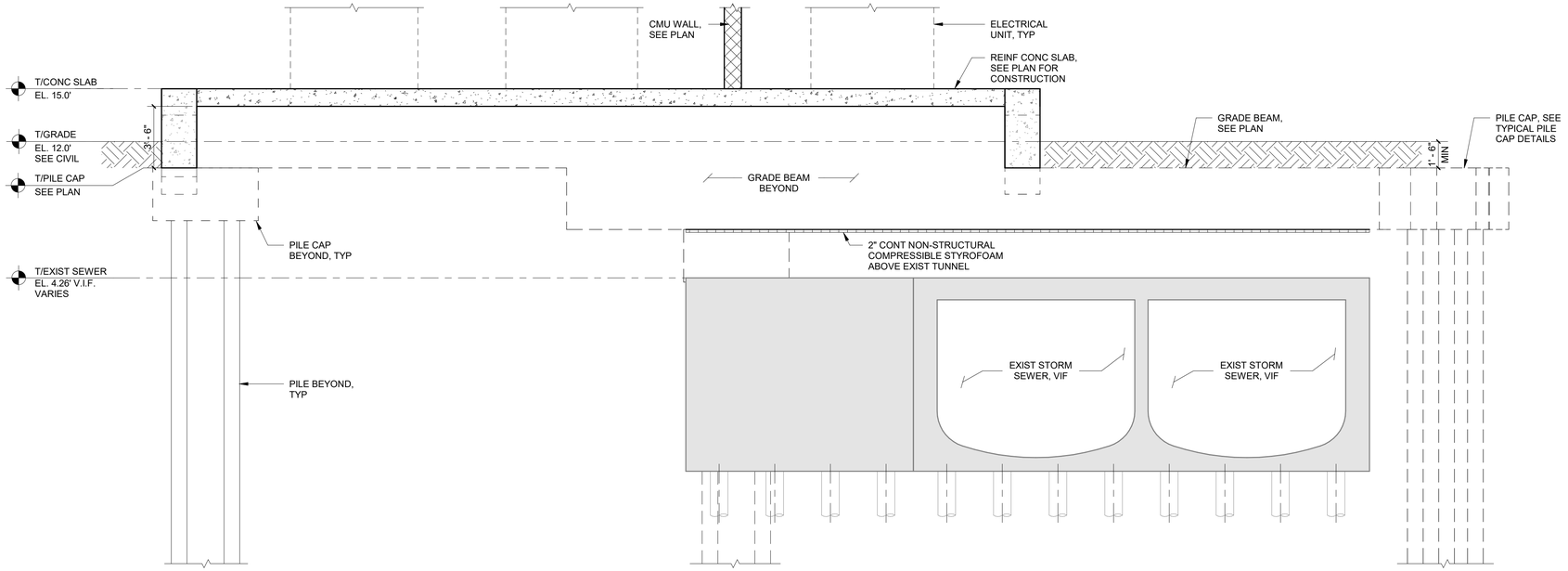


1 S-110.00 GENERATOR SLAB SECTION 1

1/4" = 1'-0"



2 S-110.00 GENERATOR SLAB SECTION 2

1/4" = 1'-0"

1/4"=1'-0" 0 4 8 FT.

BID SET

SUBMITTAL DATE: OCTOBER 2026

GRAPHIC SCALES CHECK BEFORE USE

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NO.	DATE	REVISIONS/DESCRIPTION	APPR'D.

DESIGNED BY: UNGELLI PICARDAL, P.E.
DRAWN BY: UNGELLI PICARDAL, P.E.
CHECKED BY: MOHAMED YOUSEF, P.E.
DESIGN LEAD: MOSTAFA ELMORSI, P.E.
PROJECT MANAGER: AIMEE BOULET, P.E.

AECOM
605 THIRD AVENUE, 3rd FL.
NEW YORK, NY 10158, US

STATE OF NEW YORK MOSTAFA SAAD ELDINE ELMORSI 085013 LICENSED PROFESSIONAL ENGINEER

NYC Environmental Protection

ACCOUNTABLE MANAGER: JOHN GOULAS, P.E.
PORTFOLIO MANAGER: KEVIN ELLENWOOD, P.E.
EXECUTIVE DIRECTOR: NAYANKUMAR SHAH, P.E.

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CAPITAL PROJECT WP-269
RECONSTRUCTION OF PAERDEGAT PUMPING STATION
CONTRACT PS-318
STRUCTURAL
SECTION VIEW 2

DATE: OCTOBER 2026
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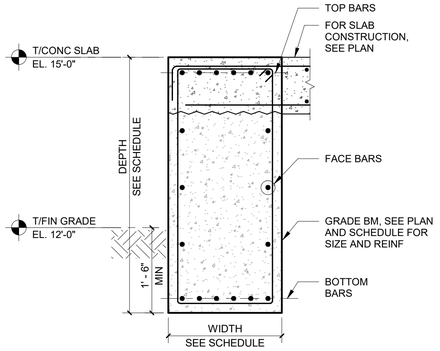
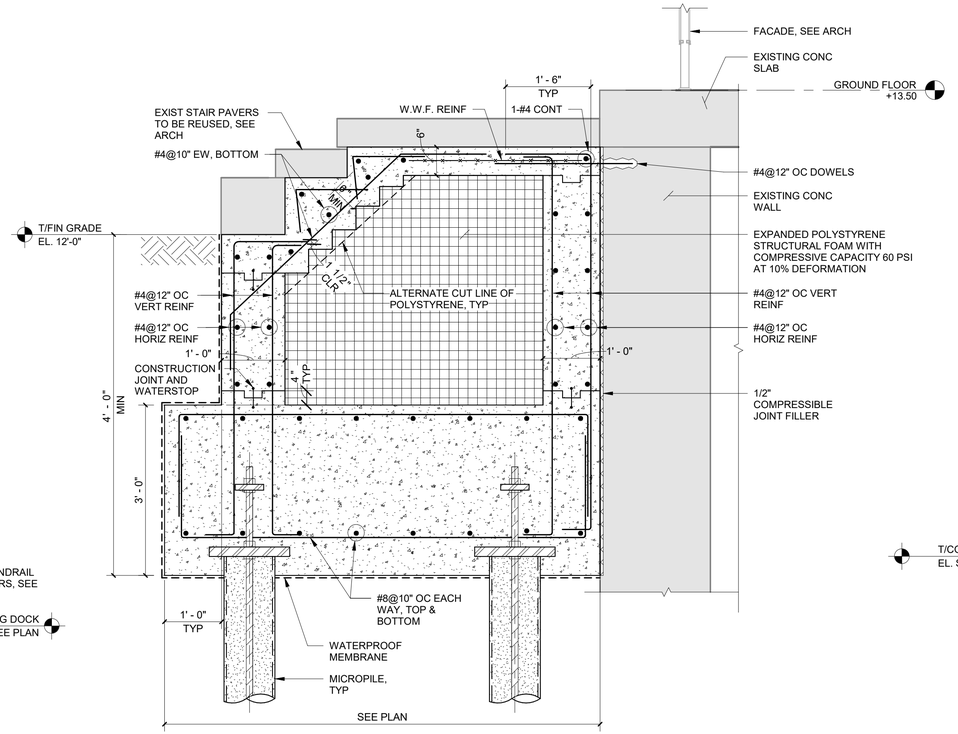


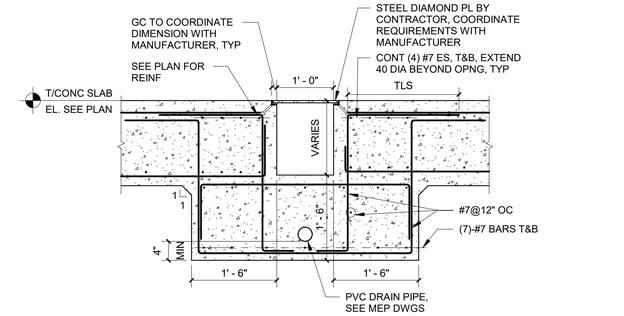
1 S-107.00 **GRADE BEAM SECTION**

SCALE: 3/4" = 1'-0"



2 S-103.00 **NORTH EXTERIOR STAIR DETAIL**

SCALE: 3/4" = 1'-0"

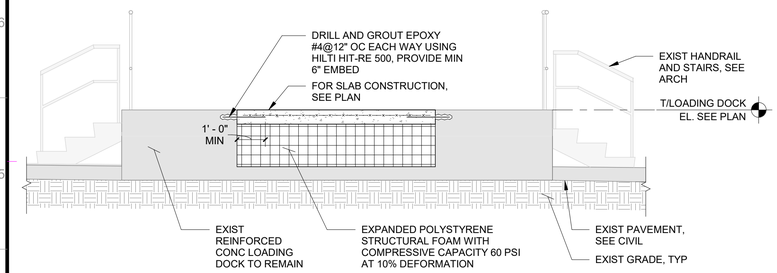


3 S-108.00 **TRENCH DETAIL WITH DRAIN**

SCALE: 3/4" = 1'-0"

0 1 2 3 FT.

3/4"=1'-0"

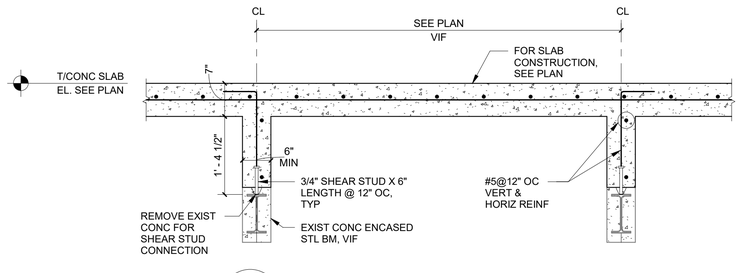


4 S-103.00 **SOUTH LOADING DOCK SECTION**

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

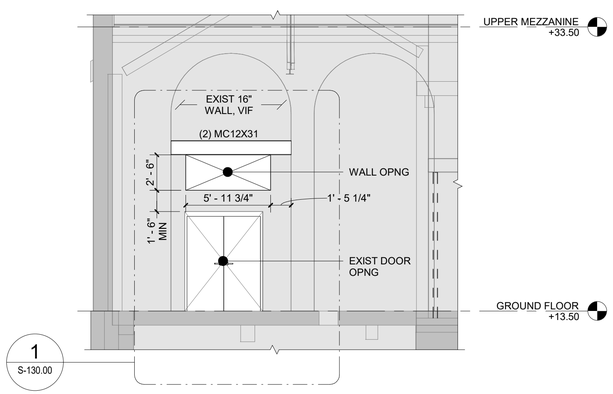
0 1 2 3 5 FT.

3/8"=1'-0"



6 S-103.00 **SECTION**

SCALE: 3/4" = 1'-0"



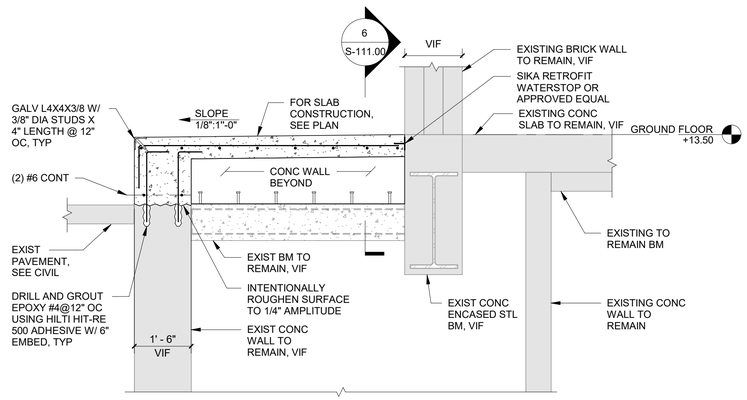
1 S-130.00

8 S-111.00 **EAST WALL**

3/16" = 1'-0"

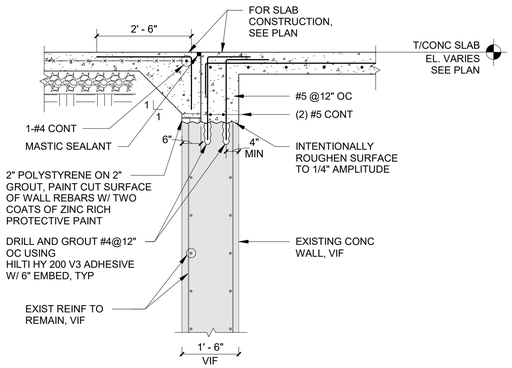
0 5 10 FT.

3/16"=1'-0"



5 S-103.00 **WEST PLATFORM SECTION 1**

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



7 S-103.00 **WEST PLATFORM SECTION 2**

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

0 1 2 4 FT.

1/2"=1'-0"

BID SET

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Environmental Protection

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CAPITAL PROJECT WP-269
RECONSTRUCTION OF PAERDEGAT PUMPING STATION
CONTRACT PS-318
STRUCTURAL
SECTION VIEW 3

DATE: OCTOBER 2026
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DRAWING NO. S-111.00

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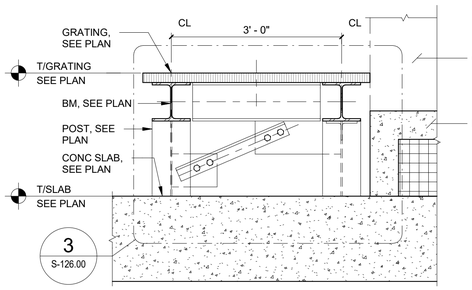
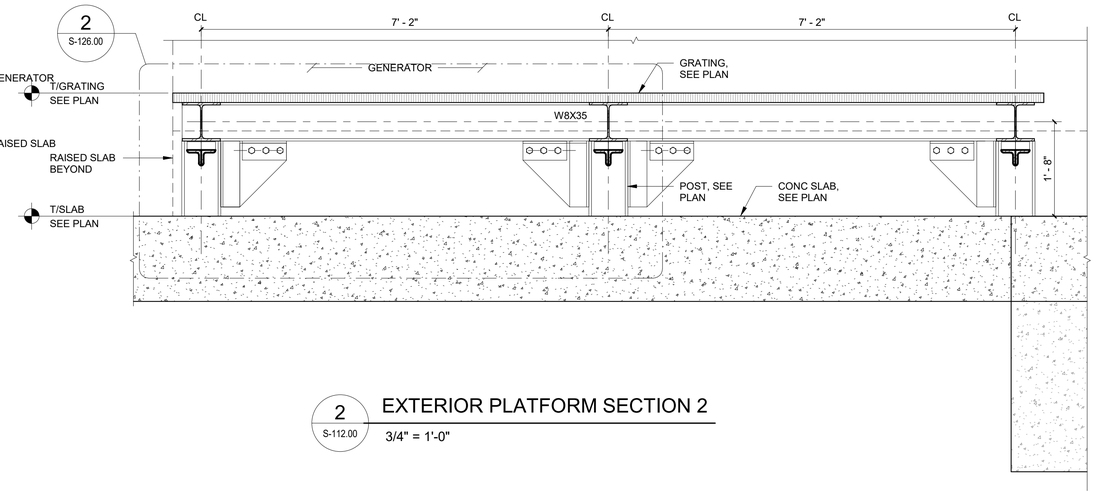


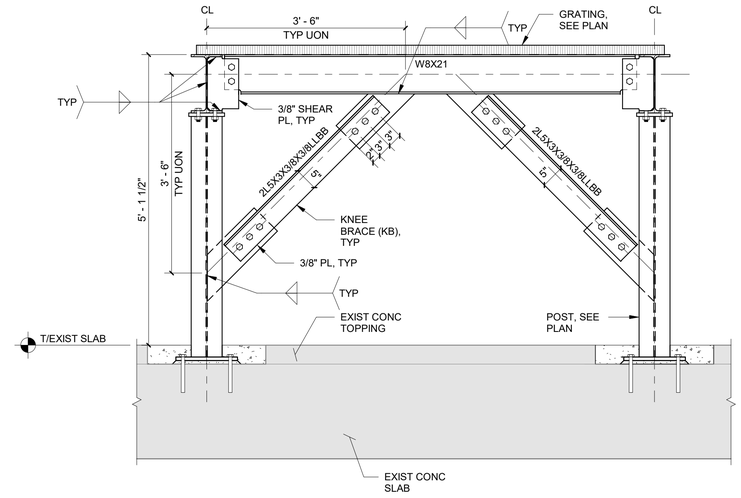


1 S-112.00 **EXTERIOR PLATFORM SECTION 1**

3/4" = 1'-0"

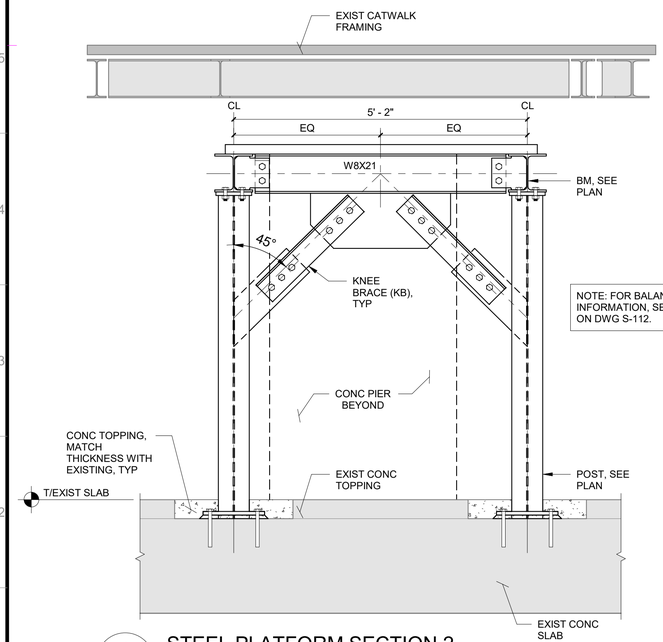
2 S-112.00 **EXTERIOR PLATFORM SECTION 2**

3/4" = 1'-0"



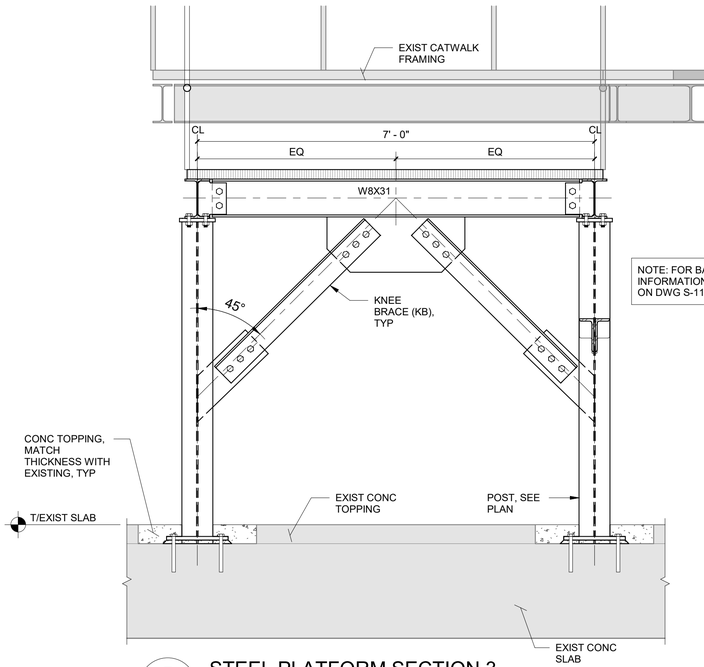
3 S-112.00 **STEEL PLATFORM SECTION 1**

3/4" = 1'-0"



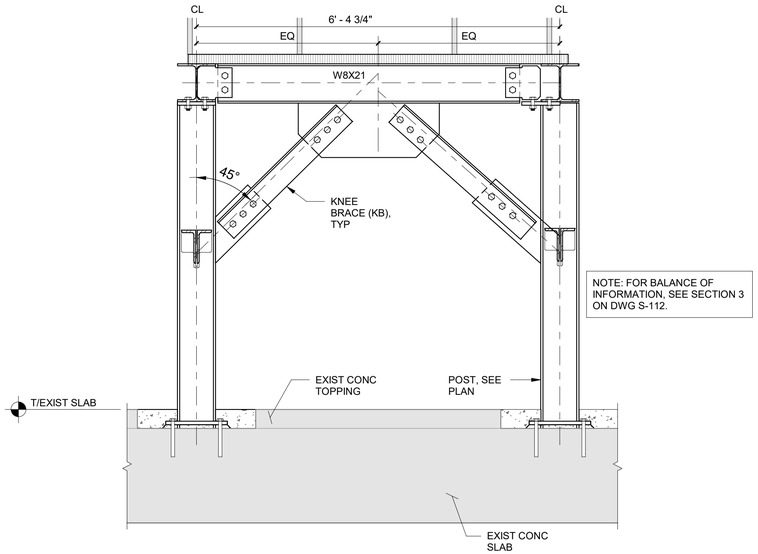
4 S-112.00 **STEEL PLATFORM SECTION 2**

3/4" = 1'-0"



5 S-112.00 **STEEL PLATFORM SECTION 3**

3/4" = 1'-0"



6 S-112.00 **STEEL PLATFORM SECTION 4**

3/4" = 1'-0"

0 1 2 3 FT.

3/4"=1'-0"

BID SET

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NYC Environmental Protection

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CAPITAL PROJECT WP-269
RECONSTRUCTION OF PAERDEGAT PUMPING STATION
CONTRACT PS-318
STRUCTURAL
SECTION VIEW 4

DATE: OCTOBER 2026
SCALE: AS INDICATED
SHEET NO: 78 OF 274
DRAWING NO. S-112.00

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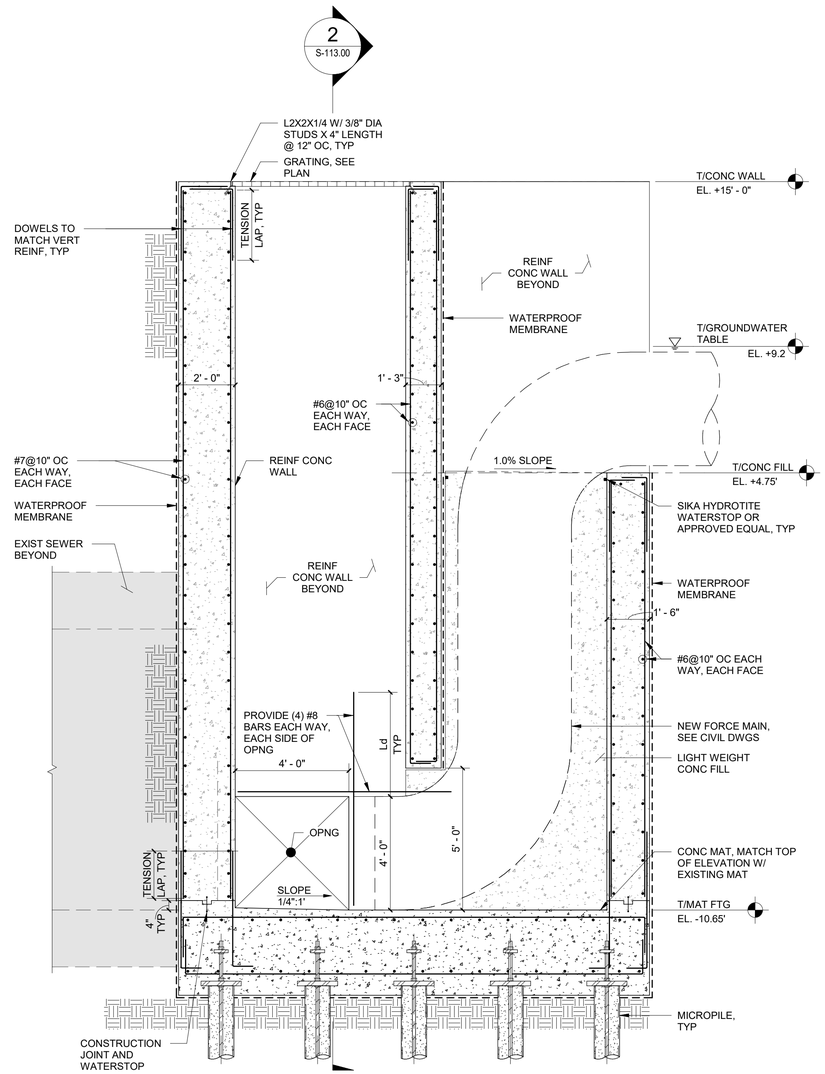
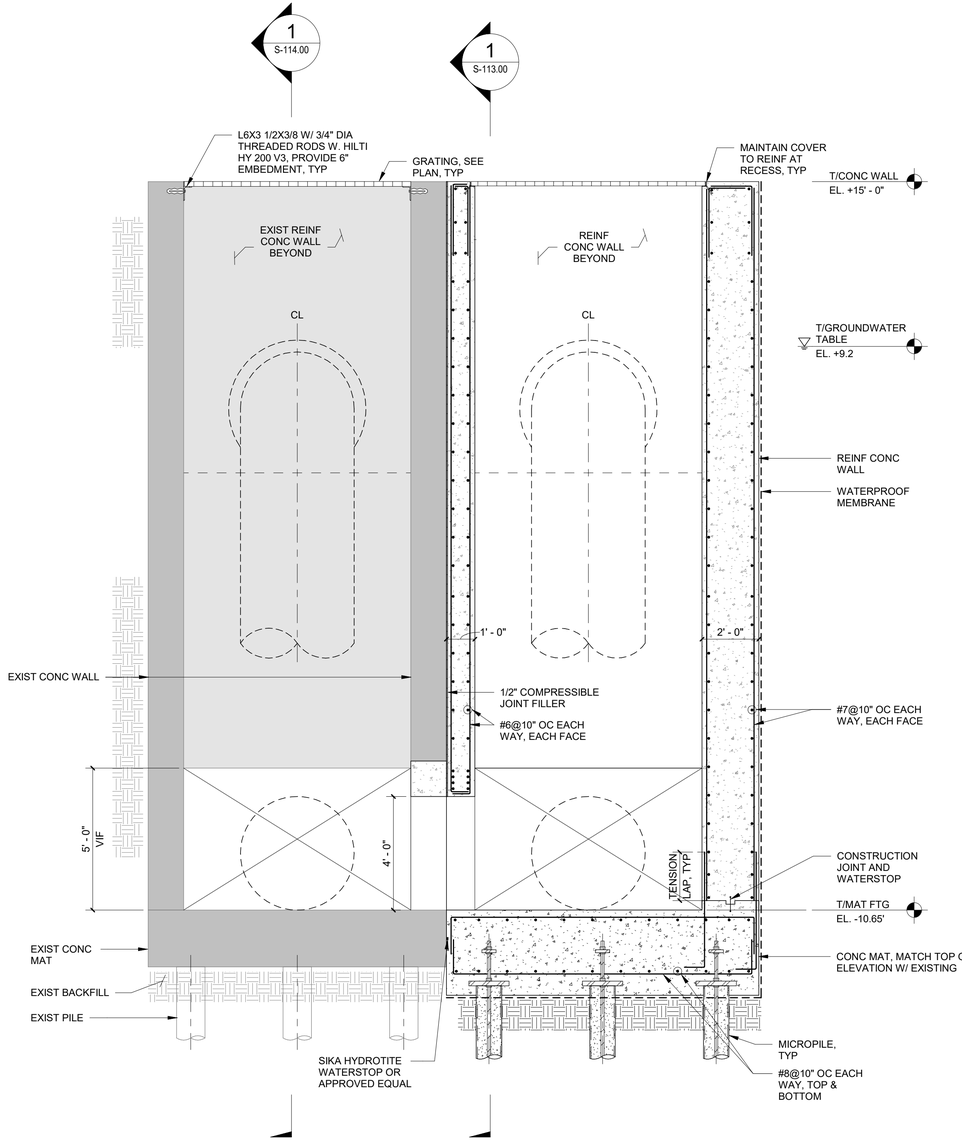


1 S-107.00 SPILLWAY SECTION 1

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



2 S-107.00 SPILLWAY SECTION 2

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

3/8"=1'-0" 0 1 2 3 5 FT.

BID SET

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Environmental Protection

ACCOUNTABLE MANAGER: JOHN GOULAS, P.E.
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CAPITAL PROJECT WP-269
RECONSTRUCTION OF PAERDEGAT PUMPING STATION
CONTRACT PS-318
STRUCTURAL
SPILLWAY SECTION 1

DATE: OCTOBER 2026
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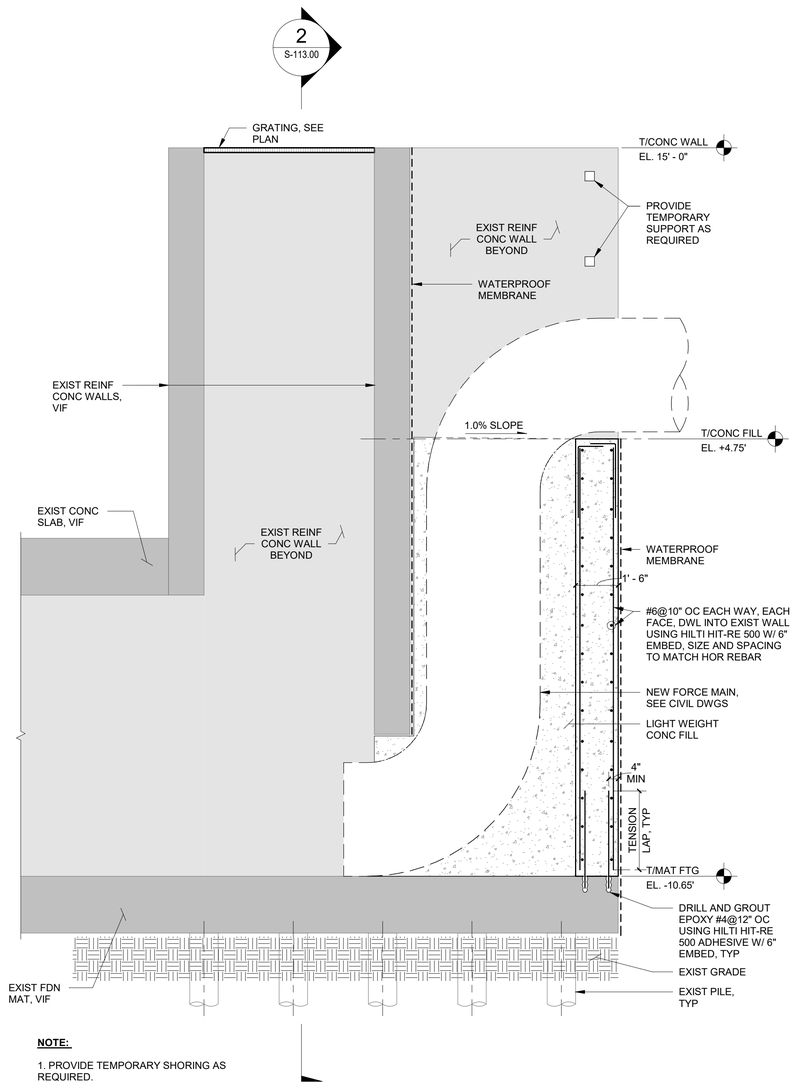

NOTE:

1. PROVIDE TEMPORARY SHORING AS REQUIRED.

1
S-114.00

SPILLWAY SECTION 1

3/8" = 1'-0"

3/8"=1'-0" 0 1 2 3 5 FT.

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STRUCTURAL
SPILLWAY SECTION 2

DATE: OCTOBER 2026
SCALE: AS INDICATED
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DRAWING NO. S-114.00

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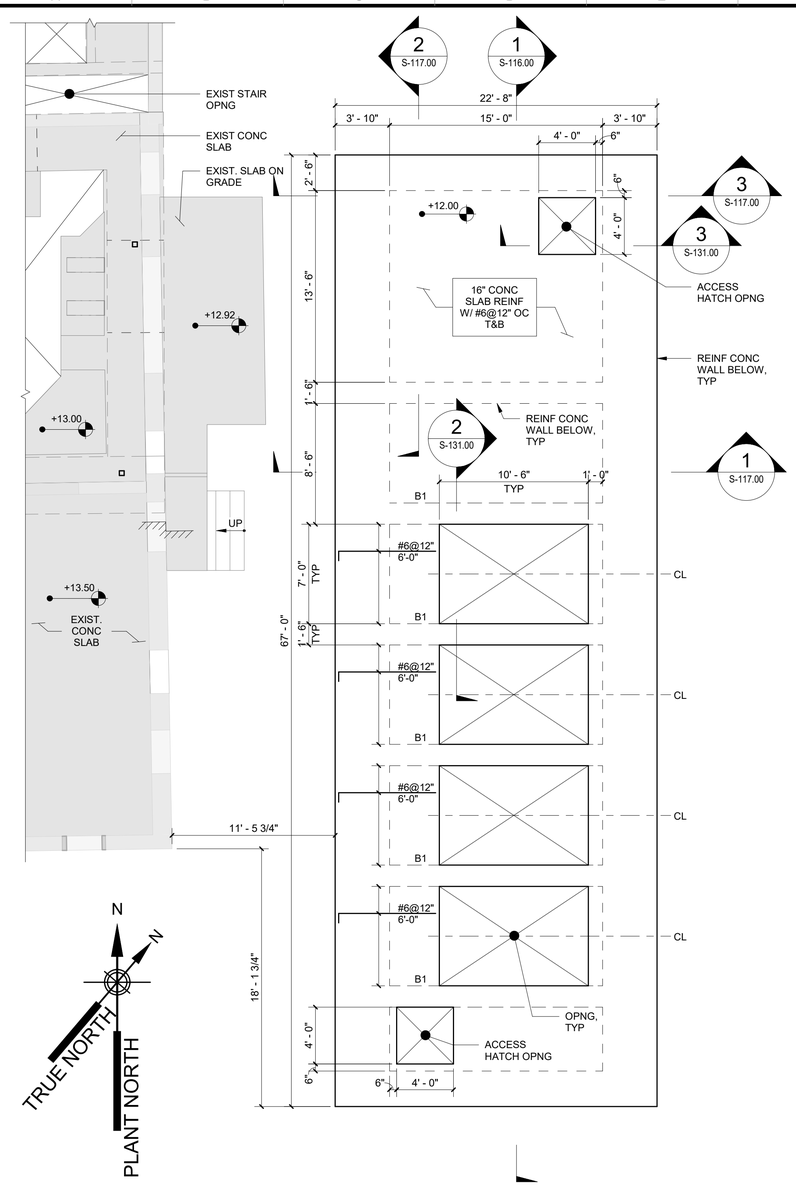
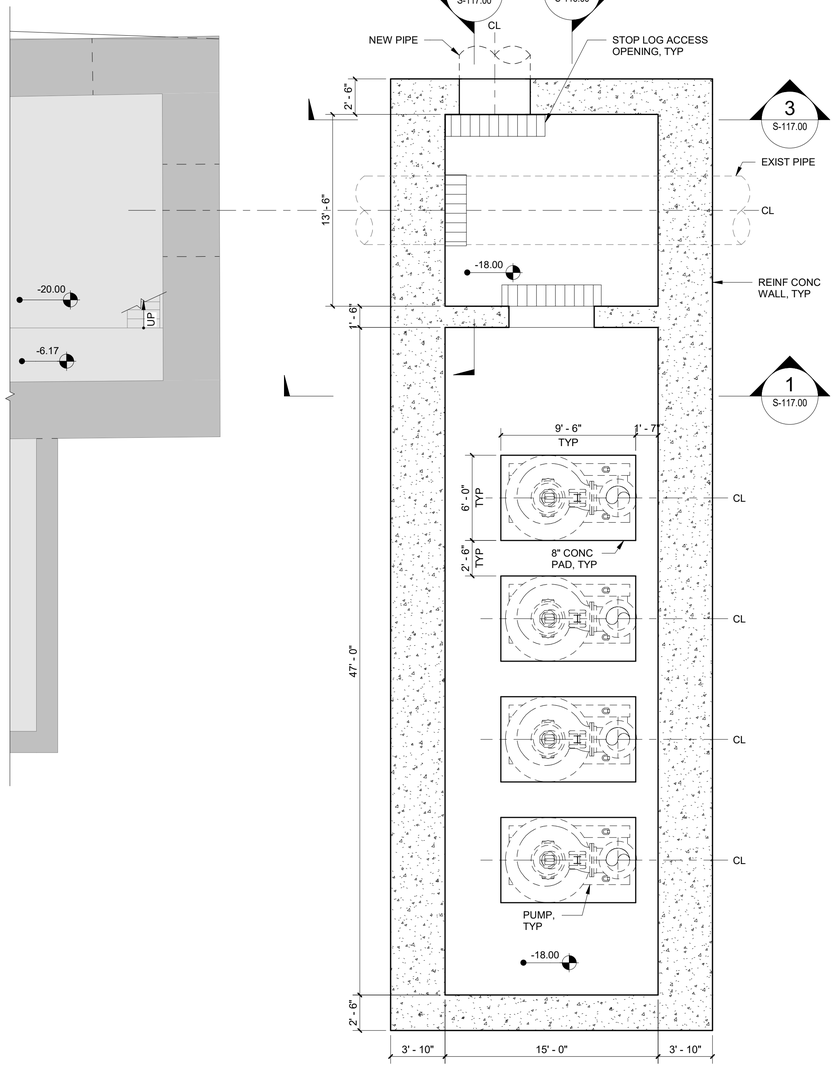


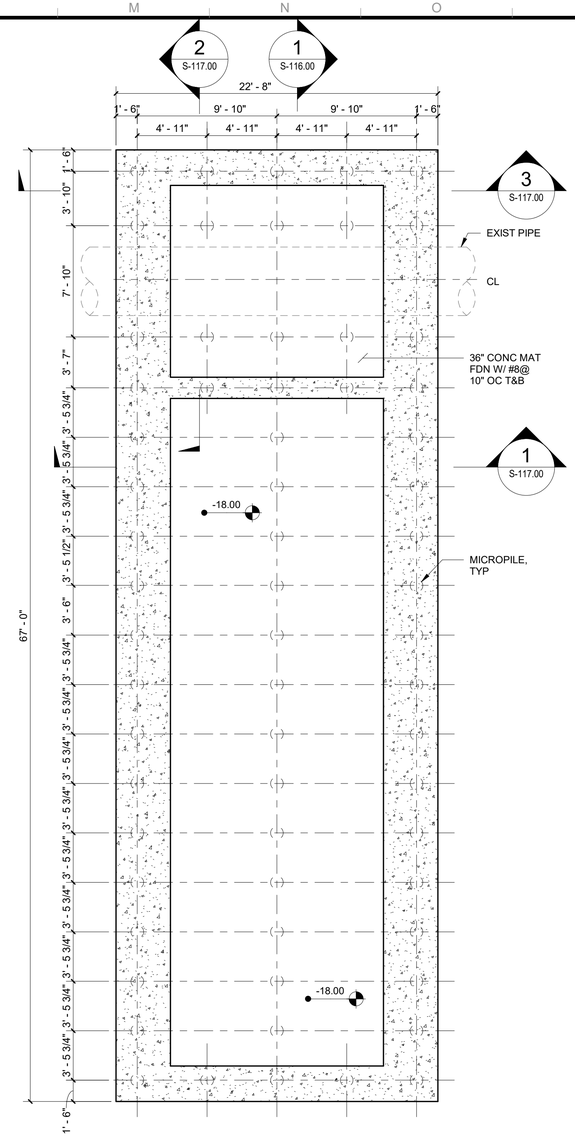
1 S-115.00 WET WELL PLAN VIEW EL. 12.00

3/16" = 1'-0"



2 S-115.00 WET WELL FDN PLAN VIEW EL. -18.00

3/16" = 1'-0"



3 S-115.00 WET WELL PILE LAYOUT PLAN VIEW EL. -18.00

3/16" = 1'-0"

NOTES / LEGEND:

1. FOR GENERAL NOTES SEE DRAWINGS SG-001 & SG-002.
2. REFER TO ARCHITECTURAL DRAWINGS FOR DIMENSIONAL INFORMATION NOT SHOWN ON PLAN.
3. REFER TO S-122 THRU S-132 DRAWINGS FOR TYPICAL DETAILS.
4. FOR ALL PROPOSED AND EXISTING UNDERGROUND UTILITY CONNECTIONS, SEE CIVIL, PLUMBING, ELECTRICAL AND SITE SURVEY DRAWINGS.
5. PILES SHALL BE EXTENDED TO INVERT LEVEL OF SEWER LINE OR LOWER.
6. ALL REINFORCEMENT TO BE EPOXY COATED.
7. ALL REBARS PARALLEL TO NORTH-SOUTH DIRECTION ARE SECOND LAYER FROM TOP AND BOTTOM OF SLABS.
   ALL REBARS PARALLEL TO EAST-WEST DIRECTION ARE FIRST LAYER FROM TOP & BOTTOM OF SLABS.
8. PROVIDE (3) #6 TOP AND BOTTOM ADDITIONAL REBARS CONTINUOUS ALL AROUND THE SLAB PERIMETER AND SLAB OPENINGS. PROVIDE DOWELED HOOKS AT REBAR ENDS.
9. —— INDICATES ADDITIONAL TOP REINFORCEMENT.
10. – – – INDICATES ADDITIONAL BOTTOM REINFORCEMENT.
11. REINFORCED CONCRETE PIER BY CONTRACTOR. COORDINATE REQUIREMENTS WITH VALVE MANUFACTURER.

BEAM SCHEDULE

MARK	WIDTH	DEPTH	TOP REINF (CONT.)	BOTTOM REINF (CONT.)	STIRRUPS			FACE BARS	REMARKS
					SIZE	TYPE	SPACING (IN)	REINF.	
B1	18"	16"	5-#7	5-#7	#4		6"	#4 @ 12" E.F.	

3/16"=1'-0" 0 5 10 FT.

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NEW YORK, NY 10158, US

STATE OF NEW YORK — MOSTAFA SAAD ELDINE ELMORSI — LICENSED PROFESSIONAL ENGINEER — 085573

NYC Environmental Protection

ACCOUNTABLE MANAGER: JOHN GOULAS, P.E.
PORTFOLIO MANAGER: KEVIN ELLENWOOD, P.E.
EXECUTIVE DIRECTOR: NAYANKUMAR SHAH, P.E.

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NEW YORK CITY ENVIRONMENTAL PROTECTION
BUREAU OF ENGINEERING DESIGN & CONSTRUCTION
96-05 HORACE HARDING EXPRESSWAY 5th FLOOR
CORONA, NEW YORK 11368
www.nyc.gov/dep

CAPITAL PROJECT WP-269
RECONSTRUCTION OF PAERDEGAT PUMPING STATION
CONTRACT PS-318
STRUCTURAL
WET WELL PLAN

DATE: OCTOBER 2026
SCALE: AS INDICATED
SHEET NO: 81 OF 274
DRAWING NO. S-115.00

Autodesk Docs://CI-AMER (USA) 60619010-PS-DES-5/PAER-S-MODEL_AECOM.rvt
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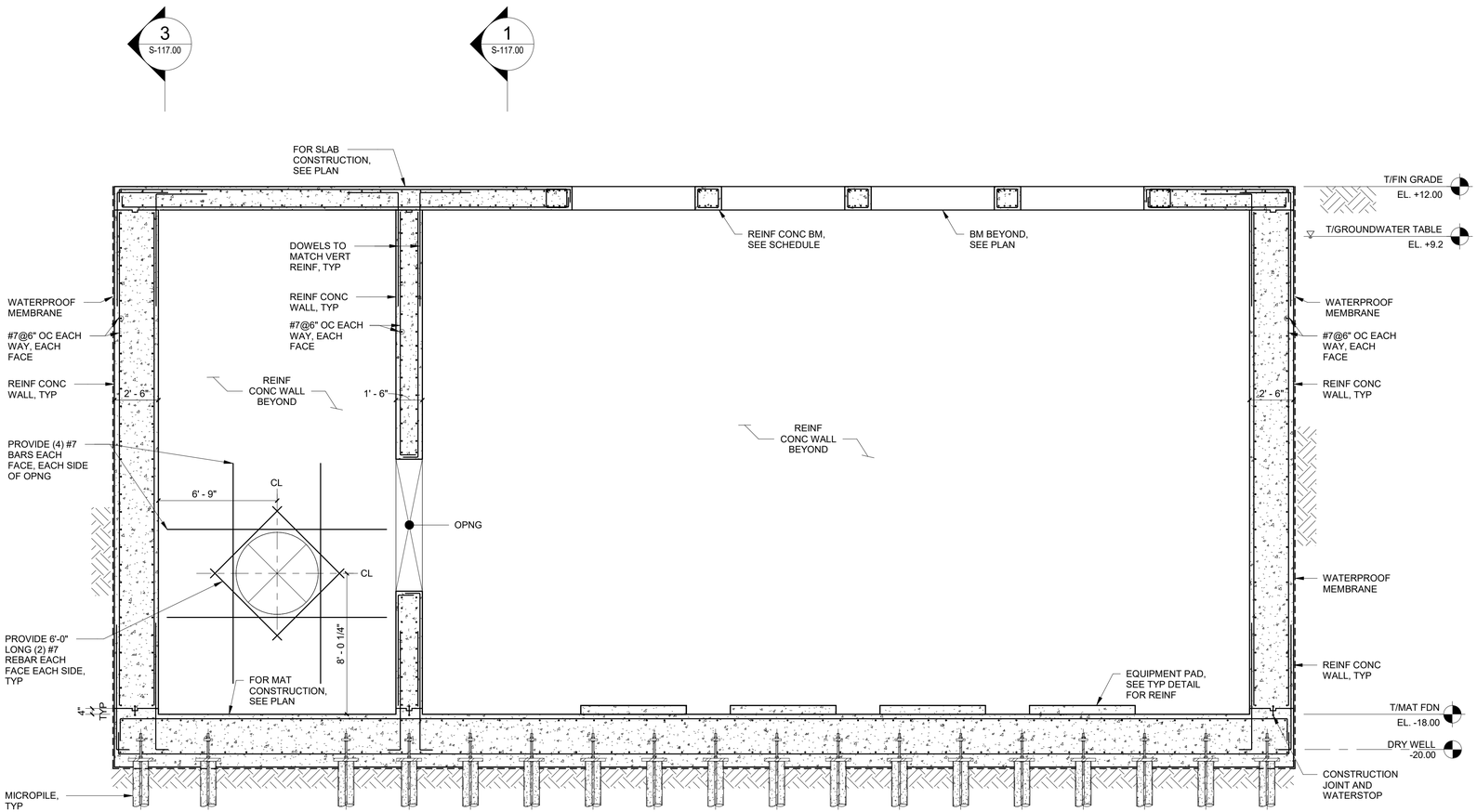

1 INTERIM BYPASS SECTION 1

1 / S-116.00

1/4" = 1'-0"

NOTES:

1. DO NOT PLACE BACKFILL AGAINST FOUNDATION WALLS UNLESS THEY ARE ADEQUATELY BRACED OR UNTIL THE FIRST LEVEL AND MAT SLAB HAVE BEEN POURED.

2. GC TO VERIFY IN FIELD PIPE SIZE AND MATERIAL TO CONFIRM OPENING DIMENSION. ACTUAL OPENING SIZE DEPENDENT ON PIPE MATERIAL.

1/4"=1'-0" 0 4 8 FT.

BID SET

SUBMITTAL DATE: OCTOBER 2026

GRAPHIC SCALES CHECK BEFORE USE

IF SHEET IS LESS THAN 22" X 34" IT IS A REDUCED PRINT. SCALE ACCORDINGLY

NO.	DATE	REVISIONS/DESCRIPTION	APPR'D.

DESIGNED BY: UNGELLI PICARDAL, P.E.
DRAWN BY: UNGELLI PICARDAL, P.E.
CHECKED BY: MOHAMED YOUSEF, P.E.
DESIGN LEAD: MOSTAFA ELMORSI, P.E.
PROJECT MANAGER: AIMEE BOULET, P.E.

AECOM
605 THIRD AVENUE, 3rd FL.
NEW YORK, NY 10158, US

STATE OF NEW YORK MOSTAFA SAAD ELDINE ELMORSI 085573 LICENSED PROFESSIONAL ENGINEER

Environmental Protection

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RECONSTRUCTION
OF PAERDEGAT PUMPING STATION
CONTRACT PS-318
STRUCTURAL
WET WELL SECTION 1

DATE: OCTOBER 2026
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SHEET NO: 82 OF 274
DRAWING NO. S-116.00

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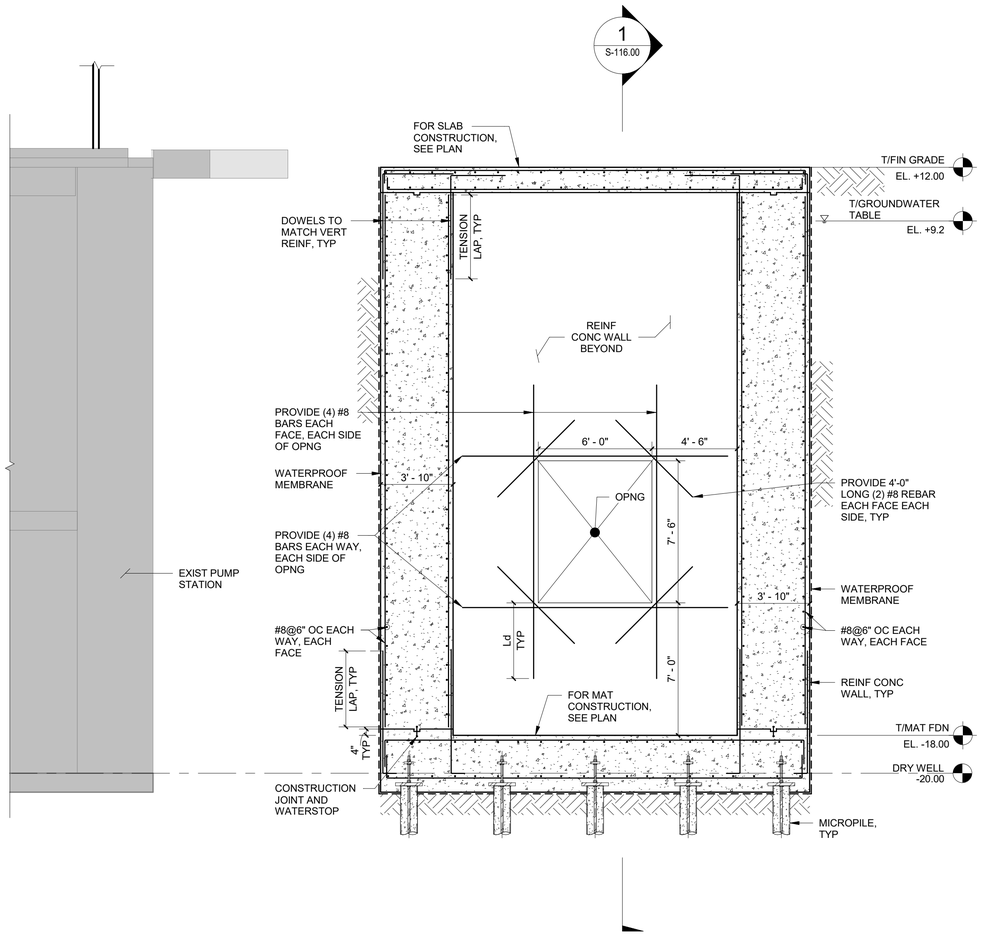


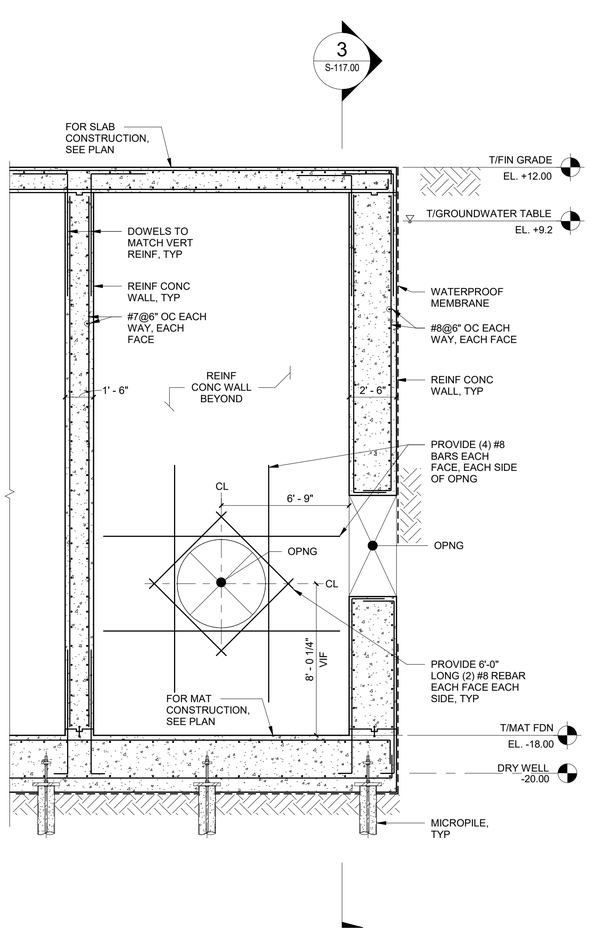
1 INTERIM BYPASS SECTION 1

S-117.00

1/4" = 1'-0"

NOTES:

1. DO NOT PLACE BACKFILL AGAINST FOUNDATION WALLS UNLESS THEY ARE ADEQUATELY BRACED OR UNTIL THE FIRST LEVEL AND MAT SLAB HAVE BEEN POURED.



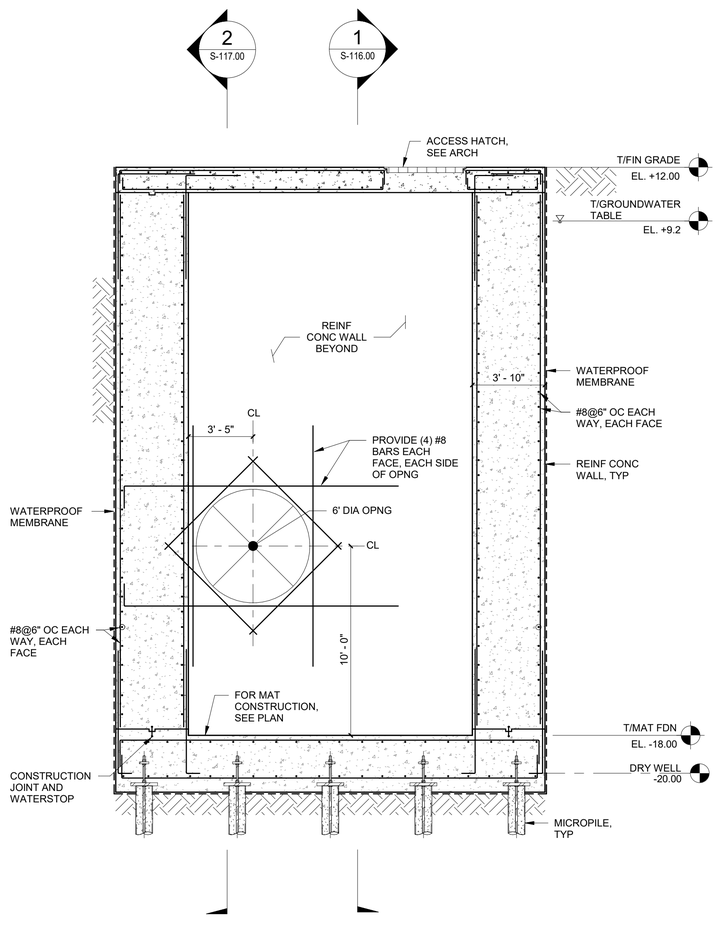
2 INTERIM BYPASS SECTION 2

S-117.00

1/4" = 1'-0"

NOTES:

1. GC TO VERIFY IN FIELD PIPE SIZE AND MATERIAL TO CONFIRM OPENING DIMENSION. ACTUAL OPENING SIZE DEPENDENT ON PIPE MATERIAL.



3 INTERIM BYPASS SECTION 3

S-117.00

1/4" = 1'-0"

0 4 8 FT.

1/4"=1'-0"

BID SET

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STATE OF NEW YORK · MOSTAFA SAAD ELDINE ELMORSI · 085213 · LICENSED PROFESSIONAL ENGINEER

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CONTRACT PS-318
STRUCTURAL
WET WELL SECTION 2

DATE: OCTOBER 2026
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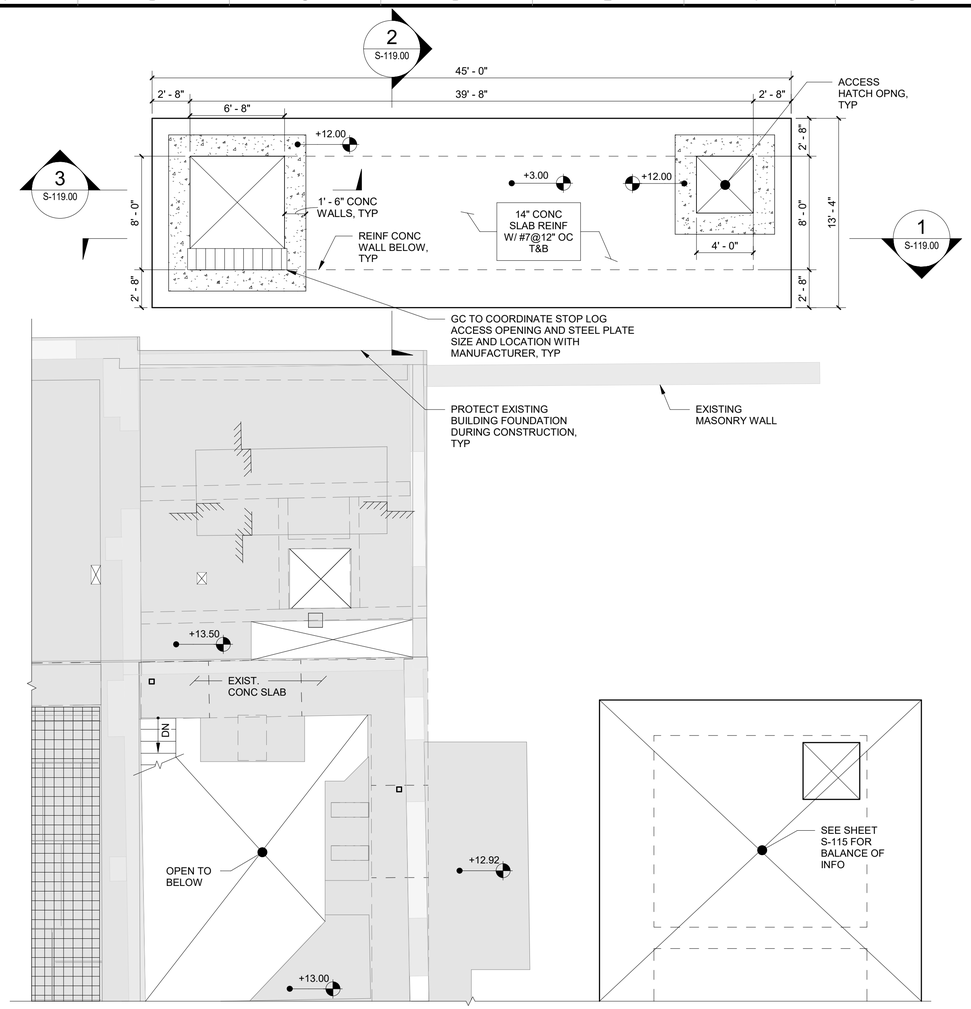
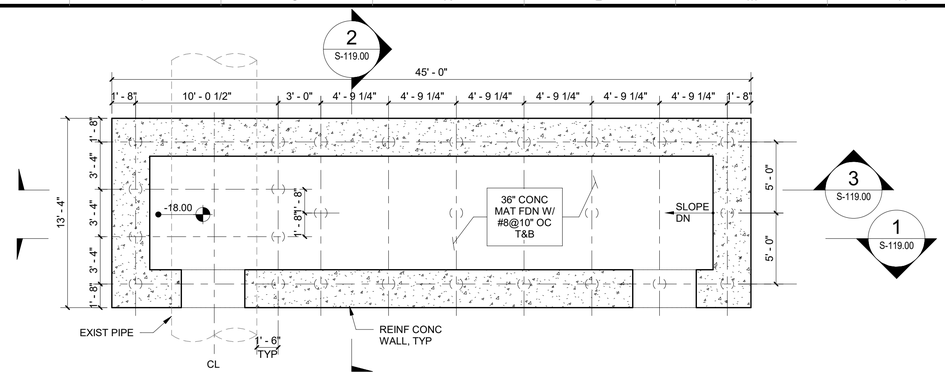


1 S-118.00 RALPH AVE DIVERSION CHAMBER PLAN VIEW EL. 12.00

3/16" = 1'-0"



2 S-118.00 RALPH AVE DIVERSION CHAMBER PLAN VIEW EL. -20.00'

3/16" = 1'-0"

NOTES / LEGEND:

1. FOR GENERAL NOTES SEE DRAWINGS SG-001 & SG-002.
2. REFER TO ARCHITECTURAL DRAWINGS FOR DIMENSIONAL INFORMATION NOT SHOWN ON PLAN.
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6. ALL REINFORCEMENT TO BE EPOXY COATED.
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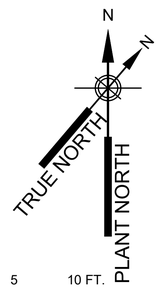
   ALL REBARS PARALLEL TO NORTH-SOUTH DIRECTION ARE FIRST LAYER FROM TOP & BOTTOM OF SLABS.
8. PROVIDE (3) #6 TOP AND BOTTOM ADDITIONAL REBARS CONTINUOUS ALL AROUND THE SLAB PERIMETER AND SLAB OPENINGS. PROVIDE DOWELED HOOKS AT REBAR ENDS.



0 5 10 FT.

3/16"=1'-0"

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CAPITAL PROJECT WP-269
RECONSTRUCTION OF PAERDEGAT PUMPING STATION
CONTRACT PS-318
STRUCTURAL
DIVERSION CHAMBER PLAN

DATE: OCTOBER 2026
SCALE: AS INDICATED
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DRAWING NO. S-118.00

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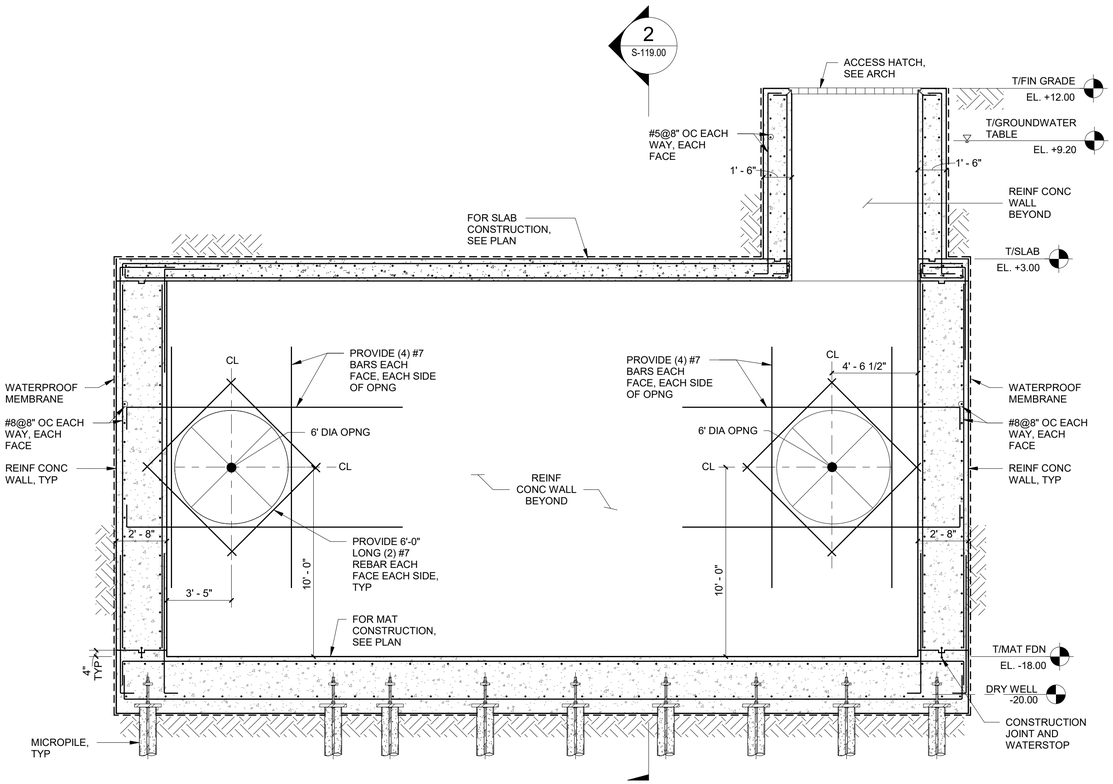

NOTES:

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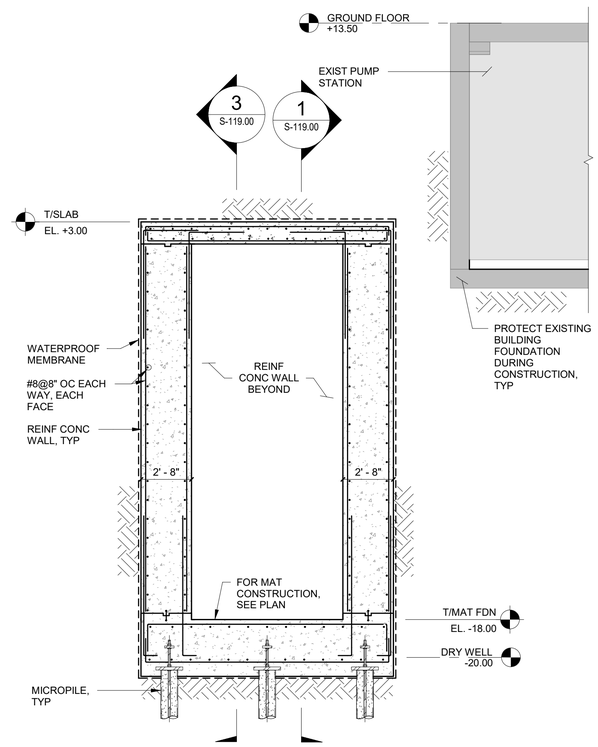
1 DIVERSION CHAMBER SECTION 1

1/4" = 1'-0"



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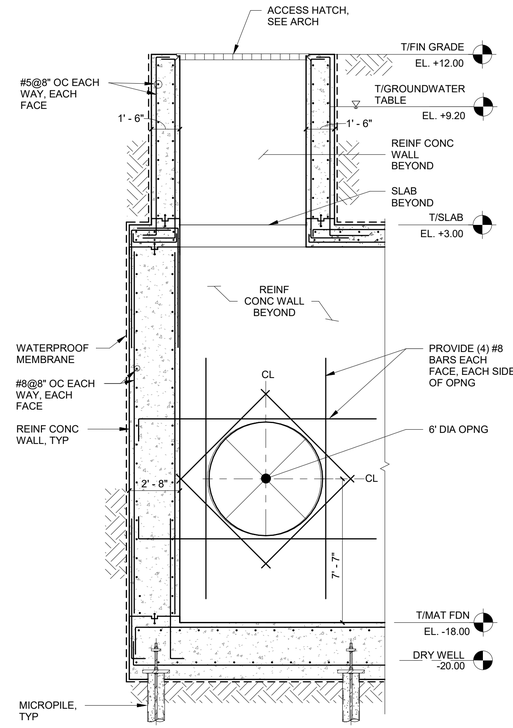
2 DIVERSION CHAMBER SECTION 2

1/4" = 1'-0"



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3 DIVERSION CHAMBER SECTION 3

1/4" = 1'-0"

1/4"=1'-0" 0 4 8 FT.

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Environmental Protection

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DIVERSION CHAMBER SECTION

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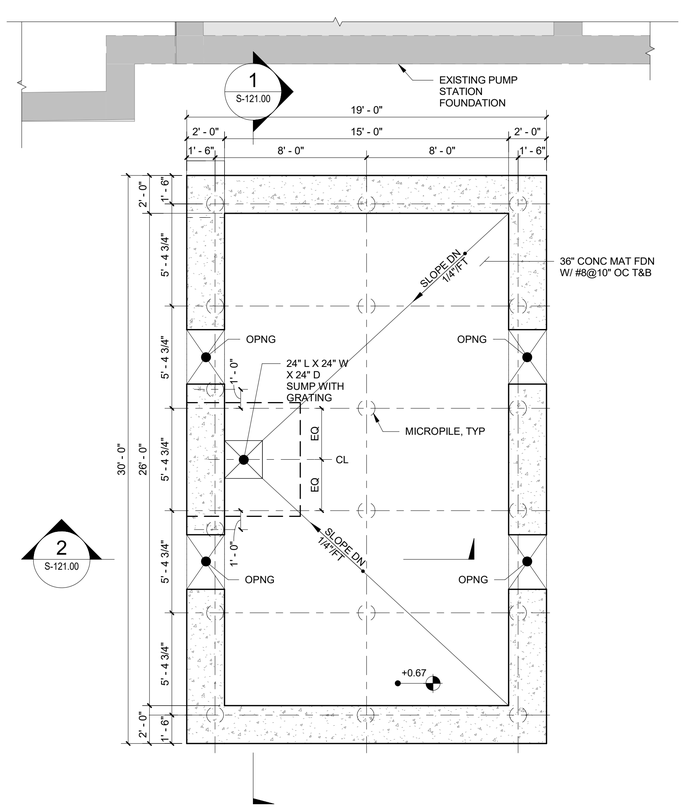
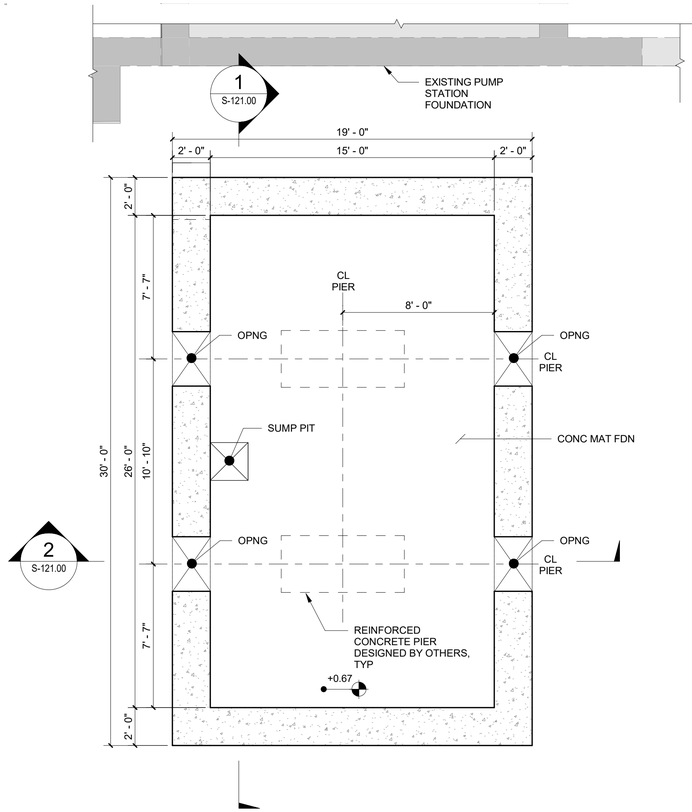


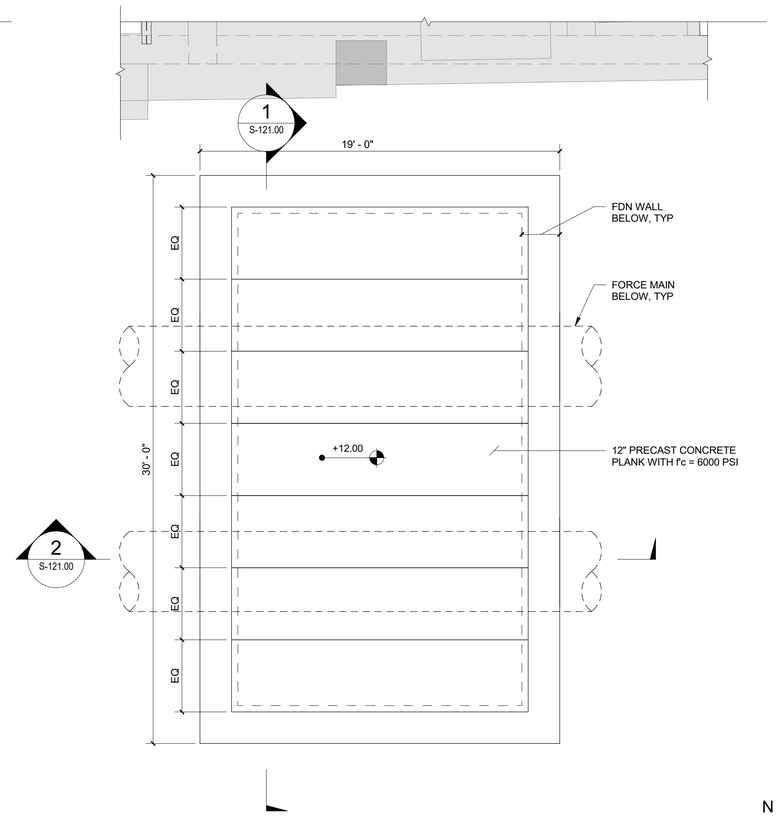
1 S-120.00 VALVE CHAMBER PILE LAYOUT PLAN VIEW EL. 0.67

1/4" = 1'-0"



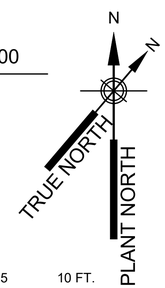
2 S-120.00 VALVE CHAMBER FDN PLAN VIEW EL. 0.67

1/4" = 1'-0"



3 S-120.00 VALVE CHAMBER PLAN VIEW EL. 12.00

1/4" = 1'-0"



3/16"=1'-0" 0 5 10 FT.

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8. PROVIDE (3) #6 TOP AND BOTTOM ADDITIONAL REBARS CONTINUOUS ALL AROUND THE SLAB PERIMETER AND SLAB OPENINGS. PROVIDE DOWELED HOOKS AT REBAR ENDS.
9. ——— INDICATES ADDITIONAL TOP REINFORCEMENT.
10. – – – INDICATES ADDITIONAL BOTTOM REINFORCEMENT.
11. REINFORCED CONCRETE PIER BY CONTRACTOR. COORDINATE REQUIREMENTS WITH VALVE MANUFACTURER.

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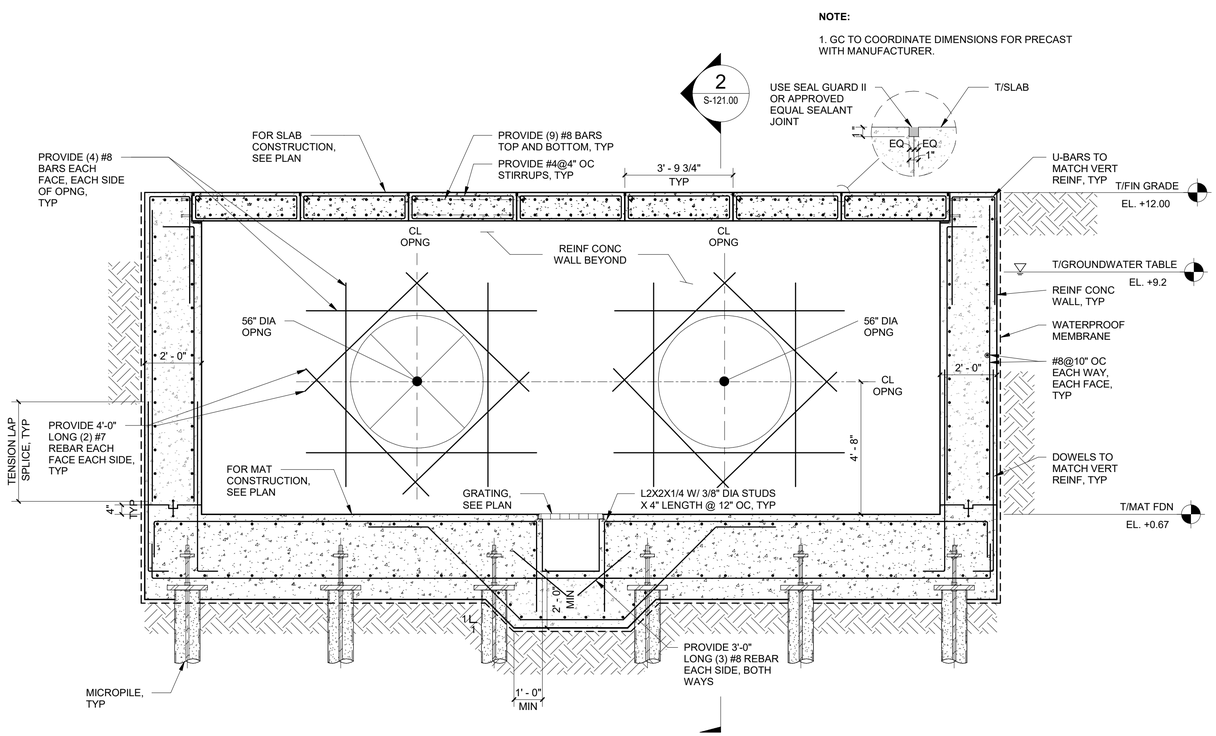


1 VALVE CHAMBER CROSS SECTION 1
S-121.00

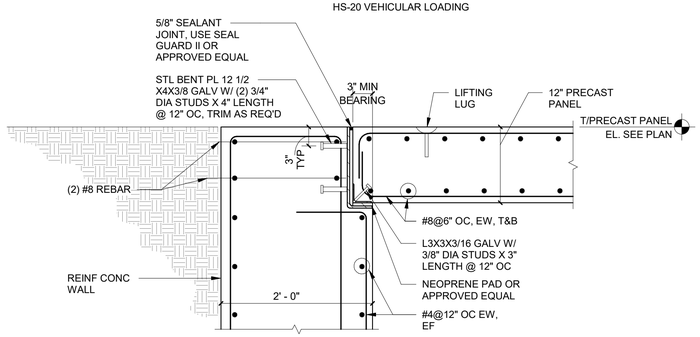
3/8" = 1'-0"

NOTES:

1. DO NOT PLACE BACKFILL AGAINST FOUNDATION WALLS UNLESS THEY ARE ADEQUATELY BRACED OR UNTIL THE FIRST LEVEL AND MAT SLAB HAVE BEEN POURED.

2. PRECAST TO BE DESIGNED FOR THE FOLLOWING LOADS:

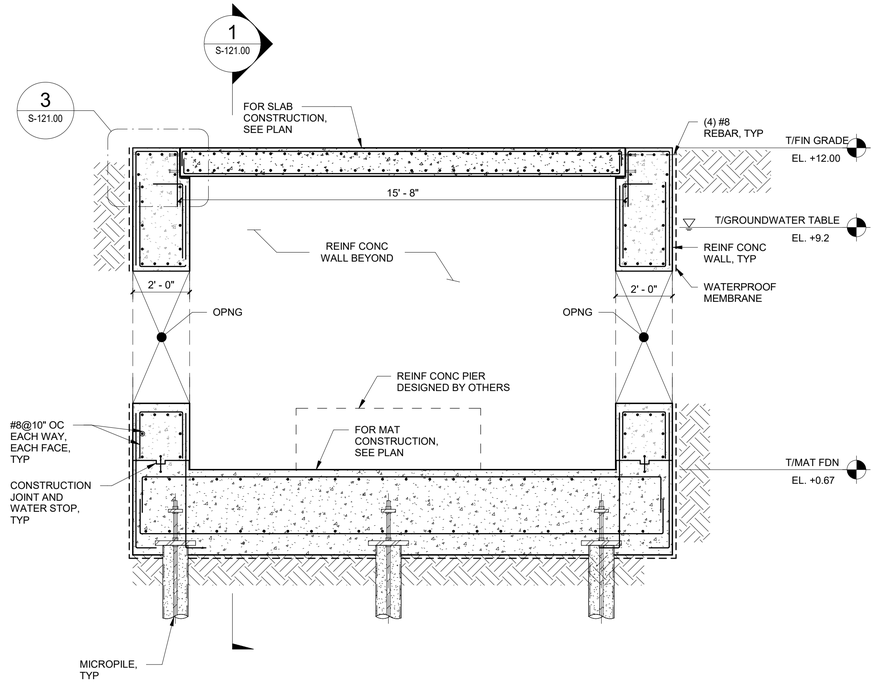
LL = 300 PSF
SL = 30 PSF
HS-20 VEHICULAR LOADING



3 PRECAST PLANK DETAIL 1
S-121.00

1" = 1'-0"

1"=1'-0" 0 1 2 FT.



2 VALVE CHAMBER CROSS SECTION 2
S-121.00

3/8" = 1'-0"

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3/8"=1'-0" 0 1 2 3 5 FT.

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BUREAU OF ENGINEERING DESIGN & CONSTRUCTION
96-05 HORACE HARDING EXPRESSWAY 5th FLOOR
CORONA, NEW YORK 11368
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CAPITAL PROJECT WP-269
RECONSTRUCTION OF PAERDEGAT PUMPING STATION
CONTRACT PS-318
STRUCTURAL
VALVE CHAMBER SECTIONS

DATE: OCTOBER 2026
SCALE: AS INDICATED
SHEET NO: 87 OF 274
DRAWING NO. S-121.00

All inquiries regarding this drawing(s) or project should be made to NYC Environmental Protection, Bureau of Engineering Design and Construction.

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ACI TENSION LAP SPLICE LENGTH (in.) PER f ′c					
BAR SIZE DESIGNATION	LAP CLASS	f ′c = 6,000 psi			
		TOP BARS		OTHER BARS	
		CASE 1	CASE 2	CASE 1	CASE 2
#3	A B	15 20	23 30	12 16	18 23
#4	A B	20 26	31 40	16 20	24 31
#5	A B	25 33	38 49	20 25	29 38
#6	A B	31 40	46 59	24 31	35 46
#7	A B	44 58	66 86	34 44	51 66
#8	A B	51 66	76 98	39 51	58 76
#9	A B	57 74	85 111	44 57	66 85
#10	A B	64 83	96 125	49 64	74 96
#11	A B	71 93	107 139	55 71	82 107
#14	N/A	86	128	66	99
#18	N/A	114	171	88	131

NOTES:

1. TABULATED VALUES ARE BASED ON GRADE 60 REINFORCING BARS AND NORMAL-WEIGHT CONCRETE.
2. TENSION DEVELOPMENT LENGTHS AND TENSION LAP SPLICE LENGTHS ARE BASED ON ACI 318-14, SECTIONS 25.4.2 AND 25.5.2, RESPECTIVELY. TABULATED VALUES FOR BEAMS OR COLUMNS ARE BASED ON TRANSVERSE REINFORCEMENT AND CONCRETE COVER MEETING MINIMUM CODE REQUIREMENTS. LENGTHS ARE IN INCHES.
3. CASES 1 AND 2, WHICH DEPEND ON THE TYPE OF STRUCTURAL ELEMENT, CONCRETE COVER, AND THE CENTER-TO-CENTER (C/C) SPACING OF THE BARS, ARE DEFINED AS:

BEAMS OR COLUMNS	CASE 1	COVER AT LEAST 1d_b AND C/C SPACING AT LEAST 2d_b
	CASE 2	COVER LESS THAN 1d_b AND C/C SPACING AT LESS THAN 2d_b
ALL OTHERS	CASE 1	COVER AT LEAST 1d_b AND C/C SPACING AT LEAST 3d_b
	CASE 2	COVER LESS THAN 1d_b AND C/C SPACING AT LESS THAN 3d_b

4. LAP CLASS A VALUES ARE THE REQUIRED TENSION DEVELOPMENT LENGTHS, ℓ_d ; LAP SPLICE LENGTHS ARE MULTIPLES OF TENSION DEVELOPMENT LENGTHS; CLASS A = 1.0 ℓ_d AND CLASS B = 1.3 ℓ_d (ACI 318-14, SECTION 25.5.2.1).
5. LAP SPLICES OF #14 OR #18 BARS ARE NOT PERMITTED. THE TABULATED VALUES FOR THOSE BAR SIZES ARE THE TENSION DEVELOPMENT LENGTHS.
6. TOP BARS ARE HORIZONTAL BARS WITH MORE THAN 12" OF CONCRETE CAST BELOW THE BARS.
7. FOR LIGHTWEIGHT AGGREGATE CONCRETE, MULTIPLY THE TABULATED VALUES BY 1.3; OR WHEN f_{ct} IS SPECIFIED, THE FACTOR IS 6.7*√(f ′c / f ′ct) ≥ 1.0
8. FOR EPOXY COATED BARS, MULTIPLY THE TABULATED VALUES BY ONE OF THE FOLLOWING FACTORS:

CONCRETE COVER AND SPACING	TOP BARS	OTHER BARS
COVER < 3d_b AND C/C SPACING< 7d_b	1.7/1.3 = 1.31	1.50
COVER ≥ 3d_b AND C/C SPACING ≥ 7d_b	1.20	1.20

COMPRESSION DEVELOPMENT LENGTHS (in.) PER f ′c		COMPRESSION LAP SPLICE LENGTHS (in.)
BAR SIZE	f ′c = 6,000 PSI	
#3 #4 #5	8 9 12	12 15 19
#6 #7 #8	14 16 18	23 27 30
#9 #10 #11	21 23 26	34 38 43
#14 #18	31 41	N/A N/A

NOTES:

1. TABULATED VALUES ARE BASED ON GRADE 60 REINFORCING BARS AND NORMAL WEIGHT CONCRETE.
2. COMPRESSION DEVELOPMENT LENGTHS AND COMPRESSION LAP SPLICE LENGTHS ARE BASED ON ACI 318-14, SECTIONS 25.4.9 AND 25.5.5, RESPECTIVELY. LENGTHS ARE IN INCHES.
3. FOR COMPRESSION DEVELOPMENT LENGTHS, IF BARS ARE ENCLOSED IN SPIRALS OR TIES CONFORMING TO ACI 318-14, SECTION 25.4.9.3,THEN A MODIFICATION FACTOR OF 0.75 MAY BE APPLIED BUT THE RESULTING LENGTH MUST NOT BE LESS THAN 8 IN.
4. FOR COMPRESSION LAP SPLICE LENGTHS:
   A. IF BARS ARE ENCLOSED IN A TIED-REINFORCED COMPRESSION MEMBER CONFORMING TO ACI 318-14, SECTION 10.7.5.2.1(a), THEN A MODIFICATION FACTOR OF 0.83 MAY BE APPLIED BUT THE RESULTING LENGTH MUST NOT BE LESS THAN 12 IN.
   B. IF BARS ARE ENCLOSED IN A SPIRALLY-REINFORCED COMPRESSION MEMBER CONFORMING TO ACI 318-14, SECTION 10.7.5.2.1(b), THEN A MODIFICATION FACTOR OF 0.75 MAY BE APPLIED BUT THE RESULTING LENGTH MUST NOT BE LESS THAN 12 IN.
   C. THE TABULATED LENGTHS ARE APPLICABLE FOR ALL CONCRETE STRENGTHS OF AT LEAST 3,000 PSI.
5. ACI 318-14 DOES NOT ALLOW LAP SPLICES OF #14 AND #18 BARS,EXCEPT TO #11 AND SMALLER BARS.

RECOMMENDED END HOOKS, ALL GRADES OF STEEL					
BAR SIZE	D	180° HOOKS		90° HOOKS	
		A OR G	J	A OR G	
#3	2 1/4"	5"	3"	6"	
#4	3"	6"	4"	8"	
#5	3 3/4"	7"	5"	10"	
#6	4 1/2"	8"	6"	1'-0"	
#7	5 1/4"	10"	7"	1'-2"	
#8	6"	11"	8"	1'-4"	
#9	9 1/2"	1'-3"	11 3/4"	1'-7"	
#10	10 3/4"	1'-5"	1'-1 1/4"	1'-10"	
#11	12"	1'-7"	1'-2 3/4"	2'-0"	
#14	18 1/4"	2'-3"	1'-9 3/4"	2'-7"	
#18	24"	3'-0"	2'-4 1/2"	3'-5"	

ALL GRADES OF STEEL:

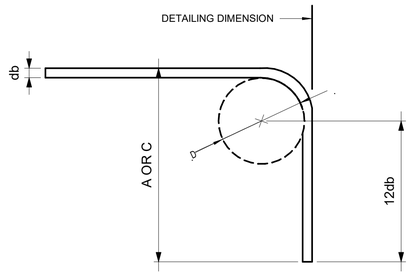
D = FINISH INSIDE BEND DIAMETER

d_b = NOMINAL BAR DIAMETER

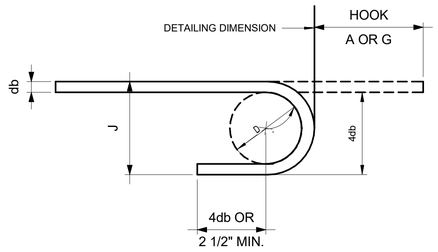
MIN. D = 6d_b FOR #3 THROUGH #8
= 8d_b FOR #9 AND #11
= 10d_b FOR #14 AND #18

SEISMIC STIRRUP / THE HOOKS			
BAR SIZE	135° SEISMIC HOOKS		
	D	A OR G	H*
#3	1 1/2"	4 1/4"	3"
#4	2"	4 1/2"	3"
#5	2 1/2"	5 1/2"	3 1/4"
#6	4 1/2"	8"	4 1/2"
#7	5 1/4"	9"	5 1/4"
#8	6"	10 1/2"	6"

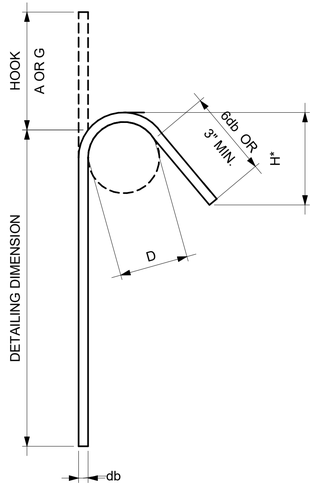
H* - DENOTES APPROXIMATE DIMENSION.



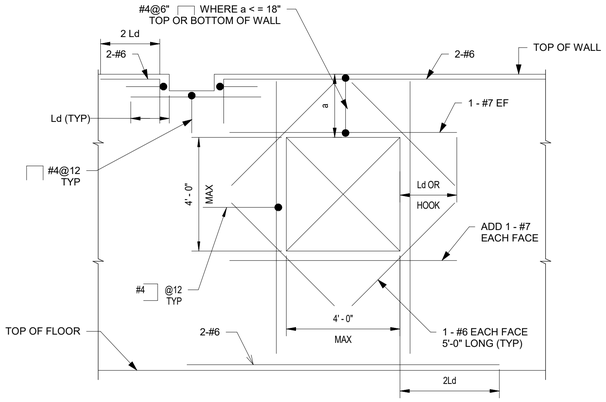
90° BEND



180° BEND



135° BEND



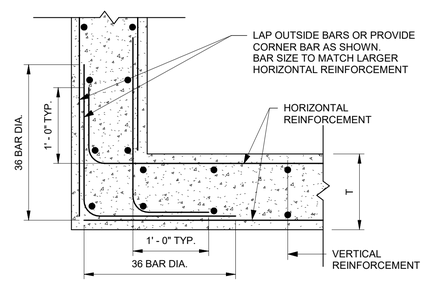
NOTES:

1. ALL REINFORCEMENT SHOWN IS IN ADDITION TO TYPICAL WALL REINFORCEMENT.
2. ADD HALF THE EQUIVALENT INTERRUPTED VERTICAL REINFORCEMENT ON EACH SIDE OF THE OPENING. WHERE REINFORCEMENT CANNOT BE EXTENDED, HOOK ALL REINFORCEMENT THAT IS AFFECTED.

1 TYPICAL OPENING IN REINFORCED CONCRETE WALLS

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

3/8"=1'-0" 0 1 2 3 5 FT.



2 HORIZONTAL REINFORCEMENT OF CONCRETE WALLS AT CORNERS AND AT FREE ENDS

SCALE: 1" = 1'-0"

1"=1'-0" 0 1 2 FT.

BID SET

SUBMITTAL DATE: OCTOBER 2026

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DRAWN BY: UNGELLI PICARDAL, P.E.
CHECKED BY: MOHAMED YOUSEF, P.E.
DESIGN LEAD: MOSTAFA ELMORSI, P.E.
PROJECT MANAGER: AIMEE BOULET, P.E.

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STATE OF NEW YORK MOSTAFA HAAD ELDIN ELMORSI 085573 LICENSED PROFESSIONAL ENGINEER

Environmental Protection

ACCOUNTABLE MANAGER: JOHN GOULAS, P.E.
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CAPITAL PROJECT WP-269
RECONSTRUCTION OF PAERDEGAT PUMPING STATION
CONTRACT PS-318
STRUCTURAL
STANDARD DETAILS 1

DATE: OCTOBER 2026
SCALE: AS INDICATED
SHEET NO: 88 OF 274
DRAWING NO. S-122.00

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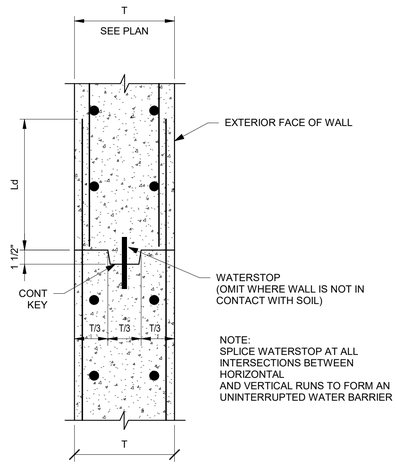
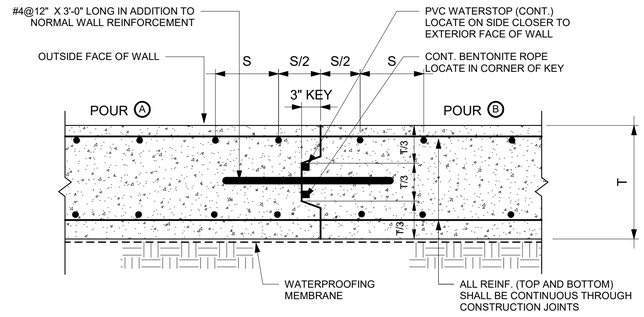


1 S-123.00 TYPICAL HORIZONTAL CONSTRUCTION JOINT DETAIL

1 1/2" = 1'-0"



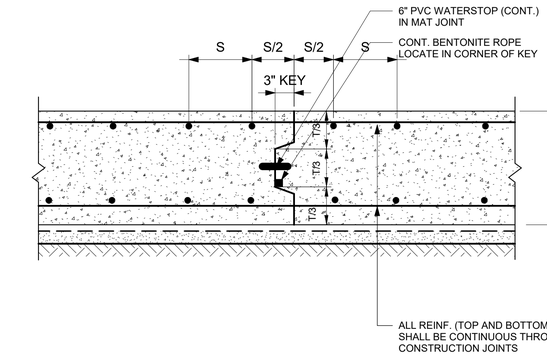
NOTES:

1. CONSTRUCTION JOINTS IN WALLS SHALL BE LOCATED AT LEAST FOUR FEET FROM FACE OF SUPPORTING FOOTING OR FROM WALL OPENING.

2. MAXIMUM SPACING BETWEEN JOINTS SHALL BE FORTY FEET UNLESS OTHERWISE NOTED ON THE FOUNDATION DRAWINGS.

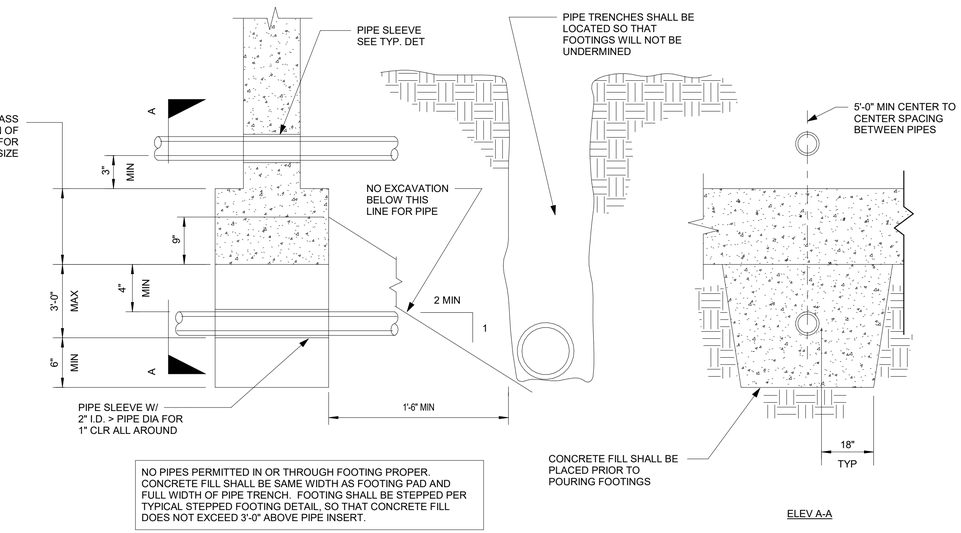
2 S-123.00 VERTICAL CONSTRUCTION JOINT IN FOUNDATION WALL

1" = 1'-0"



3 S-123.00 MAT FOUNDATION CONSTRUCTION JOINT

1" = 1'-0"

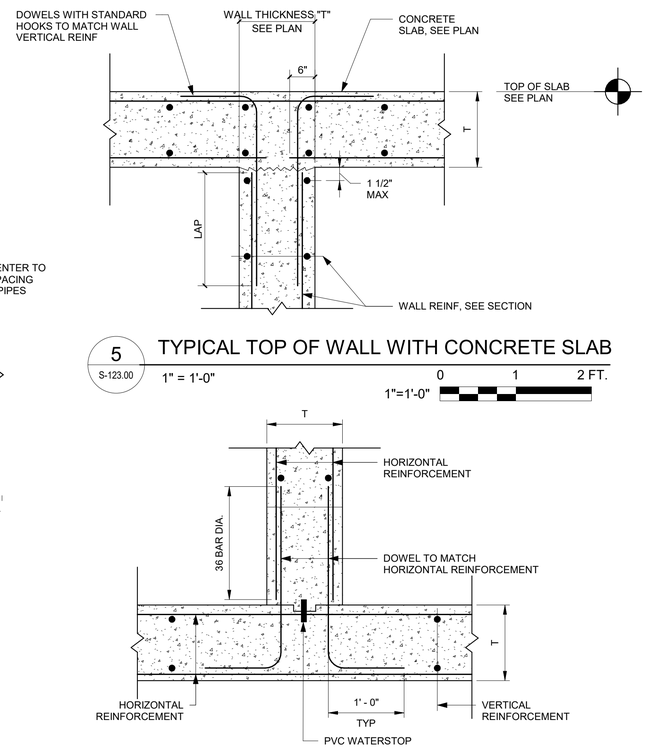


NO PIPES PERMITTED IN OR THROUGH FOOTING PROPER. CONCRETE FILL SHALL BE SAME WIDTH AS FOOTING PAD AND FULL WIDTH OF PIPE TRENCH. FOOTING SHALL BE STEPPED PER TYPICAL STEPPED FOOTING DETAIL, SO THAT CONCRETE FILL DOES NOT EXCEED 3'-0" ABOVE PIPE INSERT.

4 S-123.00 TYPICAL PIPE AND TRENCH DETAIL

1 1/2" = 1'-0"

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



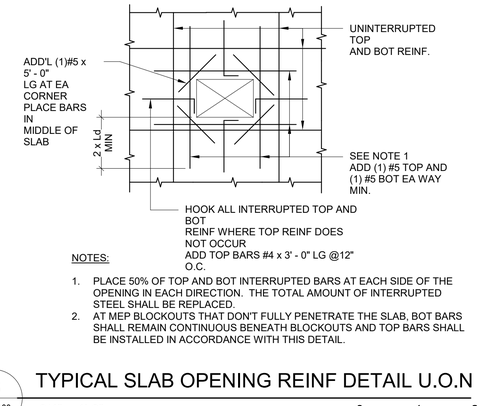
5 S-123.00 TYPICAL TOP OF WALL WITH CONCRETE SLAB

1" = 1'-0"

1"=1'-0" 0 1 2 FT.

7 S-123.00 HORIZONTAL REINFORCEMENT OF CONRETE WALLS AT INTERSECTIONS

1" = 1'-0"



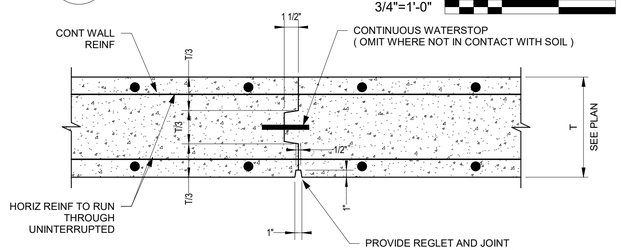
NOTES:

1. PLACE 50% OF TOP AND BOT INTERRUPTED BARS AT EACH SIDE OF THE OPENING IN EACH DIRECTION. THE TOTAL AMOUNT OF INTERRUPTED STEEL SHALL BE REPLACED.
2. AT MEP BLOCKOUTS THAT DON'T FULLY PENETRATE THE SLAB, BOT BARS SHALL REMAIN CONTINUOUS BENEATH BLOCKOUTS AND TOP BARS SHALL BE INSTALLED IN ACCORDANCE WITH THIS DETAIL.

6 S-123.00 TYPICAL SLAB OPENING REINF DETAIL U.O.N

3/4" = 1'-0"

3/4"=1'-0" 0 1 2 3 FT.



NOTES:
1. SPLICE WATERSTOP AT ALL INTERSECTIONS BETWEEN HORIZONTAL AND VERTICAL RUNS TO FORM AN UNINTERRUPTED WATER BARRIER.
2. LOCATE JOINTS MIDWAY BETWEEN COLUMN CENTERLINES UON.
3. SPACING OF JOINTS SHALL NOT EXCEED 60'-0" UON.
4. ALLOW 7 (SEVEN) DAYS MINIMUM BETWEEN PLACING CONCRETE ADJACENT TO PREVIOUSLY CAST CONCRETE.

8 S-123.00 TYPICAL PLAN WALL CONSTRUCTION JOINT

1 1/2" = 1'-0"

BID SET

SUBMITTAL DATE: OCTOBER 2026

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CAPITAL PROJECT WP-269
RECONSTRUCTION OF PAERDEGAT PUMPING STATION
CONTRACT PS-318
STRUCTURAL
STANDARD DETAILS 2

DATE: OCTOBER 2026
SCALE: AS INDICATED
SHEET NO: 89 OF 274
DRAWING NO. S-123.00

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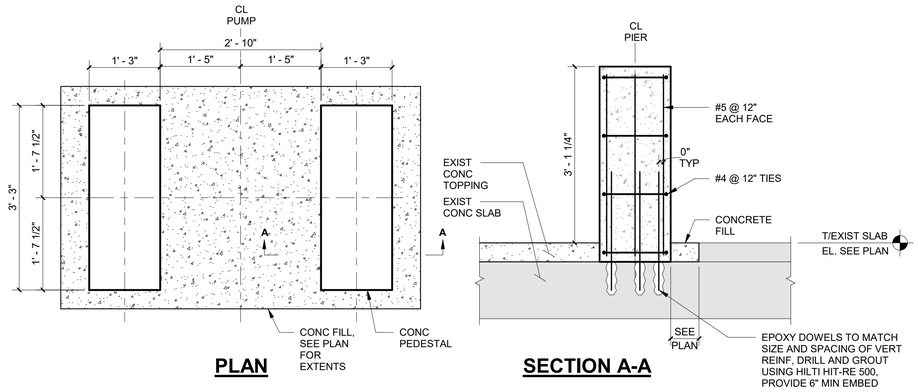
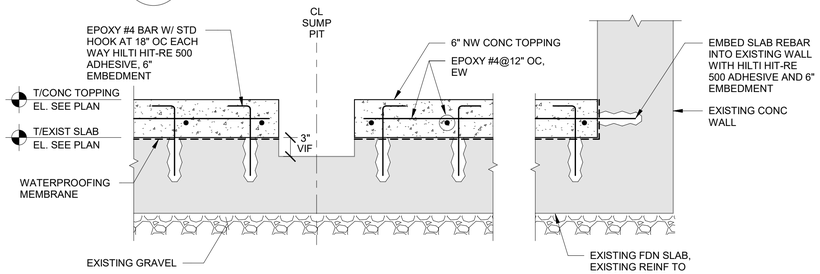


1 TYPICAL CONCRETE PEDESTAL DETAIL

S-124.00

3/4" = 1'-0"



SUGGESTED CONSTRUCTION SEQUENCE:

1. FILL AND REPAIR ANY CRACKS IN THE EXISTING CONCRETE SLAB.
2. APPLY WATERPROOFING MEMBRANE ON TOP OF THE EXISTING SLAB.
3. DOWEL INTO THE EXISTING SLAB AND WALLS.
4. PROVIDE LIQUID WATERPROOFING AROUND THE DOWELS.
5. PROVIDE SLAB REINFORCEMENT.
6. PROVIDE CONCRETE TOPPING.

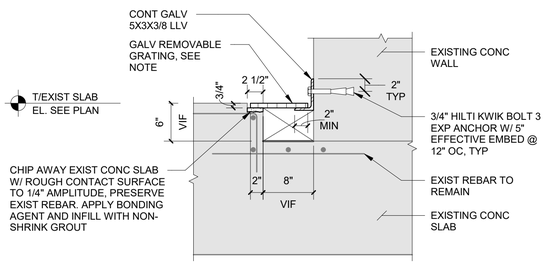
NOTES:

1. EXISTING BARS SHALL NOT BE CUT OR DAMAGED UNLESS NOTED OTHERWISE ON THE DRAWINGS. ANCHOR LOCATIONS CAN BE SLIGHTLY ADJUSTED TO AVOID EXISTING BARS. THE CONTRACTOR SHALL REVIEW THE EXISTING STRUCTURAL DRAWINGS TO LOCATE THE EXISTING BARS AND CONFIRM BY USING GPR, X-RAY, HILTI PS 1000, OR BY CHIPPING CONCRETE SURFACE OR SIMILAR METHODS.

4 TYPICAL SUMP PIT DETAIL

S-124.00

1" = 1'-0"



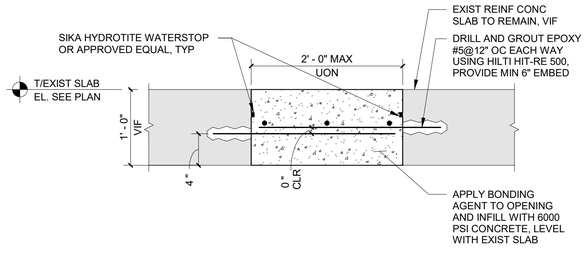
NOTES:

1. GRATING SHALL BE HOT-DIPPED GALVANIZED 3/4" X 3/16" PLAIN BEARING BARS AT 1 3/16" SPACING ASTM A-1011 CS TYPE B Fy = 30 KSI, WITH CROSS BARS 4" APART (STEEL LIGHT-DUTY WELDED 19-W-4) AS MANUFACTURED BY OHIO GRATINGS, INC IKG INDUSTRIES, GRATING PACIFIC, INC OR APPROVED EQUAL.

7 TYPICAL EXISTING TRENCH COVER DETAIL

S-124.00

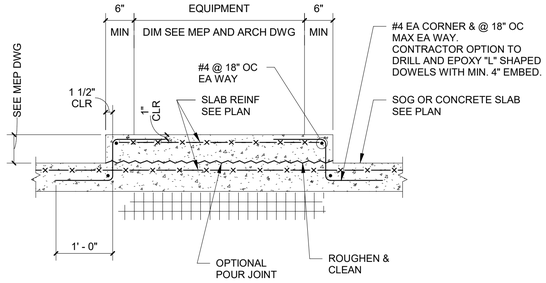
1" = 1'-0"



2 TYPICAL DETAIL EXISTING SLAB INFILL

S-124.00

1" = 1'-0"



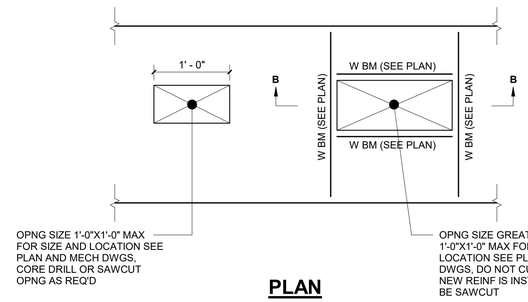
NOTE:
PAD DIMENSIONS, ANCHOR BOLT SIZE AND LOCATIONS, AND OTHER EMBEDDED ITEMS SHALL CONFORM TO EQUIPMENT MANUFACTURER'S REQUIREMENTS. CONTRACTOR SHALL COORDINATE WITH EQUIPMENT MANUFACTURER ON EXACT DIMENSIONS BEFORE BUILDING THE EQUIPMENT PADS.

TYPICAL EQUIPMENT PAD ON SLAB ON GRADE / CONCRETE SLAB

5

S-124.00

3/4" = 1'-0"



PLAN

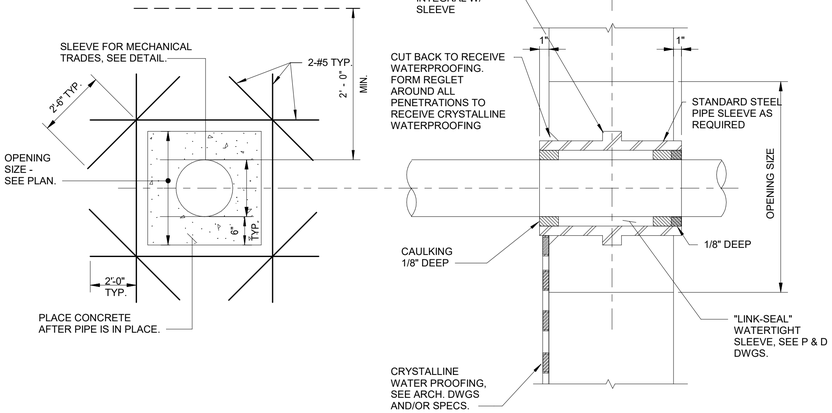
NOTES:

1. CLUSTERED OPENINGS SPACED CLOSER THAN 12" CLEAR SHALL BE TREATED AS ONE LARGE OPENING, & PROVIDED THE REINF OR FRAMING.
2. DRYPACK AND SHIM BETWEEN STEEL BEAM AND EXISTING SLAB FOR FULL BEARING SUPPORT.

8 TYPICAL FRAMING AROUND OPENINGS IN EXISTING SLAB

S-124.00

1" = 1'-0"



3 TYPICAL PIPE SLEEVE DETAIL

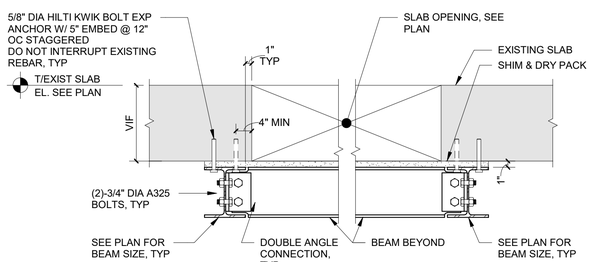
S-124.00

3/4" = 1'-0"

6 TYPICAL EQUIPMENT PAD

S-124.00

1" = 1'-0"



SECTION B-B

3/4"=1'-0" 0 1 2 3 FT.

1"=1'-0" 0 1 2 FT.

BID SET

SUBMITTAL DATE: OCTOBER 2026

GRAPHIC SCALES CHECK BEFORE USE

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DRAWN BY: UNGELLI PICARDAL, P.E.
CHECKED BY: MOHAMED YOUSEF, P.E.
DESIGN LEAD: MOSTAFA ELMORSI, P.E.
PROJECT MANAGER: AIMEE BOULET, P.E.

AECOM
605 THIRD AVENUE, 3rd FL.
NEW YORK, NY 10158, US

STATE OF NEW YORK MOSTAFA SAAD ELDIN ELMORSI 085573 LICENSED PROFESSIONAL ENGINEER

Environmental Protection

ACCOUNTABLE MANAGER: JOHN GOULAS, P.E.
PORTFOLIO MANAGER: KEVIN ELLENWOOD, P.E.
EXECUTIVE DIRECTOR: NAYANKUMAR SHAH, P.E.

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CAPITAL PROJECT WP-269
RECONSTRUCTION OF PAERDEGAT PUMPING STATION
CONTRACT PS-318
STRUCTURAL
STANDARD DETAILS 3

DATE: OCTOBER 2026
SCALE: AS INDICATED
SHEET NO: 90 OF 274
DRAWING NO. S-124.00

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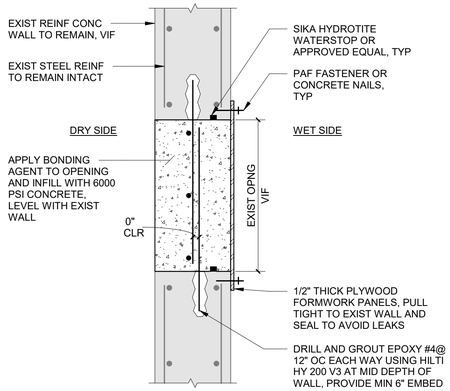
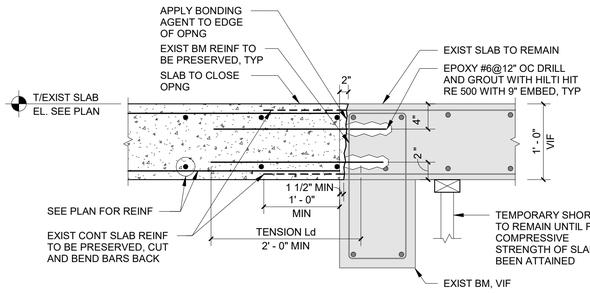


WALL SECTION

1 TYPICAL DETAIL EXISTING WALL INFILL

S-125.00

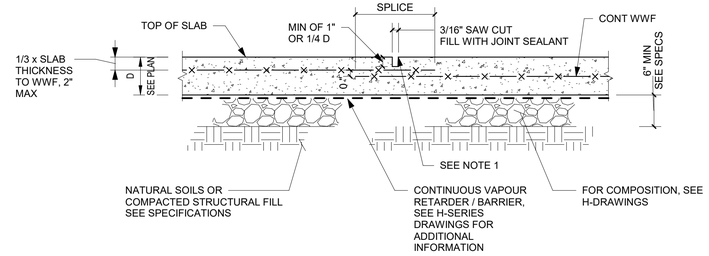
1" = 1'-0"



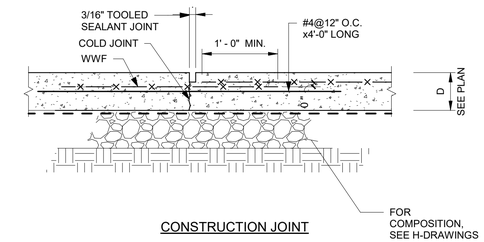
2 TYPICAL SLAB ON GRADE CONTROL JOINT AND CONSTRUCTION JOINT

S-125.00

1" = 1'-0"



SLAB ON GRADE (S.O.G.) WITH CONTROL JOINT



CONSTRUCTION JOINT

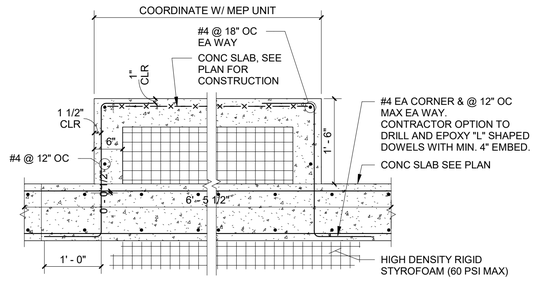
NOTES:

1. CONTROL JOINTS SHALL BE SAWCUT AS SOON AS CONCRETE IS HARD ENOUGH NOT TO BE TORN OR DAMAGED BY THE BLADE, AND BEFORE THE CONCRETE STARTS TO COOL. TYPICALLY JOINTS SHOULD BE CUT 4 TO 12 HOURS AFTER THE SLAB HAS BEEN FINISHED, DEPENDING UPON WEATHER AND JOB CONDITIONS.
2. AREA BOND BY SLAB JOINTS SHALL NOT EXCEED 196 SQUARE FEET VERIFY LOCATIONS WITH ARCHITECT AND ENGINEER PRIOR TO PLACING SLAB.
3. A MAXIMUM RATIO OF 1.5 SHALL BE MAINTAINED BETWEEN LONG AND SHORT DIMENSIONS OF PANELS FORMED BY CONSTRUCTION AND CONTROL JOINTS.
4. SPACING OF SAWCUT CONTROL JOINTS (IN FEET) TO BE APPROXIMATELY THREE TIMES THE SLAB THICKNESS IN INCHES WITH A MAXIMUM OF 20 FT.

3 TYPICAL DETAIL SLAB INFILL AT MECH EQPT RM

S-125.00

1" = 1'-0"

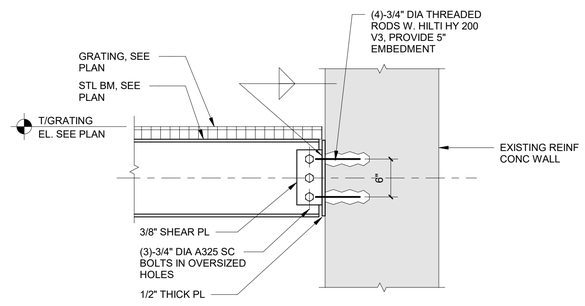


NOTE:
PAD DIMENSIONS, ANCHOR BOLT SIZE AND LOCATIONS, AND OTHER EMBEDDED ITEMS SHALL CONFORM TO EQUIPMENT MANUFACTURER'S REQUIREMENTS. CONTRACTOR SHALL COORDINATE WITH EQUIPMENT MANUFACTURER ON EXACT DIMENSIONS BEFORE BUILDING THE EQUIPMENT PADS.

4 TYPICAL CONNECTION TO EXISTING CONCRETE BEAM

S-125.00

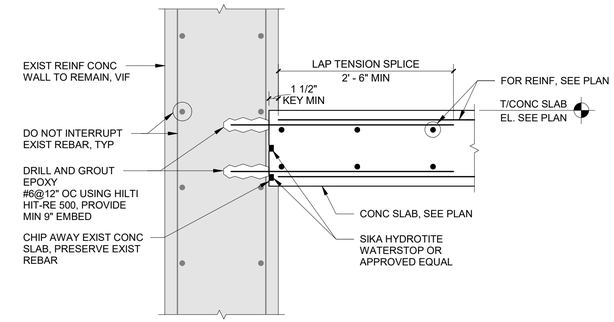
1" = 1'-0"



5 TYPICAL DETAIL CONC SLAB SUPPORTED ON EXISTING WALL

S-125.00

1" = 1'-0"

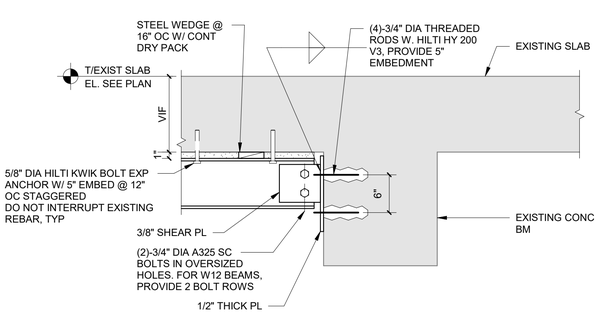


WALL SECTION

6 TYPICAL RAISED EQUIPMENT PAD ON CONCRETE SLAB

S-125.00

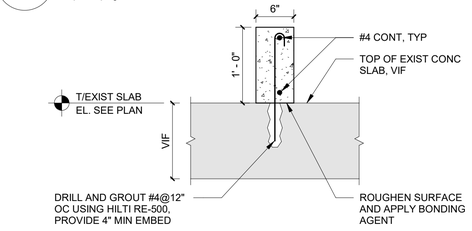
3/4" = 1'-0"



7 TYPICAL CONNECTION TO EXISTING CONCRETE WALL

S-125.00

1" = 1'-0"



NOTE:
COORDINATE WITH MEP DRAWINGS.

0 1 2 3 FT.
3/4"=1'-0"

8 TYPICAL CONCRETE CURB DETAIL

S-125.00

1" = 1'-0"

0 1 2 FT.
1"=1'-0"

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PROJECT MANAGER: AIMEE BOULET, P.E.

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605 THIRD AVENUE, 3rd FL.
NEW YORK, NY 10158, US

STATE OF NEW YORK MOSTAFA SAAD ELDINE ELMORSI 085573 LICENSED PROFESSIONAL ENGINEER

Environmental Protection

ACCOUNTABLE MANAGER
JOHN GOULAS, P.E.
PORTFOLIO MANAGER
KEVIN ELLENWOOD, P.E.
EXECUTIVE DIRECTOR
NAYANKUMAR SHAH, P.E.

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CAPITAL PROJECT WP-269
RECONSTRUCTION OF PAERDEGAT PUMPING STATION
CONTRACT PS-318
STRUCTURAL
STANDARD DETAILS 4

DATE: OCTOBER 2026
SCALE: AS INDICATED
SHEET NO: 91 OF 274
DRAWING NO. S-125.00

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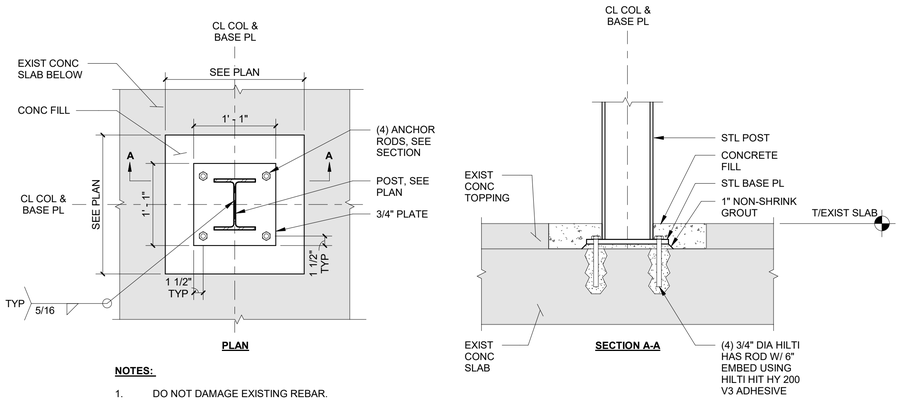


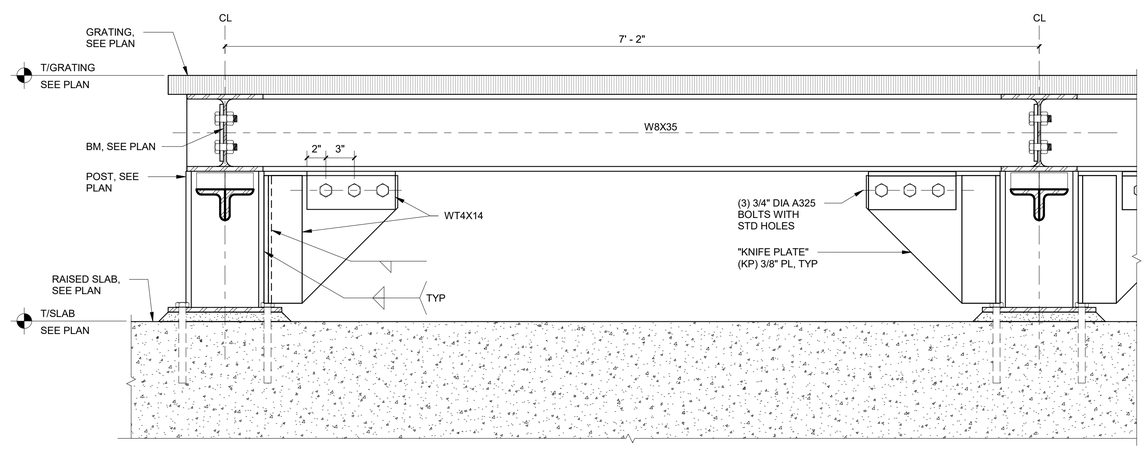
NOTES:

1. DO NOT DAMAGE EXISTING REBAR.

1 S-126.00 TYPICAL PUMP ROOM POST BASE PLATE DETAIL 1

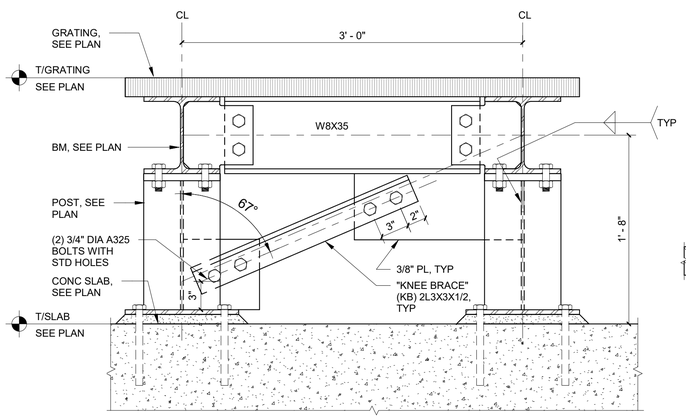
1" = 1'-0"

1"=1'-0" 0 1 2 FT.



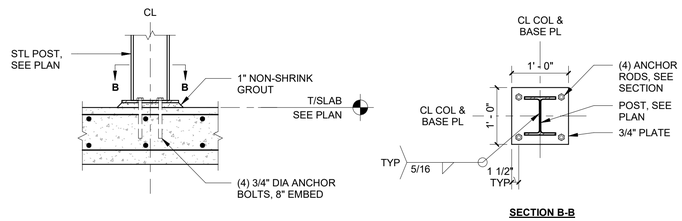
2 S-126.00 EXTERIOR PLATFORM DETAIL 2

1 1/2" = 1'-0"



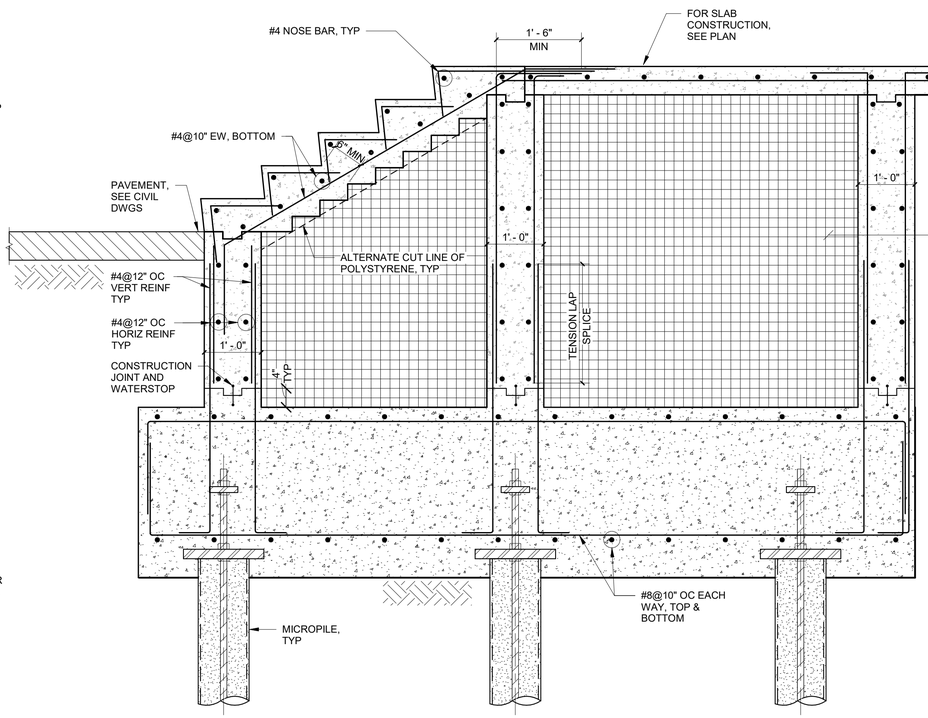
3 S-126.00 EXTERIOR PLATFORM DETAIL 1

1 1/2" = 1'-0"



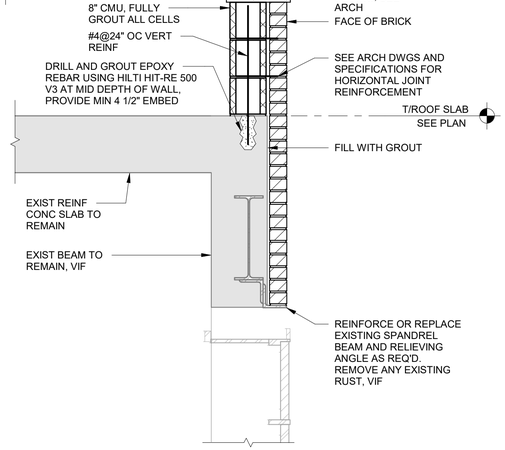
4 S-126.00 TYPICAL GENERATOR BASE PL DETAIL

3/4" = 1'-0"



5 S-126.00 WEST PLATFORM SECTION 1

3/4" = 1'-0"



6 S-105.00 PARAPET SECTION

SCALE: 3/4" = 1'-0"

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

3/4"=1'-0" 0 1 2 3 FT.

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PROJECT MANAGER: AIMEE BOULET, P.E.

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STATE OF NEW YORK MOSTAFA SAAD ELDINE ELMORSI 085513 LICENSED PROFESSIONAL ENGINEER

NYC Environmental Protection

ACCOUNTABLE MANAGER: JOHN GOULAS, P.E.
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CAPITAL PROJECT WP-269
RECONSTRUCTION
OF PAERDEGAT PUMPING STATION
CONTRACT PS-318
STRUCTURAL
STANDARD DETAILS 5

DATE: OCTOBER 2026
SCALE: AS INDICATED
SHEET NO: 92 OF 274
DRAWING NO. S-126.00

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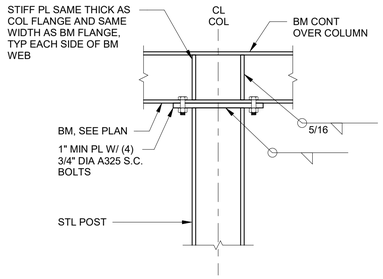
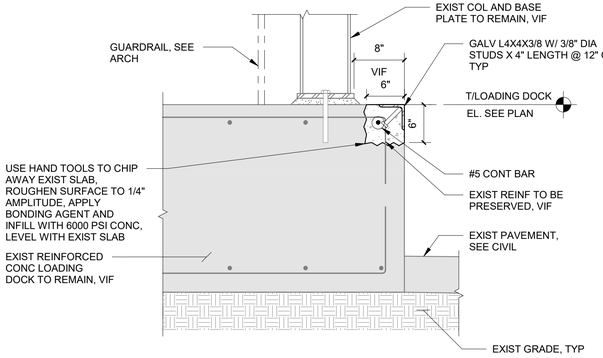


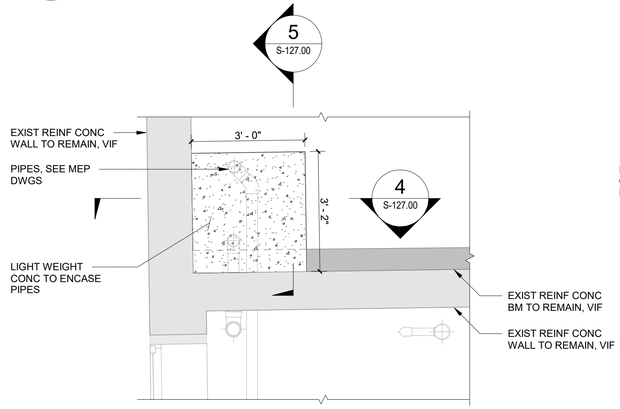
1 S-127.00 **TYPICAL BEAM OVER POST CONNECTION**

1" = 1'-0"



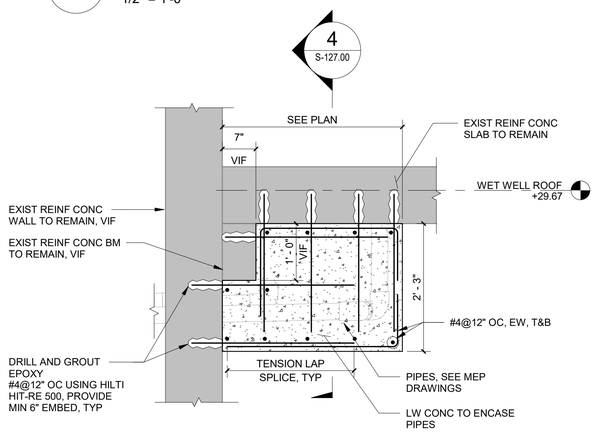
2 S-127.00 **SOUTH LOADING DOCK DETAIL**

1" = 1'-0"



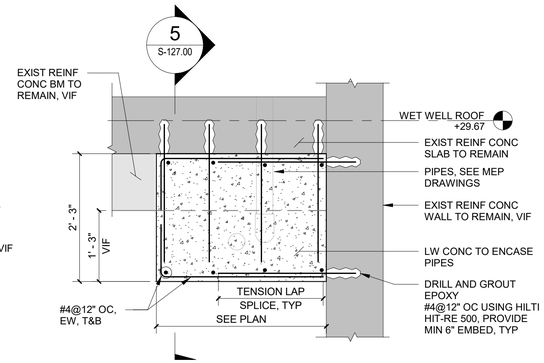
3 S-127.00 **PIPE ENCASEMENT PLAN**

1/2" = 1'-0"



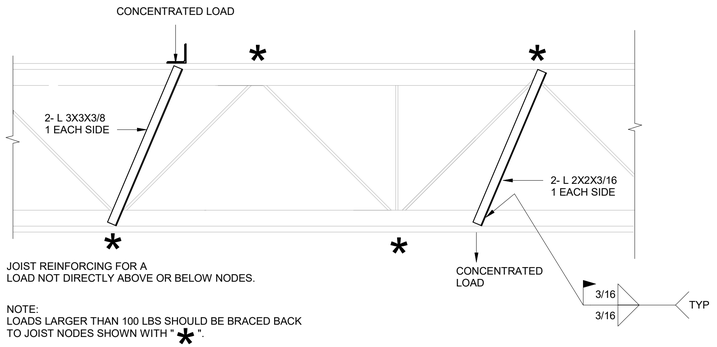
5 S-127.00 **PIPE ENCASEMENT SECTION 2**

3/4" = 1'-0"



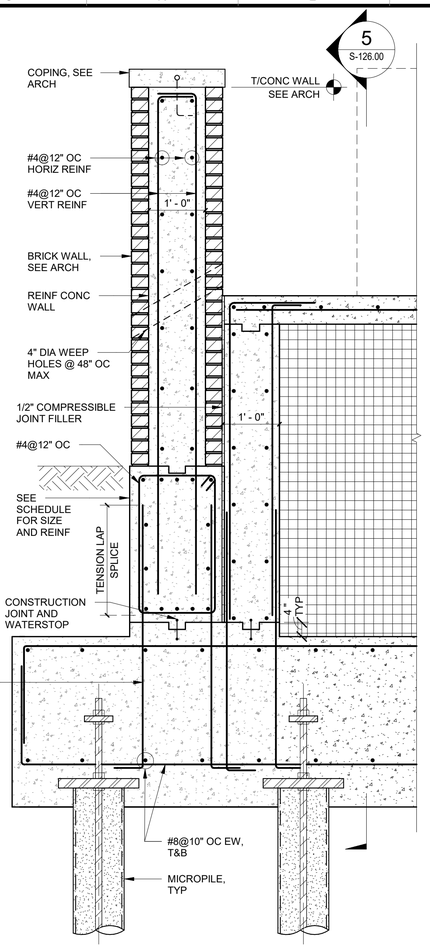
4 S-127.00 **PIPE ENCASEMENT SECTION 1**

3/4" = 1'-0"



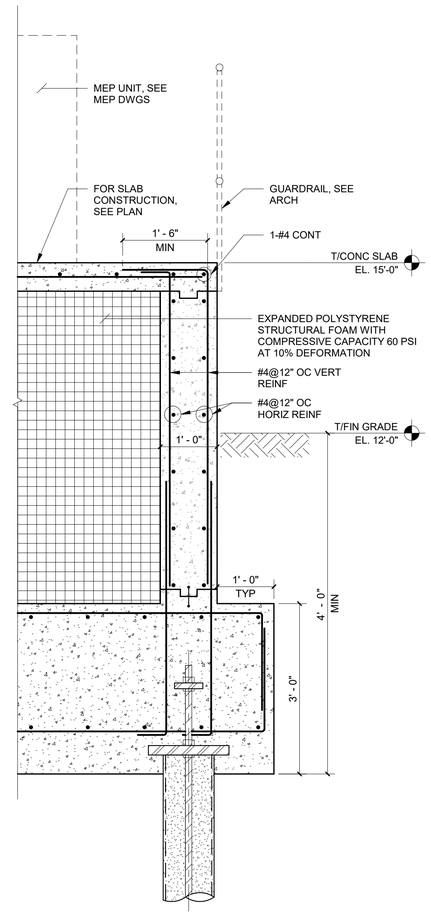
7 S-127.00 **TYPICAL JOIST REINFORCEMENT DETAIL**

3/4" = 1'-0"



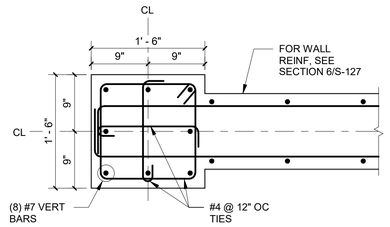
6 S-127.00 **WEST ELEVATED PLATFORM SECTION 1**

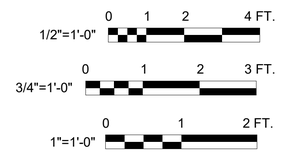
3/4" = 1'-0"



8 S-127.00 **WEST WALL TO PILASTER DETAIL**

1" = 1'-0"





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STATE OF NEW YORK MOSTAFA SAAD ELDINE ELMORSI LICENSED PROFESSIONAL ENGINEER 085573

NYC Environmental Protection

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PORTFOLIO MANAGER	KEVIN ELLENWOOD, P.E.
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CAPITAL PROJECT WP-269
RECONSTRUCTION
OF PAERDEGAT PUMPING STATION
CONTRACT PS-318
STRUCTURAL
STANDARD DETAILS 6

DATE: OCTOBER 2026
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SHEET NO: 93 OF 274
DRAWING NO. S-127.00

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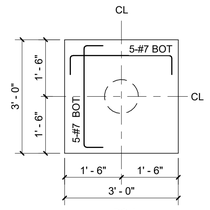
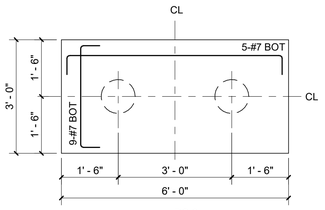


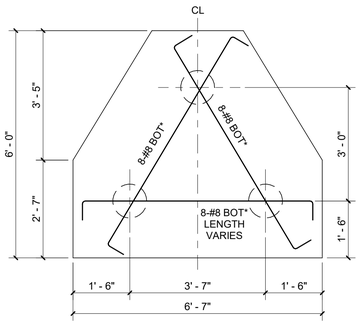
PC-1

DEPTH = 36"



PC-2

DEPTH = 36"

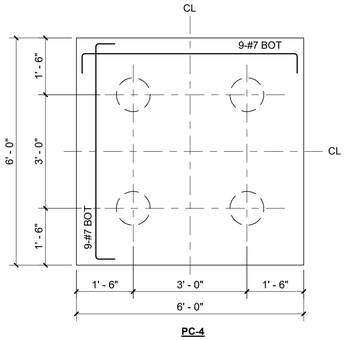


PC-3A

DEPTH = 36"

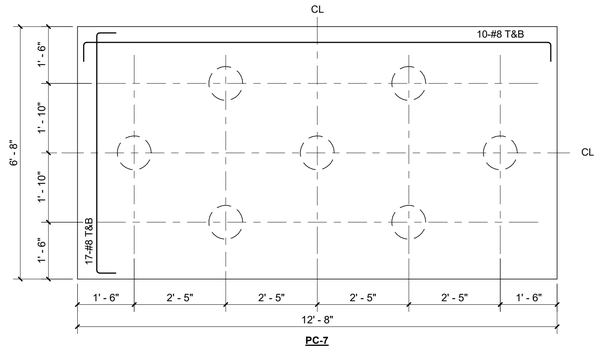
*SEE TABLE FOR ADDITIONAL PILE CAPS

MARK	DEPTH	REINF
PC-3A	36"	8-#8 BOT
PC-3B	42"	8-#8 BOT & TOP
PC-3C	54"	10-#8 BOT & TOP
PC-3D	72"	13-#8 BOT & TOP



PC-4

DEPTH = 36"



PC-7

DEPTH = 42"

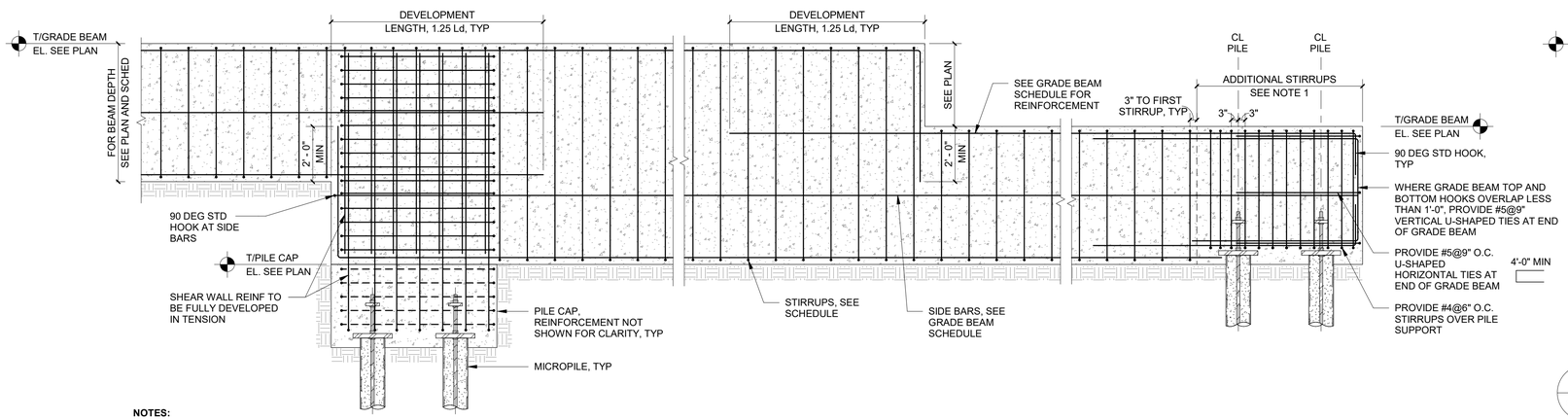
1 TYPICAL PILE CAPS DETAIL

S-128.00

1/2" = 1'-0"

0 1 2 4 FT.

1/2"=1'-0"



NOTES:

1. PROVIDE #4@6" O.C. STIRRUPS OVER PILE SUPPORT, TYPICAL.

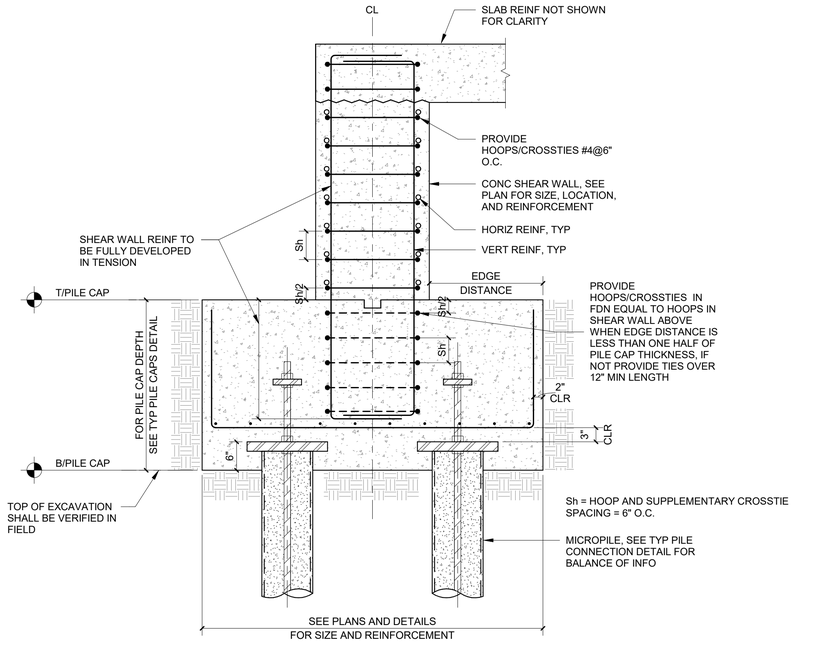
4 TYPICAL DETAIL FOR STEPPED BEAM

S-128.00

3/8" = 1'-0"

0 1 2 3 5 FT.

3/8"=1'-0"



2 TYPICAL PILE CAP DETAIL AT SHEAR WALL

S-128.00

N.T.S.

3 TYPICAL PILE CONNECTION DETAIL INTO PILE CAP

S-128.00

3/4" = 1'-0"

0 1' 2 3 FT.

3/4"=1'-0"

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DRAWN BY: UNGELLI PICARDAL, P.E.
CHECKED BY: MOHAMED YOUSEF, P.E.
DESIGN LEAD: MOSTAFA ELMORSI, P.E.
PROJECT MANAGER: AIMEE BOULET, P.E.

AECOM
605 THIRD AVENUE, 3rd FL.
NEW YORK, NY 10158, US

STATE OF NEW YORK MOSTAFA SAAD ELDINE ELMORSI LICENSED PROFESSIONAL ENGINEER 085573

NYC Environmental Protection

ACCOUNTABLE MANAGER: JOHN GOULAS, P.E.
PORTFOLIO MANAGER: KEVIN ELLENWOOD, P.E.
EXECUTIVE DIRECTOR: NAYANKUMAR SHAH, P.E.

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CAPITAL PROJECT WP-269
RECONSTRUCTION
OF PAERDEGAT PUMPING STATION
CONTRACT PS-318
STRUCTURAL
STANDARD DETAILS 7

DATE: OCTOBER 2026
SCALE: AS INDICATED
SHEET NO: 94 OF 274
DRAWING NO. S-128.00

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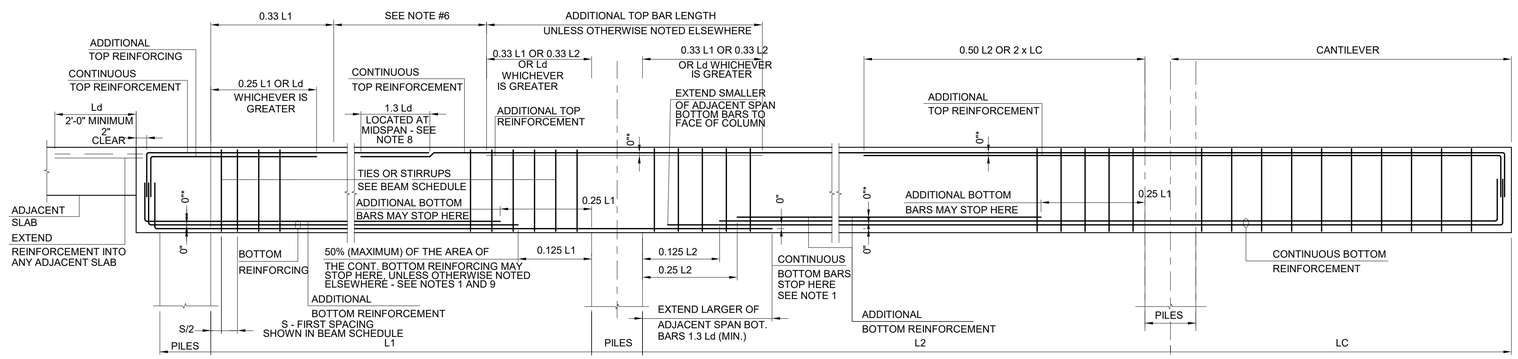


NON-CONTINUOUS END | CONTINUOUS END | AT CANTILEVER

NOTES:

1. 100% OF THE CONTINUOUS BOTTOM BARS SHALL BE CONTINUOUS OVER THE FOOTPRINT OF THE COLUMNS. 50% (MIN.) OF THE CONTINUOUS BOTTOM BARS SHALL BE CONTINUOUS OVER SUPPORTING BEAMS.
2. FOR BEAMS ALONG A PERIMETER (e.g. SPANDREL BEAMS) AT LEAST 1/6 OF THE TOTAL AREA OF TOP BARS AT INTERIOR SUPPORTS (BUT NOT FEWER THAN 2 BARS) SHALL BE CONTINUOUS.
3. DEVELOPMENT LENGTH Ld TO BE DETERMINED IN ACCORDANCE WITH THE REQUIREMENTS OF ACI 318, CHAPTER 12.
4. FOR SIZE AND NUMBER OF ALL BARS, SEE PLANS AND BEAM SCHEDULE.
5. * = PLACE ADDITIONAL BARS IN A SECOND LAYER / ROW ABOVE THE BOTTOM BARS OR BELOW THE TOP BARS IF CENTER TO CENTER LONGITUDINAL BAR SPACING IS LESS THAN 4"

NOTES (CONT.):

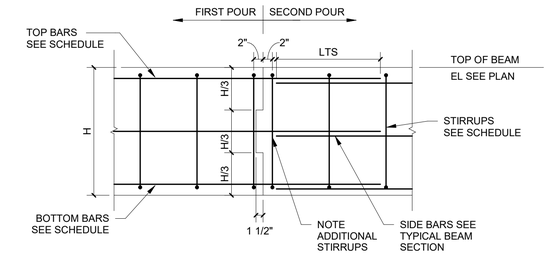
6. FOR FILLER FLOOR BEAMS (GENERALLY MARKED "__FB__") SUPPORTING ONLY THE SLAB AND WITH NO OTHER BEAMS FRAMING INTO IT (NOR COLUMNS OR WALLS ABOVE), THE SHEAR REINFORCING VOLUME IN THE MIDDLE 1/3 OF THE SPAN MAY BE REDUCED BY 50%, PROVIDED THE SPACING OF THE REINFORCING DOES NOT EXCEED (H - 3) / 2. FOR EXAMPLE, IN THIS ZONE A 12" x 24" BEAM WITH 3 - LEGS OF #4 @ 8" MAY BE REDUCED TO 2 - LEGS OF #4 @ 10 1/2". THIS IS NOT APPLICABLE FOR SPANS ADJACENT TO CANTILEVERS (BACK-SPANS) & GIRDERS, NOR FLOOR BEAMS SUPPORTING OTHER BEAMS, COLUMNS, WALLS ETC.
7. FOR ALL CONCRETE BEAM SCHEDULES, SEE [ENGINEER TO COORDINATE] .
8. WHERE ADJACENT BEAM SPANS HAVE DIFFERENT TOP REINFORCING BARS SCHEDULED, EXTEND THE BARS OF THE BEAM WITH THE LARGER OF THE CONTINUOUS TOP BARS TO THE LAP SPLICE IN THE BEAM WITH THE SMALLER OF THE CONTINUOUS TOP BARS; ADDITIONALLY, USE THE LARGER OF THE ADDITIONAL TOP BARS OVER THE COMMON SUPPORT.
9. 100% OF THE BOTTOM BARS FOR TRANSFER BEAMS ("__XB__") SHALL BE CONTINUOUS BETWEEN SUPPORTS.

1 S-129.00 TYPICAL CAST-IN-PLACE CONCRETE BEAM DETAIL

3/4" = 1'-0"

GRADE BEAM SCHEDULE

MARK	WIDTH	DEPTH	TOP REINFORCEMENT (CONT.)	BOTTOM REINFORCEMENT (CONT.)	STIRRUPS			SIDE BARS	REMARKS
					SIZE	TYPE	SPACING (IN)	REINF.	
GB 24x36	24"	36"	6-#8	6-#8	#4		12"	#4 @ 10" E.F.	
GB 24x42	24"	42"	8-#8	8-#8	#4		12"	#6 @ 9" E.F.	2 LAYERS
GB 24x54	24"	54"	8-#8	8-#8	#4		12"	#6 @ 9" E.F.	2 LAYERS
GB 24x60	24"	60"	8-#8	8-#8	#4		12"	#6 @ 9" E.F.	2 LAYERS
GB 24x72	24"	72"	12#8	12#8	#4		12"	#6 @ 9" E.F.	2 LAYERS
GB 24x96	24"	96"	12-#8	12-#8	#4		12"	#6 @ 9" E.F.	2 LAYERS
GB 24x102	24"	102"	12-#8	12-#8	#4		12"	#6 @ 9" E.F.	2 LAYERS
GB 24x126	24"	126"	12-#9	12-#9	#4		12"	#6 @ 9" E.F.	2 LAYERS

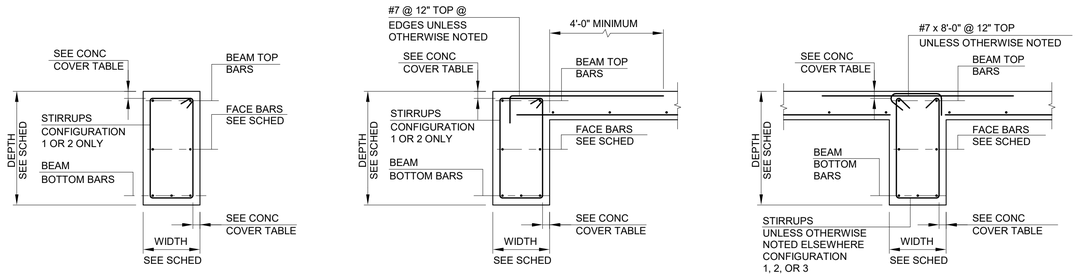


NOTES:

1. CONTRACTOR SHALL SUBMIT CONCRETE CONSTRUCTION JOINT LAYOUT FOR REVIEW AND APPROVAL (REFER TO GENERAL NOTES AND SPECIFICATIONS) PRIOR TO REINFORCEMENT SUBMITTAL.
2. HORIZONTAL CONSTRUCTION JOINTS ARE NOT PERMITTED WITHOUT WRITTEN APPROVAL FROM EOR.

4 S-129.00 TYP GRADE BEAM CONSTRUCTION JOINT - ELEVATION

N.T.S.



UPSET OR NO SLAB | SLAB OCCURS ONE SIDE | SLAB OCCURS BOTH SIDES

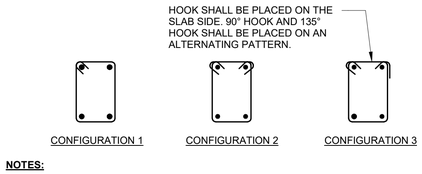
NOTES:

1. FOR BEAM SIZE, AND REINFORCING, SEE BEAM SCHEDULE AND/OR SECTIONS.
2. ALL HOOKS AND BENDS SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF ACI 318, CHAPTER 25.

2 S-129.00 TYPICAL CONCRETE BEAM SECTIONS

1" = 1'-0"

1"=1'-0" 0 1 2 FT.



NOTES:

1. CONFIGURATION 1, 2 AND 3 MAY BE USED WHERE SLAB OCCURS ON EACH SIDE AT TOP OF BEAM.
2. CONFIGURATION 1, 2 AND 3 MAY BE USED WHERE SLAB OCCURS ON ONE SIDE AT TOP OF BEAM. THE 90° HOOK SHALL BE PLACED ON THE SLAB SIDE.
3. CONFIGURATION 1 AND 2 MAY BE USED WHERE NO SLAB OCCURS AT TOP OF BEAM INCLUDING UPTURNED BEAM UNLESS NOTED OTHERWISE.
4. FOR STANDARD HOOK AND BEND DETAILS, SEE "TYPICAL HOOKED BAR DETAILS".

3 S-129.00 STIRRUP CONFIGURATIONS

3/4" = 1'-0"

3/4"=1'-0" 0 1 2 3 FT.

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NYC Environmental Protection

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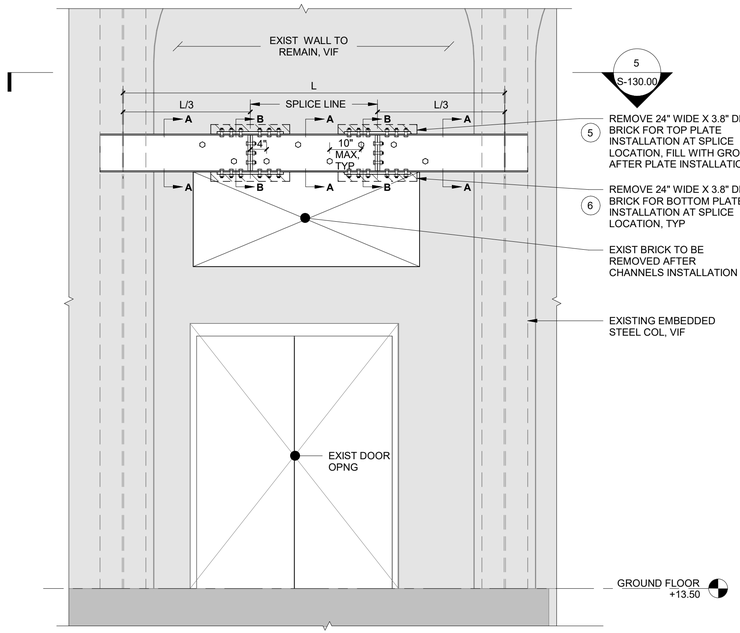
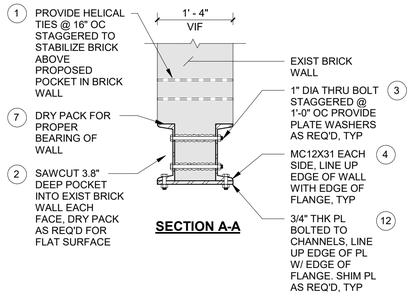


1 S-130.00 **EAST WALL - ELEVATION**

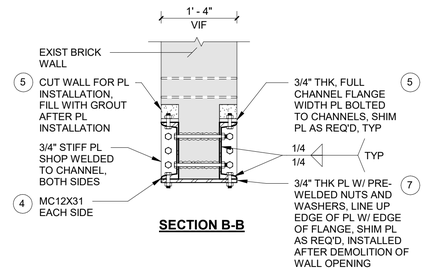
1/2" = 1'-0"



SECTION A-A

2 S-130.00 **DETAIL 1**

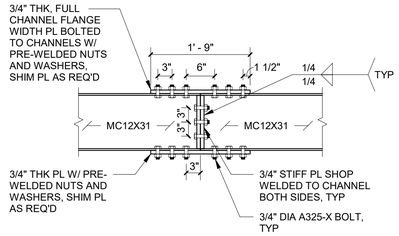
3/4" = 1'-0"



SECTION B-B

3 S-130.00 **DETAIL 2**

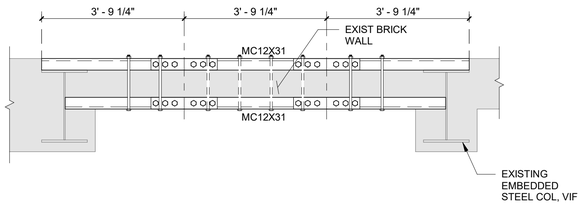
3/4" = 1'-0"



BEAM SPLICE

4 S-130.00 **DETAIL 3**

3/4" = 1'-0"

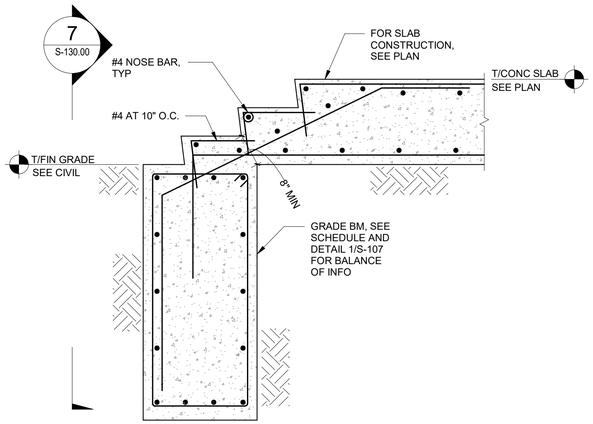


5 S-130.00 **EAST WALL - PLAN**

1/2" = 1'-0"

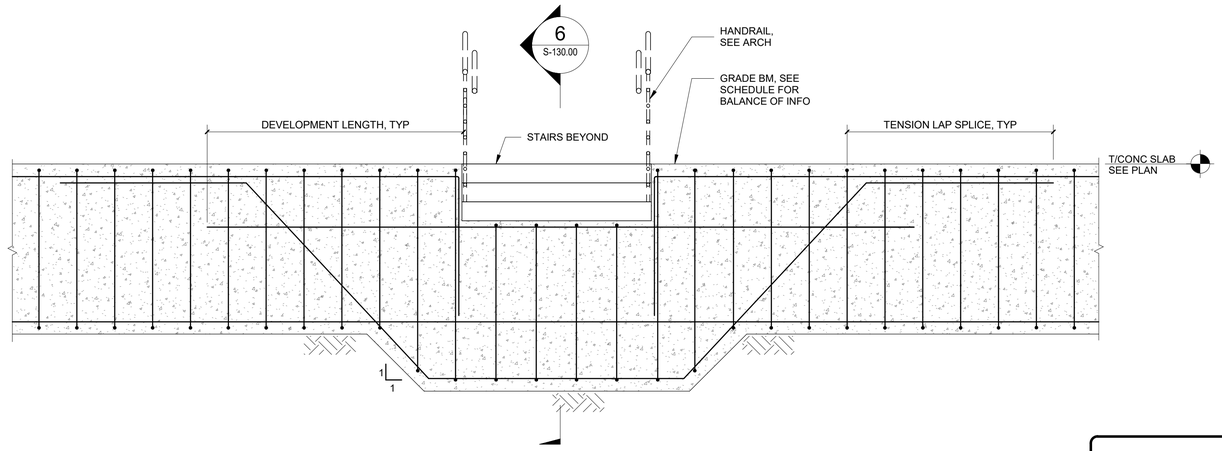
NOTES:

1. OPTION FOR CONTRACTOR TO INSTALL CONTINUOUS BEAM IN LIEU OF SPLICES PROVIDED THAT ALL DESIGN REQUIREMENTS ARE MET AND MEMBER FITS WITHIN SITE CONSTRAINTS.
2. (X) INDICATES SUGGESTED CONSTRUCTION SEQUENCE.
3. PROVIDE TEMPORARY SHORING AS REQUIRED.
4. VERIFY DIMENSIONS IN THE FIELD.



6 S-130.00 **TYPICAL STAIR DETAIL 1**

3/4" = 1'-0"



7 S-130.00 **TYPICAL STAIR DETAIL 2**

1/2" = 1'-0"

3/4"=1'-0" 0 1 2 3 FT.

1/2"=1'-0" 0 1 2 4 FT.

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Environmental Protection

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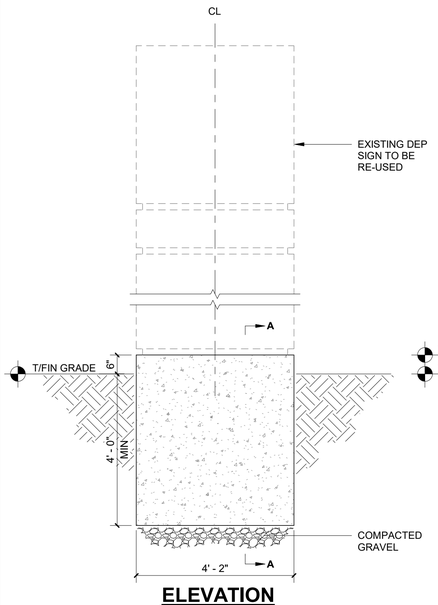
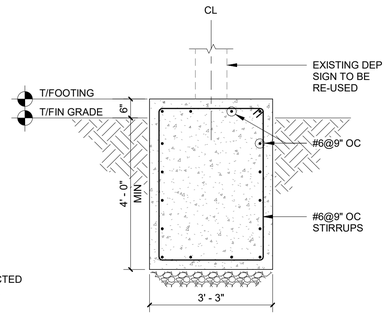


ELEVATION

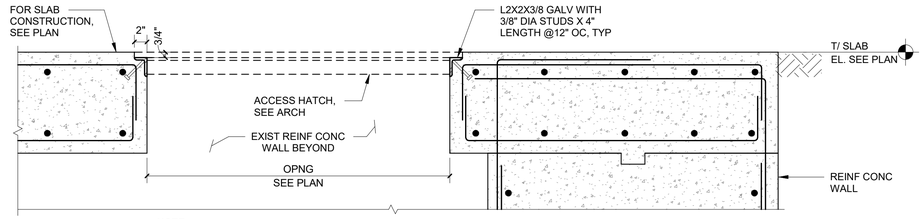


SECTION A-A

NOTE:
1. CONTRACTOR TO SUBMIT SHOP DRAWINGS FOR METHOD OF CONSTRUCTION, SPACING AND FASTENING.
2. SEE ARCH AND CIVIL DRAWINGS FOR LOCATION OF SIGN.

1 SIGN FOUNDATION DETAILS
S-131.00

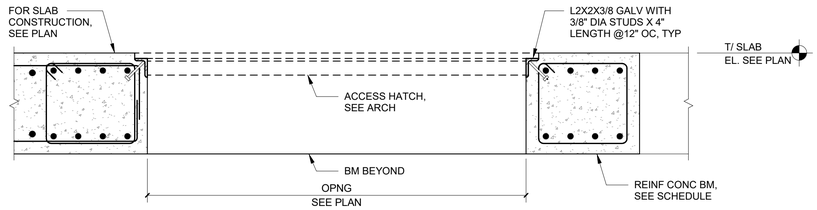
1/2" = 1'-0"



NOTE:
1. CONTRACTOR TO COORDINATE DIMENSIONS WITH ACCESS HATCH MANUFACTURER.

3 ACCESS HATCH SECTION
S-131.00

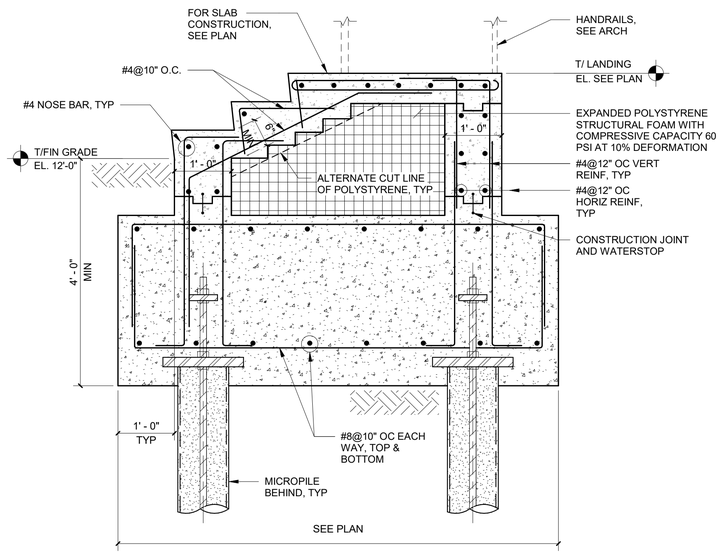
1" = 1'-0"



NOTE:
1. CONTRACTOR TO COORDINATE DIMENSIONS WITH ACCESS HATCH MANUFACTURER.

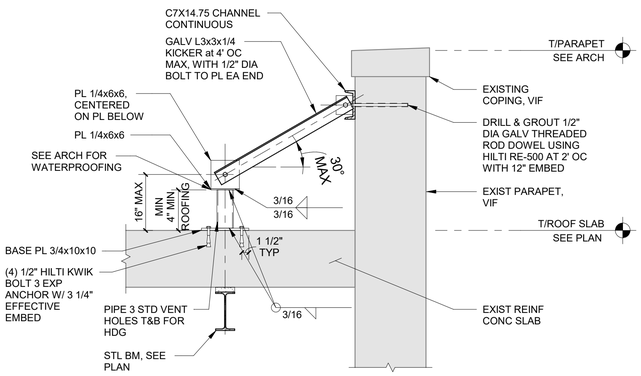
2 BYPASS CHAMBER ACCESS HATCH SECTION
S-131.00

1" = 1'-0"



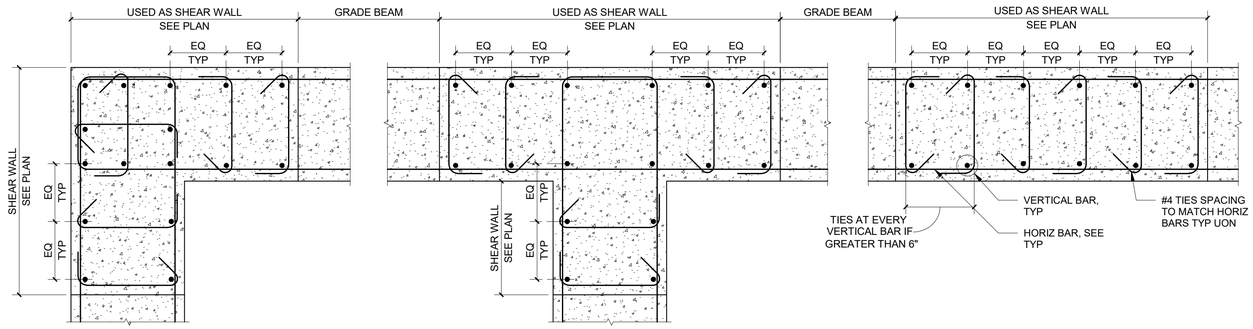
6 WEST PLATFORM SECTION 1
S-131.00

3/4" = 1'-0"



4 TYPICAL PARAPET BRACE DETAIL
S-131.00

3/4" = 1'-0"



CORNER INTERSECTION **T- INTERSECTION** **TYPICAL WALL**

NOTE:
1. FOR INFORMATION NOT SHOWN, SEE TYPICAL WALL DETAIL.
2. TIES WITH 135 AND 90 DEGREE HOOKS TO ALTERNATE IN PLAN AND IN ELEVATION.

5 TYPICAL SHEARWALL REINFORCEMENT ARRANGEMENT PLAN
S-131.00

3/4" = 1'-0"

1/2"=1'-0" 0 1 2 4 FT.

1"=1'-0" 0 1 2 FT.

3/4"=1'-0" 0 1 2 3 FT.

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SPLICE LENGTH FOR MASONRY CONSTRUCTION	
BAR/ WIRE SIZE	**CMU WALL**
W1.7	12"
W2.1	12"
W2.8	12"
W4.9	12"
#4	24"
#5	30"
#6	37"
#7	51"
#8	79"
#9	102"

NOTE:

1. SPLICE LENGTHS APPLY TO VERT. AND HORIZ. REINFORCEMENT.
2. ALL VERT. REINFORCEMENT SHALL EXTEND TO WITHIN 2 INCHES OF TOPS OF WALLS.
3. SEE STRUCTURAL / ARCH. PLANS FOR CMU WALL LOCATIONS.

1 TYPICAL SPLICE LENGTH FOR MASONRY CONSTRUCTION

S-132.00

1" = 1'-0"

REINFORCEMENT OF EXTERIOR CMU WALL			
THICKNESS / HEIGHT (FT)	**REINF**	**12"**	**BB = BOND BEAM REINF**
10	VERT	#5@16" O.C., (2) LAYERS	FOR 12" WALL 2-#5 CONT AT TOP COURSE & 8'-0" O.C.
	HORIZ	2-#9 WIRE TRUSS @ 16" O.C.	

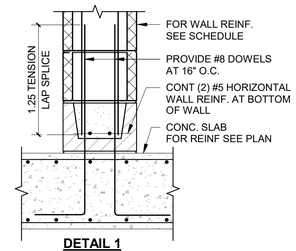
NOTES:

1. MINIMUM SPLICE LENGTH = 3'-0".
2. PROVIDE ADDITIONAL HORIZ. #5 BAR ON EACH SIDE OF OPENING. EXTEND 3'-0" BEYOND IN GROUTED FILLED CELLS.
3. PROVIDE (1) #5 VERT. BAR AT EACH SIDE OF OPENING IN GROUTED FILLED CELLS. EXTEND BAR FULL HEIGHT OF THE WALL.

2 TYPICAL REINFORCEMENT OF EXTERIOR CMU WALL

S-132.00

1" = 1'-0"



DETAIL 1

3 TYPICAL CMU EXTERIOR WALL REINF DETAIL

S-132.00

1" = 1'-0"

0 1 2 FT.
1"=1'-0"

BID SET

SUBMITTAL DATE: OCTOBER 2026

GRAPHIC SCALES CHECK BEFORE USE

IF SHEET IS LESS THAN 22" X 34" IT IS A REDUCED PRINT. SCALE ACCORDINGLY

NO.	DATE	REVISIONS/DESCRIPTION	APPR'D.

DESIGNED BY: UNGELLI PICARDAL, P.E.
DRAWN BY: UNGELLI PICARDAL, P.E.
CHECKED BY: MOHAMED YOUSEF, P.E.
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Environmental Protection

ACCOUNTABLE MANAGER: JOHN GOULAS, P.E.
PORTFOLIO MANAGER: KEVIN ELLENWOOD, P.E.
EXECUTIVE DIRECTOR: NAYANKUMAR SHAH, P.E.

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96-05 HORACE HARDING EXPRESSWAY 5th FLOOR
CORONA, NEW YORK 11368
www.nyc.gov/dep

CAPITAL PROJECT WP-269
RECONSTRUCTION
OF PAERDEGAT PUMPING STATION
CONTRACT PS-318
STRUCTURAL
STANDARD CMU DETAILS

DATE: OCTOBER 2026
SCALE: AS INDICATED
SHEET NO: 98 OF 274
DRAWING NO. S-132.00

All inquiries regarding this drawing(s) or project should be made to NYC Environmental Protection, Bureau of Engineering Design and Construction.

Autodesk Docs://CI-AMER (USA) 60619010-PS-DES-5/PAER-S-MODEL_AECOM.rvt
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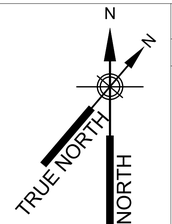
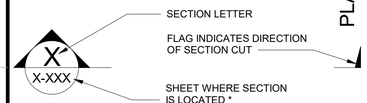
GENERAL SYMBOLOGY



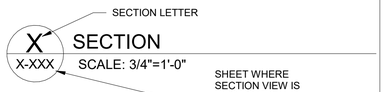
PLAN

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

PLAN TITLE



SECTION CUT MARKER



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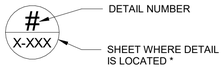
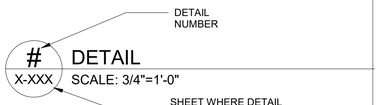


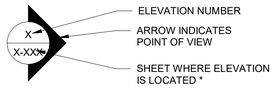
DETAIL MARKER

FOR REFERENCING DETAILS INCLUDED IN DRAWING SET

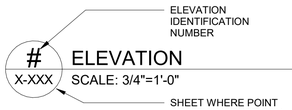


DETAIL TITLE

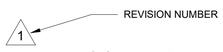
* FOR COMMON DETAILS AND SECTIONS OR DETAILS THAT ARE CUT OR CALLED OUT ON MULTIPLE SHEETS, OR IF IT IS SHOWN IN THE SAME SHEET IT IS INDICATED, THE SHEET NUMBER IS REPLACED BY A DASH (-)



SINGLE ELEVATION



ELEVATION TITLE



REVISION MARKER

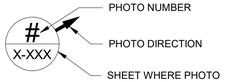


PHOTO MARKER

EQUIPMENT IDENTIFICATION

0000 - 00 - 00 - XY

- 0000: PROCESS IDENTIFIER WITH UNIT FAMILY
- 00: EQUIPMENT SIZE
- 00: UNIT #
- XY: COMPONENT IDENTIFIER

PROCESS IDENTIFIER UNIT FAMILY:

1601	MAIN SEWAGE PUMP #1
1602	MAIN SEWAGE PUMP #2
1603	MAIN SEWAGE PUMP #3
1604	MAIN SEWAGE PUMP #4
1605	MAIN SEWAGE PUMP #5
1606	MAIN SEWAGE PUMP #6
1301	INFLUENT GATE #1
1302	INFLUENT GATE #2
1610	FORCE MAIN
7400	AIR COMPRESSOR
7401	VACUUM PRIMING SYSTEM #1
7402	VACUUM PRIMING SYSTEM #2
7403	VACUUM PRIMING SYSTEM #3

COMPONENT IDENTIFIER:

SV	SUCTION GATE VALVE WITH FLOOR BOX
CV	CHECK VALVE
IV	ISOLATION VALVE

LEGEND

DEMOLITION

PIPING SYMBOLOGY

- FLOW ARROW BELOW OTHER CONDUIT
- FLOW DOWN
- FLOW UP
- GATE VALVE
- KNIFE GATE VALVE
- PUMP
- SUBMERSIBLE PUMP
- WATER LEVEL
- DRAIN
- PRESSURE RELIEF VALVE
- Y STRAINER
- PRESSURE GAUGE
- DISCONNECT COUPLING
- REDUCER
- BLIND FLANGE
- INFLUENT GATE
- CHECK VALVE
- GLOBE VALVE
- BALL VALVE
- SEAL WATER ASSEMBLY
- A — COMBINATION AIR VALVE
- S — SURGE RELIEF VALVE
- PLUG VALVE
- WYE
- REDUCER
- FLOW DIRECTIONAL ARROW
- M — MOTOR ACTUATED
- FE — MAGNETIC FLOW METER
- PI — PRESSURE INDICATOR
- PIT — PRESSURE INDICATING TRANSMITTER

ABBREVIATIONS

±	PLUS/MINUS
BV	BALL VALVE
CAV	COMBINATION AIR RELIEF VALVE
℄	CENTERLINE
CONC	CONCRETE
CONN	CONNECTION
CONT	CONTINUE, CONTINUOUS
CPLG	COUPLING
CV	CHECK VALVE
CTR	CENTER
CW	COLD WATER/CITY WATER
D	DRAIN
DET	DETAIL
DI	DUCTILE IRON
DIA/∅	DIAMETER
DIM(S)	DIMENSION(S)
DWG(S)	DRAWING(S)
EX	EXISTING
EA	EACH
EL,ELEV	ELEVATION
EXP	EXPANSION
EXT	EXTERIOR
FCA	FLANGE COUPLING ADAPTER
FD	FLOOR DRAIN
FM	FORCE MAIN
FO	FUEL OIL
FOF	FUEL OIL FILL
FOR	FUEL OIL RETURN
FOS	FUEL OIL SUPPLY
FST	FUEL OIL STORAGE TANK
GA	GAUGE
GC	GENERAL CONTRACTOR
GS	GALVANIZED STEEL
GV	GATE VALVE
HDPE	HIGH DENSITY POLYETHYLENE
HORIZ,H	HORIZONTAL
HWL	HIGH WATER LEVEL
ID	INSIDE DIAMETER
INV EL/IE	INVERT ELEVATION
LBS	POUNDS
LWL	LOW WATER LEVEL
MH	MANHOLE
MSP	MAIN SEWAGE PUMP
NC	NORMALLY CLOSED
NTS	NOT TO SCALE
OD	OUTSIDE DIAMETER
PI	PRESSURE INDICATOR
PIT	PRESSURE INDICATING TRANSMITTER
PLATF	PLATFORM
PSF	POUNDS PER SQUARE FOOT
PS	PUMP STATION
PV	PLUG VALVE
PVC	POLYVINYL CHLORIDE PIPE
QTY	QUANTITY
RAD	RADIUS
RS	RAW SEWAGE
S	SEWER
SA	SERVICE AIR
SAN	SANITARY
SCH	SCHEDULE
SD	STORM DRAIN
SECT	SECTION
SPECS	SPECIFICATIONS
SQ	SQUARE
SQ FT	SQUARE FEET
SS	STAINLESS STEEL
STA	STATION
STD	STANDARD
TEMP	TEMPORARY
TOC	TOP OF CONCRETE
TOS	TOP OF STEEL/SLAB
TOW	TOP OF WALL
TYP	TYPICAL
VP	VACCUM PRIMING
W/	WITH
WC	WATER CLOSET
WL	WATER LEVEL
WS	WATER STOP
XP	EXPLOSION PROOF

MECHANICAL PROCESS PIPING ABBREVIATIONS

IPS	INTERIM PUMPING SYSTEM
PD	PROCESS DRAIN
RWW	RAW WASTEWATER
SA	SERVICE AIR
VP	VACUUM PRIMING

GENERAL NOTES

1. LOCATIONS, ELEVATIONS AND DIMENSIONS OF EXISTING STRUCTURES, UTILITIES, AND OTHER FEATURES ARE SHOWN ACCORDING TO THE BEST INFORMATION AVAILABLE AT THE TIME OF PREPARATION OF THESE PLANS THE LOCATIONS, ELEVATIONS, AND DIMENSIONS OF ALL EXISTING UTILITIES, STRUCTURES, AND FEATURES AFFECTING THIS WORK SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION.
2. WORK PERFORMED UNDER THIS CONTRACT SHALL COMPLY WITH APPLICABLE FEDERAL, STATE, AND LOCAL SAFETY AND OCCUPATIONAL HEALTH LAWS AND REGULATIONS WHERE THE REQUIREMENTS OF THE SPECIFICATION, APPLICABLE LAWS, CRITERIA, ORDINANCES, REGULATIONS, AND REFERENCED DOCUMENTS VARY, THE OWNER SHALL BE CONTACTED AND WILL PROVIDE AN INTERPRETATION FOR THE CONTRACTOR.
3. ALL AREAS OF THE PUMPING STATION IMPACTED BY CONTRACTOR'S TEMPORARY FACILITIES SHALL BE RESTORED TO ORIGINAL CONDITION BY THE CONTRACTOR.
4. THE CONTRACTOR SHALL MAINTAIN, AT THE JOB SITE, ONE SET OF FULL-SIZE CONTRACT DRAWINGS MARKED TO SHOW ANY DEVIATIONS THAT HAVE BEEN MADE FROM THE CONTRACT DRAWINGS, INCLUDING BURIED OR CONCEALED CONSTRUCTION AND UTILITY FEATURES REVEALED DURING THE COURSE OF CONSTRUCTION THESE DRAWINGS SHALL BE AVAILABLE FOR REVIEW BY THE ENGINEER AT ALL TIMES UPON COMPLETION OF THE INSTALLATION OF NEW WORK THE CONTRACTOR SHALL TURN OVER TO THE OWNER AND ENGINEER ONE (1) SET OF AS-BUILT REPRODUCIBLE DRAWINGS AND ONE (1) SET OF PRINTS INCLUDING ALL APPROVED FIELD CHANGES AND DESIGN DEVIATIONS PRIOR TO REQUEST FOR FINAL PAYMENT BY OWNER
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF HIS WORK AND NEWLY INSTALLED WORK, AND PROVIDE APPROPRIATE BARRIERS AND SAFETY GUARD RAILS, AS REQUIRED.
6. THE CONTRACTOR SHALL FILE PLANS WITH GOVERNING LOCAL AND STATE AUTHORITIES HAVING JURISDICTION AND SHALL SECURE ALL PERMITS AND PAY ALL FEES REQUIRED FOR INSTALLATION OF HIS WORK, UNLESS OTHERWISE SPECIFIED IN THE CONTRACT DOCUMENTS.
7. THE CONTRACTOR SHALL PROVIDE ALL RIGGING, RAMPS, AND HOISTING, AS REQUIRED FOR THE INSTALLATION OF THIS WORK.
8. ALL WORK SHALL BE PERFORMED BY LICENSED CONTRACTORS IN THE STATE OF NEW YORK AND WORKMAN EXPERIENCED IN THE TRADE HAVING JURISDICTION ALL WORK SHALL BE SUPERVISED AT ALL TIMES.
9. ANY DEVIATION OR CHANGE IN DESIGN SHALL NOT BE MADE WITHOUT WRITTEN APPROVAL OF THE ENGINEER OR OWNER ANY WORK INSTALLED WITHOUT PRIOR APPROVAL OF THE ENGINEER OR OWNER OR FOUND TO BE DEFECTIVE OR OF POOR QUALITY SHALL BE REPLACED BY THE CONTRACTOR AT HIS OWN EXPENSE.
10. THE CONTRACTOR SHALL COORDINATE WITH THE OWNER ON THE SUPPLY OF TEMPORARY POWER, POTABLE WATER, AND LIGHTING, AS REQUIRED TO PERFORM HIS WORK SUCH UTILITY REQUIREMENTS ARE THE CONTRACTOR'S RESPONSIBILITY.
11. CONTRACTOR IS RESPONSIBLE FOR ANY SNOW REMOVAL IF IMPACTING PROGRESS OF WORK.
12. EQUIPMENT AND SYSTEMS DIMENSIONS, LOCATIONS AND PIPING SYSTEM LAYOUTS ARE BASED ON EQUIPMENT SELECTED BY THE ENGINEER. IF CONTRACTOR PROPOSES TO PROVIDE EQUIPMENT THAT REQUIRES AN ARRANGEMENT OR SPACING DIFFERING FROM THAT INDICATED OR SPECIFIED, THE CONTRACTOR SHALL PREPARE AND SUBMIT TO THE ENGINEER FOR REVIEW DETAILED ARCHITECTURAL, STRUCTURAL, MECHANICAL, PLUMBING, INSTRUMENTATION HVAC AND ELECTRICAL DRAWINGS AND EQUIPMENT LISTS SHOWING ALL NECESSARY CHANGES AND EMBODYING ALL FEATURES OF THE EQUIPMENT AND/OR PROCESS SYSTEMS PROPOSED. THIS INFORMATION SHALL INCLUDE BUT NOT BE LIMITED TO PLANS, SECTIONS DETAILS AND SCHEMATICS OF ALL PIPING SYSTEMS AND APPURTENANCES REQUIRED, ELECTRICAL CONTROLS, CHEMICAL FEED SYSTEMS ETC. SUCH CHANGES IF APPROVED BY THE ENGINEER SHALL BE AT NO ADDITIONAL COST TO THE OWNER AND NO TIME EXTENSION TO THE CONTRACT TIME TO COMPLETION. THE CONTRACTOR SHALL ASSUME THE COST OF AND THE RESPONSIBILITY FOR ACCOMPLISHING ALL THE NECESSARY CHANGES CORRESPONDING TO THE DIMENSIONS AND CHARACTERISTICS OF THE EQUIPMENT SUBMITTED AND APPROVED BY THE ENGINEER.
13. WHEN MAKING NEW CONNECTIONS TO EXISTING PIPING, THE CONTRACTOR MAY, AT HIS OPTION:
    - A. REPLACE PIPING BACK TO NEAREST FITTING.
    - B. USE RESTRAINED SLEEVE COUPLING OR FLANGE ADAPTERS.
14. WALL AND FLOOR SLEEVES SHALL BE LARGE ENOUGH TO ACCOMMODATE FLANGES IF REQUIRED. FLOOR SLEEVES SHALL PROJECT AT LEAST 4-IN. ABOVE FINISHED FLOOR UNLESS OTHERWISE SHOWN, REFER TO DETAILS. IF SLEEVES ARE TO BE SEALED, PROVIDE GROOVED COUPLING PIPING CONNECTION TO FACILITATE INSTALLATION AND REMOVAL OF PIPING.
15. PROVIDE WALL CASTINGS WITH WATERSTOP FOR ALL BURIED AND SUBMERGED PIPELINES AND FOR PIPING LOCATED WITHIN 2 FT. OF MAXIMUM WATER SURFACE, WALL CASTINGS 4-IN AND LARGER - DUCTILE IRON; 3-IN AND SMALLER SCH, 40, 316L STAINLESS STEEL.
16. ALL PIPE PENETRATIONS THROUGH INTERIOR AND EXTERIOR WALLS AND FLOORS SHALL BE SEALED WATERTIGHT.
17. USE RESTRAINED COUPLINGS OR GROOVED COUPLINGS WHERE NECESSARY, AND AS APPROVED, TO FACILITATE PIPING INSTALLATION.
18. FOR FLANGED SYSTEMS PROVIDE FLEXIBLE CONNECTORS WHERE NECESSARY, AND AS APPROVED TO FACILITATE PIPING INSTALLATION AND VALVE AND EQUIPMENT REMOVAL.
19. ALL FLEXIBLE CONNECTORS, INCLUDING EXPANSION JOINTS AND SLEEVE COUPLINGS SHALL BE RESTRAINED AS INDICATED OR AS REQUIRED FOR EXPANSION AND FOR FLEXIBILITY.
20. SMALL PIPING (SAMPLE, SERVICE AIR, ETC.) IS SHOMN DIAGRAMMATICALLY FIELD- ROUTING SUBJECT TO APPROVAL OF THE ENGINEER. SMALL PIPE ROUTING MUST NOT INTERFERE WITH ACCESS TO OR OPERATION OF ANY OTHER PIPE, VALVE, OR EQUIPMENT.
21. PORTIONS OF NON-PROCESS PIPING (PLUMBING, HVAC, CIVIL) ARE SHOWN FOR CLARITY OF DESIGN ONLY REFER TO APPROPRIATE DRAWINGS AND SPECIFICATIONS FOR REQUIREMENTS.
22. PROVIDE CONCRETE PADS FOR ALL FLOOR MOUNTED PROCESS EQUIPMENT, REFER TO STRUCTURAL DRAWINGS FOR DETAILS.
23. VENTS AND DRAINS:
    - A. INSTALL VENT AND DRAIN PIPING AND VALVES SO THERE IS NO INTERFERENCE WTH ACCESS TO OR OPERATION OF ANY EQUIPMENT, VALVES, PIPING OR PANELS.
    - B. PROVIDE ISOLATION VALVES FOR ALL VENTS AND DRAINS AS SPECIFIED AND INDICATED.
    - C. LOCATE VALVES SO THAT THEY ARE ACCESSIBLE AND OPERABLE.
    - D. PIPE ALL VENT AND DRAINS SLOPED TO DRAIN TO THE NEAREST GUTTER, SUMP, TRENCH OR DRAIN OR AS INDICATED.
    - E. WHERE PIPING RUNS ACROSS A FLOOR, INSTALL 2 INCHES MAXIMUM ABOVE FLOOR.
24. CONTRACTOR SHALL DESIGN ALL PIPE SUPPORTS AND HANGERS IN ACCORDANCE WITH SPECIFICATION 40 05 07 - HANGERS AND SUPPORTS FOR PROCESS PIPING.

ELEVATION NOTES:

1. ALL ELEVATIONS ON THIS CHART ARE REFERENCED TO NAVD88.
2. NAVD88 IS 1.45 FT BENEATH THE BROOKLYN HIGHWAY DATUM
3. 1% ANNUAL CHANCE (100-YR) PRELIMINARY BASE FLOOD ELEVATION (BFE) IS AS PER FEMA REVISED PRELIMINARY FLOOD INSURANCE RATE MAP DATE JANUARY 30, 2015.
4. THE NYC MAYOR'S OFFICE OF RECOVERY AND RESILIENCY MAY 2022 CLIMATE RESILIENCY DESIGN GUIDELINE (V 4.1) REQUIRES A DESIGN FLOOD ELEVATION (DFE) OF 40-IN ABOVE THE 1% BFE

ITEM	ELEVATION IN NAVD88
DESIGN FLOOD ELEVATION (DFE)[4]	
PAERDEGAT PS	EL +14.33
	(SEE NOTE 3)
PFIRM1% BFE[3] (100-YR)	
PAERDEGAT PS	EL +11.00
	(SEE NOTE 2)
BROOKLYN HIGHWAY DATUM (BHD)	EL +1.45
NAVD88[2]	EL 0.00

BID SET

SUBMITTAL DATE: OCTOBER 2026

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NO.	DATE	REVISIONS/DESCRIPTION	APPR'D.

DESIGNED BY: TOM FINI, P.E.
DRAWN BY: MENGHONG WANG
CHECKED BY: PAUL MOULTON, P.E.
DESIGN LEAD: TOM FINI, P.E.
PROJECT MANAGER: AIMEE BOULET, P.E.

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STATE OF NEW YORK · TOM FINI · 109219 · LICENSED PROFESSIONAL ENGINEER

Environmental Protection

ACCOUNTABLE MANAGER: JOHN GOULAS, P.E.
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96-05 HORACE HARDING EXPRESSWAY 5th FLOOR
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CAPITAL PROJECT WP-269
RECONSTRUCTION OF
PAERDEGAT PUMPING STATION
CONTRACT PS-318
MECHANICAL
LEGEND, ABBREVIATIONS, NOTES

DATE: OCTOBER 2026
SCALE: NOT TO SCALE
SHEET NO: 99 OF 274
DRAWING NO. MG-001.00

All inquiries regarding this drawing(s) or project should be made to NYC Environmental Protection, Bureau of Engineering Design and Construction.

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PROCESS PIPING SCHEDULE

LEGEND	SERVICE	SYSTEM DESIGN CONDITIONS: TEMP (DEG. F) OPER.	TEMP (DEG. F) MAX.	PRESSURE (PSI) WORK.	PRESSURE (PSI) MAX.	PIPING: MATERIAL	DIAMETER RANGE	SCH./ CLASS	LINING/ COATING	JOINT TYPE	INSULATION: TYPE	THICKNESS (IN.)	VALVING: BLOCK	CHECK	THROTTLING	PRESSURE (PSI)	MEDIUM	TEST DURATION (MIN.)	LEAKAGE ALLOWANCE (SEE NOTES)	SPECS. SECTION NUMBER	REMARKS
RS	RAW SEWAGE	60	80	SAS	SAS	DUCTILE IRON	4" AND LARGER	SEE SPEC. SECTION	CERAMIC EPOXY LINED	FLANGED/ PUSH-ON	---	---	PLUG/GATE	SWING	---	60	WATER	60	ZERO	40 05 19	SEE NOTE 5
SA	SERVICE AIR	150	250	100	175	TYPE 316 STAINLESS STEEL	ALL	SCH.40 (SEE NOTE 4)	---	THREADED	---	---	BALL	SWING	---	300	AIR	60	ZERO	40 05 22	
VP	VACUUM PRIMING	60	100	FULL VACUUM	100	TYPE 316 STAINLESS STEEL	ALL	SCH.40 (SEE NOTE 4)	---	THREADED	---	---	BALL	SWING	---	150	AIR	60	ZERO	40 05 22	

PROCESS PIPING NOTES:
1. PIPING SCHEDULE ABOVE REFERS TO MECHANICAL PROCESS PIPING ONLY. REFER TO OTHER DISCIPLINES FOR ANY NON-PROCESS PIPING SHOWN AS BACKGROUND INFORMATION ON THE MECHANICAL DRAWINGS AND FOR CONTINUATION OF PIPING BEYOND MECHANICAL DISCIPLINE LIMITS OF WORK.
2. USE TYPE 316L S.S. PIPE FOR DRAINS FROM DUCTILE IRON SERVICE FOR DRAINS 3" AND SMALLER.
3. PROVIDE FLANGES AT EQUIPMENT, VALVES AND AS INDICATED ON THE DRAWINGS.
4. FOR STAINLESS STEEL PIPING:
   A. PROVIDE STAINLESS STEEL PIPE LESS THAN THREE-INCH DIAMETER WITH THREADED CONNECTIONS CONFORMING TO ANSI B2.1 .
   B. STAINLESS STEEL PIPING LESS THAN SIX-INCH DIAMETER SHALL BE SCHEDULE 40.
   C. STAINLESS STEEL PIPE SIX-INCH DIAMETER THROUGH EIGHT-INCH DIAMETER SHALL BE SCHEDULE 10S.
   D. SEE ALSO SPEC. SECTION 40 05 22.
5. PROVIDE CUSTOM FABRICATED CARBON STEEL PIPE REDUCER SECTION ON PUMP DISCHARGES AS NECESSARY TO MATE TO DISCHARGE ELBOWS. THESE SECTIONS SHALL CONFORM TO SPEC. SECTION 43 23 31.05.
6. SAS = SAME AS SYSTEM

PROCESS PUMP SCHEDULE

TAG NO.	NUMBER OF UNITS: TOTAL	OPERATING	STANDBY	NAME	LOCATION	TYPE	RATING POINT: CAPACITY (GPM)	HEAD (FEET)	MIN. WIRE-TO-WATER EFF.%	MIN. SHUTOFF HEAD (FEET)	MIN. SUCTION/ DISCHARGE SIZE (IN.)	PUMP RPM	SEAL TYPE	MOTOR DATA: HP (MAX.)	RPM (MAX.)	ENCL. TYPE	DRIVE TYPE	SPEC. SECTION	BASIS OF DESIGN	REMARKS
MSP 1601 THRU MSP 1606	6	5	1	MAIN SEWAGE PUMPS	UPPER/LOWER PUMP ROOM	ROTODYNAMIC SOLIDS HANDLING DRY PIT SUBMERSIBLE VERTICAL MOUNTED	7,920	25	74	44	24/20	500	TANDEM MECH.	90	500	SUBMERSIBLE	CLOSED COUPLED	42 23 31.05	FLYGT NT 3531/746 1470	SEE NOTES

RAW SEWAGE PUMP NOTES:
1. CONSTANT SPEED.
2. FULL SPEED SECONDARY RATING POINT: 12,000 GPM @ 12 FEET WITH NO MORE THAN 16 FEET OF NPSH3.
2. SOLIDS HANDLING CAPABILITY: 4 INCH MINIMUM
3. NET POSITIVE SUCTION HEAD REQUIRED AT RATING POINT: 8 FEET

SLIDE GATE SCHEDULE

TAG NO.	NUMBER OF UNITS	LOCATION	TYPE	CLEAR OPENING W x H, IN	CONFIGURATION	INSTALLATION	HEAD TYPE	DESIGN HEAD, FT	THIMBLE	OPERTOR TYPE	MOTOR DATA: HP /AMPS	ENCL. TYPE	SPEC. SECTION	REMARKS
1301-48-01	1	SCREENING CHAMBER RALPH AVE INFLUENT	TYPE 316L FABRICATED STAINLESS STEEL	48 x 48	4-SIDED	NON-SELF CONTAINED	SEATING/ UNSEATING	27/27	E TYPE	ELECTRIC	SEE NOTE 2	NEMA 7	40 05 59.05	MODULATING
1302-48-01	1	SCREENING CHAMBER AVENUE M INFLUENT	TYPE 316L FABRICATED STAINLESS STEEL	48 x 48	4-SIDED	NON-SELF CONTAINED	SEATING/ UNSEATING	27/27	E TYPE	ELECTRIC	SEE NOTE 2	NEMA 7	40 05 59.05	OPEN/CLOSE

SLIDE GATE NOTES:
1. SEE ALSO SPEC. SECTION 40 05 59.05.2.
2. ELECTRIC OPERATED ACTUATORS ARE SIZED AND RATED ACCORDING TO TORQUE AND THRUST OUTPUT.

AIR COMPRESSOR SCHEDULE

TAG NO.	NUMBER OF UNITS	NAME	LOCATION	TYPE	CAPACITY (SCFM)	PRESSURE (PSIG)	AIR RECEIVER: CAPACITY (GAL)	SYSTEM PRESSURE MAX. SETTING (PSIG)	MAX. RATED PRESSURE (PSIG)	AIR OUTLET SIZE (NPT)	AIR COMPRESSOR: AIR INLET (NPT)	AIR DISCHARGE (NPT)	Dba SOUND LEVEL	MOTOR DATA: HP	RPM	VOLTS	PHASE	HERTZ	BASIS OF DESIGN
7400	1	SERVICE AIR COMPRESSOR	GROUND FLOOR @ EL. 13.50'	RECIPROCATING	15	100	80	125	175	1"	0.75"	0.5"	85	5	SEE NOTE 2	460	3	60	QUINCY QR-25 SERIES

AIR COMPRESSOR NOTES:
1. SEE ALSO SPEC. SECTION 42 12 33.
2. RPM AS SPECIFIED BY AIR COMPRESSOR MANUFACTURER

VACUUM PRIMING SYSTEM SCHEDULE

TAG NO.	NUMBER OF UNITS	NAME	LOCATION	TYPE	DESIGN LIFT (FT)	SYSTEM VOLUME TO BE EVACUATED (FT^3)	RECEIVER CAPACITY (GAL)	PRIMING VALVES	MOTOR SIZE (HP)	MIN. VACUUM PUMP CAPACITY (ACFM)	RATED VACUUM (inHg)	BASIS OF DESIGN
7401 7402 7403	3	VACUUM PRIMING SYSTEM	GROUND FLOOR @ EL. 13.50	PRIMING SYSTEM	14	MSP 1601: 190 MSP 1602: 160 MSP 1603: 130	120	SINGLE	4	50	29.9	PREMIER FLUID SYSTEMS (VHD-120-107)

VACUUM PRIMING SYSTEM NOTES:
1. SEE ALSO SPEC. SECTION 43 12 60.

BID SET

SUBMITTAL DATE: OCTOBER 2026

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DRAWN BY: MENGHONG WANG
CHECKED BY: PAUL MOULTON, P.E.
DESIGN LEAD: TOM FINI, P.E.
PROJECT MANAGER: AIMEE BOULET, P.E.

AECOM
605 THIRD AVENUE, 3rd FL.
NEW YORK, NY 10158, US

STATE OF NEW YORK · TOM FINI · 109219 · LICENSED PROFESSIONAL ENGINEER

Environmental Protection

ACCOUNTABLE MANAGER: JOHN GOULAS, P.E.
PORTFOLIO MANAGER: KEVIN ELLENWOOD, P.E.
EXECUTIVE DIRECTOR: NAYANKUMAR SHAH, P.E.

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CAPITAL PROJECT WP-269
RECONSTRUCTION OF
PAERDEGAT PUMPING STATION
CONTRACT PS-318
MECHANICAL
MECHANICAL PROCESS SCHEDULE

DATE: OCTOBER 2026
SCALE:
SHEET NO: 100 OF 274
DRAWING NO. MG-002.00

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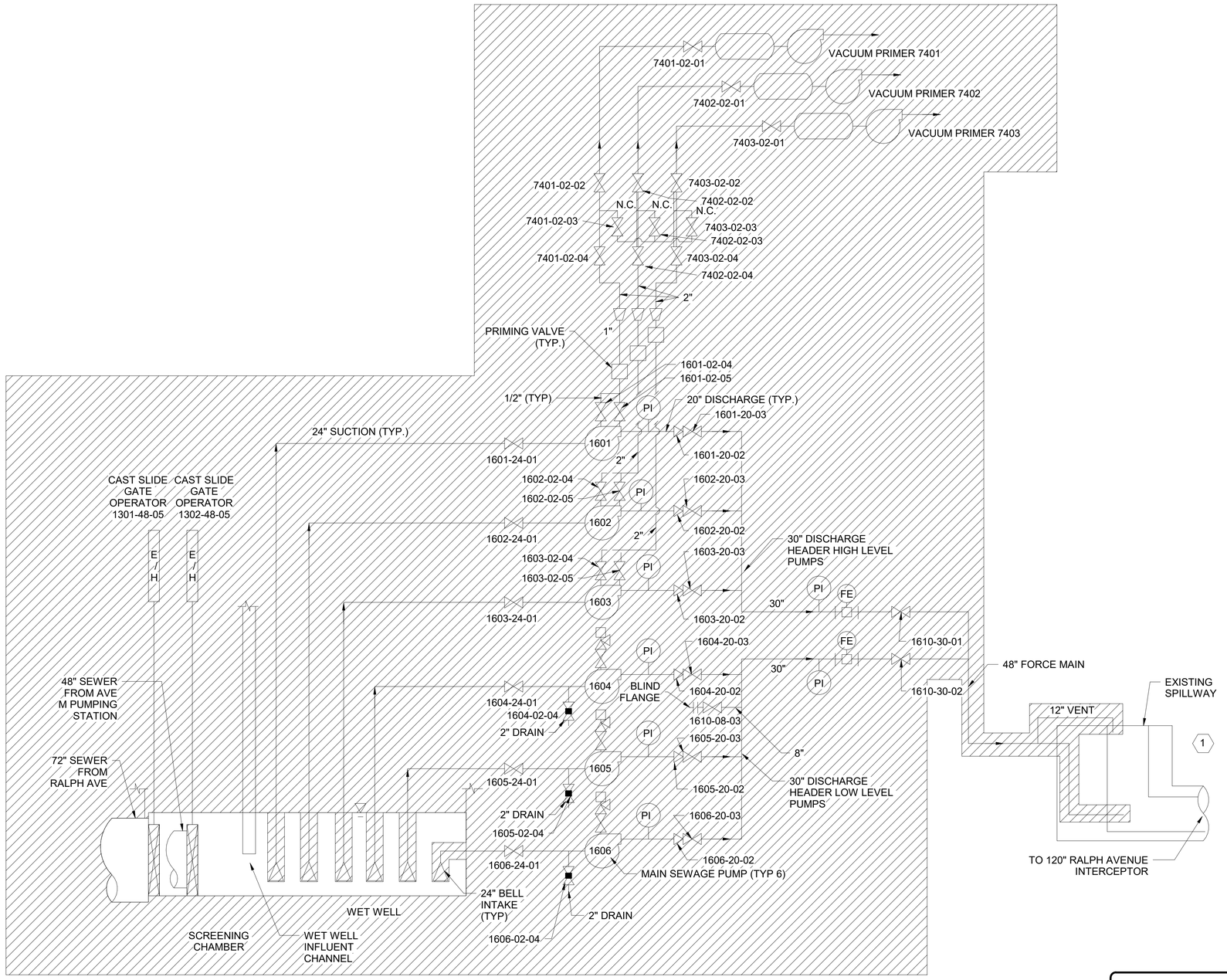

KEYNOTES: #

1. FOR MODIFICATIONS TO EXISTING 48" FORCE MAIN OUTSIDE OF BUILDING AND SPILLWAY, SEE CIVIL AND STRUCTURAL DRAWINGS.

BID SET

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CAPITAL PROJECT WP-269
RECONSTRUCTION OF
PAERDEGAT PUMPING STATION
CONTRACT PS-318
MECHANICAL
DEMOLITION PROCESS FLOW DIAGRAM

DATE: OCTOBER 2026
SCALE: 1 1/2" = 1'-0"
SHEET NO: 101 OF 274
DRAWING NO. DM-101.00

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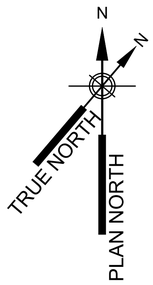

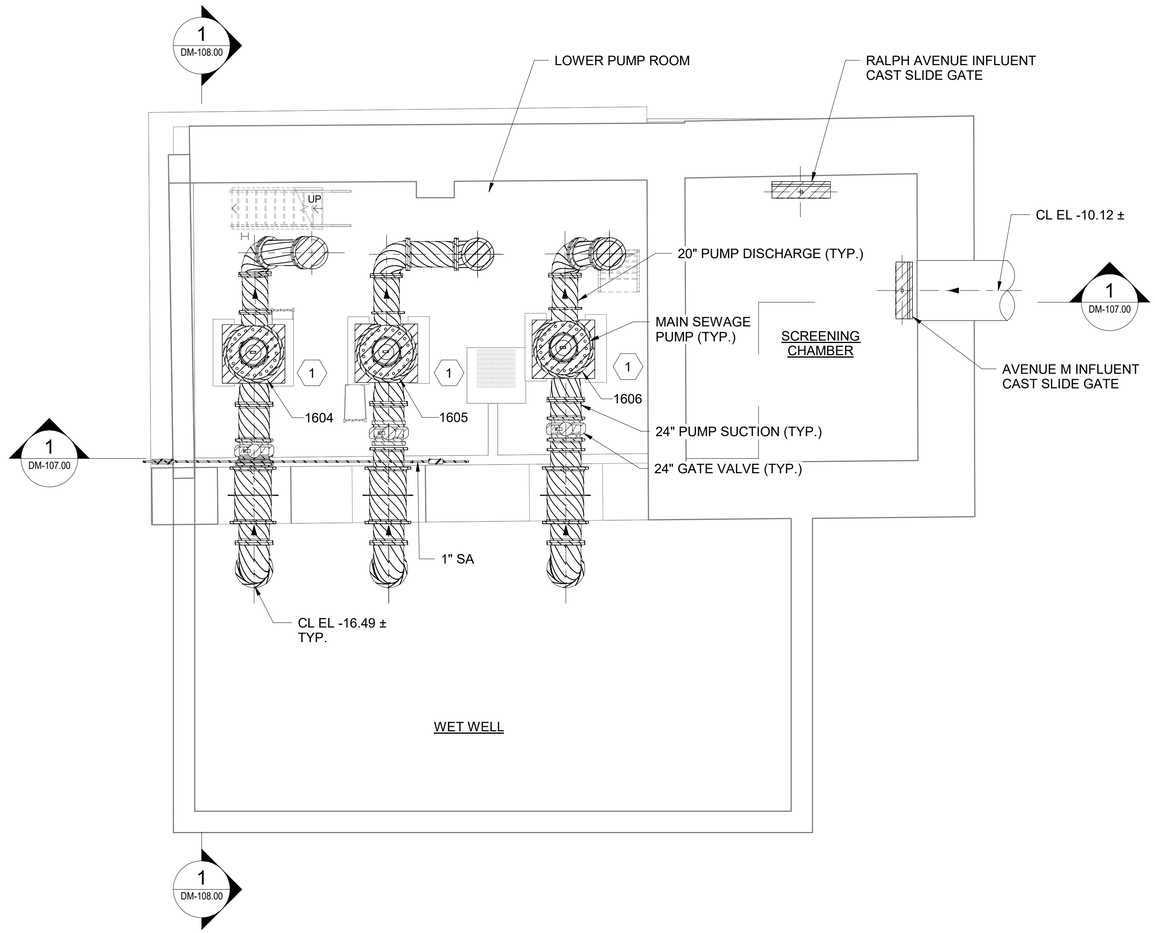

DEMOLITION LOWER PUMP ROOM, WET WELL, SCREENING CHAMBER - PLAN AT EL. -20.00

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

GENERAL NOTES:

1. CONTRACTOR SHALL BE RESPONSIBLE FOR DRAINING AND CLEANING THE WET WELL AND PUMP STATION FOR ALL MODIFICATIONS. ALL HAZARDOUS MATERIALS SHALL BE PROPERLY DISPOSED. REFER TO THE PROJECT SPECIFICATIONS FOR FURTHER DETAILS.

2. DEMOLITION OF PIPING, VALVES, AND EQUIPMENT SHALL INCLUDE REMOVAL OF PIPE SUPPORTS, PADS, AND ALL ASSOCIATED APPURTENANCES. CONCRETE SHALL BE REPAIRED PER STRUCTURAL DRAWINGS AND SPECIFICATIONS.

3. DEMOLITION PLANS ARE DIVIDED BY DISCIPLINE. MECHANICAL DEMOLITION IS SHOWN ON DM SHEETS; REFER TO SHEETS OF OTHER DISCIPLINES FOR THE SPECIFIC DEMOLITION REQUIREMENTS.

KEY NOTES: (#)

1. DEMOLISH PUMP, MOTOR, PRESSURE GAUGES, APPURTENANCES, CONCRETE PEDESTALS, AND ASSOCIATED SUCTION AND DISCHARGE PIPING. SEE STRUCTURAL DETAILS FOR CONCRETE REPAIR.

0 5 10 FT.
3/16"=1'-0"

BID SET

SUBMITTAL DATE: OCTOBER 2026

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CAPITAL PROJECT WP-269
RECONSTRUCTION OF
PAERDEGAT PUMPING STATION
CONTRACT PS-318
MECHANICAL
DEMOLITION LOWER PUMP ROOM, WET WELL, SCREENING CHAMBER

DATE: OCTOBER 2026
SCALE: 3/16" = 1'-0"
SHEET NO: 102 OF 274
DRAWING NO. DM-102.00

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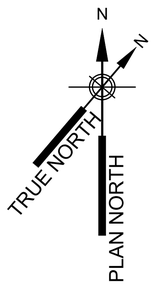


GENERAL NOTES:

1. CONTRACTOR SHALL BE RESPONSIBLE FOR DRAINING IDENTIFYING AND HANDLING ALL HAZARDOUS MATERIALS IN THE FACILITY, IN ACCORDANCE WITH ALL APPLICABLE REGULATIONS.

2. DEMOLITION OF PIPING, VALVES, AND EQUIPMENT SHALL INCLUDE REMOVAL OF PIPE SUPPORTS, PADS, AND ALL ASSOCIATED APPURTENANCES. CONCRETE SHALL BE REPAIRED PER STRUCTURAL DRAWINGS AND SPECIFICATIONS.

3. DEMOLITION PLANS ARE DIVIDED BY DISCIPLINE. MECHANICAL DEMOLITION IS SHOWN ON DM SHEETS; REFER TO SHEETS OF OTHER DISCIPLINES FOR THE SPECIFIC DEMOLITION REQUIREMENTS.

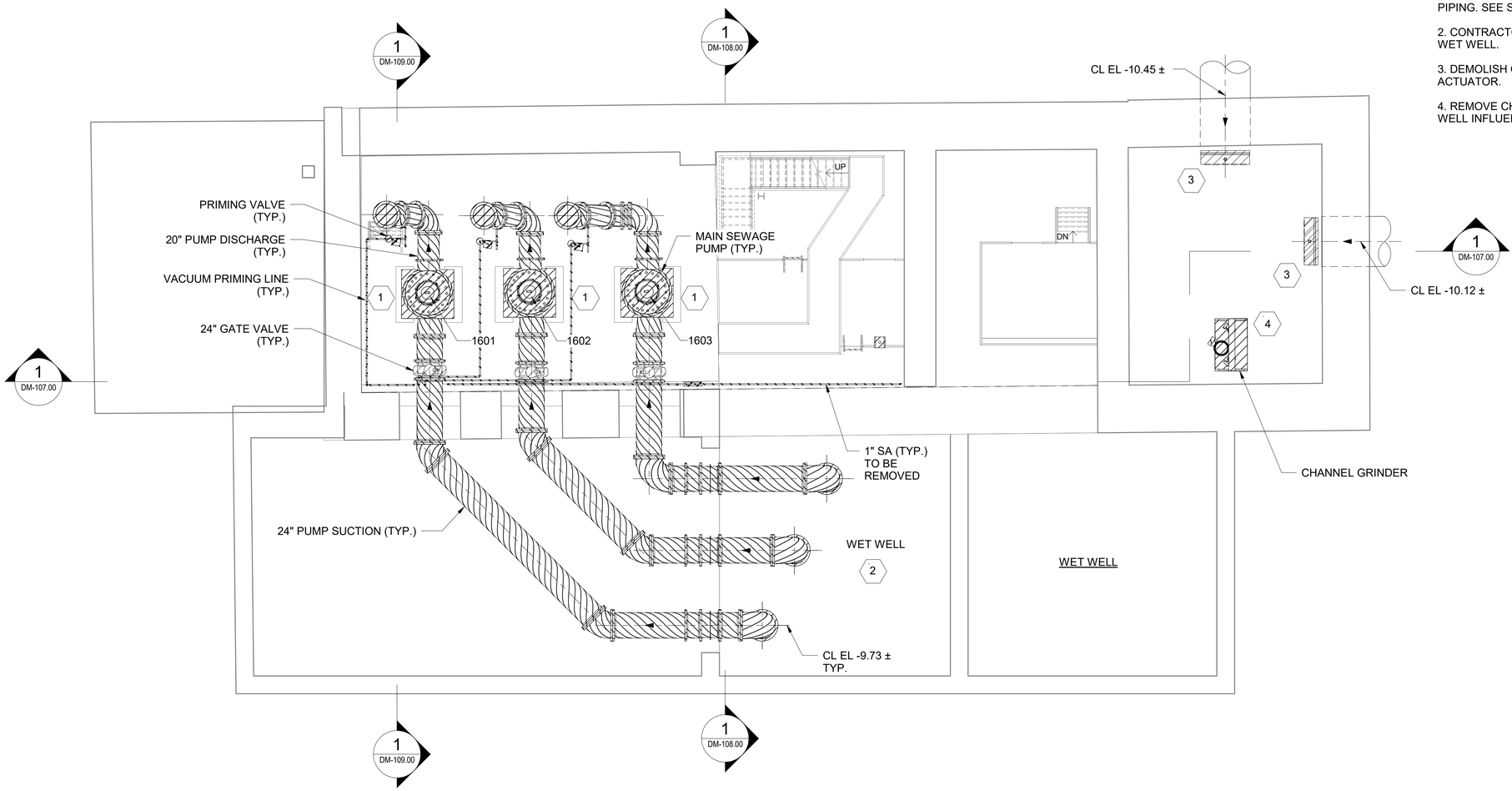
KEY NOTES: (#)

1. DEMOLISH PUMP, MOTOR, PRESSURE GAUGES, APPURTENANCES, CONCRETE PEDESTALS, AND ASSOCIATED SUCTION AND DISCHARGE PIPING. SEE STRUCTURAL DETAILS FOR CONCRETE REPAIR.

2. CONTRACTOR SHALL BE RESPONSIBLE FOR DRAINING AND CLEANING THE WET WELL.

3. DEMOLISH CAST SLIDE GATE, WALL THIMBLES, STEM, AND ASSOCIATED ACTUATOR.

4. REMOVE CHANNEL GRINDER FROM CONCRETE BENCH ADJACENT TO WET WELL INFLUENT CHANNEL.



DEMOLITION UPPER PUMP ROOM - PLAN AT EL. -12.00'

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

3/16"=1'-0" 0 5 10 FT.

BID SET

SUBMITTAL DATE: OCTOBER 2026

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CAPITAL PROJECT WP-269
RECONSTRUCTION OF
PAERDEGAT PUMPING STATION
CONTRACT PS-318
MECHANICAL
DEMOLITION UPPER PUMP ROOM

DATE: OCTOBER 2026
SCALE: 3/16" = 1'-0"
SHEET NO: 103 OF 274
DRAWING NO. DM-103.00

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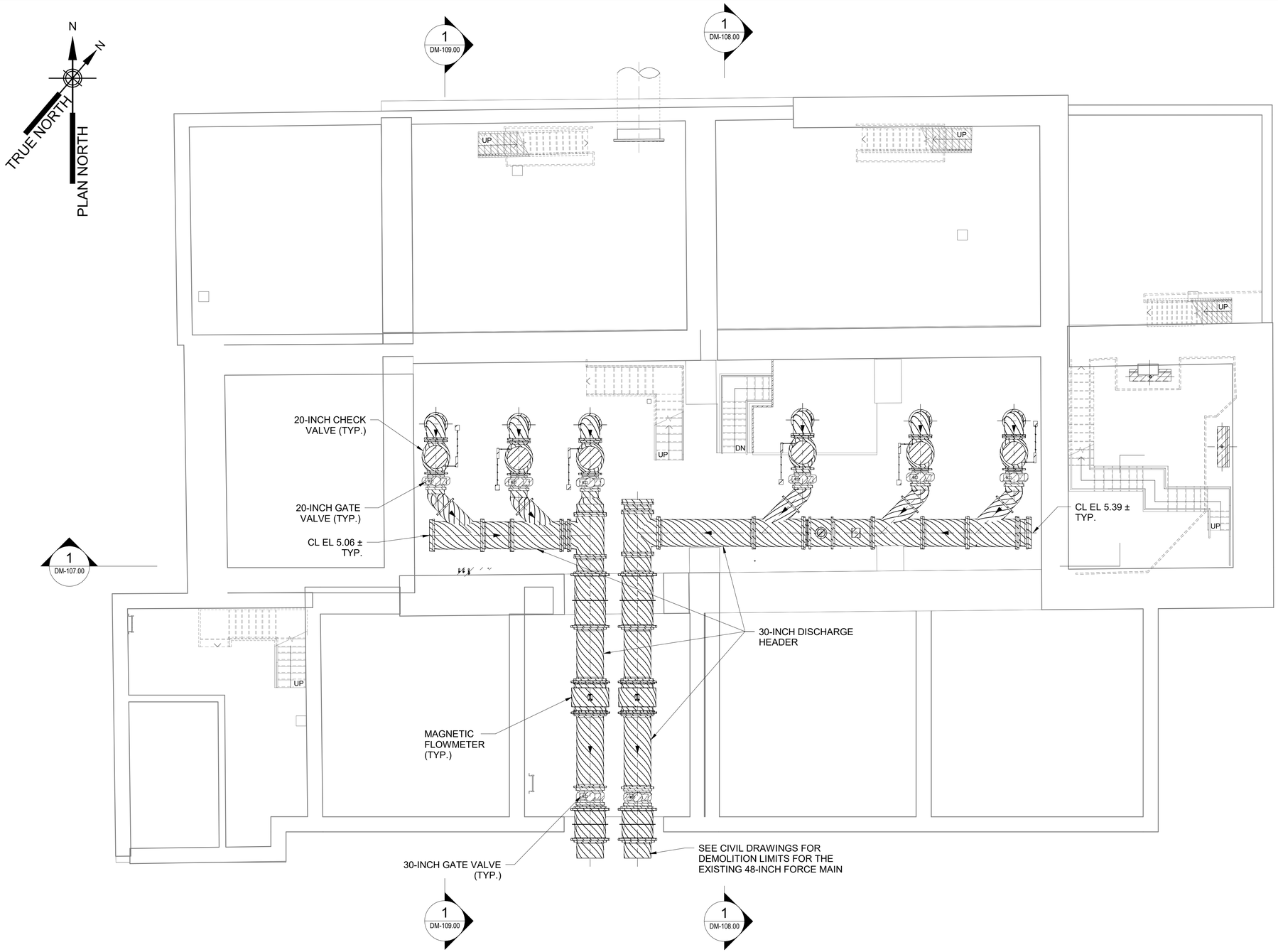

GENERAL NOTES:

1. CONTRACTOR SHALL BE RESPONSIBLE FOR DRAINING IDENTIFYING AND HANDLING ALL HAZARDOUS MATERIALS IN THE FACILITY, IN ACCORDANCE WITH ALL APPLICABLE REGULATIONS.

2. DEMOLISH PIPE SUPPORTS, FITTINGS, AND THRUST BRACING.

3. DEMOLITION OF PIPING, VALVES, AND EQUIPMENT SHALL INCLUDE REMOVAL OF PIPE SUPPORTS, PADS, AND ALL ASSOCIATED APPURTENANCES. CONCRETE SHALL BE REPAIRED PER STRUCTURAL DRAWINGS AND SPECIFICATIONS.

4. DEMOLITION PLANS ARE DIVIDED BY DISCIPLINE. MECHANICAL DEMOLITION IS SHOWN ON DM SHEETS; REFER TO SHEETS OF OTHER DISCIPLINES FOR THE SPECIFIC DEMOLITION REQUIREMENTS.

DEMOLITION DISCHARGE PIPING GALLERY, STORAGE ROOMS, ELECTRICAL CHAMBERS - PLAN AT EL. 2.83

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

3/16"=1'-0" 0 5 10 FT.

BID SET

SUBMITTAL DATE: OCTOBER 2026

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DRAWN BY: MENGHONG WANG

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STATE OF NEW YORK TOM FINI 109219 LICENSED PROFESSIONAL ENGINEER

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PORTFOLIO MANAGER: KEVIN ELLENWOOD, P.E.
EXECUTIVE DIRECTOR: NAYANKUMAR SHAH, P.E.

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RECONSTRUCTION OF
PAERDEGAT PUMPING STATION
CONTRACT PS-318
MECHANICAL
DEMOLITION DISCHARGE PIPING GALLERY, STORAGE ROOMS, ELECTRICAL CHAMBERS

DATE: OCTOBER 2026
SCALE: 3/16" = 1'-0"
SHEET NO: 104 OF 274
DRAWING NO. DM-104.00

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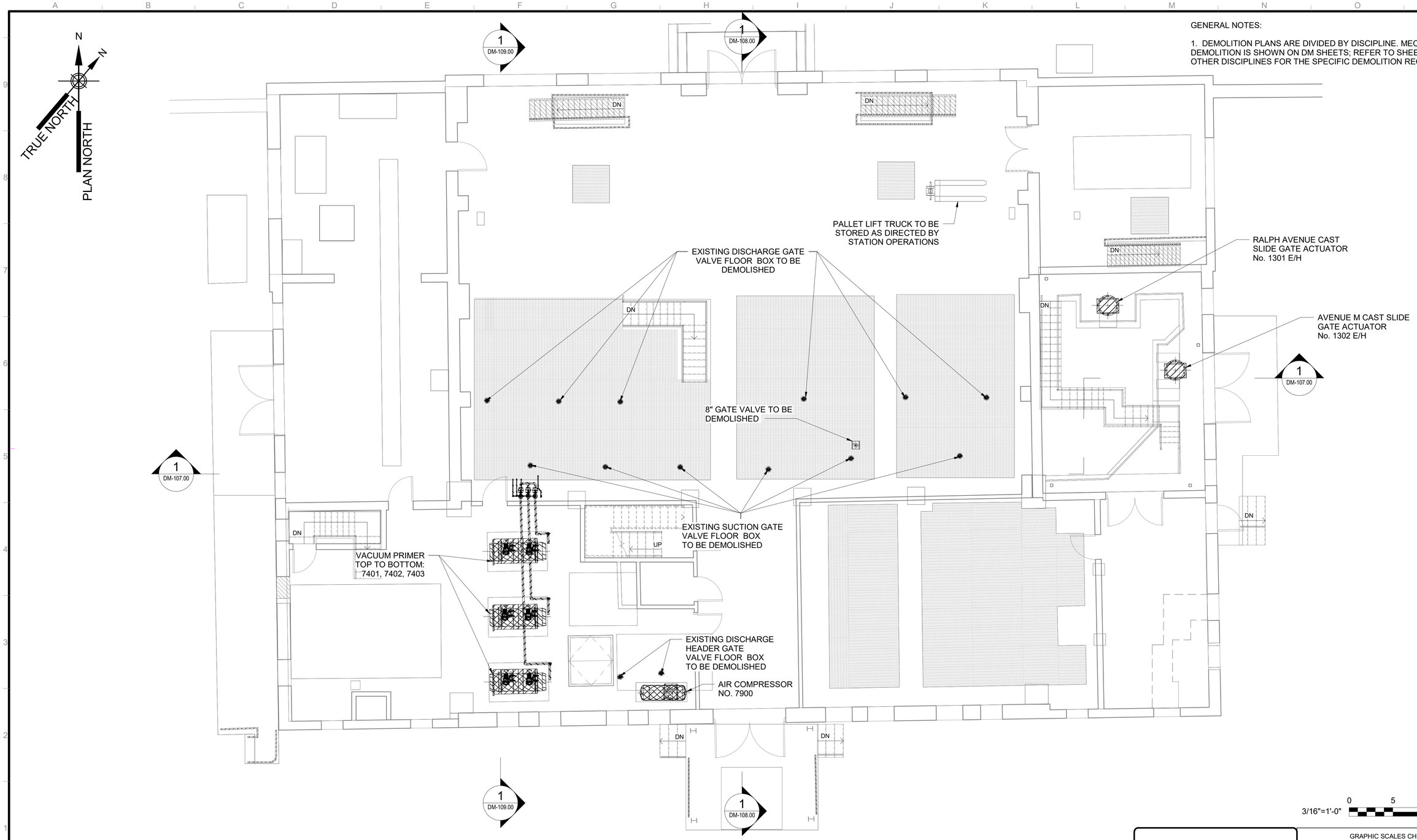

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DEMOLITION GROUND FLOOR - PLAN AT EL. 13.50

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

0 5 10 FT.
3/16"=1'-0"

BID SET

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RECONSTRUCTION OF
PAERDEGAT PUMPING STATION
CONTRACT PS-318
MECHANICAL
DEMOLITION GROUND FLOOR (OPEN AREA, SCREENING CHAMBER, MECH EQUIP RM)

DATE: OCTOBER 2026
SCALE: 3/16" = 1'-0"
SHEET NO: 105 OF 274
DRAWING NO. DM-105.00

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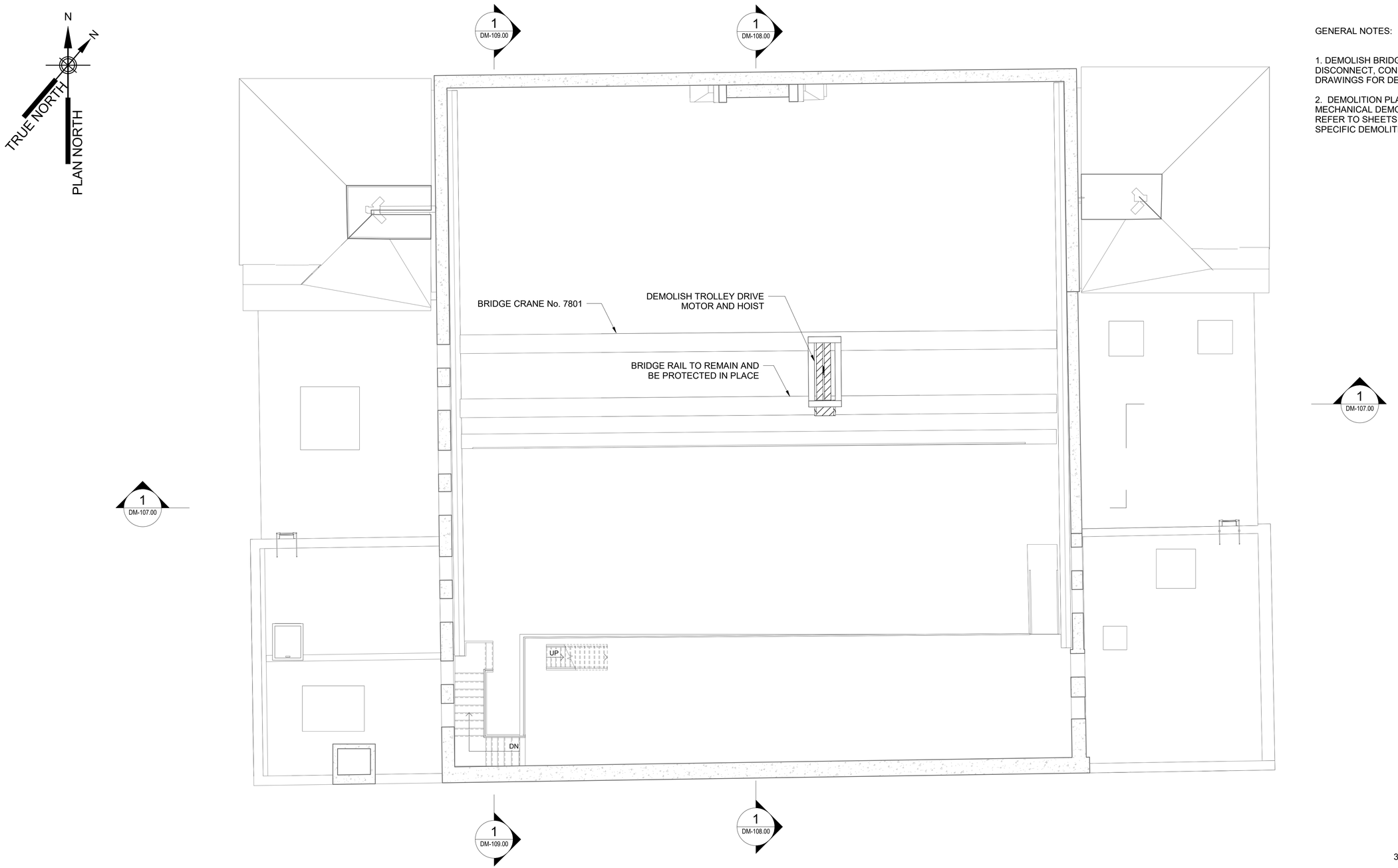

GENERAL NOTES:

1. DEMOLISH BRIDGE CRANE ELECTRIFICATION SYSTEM, DISCONNECT, CONDUITS, AND WIRING. SEE ELECTRICAL DRAWINGS FOR DETAILS.

2. DEMOLITION PLANS ARE DIVIDED BY DISCIPLINE. MECHANICAL DEMOLITION IS SHOWN ON DM SHEETS; REFER TO SHEETS OF OTHER DISCIPLINES FOR THE SPECIFIC DEMOLITION REQUIREMENTS.

1
DM-107.00

0 5 10 FT.
3/16"=1'-0"

DEMOLITION EAST AND WEST FLAT ROOFS AND UPPER MEZZANINE - PLAN AT EL. 33.50

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

BID SET

SUBMITTAL DATE: OCTOBER 2026

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RECONSTRUCTION OF
PAERDEGAT PUMPING STATION
CONTRACT PS-318
MECHANICAL
DEMOLITION EAST AND WEST FLAT ROOFS AND UPPER MEZZANINE

DATE: OCTOBER 2026
SCALE: 3/16" = 1'-0"
SHEET NO: 106 OF 274
DRAWING NO. DM-106.00

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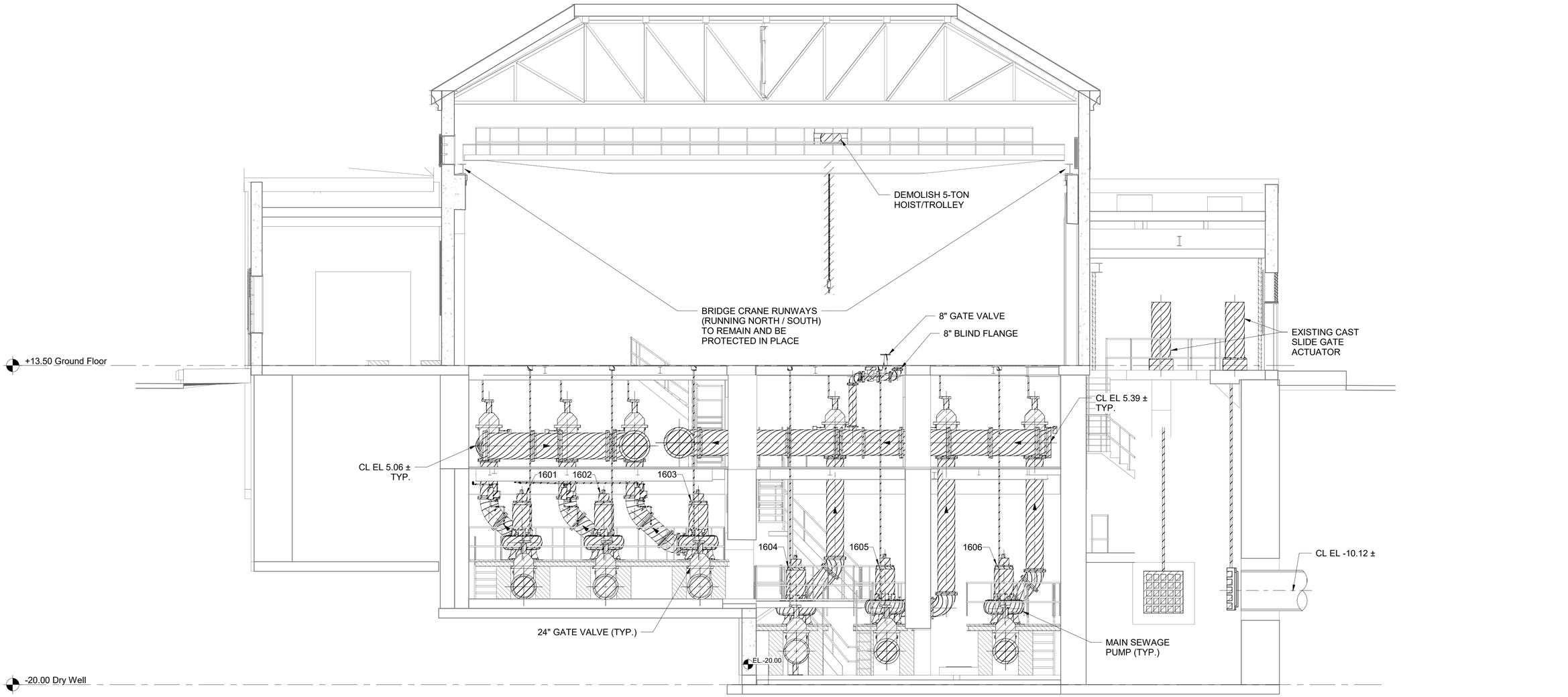

1 DM-102.00 DEMOLITION SECTION VIEW NORTH

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

3/16"=1'-0" 0 5 10 FT.

BID SET

SUBMITTAL DATE: OCTOBER 2026

GRAPHIC SCALES CHECK BEFORE USE

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DRAWN BY: MENGHONG WANG
CHECKED BY: PAUL MOULTON, P.E.
DESIGN LEAD: TOM FINI, P.E.
PROJECT MANAGER: AIMEE BOULET, P.E.

AECOM
605 THIRD AVENUE, 3rd FL.
NEW YORK, NY 10158, US

STATE OF NEW YORK TOM FINI 109219 LICENSED PROFESSIONAL ENGINEER

Environmental Protection

ACCOUNTABLE MANAGER: JOHN GOULAS, P.E.
PORTFOLIO MANAGER: KEVIN ELLENWOOD, P.E.
EXECUTIVE DIRECTOR: NAYANKUMAR SHAH, P.E.

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CAPITAL PROJECT WP-269
RECONSTRUCTION OF
PAERDEGAT PUMPING STATION
CONTRACT PS-318
MECHANICAL
DEMOLITION SECTION VIEW NORTH

DATE: OCTOBER 2026
SCALE: 3/16" = 1'-0"
SHEET NO: 107 OF 274
DRAWING NO. DM-107.00

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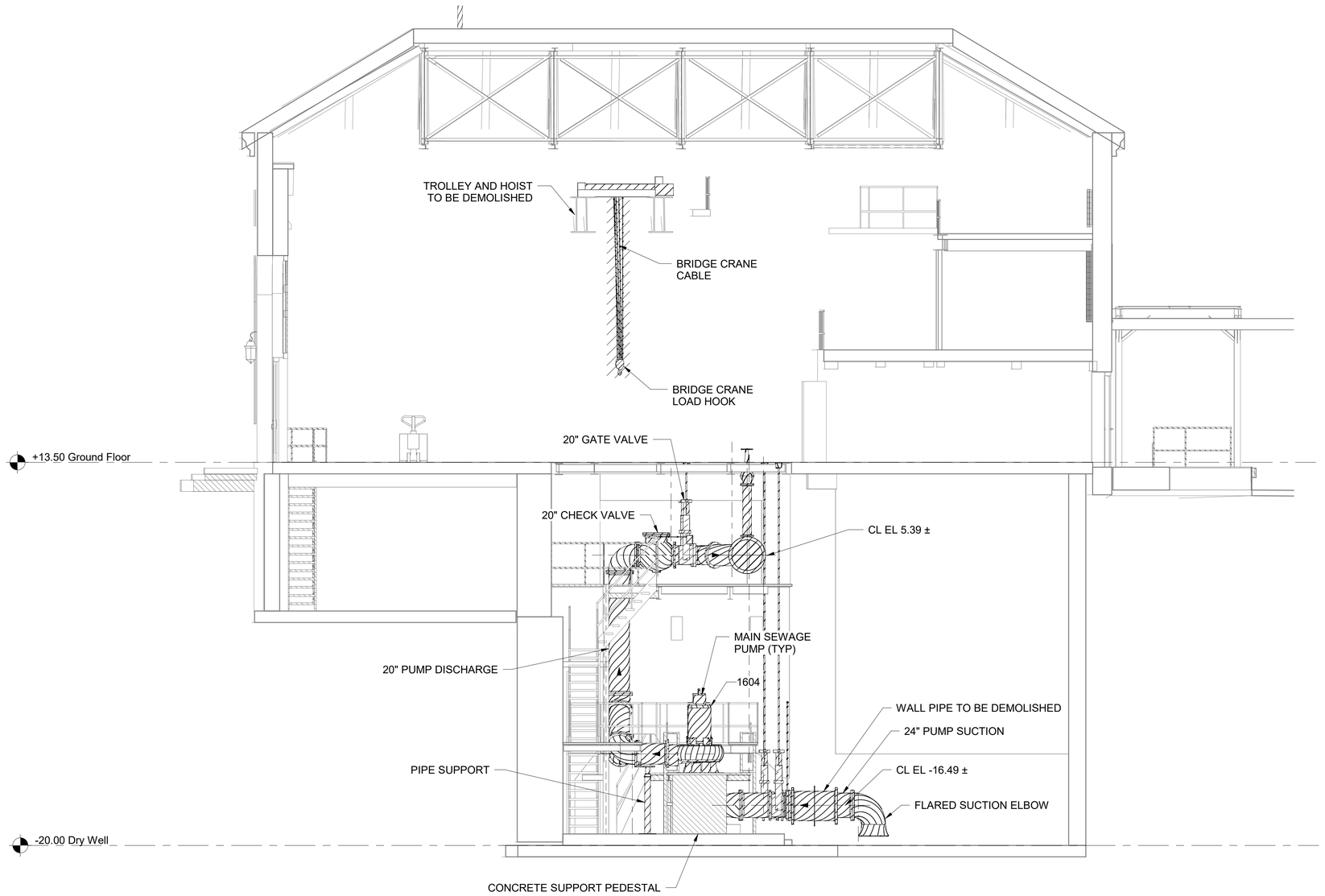
GENERAL NOTES:

1. DEMOLITION PLANS ARE DIVIDED BY DISCIPLINE. MECHANICAL DEMOLITION IS SHOWN ON DM SHEETS; REFER TO SHEETS OF OTHER DISCIPLINES FOR THE SPECIFIC DEMOLITION REQUIREMENTS.



1 / DM-102.00 DEMOLITION SECTION VIEW EAST

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

0 5 10 FT.

3/16"=1'-0"

BID SET

SUBMITTAL DATE: OCTOBER 2026

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NYC Environmental Protection

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CAPITAL PROJECT WP-269
RECONSTRUCTION OF PAERDEGAT PUMPING STATION
CONTRACT PS-318
MECHANICAL
DEMOLITION SECTION VIEW EAST
SHEET 1

DATE: OCTOBER 2026
SCALE: 3/16" = 1'-0"
SHEET NO: 108 OF 274
DRAWING NO. DM-108.00

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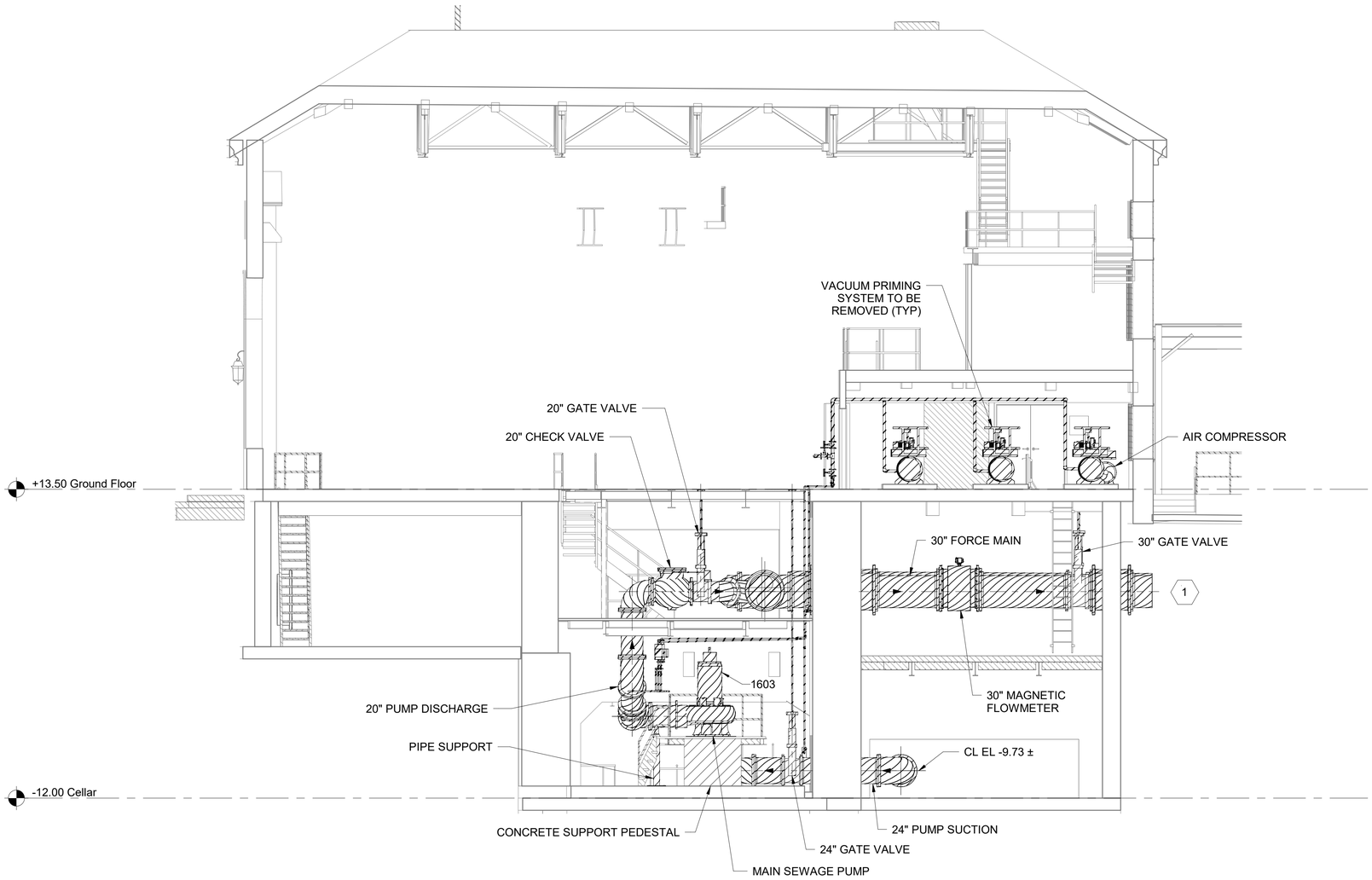
KEY NOTES: (#)

1. FOR DEMOLITION OF EXISTING FORCE MAIN, SEE CIVIL DRAWINGS.



1 DM-103.00 DEMOLITION SECTION VIEW EAST

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

3/16"=1'-0" 0 5 10 FT.

BID SET

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CAPITAL PROJECT WP-269
RECONSTRUCTION OF
PAERDEGAT PUMPING STATION
CONTRACT PS-318
MECHANICAL
DEMOLITION SECTION VIEW EAST
SHEET 2

DATE: OCTOBER 2026
SCALE: 3/16" = 1'-0"
SHEET NO: 109 OF 274
DRAWING NO. DM-109.00

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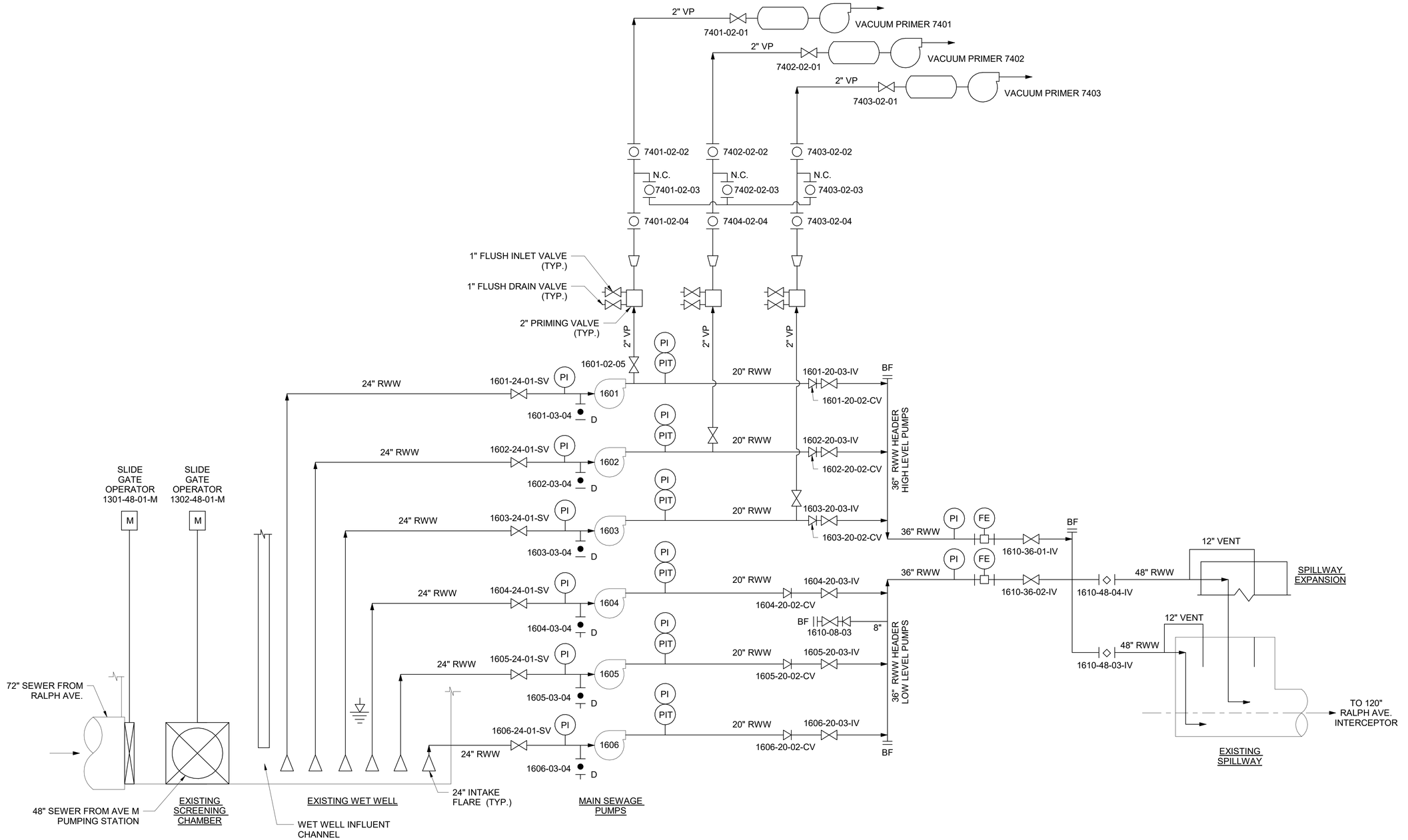

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CAPITAL PROJECT WP-269
RECONSTRUCTION OF
PAERDEGAT PUMPING STATION
CONTRACT PS-318
MECHANICAL
PROCESS FLOW DIAGRAM

DATE: OCTOBER 2026
SCALE: 1 1/2" = 1'-0"
SHEET NO: 110 OF 274
DRAWING NO. M-101.00

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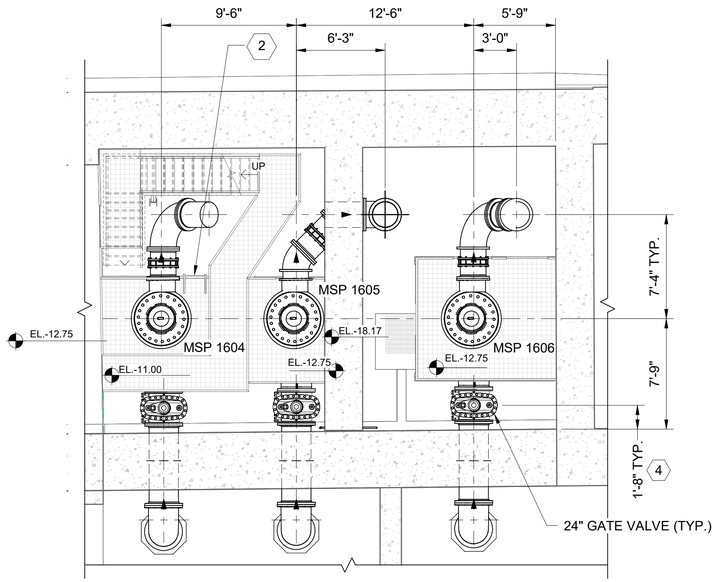
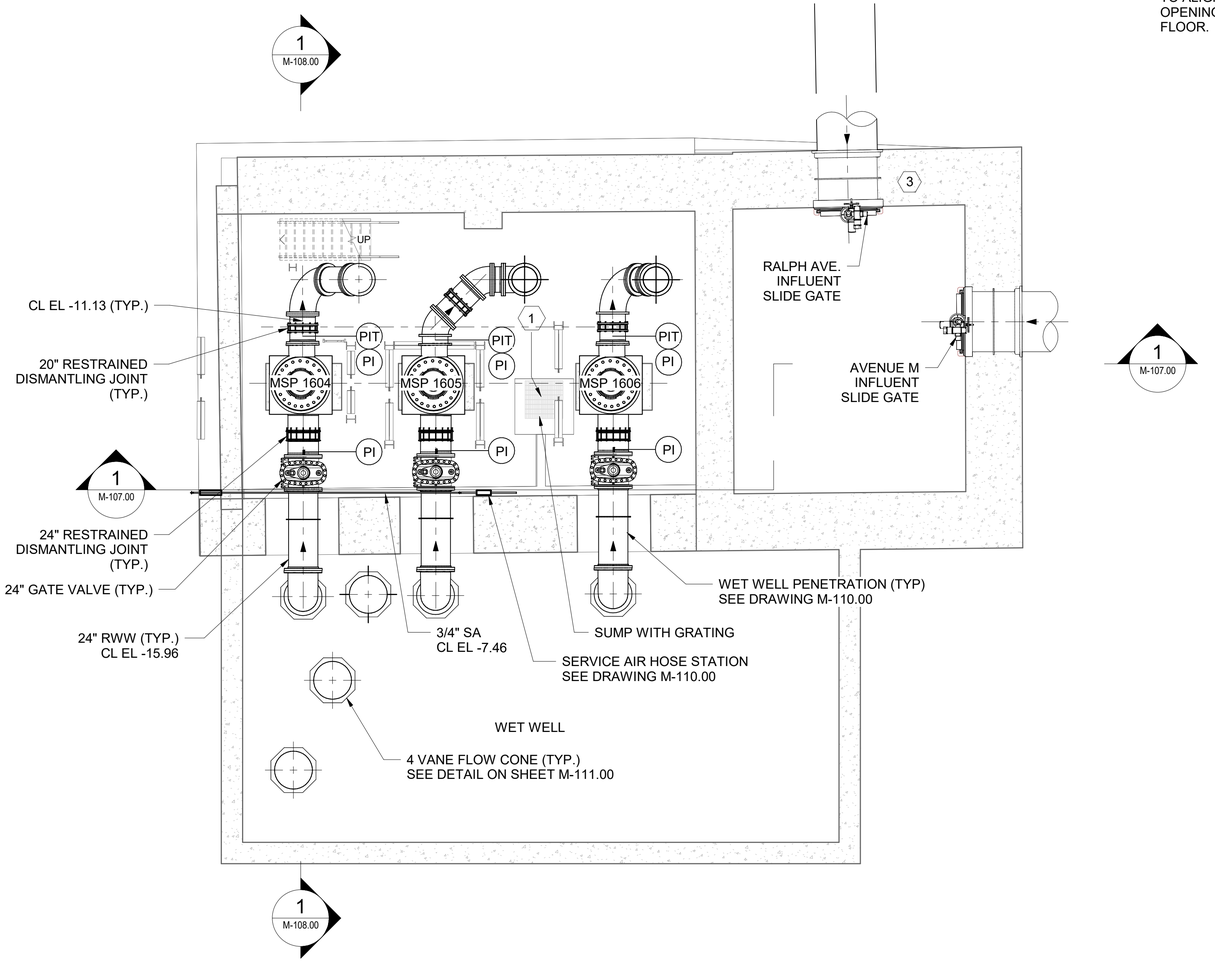


LOWER PUMP ROOM - PLATFORM

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



LOWER PUMP ROOM, WET WELL, SCREENING CHAMBER - PLAN AT EL. -20.00

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

KEYNOTES: (#)

1. SEE SUMP PUMPS DETAIL ON PLUMBING SHEETS.

2. REFER TO ARCHITECTURAL AND STRUCTURAL DRAWINGS FOR LADDERS, PLATFORMS, AND SUPPORTS.

3. CONTRACTOR SHALL VERIFY LOCATION OF TRANSITION FROM 72-INCH RALPH AVENUE SEWER TO 48-INCH CAST SLIDE GATE.

4. CONTRACTOR SHALL LOCATE GATE VALVES TO ALIGN STEMS WITH EXISTING ACCESS OPENINGS IN THE GRATING ON THE GROUND FLOOR.

3/16"=1'-0" 0 5 10 FT.

BID SET

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CAPITAL PROJECT WP-269
RECONSTRUCTION OF
PAERDEGAT PUMPING STATION
CONTRACT PS-318
MECHANICAL
LOWER PUMP ROOM, WET WELL, SCREENING CHAMBER

DATE: OCTOBER 2026
SCALE: 3/16" = 1'-0"
SHEET NO: 111 OF 274
DRAWING NO. M-102.00

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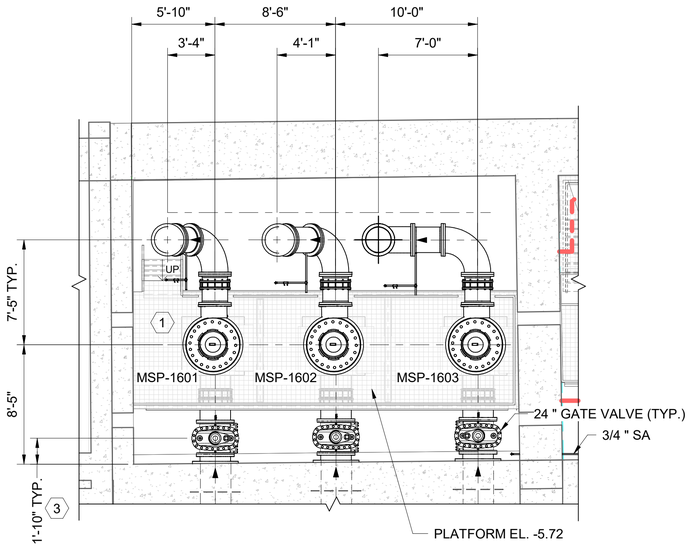
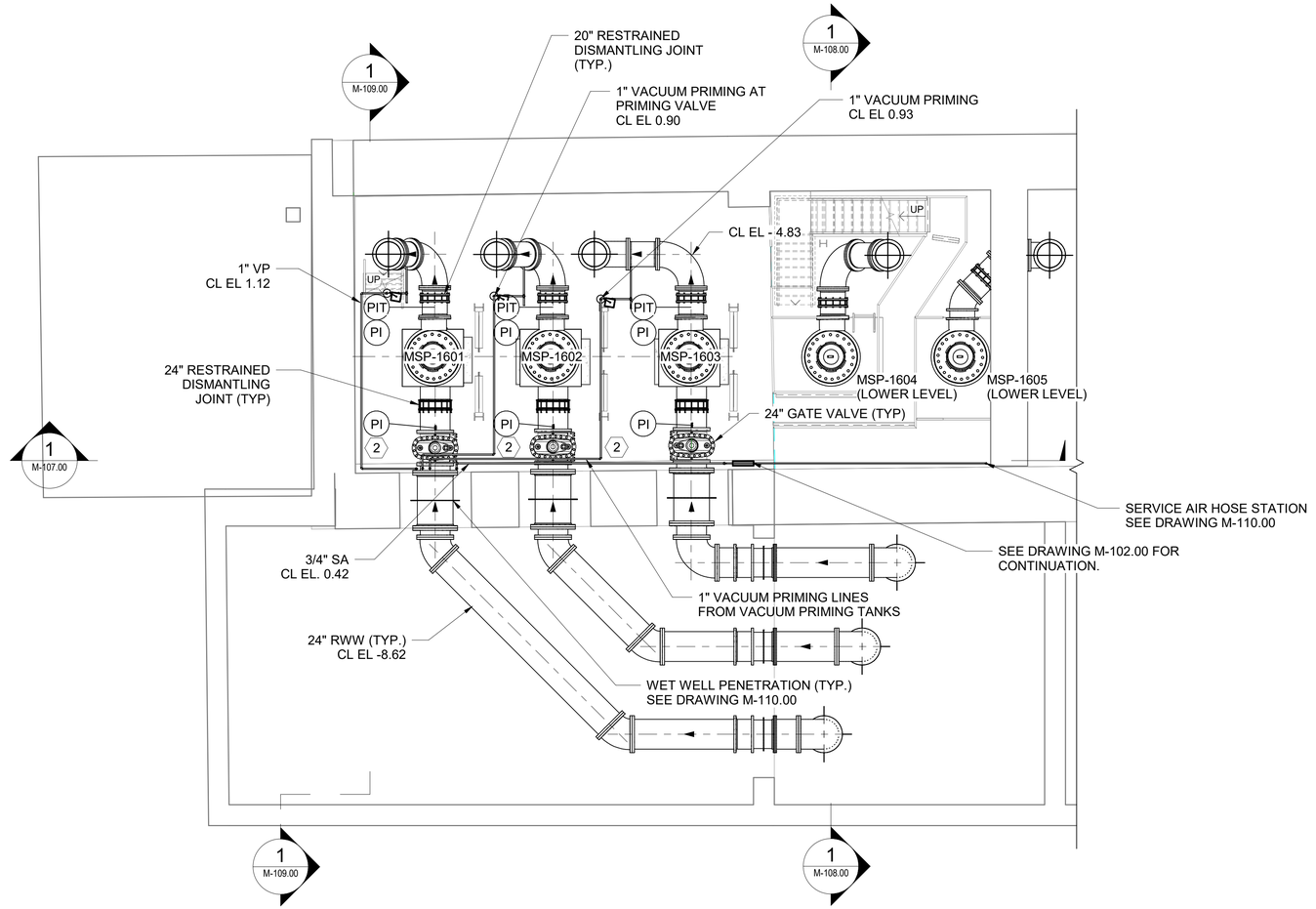


UPPER PUMP ROOM - PLATFORM

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



UPPER PUMP ROOM - PLAN AT EL -12.00'

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

KEYNOTES: (#)

1. REFER TO ARCHITECTURAL AND STRUCTURAL DRAWINGS FOR LADDERS, PLATFORMS, AND SUPPORTS.

2. VACUUM PRIMING LINE TO BE SLOPED TOWARDS PRIMING VALVE.

3. CONTRACTOR SHALL LOCATE GATE VALVES TO ALIGN STEMS WITH EXISTING ACCESS OPENINGS IN THE GRATING ON THE GROUND FLOOR.

0 5 10 FT.
3/16"=1'-0"

BID SET

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STATE OF NEW YORK TOM FINI 109219 LICENSED PROFESSIONAL ENGINEER

Environmental Protection

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CAPITAL PROJECT WP-269
RECONSTRUCTION OF
PAERDEGAT PUMPING STATION
CONTRACT PS-318
MECHANICAL
UPPER PUMP ROOM

DATE: OCTOBER 2026
SCALE: 3/16" = 1'-0"
SHEET NO: 112 OF 274
DRAWING NO. M-103.00

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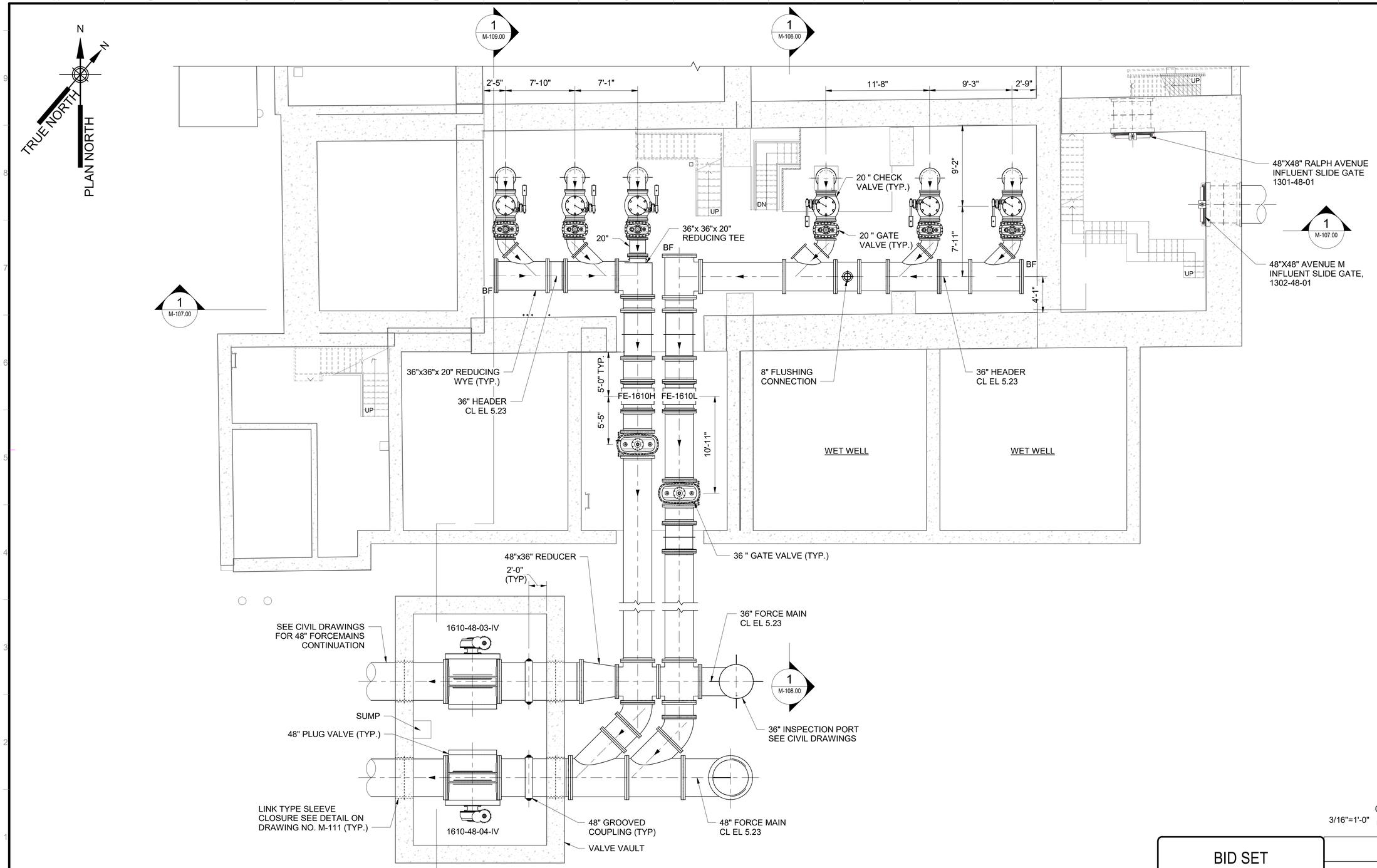

DISCHARGE PIPING GALLERY, STORAGE ROOMS, ELECTRICAL CHAMBERS - PLAN AT EL. 2.83

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

0 5 10 FT.

3/16"=1'-0"

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CAPITAL PROJECT WP-269
RECONSTRUCTION OF
PAERDEGAT PUMPING STATION
CONTRACT PS-318
MECHANICAL
DISCHARGE PIPING GALLERY, STORAGE ROOMS, ELECTRICAL CHAMBERS

DATE: OCTOBER 2026
SCALE: 3/16" = 1'-0"
SHEET NO: 113 OF 274
DRAWING NO. M-104.00

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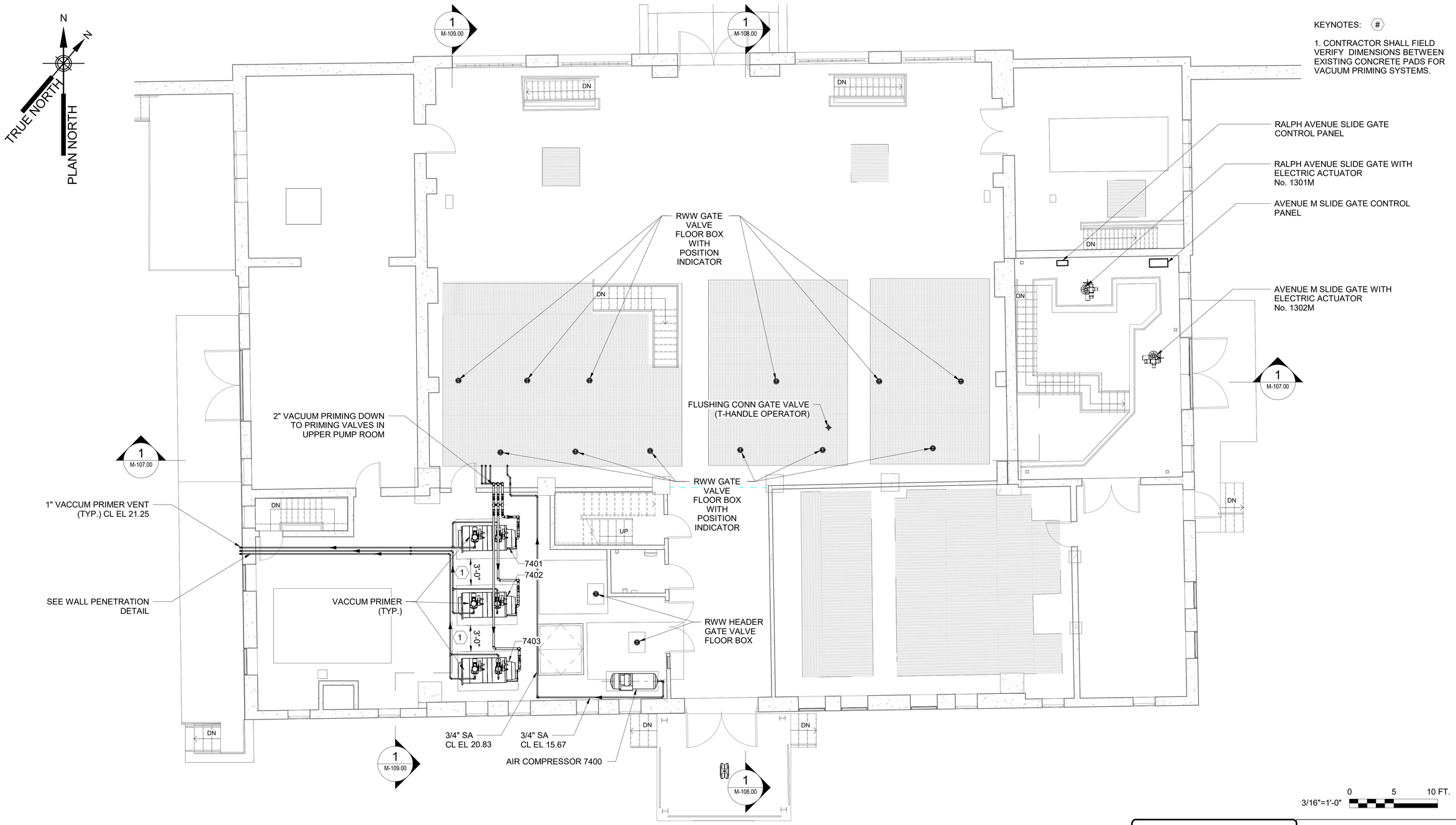

GROUND FLOOR - PLAN AT EL. 13.50'

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

BID SET

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CAPITAL PROJECT WP-269
RECONSTRUCTION OF
PAERDEGAT PUMPING STATION
CONTRACT PS-318
MECHANICAL
GROUND FLOOR (OPEN AREA, SCREENING CHAMBER, MECH EQUIP RM)

DATE: OCTOBER 2026
SCALE: 3/16" = 1'-0"
SHEET NO: 114 OF 274
DRAWING NO. M-105.00

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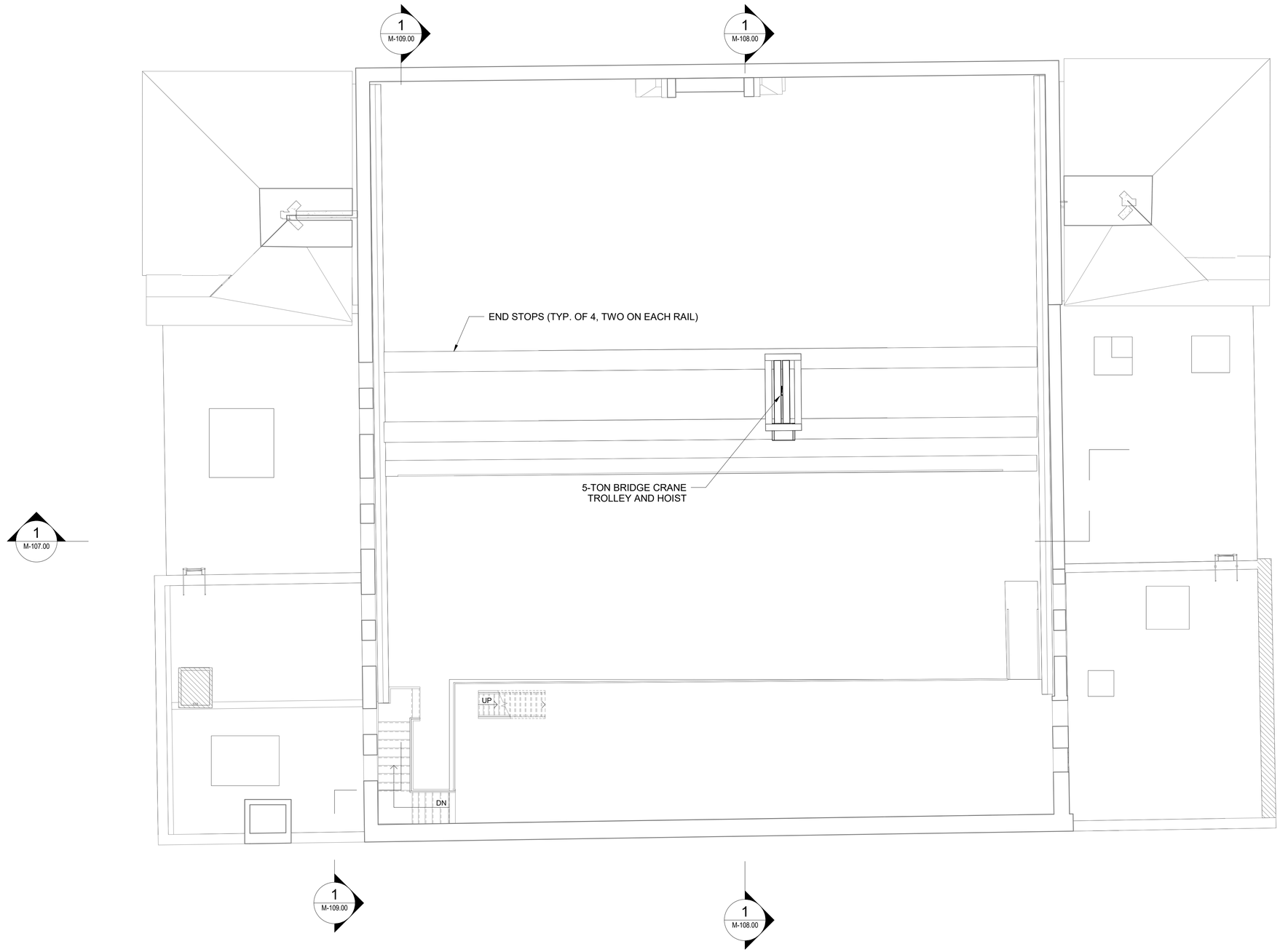

GENERAL NOTES:

1. COORDINATE ALL CRANE COMPONENT MODIFICATIONS WITH ELECTRICAL AND I&C DRAWINGS.

2. ALL FIELD WIRING TO BE INSTALLED BY CONTRACTOR UNDER THE SUPERVISION OF CRANE SUPPLIER.

3. THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS, DIMENSIONS, AND ELEVATIONS BEFORE COMMENCING THE WORK.

4. CONTRACTOR TO VERIFY NUMBER OF WIRES AND CONDUIT SIZE WITH SUPPLIER AND MAKE ADJUSTMENTS IF NECESSARY.

5. LOCAL CONTROL PANEL AND WIRING TO THE CRANE MOTORS AND ASSOCIATED CONTROLS, FURNISHED AND INSTALLED BY CRANE SUPPLIER.

6. PROVIDE NEW RUBBER BUMPERS FOR ALL END STOPS.

1
M-107.00

0 5 10 FT.
3/16"=1'-0"

EAST AND WEST FLAT ROOFS AND UPPER MEZZANINE - PLAN AT EL. 33.50'

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

BID SET

SUBMITTAL DATE: OCTOBER 2026

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CONTRACT PS-318
MECHANICAL
EAST AND WEST FLAT ROOFS AND UPPER MEZZANINE

DATE: OCTOBER 2026
SCALE: 3/16" = 1'-0"
SHEET NO: 115 OF 274
DRAWING NO. M-106.00

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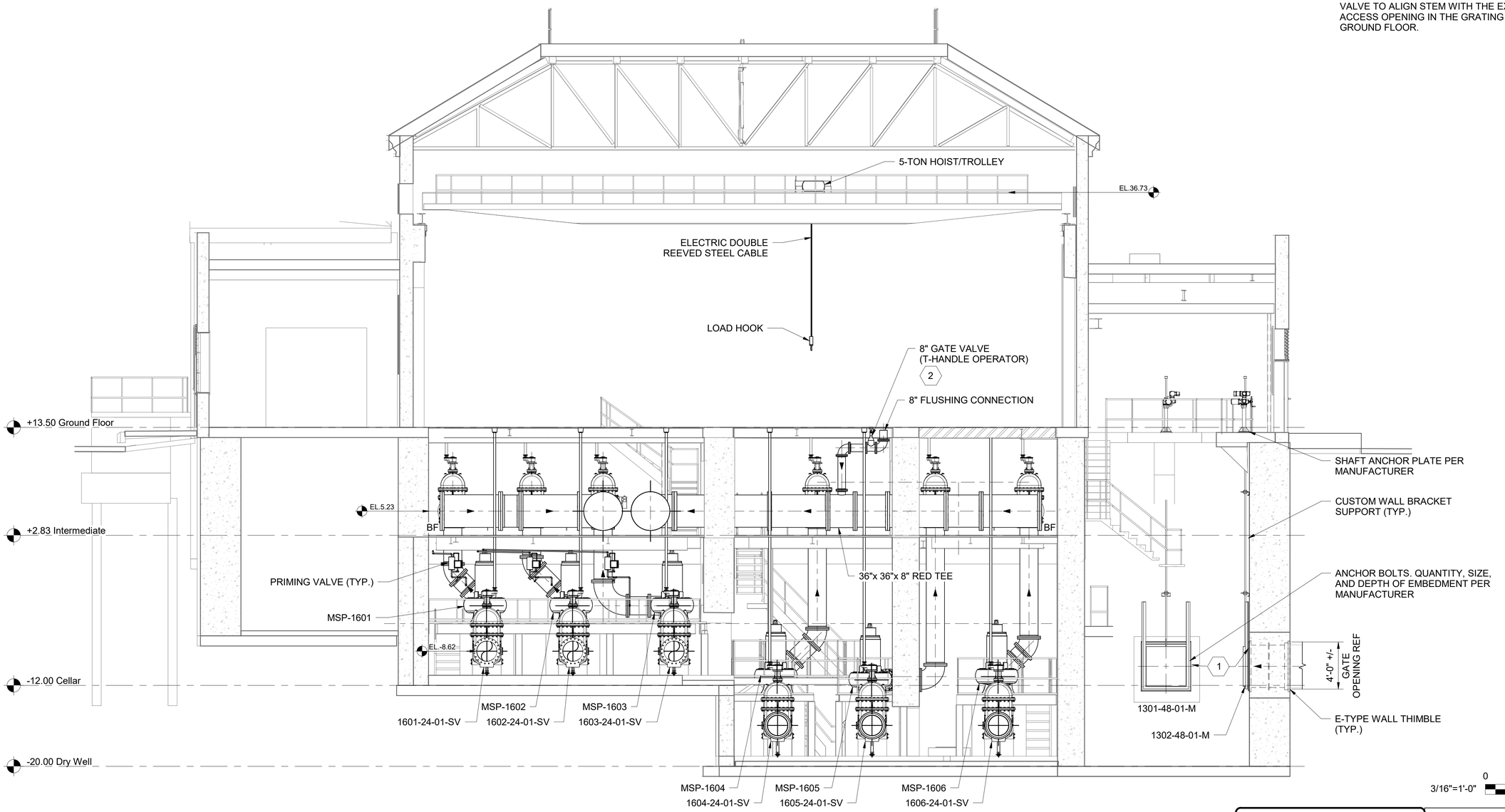
KEYNOTES: #

1. MODIFY OPENING AND REPAIR CONCRETE AS REQUIRED BY THE SPECIFICATIONS AND STRUCTURAL DRAWINGS PRIOR TO INSTALLATION OF GATE AS SHOWN.

2. CONTRACTOR SHALL LOCATE GATE VALVE TO ALIGN STEM WITH THE EXISTING ACCESS OPENING IN THE GRATING ON THE GROUND FLOOR.



0 5 10 FT.
3/16"=1'-0"

1 M-102.00 SECTION VIEW NORTH (PUMP ROOM)
SCALE: 3/16" = 1'-0"

BID SET
SUBMITTAL DATE: OCTOBER 2026

GRAPHIC SCALES CHECK BEFORE USE

IF SHEET IS LESS THAN 22" X 34" IT IS A REDUCED PRINT. SCALE ACCORDINGLY

NO.	DATE	REVISIONS/DESCRIPTION	APPR'D.

DESIGNED BY: TOM FINI, P.E.
DRAWN BY: MENGHONG WANG
CHECKED BY: PAUL MOULTON, P.E.
DESIGN LEAD: TOM FINI, P.E.
PROJECT MANAGER: AIMEE BOULET, P.E.

AECOM
605 THIRD AVENUE, 3rd FL.
NEW YORK, NY 10158, US

STATE OF NEW YORK TOM FINI 109219 LICENSED PROFESSIONAL ENGINEER

Environmental Protection

ACCOUNTABLE MANAGER	JOHN GOULAS, P.E.
PORTFOLIO MANAGER	KEVIN ELLENWOOD, P.E.
EXECUTIVE DIRECTOR	NAYANKUMAR SHAH, P.E.

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CAPITAL PROJECT WP-269
RECONSTRUCTION OF
PAERDEGAT PUMPING STATION
CONTRACT PS-318
MECHANICAL
SECTION VIEW NORTH (PUMP ROOM)

DATE: OCTOBER 2026
SCALE: 3/16" = 1'-0"
SHEET NO: 116 OF 274
DRAWING NO. M-107.00

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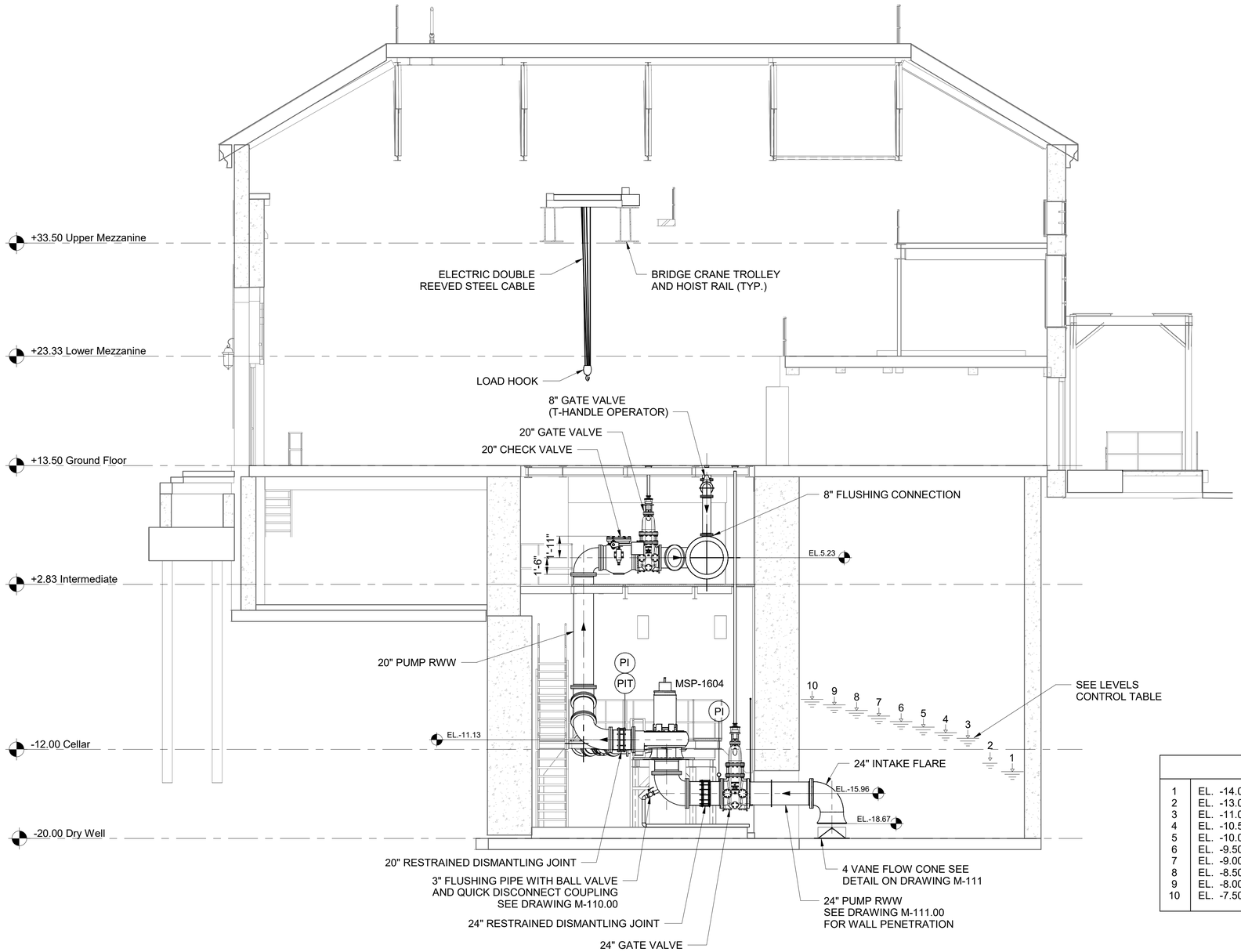

1 / M-102.00 SECTION VIEW EAST

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

LEVEL CONTROLS		
1	EL. -14.00	SEND LOW-LOW LEVEL ALARM. STOP ALL MSP MOTORS (SECOND CHECK)
2	EL. -13.00	STOP ALL MSP MOTORS
3	EL. -11.00	START LEAD MSP
4	EL. -10.50	START FIRST LAG MSP
5	EL. -10.00	START SECOND LAG MSP
6	EL. -9.50	START THIRD LAG MSP
7	EL. -9.00	START FORTH LAG MSP
8	EL. -8.50	START FIFTH LAG MSP
9	EL. -8.00	SEND HIGH LEVEL ALARM
10	EL. -7.50	SEND HIGH-HIGH LEVEL ALARM

0 5 10 FT.

3/16"=1'-0"

BID SET

SUBMITTAL DATE: OCTOBER 2026

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Environmental Protection

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CAPITAL PROJECT WP-269
RECONSTRUCTION OF
PAERDEGAT PUMPING STATION
CONTRACT PS-318
MECHANICAL
SECTION VIEW EAST
SHEET 1

DATE: OCTOBER 2026
SCALE: 3/16" = 1'-0"
SHEET NO: 117 OF 274
DRAWING NO. M-108.00

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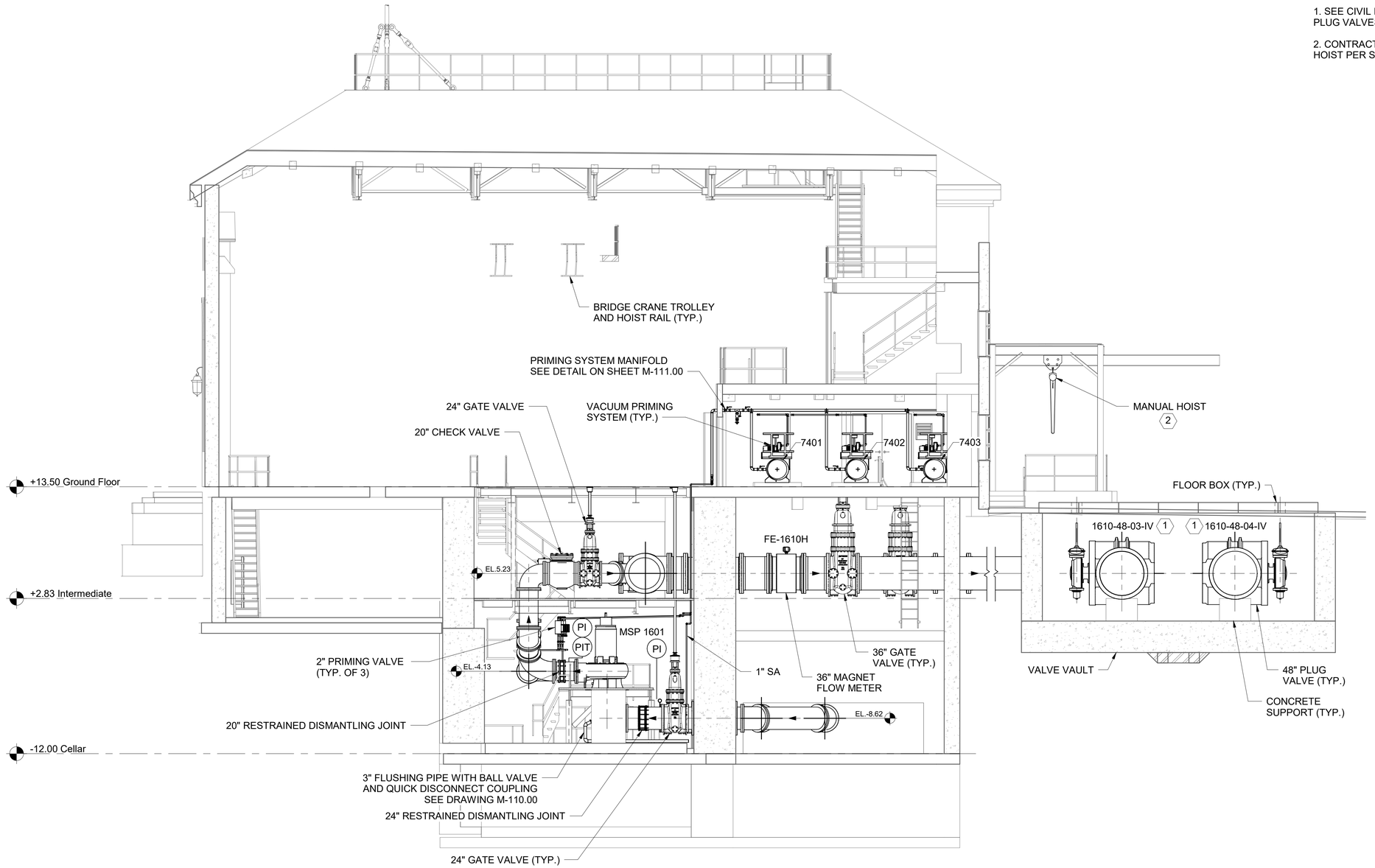
KEYNOTES: (#)

1. SEE CIVIL DRAWINGS FOR INSTALLATION OF PLUG VALVES.

2. CONTRACTOR TO FURNISH AND INSTALL MANUAL HOIST PER SPECIFICATION SECTION 41 22 23.19.



3/16"=1'-0" 0 5 10 FT.

1 / M-103.00 SECTION VIEW EAST

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

BID SET

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CAPITAL PROJECT WP-269
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PAERDEGAT PUMPING STATION
CONTRACT PS-318
MECHANICAL
SECTION VIEW EAST
SHEET 2

DATE: OCTOBER 2026
SCALE: 3/16" = 1'-0"
SHEET NO: 118 OF 274
DRAWING NO. M-109.00

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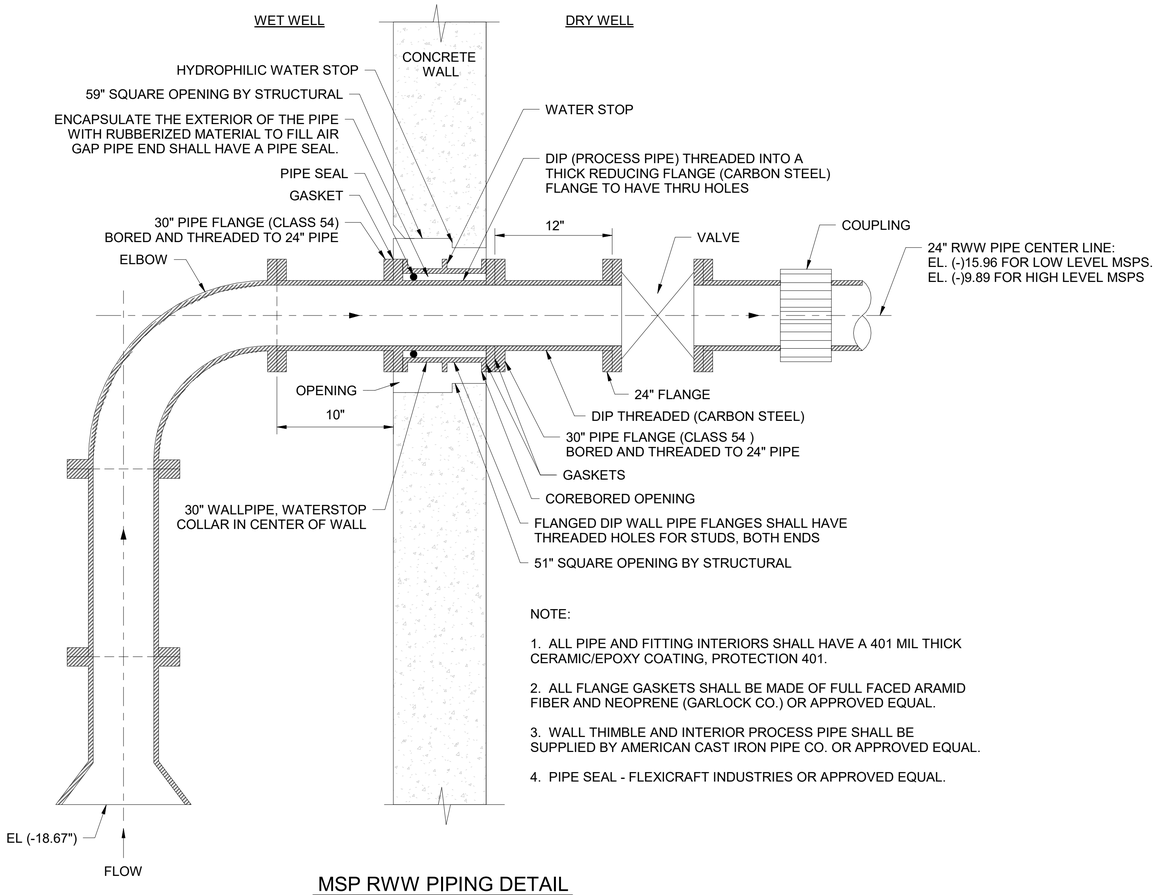
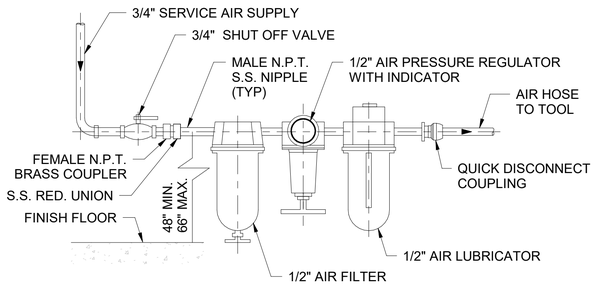


MSP RWW PIPING DETAIL

SCALE: N.T.S.

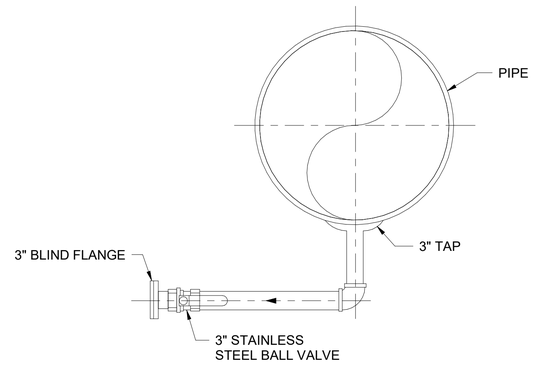
NOTE:

1. ALL PIPE AND FITTING INTERIORS SHALL HAVE A 401 MIL THICK CERAMIC/EPOXY COATING, PROTECTION 401.
2. ALL FLANGE GASKETS SHALL BE MADE OF FULL FACED ARAMID FIBER AND NEOPRENE (GARLOCK CO.) OR APPROVED EQUAL.
3. WALL THIMBLE AND INTERIOR PROCESS PIPE SHALL BE SUPPLIED BY AMERICAN CAST IRON PIPE CO. OR APPROVED EQUAL.
4. PIPE SEAL - FLEXICRAFT INDUSTRIES OR APPROVED EQUAL.



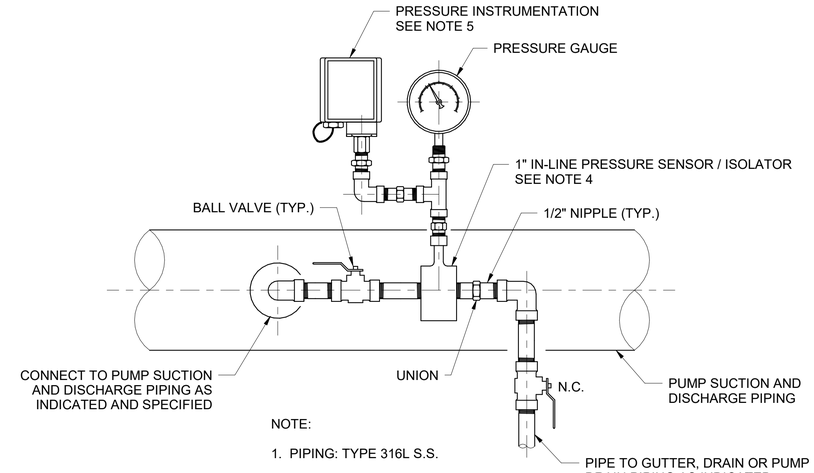
SERVICE AIR TOOL STATION DETAIL

SCALE: N.T.S.



FLUSH DRAIN DETAIL

SCALE: N.T.S.



NOTE:

1. PIPING: TYPE 316L S.S.
2. VALVES: TYPE 316 S.S.
3. HARDWARE: TYPE 316 S.S.
4. FOR 300 CLASS ANSI USE FLANGED SENSOR.
5. PROVIDE GAUGE AND PRESSURE INSTRUMENTATION (PIT, PS, ETC.) AS INDICATED AND SPECIFIED.

PRESSURE GAUGE / INSTRUMENT ASSEMBLY

SCALE: N.T.S.

BID SET

SUBMITTAL DATE: OCTOBER 2026

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CAPITAL PROJECT WP-269
RECONSTRUCTION OF
PAERDEGAT PUMPING STATION
CONTRACT PS-318
MECHANICAL
STANDARD DETAIL - SHEET 1

DATE: OCTOBER 2026
SCALE: AS INDICATED
SHEET NO: 119 OF 274
DRAWING NO. M-110.00

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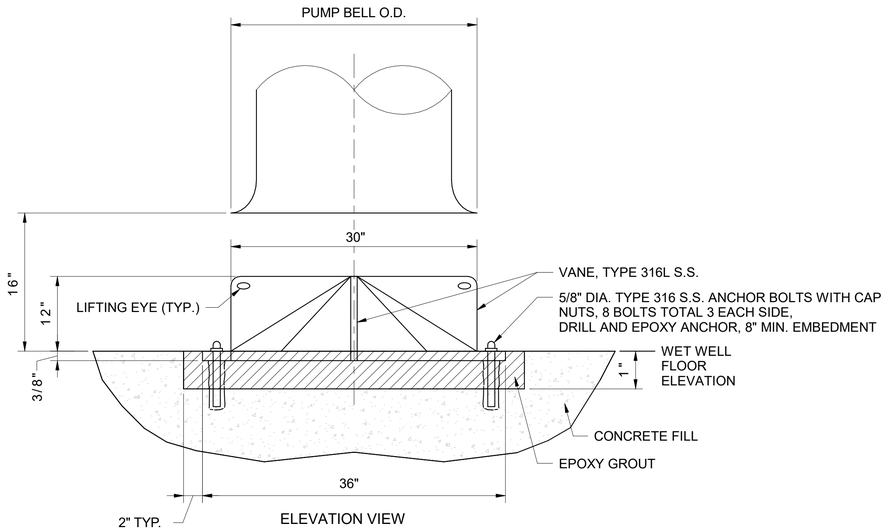
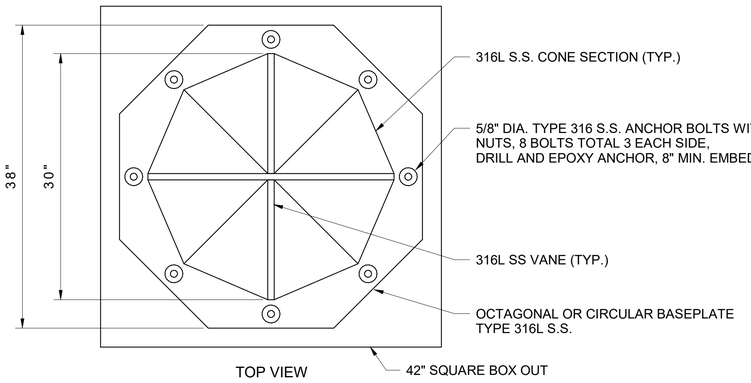


ELEVATION VIEW



TOP VIEW

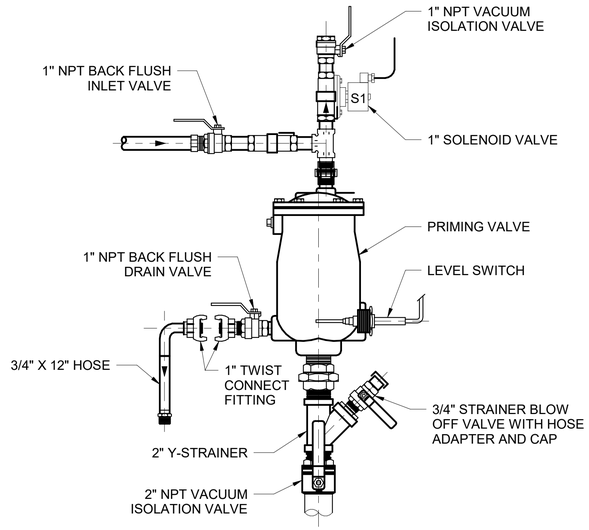
4 VANE FLOOR CONE TABLE			
CONE DIAMETER (IN.)	BASEPLATE THICKNESS (IN.)	CONE SECTIONS THICKNESS (IN.)	WELD BEAD (IN.)
30 & SMALLER	3/8	1/4	1/8

NOTES:

1. PROVIDE CONES WITH ALL COMPONENTS CUT WITH TABS AND HOLES FOR ASSEMBLY.
2. CONTINUOUSLY WELD ALL VORTEX SUPRESSION VANES TO THE BASEPLATE PRIOR TO WELDING CONE PIECES.
3. CONTINUOUSLY WELD ALL PIECES.
4. PASSIVATE ALL SURFACES AFTER WELDING WITH MILD 10% CITRIC ACID/WATER SOLUTION WIPE.
5. PROVIDE LIFTING SLOTS IN VANES.
6. MANUFACTURER: FLOWOPTIMIZERS.

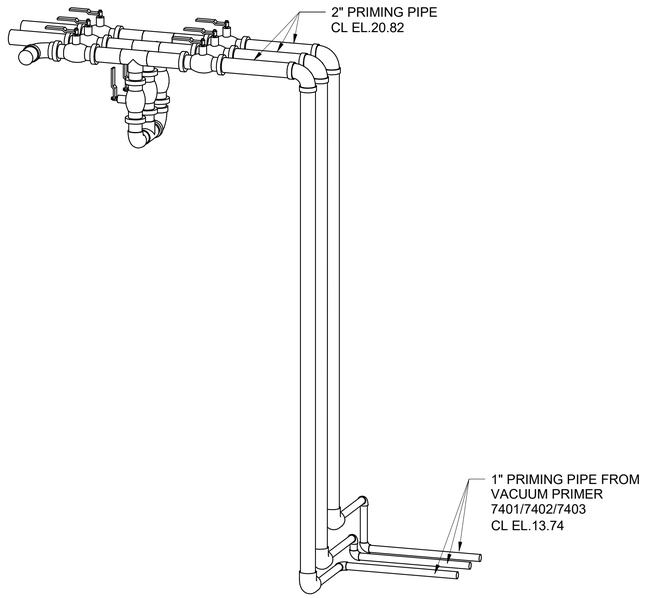
4 VANE FLOOR CONE DETAIL

SCALE: N.T.S.



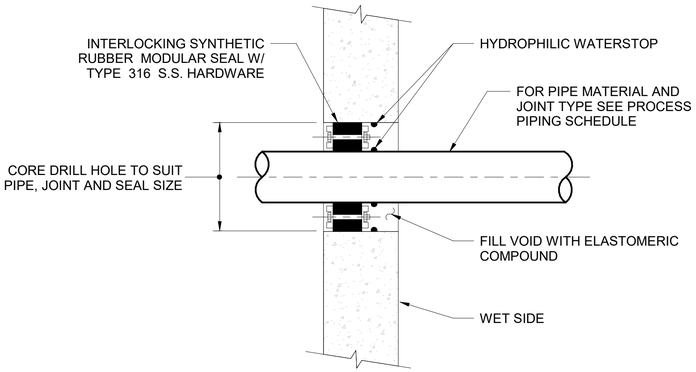
MSP PRIMING VALVE ASSEMBLY

SCALE: N.T.S.



VACUUM PRIMING PIPING MANIFOLD

SCALE: N.T.S.

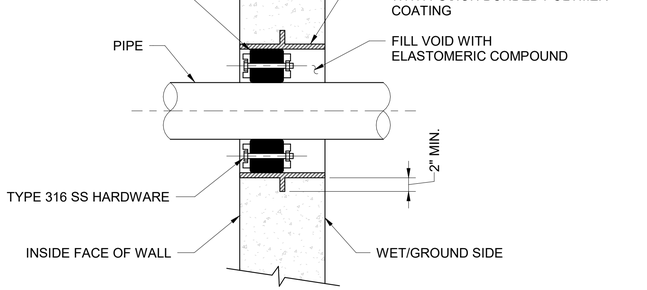


NOTES:

1. MODULAR SEAL SHALL BE PLACED SO THAT BOLTS CAN BE ADJUSTED DURING NORMAL OPERATION.
2. WALLS 12" OR THICKER SHALL REQUIRE 2 MODULAR SEALS.

PIPE PENETRATION THROUGH EXISTING WALL/ FLOOR DETAIL

SCALE: N.T.S.



NOTES:

1. MODULAR SEAL SHALL BE PLACED SO THAT BOLTS CAN BE ADJUSTED DURING NORMAL OPERATION.
2. WALLS 12" OR THICKER SHALL REQUIRE 2 MODULAR SEALS.

WALL PENETRATION LINK TYPE SLEEVE CLOSURE

SCALE: N.T.S.

BID SET

SUBMITTAL DATE: OCTOBER 2026

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CAPITAL PROJECT WP-269
RECONSTRUCTION OF
PAERDEGAT PUMPING STATION
CONTRACT PS-318
MECHANICAL
STANDARD DETAIL - SHEET 2

DATE: OCTOBER 2026
SCALE: AS INDICATED
SHEET NO: 120 OF 274
DRAWING NO. M-111.00

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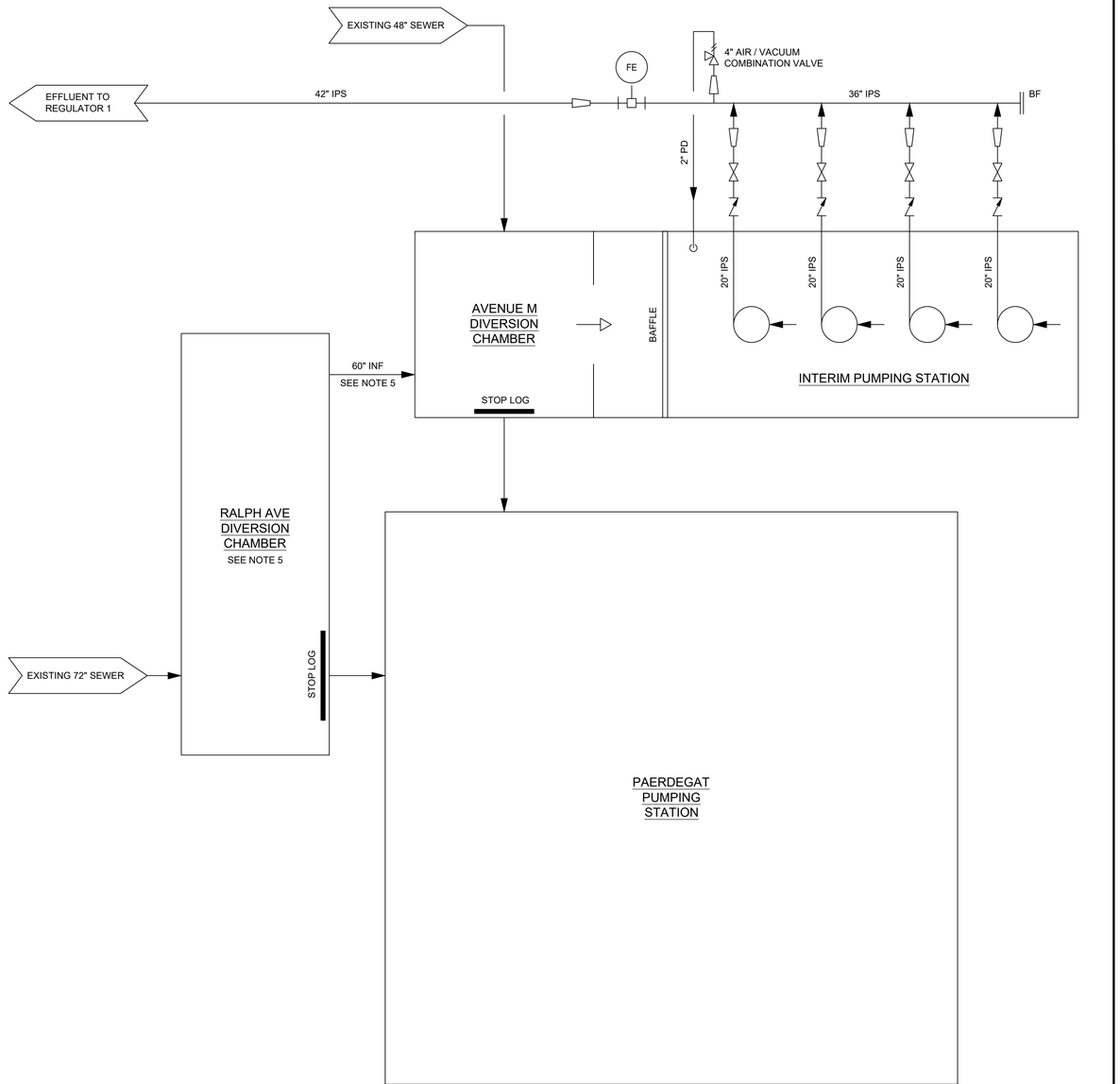
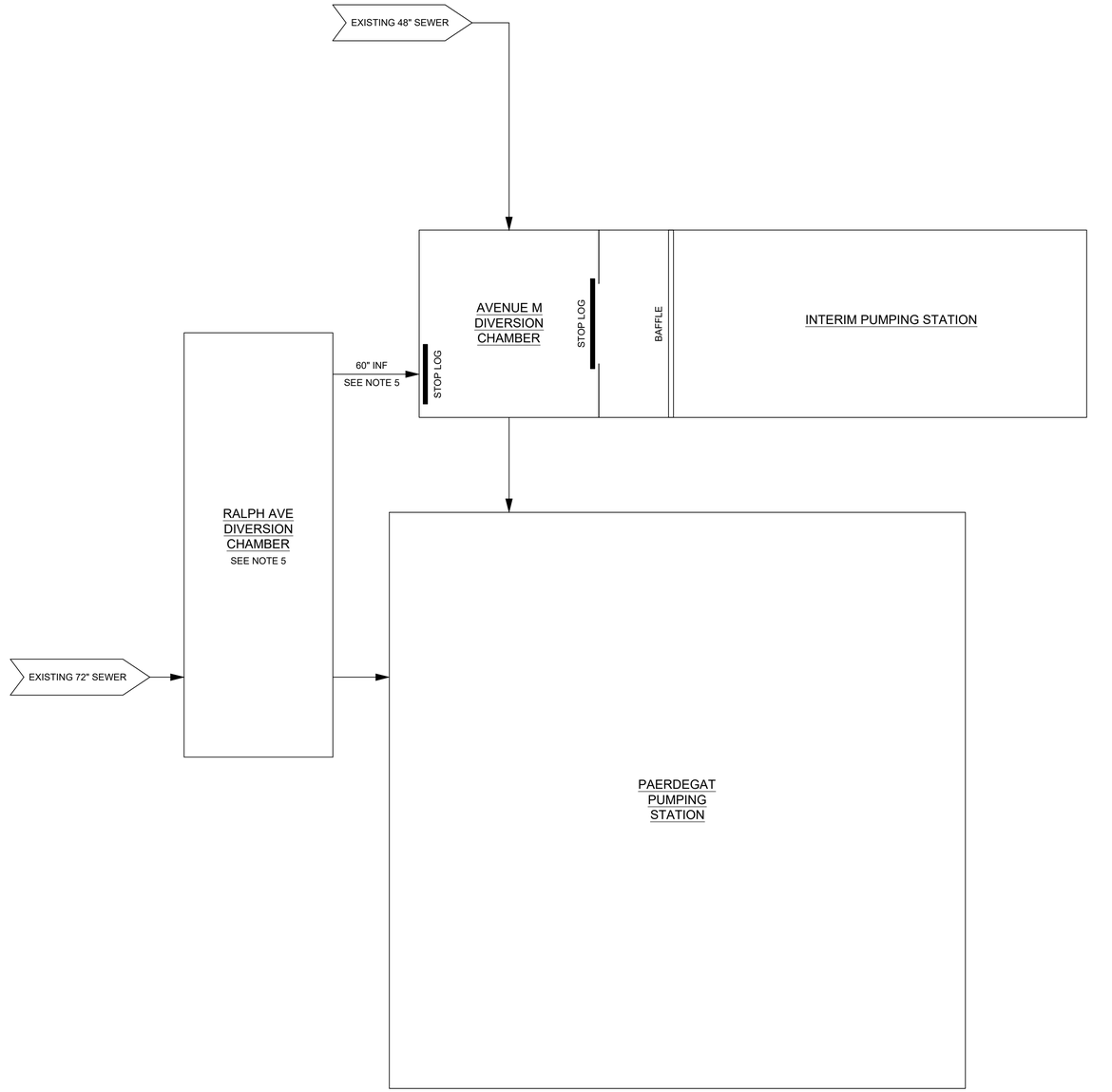


DURING CONSTRUCTION OPERATION



POST-CONSTRUCTION OPERATION

BID SET

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CAPITAL PROJECT WP-269
RECONSTRUCTION OF
PAERDEGAT PUMPING STATION
CONTRACT PS-318
MECHANICAL
INTERIM PUMPING STATION
PROCESS FLOW DIAGRAM

DATE: OCTOBER 2026
SCALE: NO SCALE
SHEET NO: 121 OF 274
DRAWING NO. M-112.00

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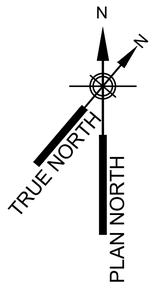
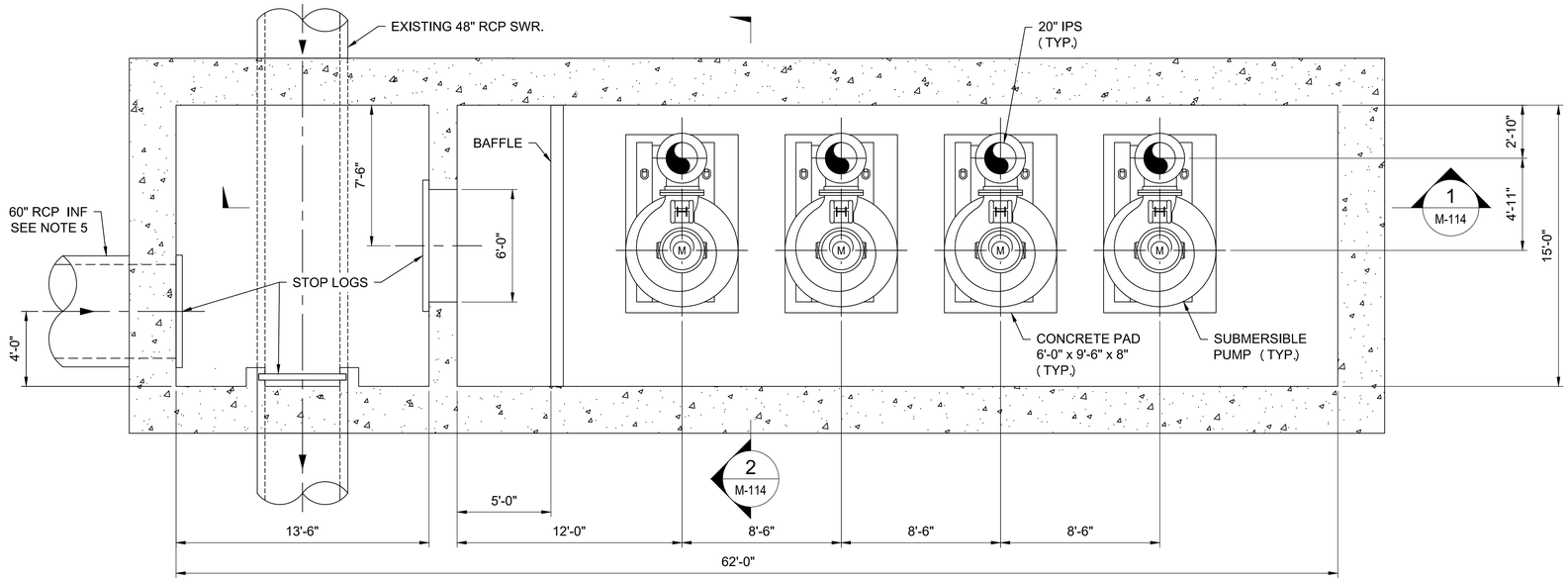
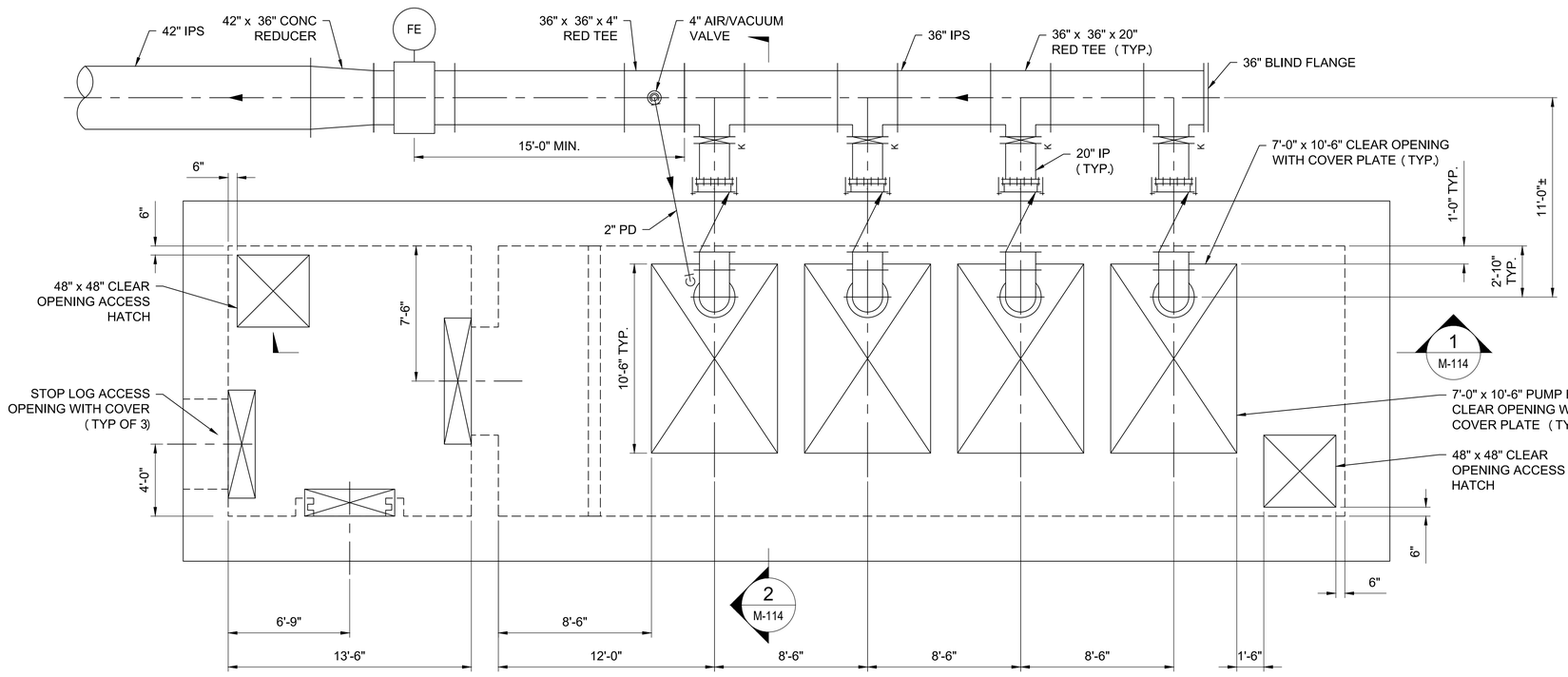




WET WELL AT EL. -20.0

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



WET WELL AT EL. 12.0

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

NOTES:

1. THIS CONTRACT DRAWING PROVIDES SUGGESTED INTERIM PUMPING DESIGN FOR BASE BID.
2. ALL EXPOSED PIPING TO BE HEAT TRACED AND INSULATED.
3. REFER TO SPECIFICATION SECTION 01 51 50 - INTERIM PUMPING SYSTEM FOR INTERIM PUMPING SYSTEM OPERATION REQUIREMENTS.
4. SEE SPECIFICATION SECTION 01 51 40 - INTERIM POWER FOR INTERIM POWER PLAN.
5. SEE STRUCTURAL AND CIVIL DRAWINGS FOR DETAILED DESIGN.
6. COORDINATE SIZE AND LOCATION OF COVER PLATES FOR PUMP REMOVAL.
7. UPON COMMISSIONING OF PUMPING STATION WITH NEW EQUIPMENT, THE CONTRACTOR SHALL REMOVE ALL INTERIM MECHANICAL EQUIPMENT, INCLUDING BUT NOT LIMITED TO INTERIM PUMPS, VALVES, AND PIPING. DIVERSION CHAMBERS AND INTERIM PUMPING STATION STRUCTURES SHALL REMAIN IN PLACE FOR FUTURE USE AS PART OF AN EMERGENCY PUMP AROUND SYSTEM.

0 4 8 FT.
1/4"=1'-0"

BID SET

SUBMITTAL DATE: OCTOBER 2026

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DRAWN BY: SCOTT BOLEN
CHECKED BY: PAUL MOULTON, P.E.
DESIGN LEAD: TOM FINI, PE
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NEW YORK, NY 10158, US

STATE OF NEW YORK · TOM FINI · 109219 · LICENSED PROFESSIONAL ENGINEER

Environmental Protection

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EXECUTIVE DIRECTOR	NAYANKUMAR SHAH, P.E.

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BUREAU OF ENGINEERING DESIGN & CONSTRUCTION
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CORONA, NEW YORK 11368
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CAPITAL PROJECT WP-269
RECONSTRUCTION OF
PAERDEGAT PUMPING STATION
CONTRACT PS-318
MECHANICAL
INTERIM PUMPING STATION
PLANS

DATE: OCTOBER 2026
SCALE: 1/4"=1'-0"
SHEET NO: 122 OF 274
DRAWING NO. M-113.00

All inquiries regarding this drawing(s) or project should be made to NYC Environmental Protection, Bureau of Engineering Design and Construction.

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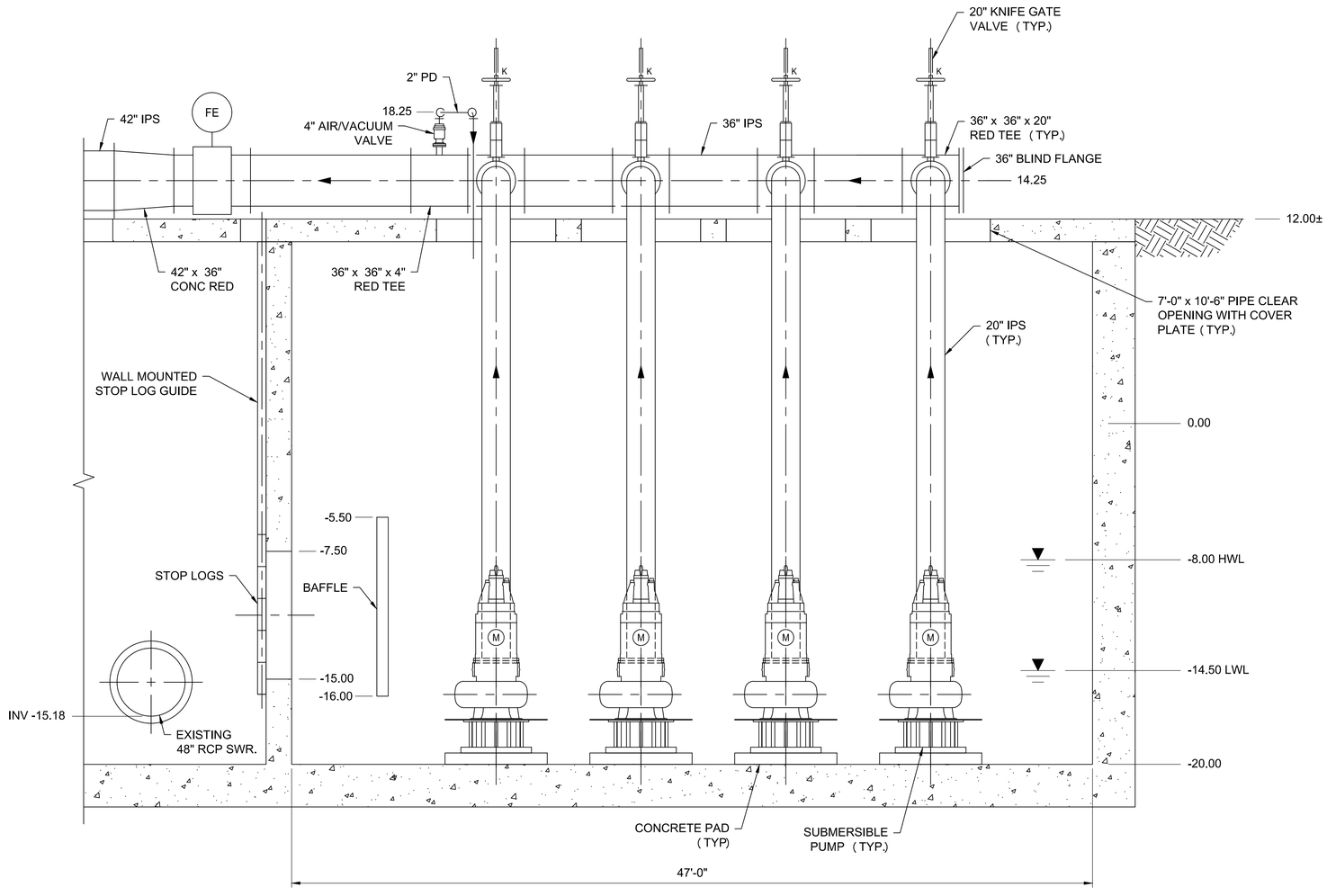
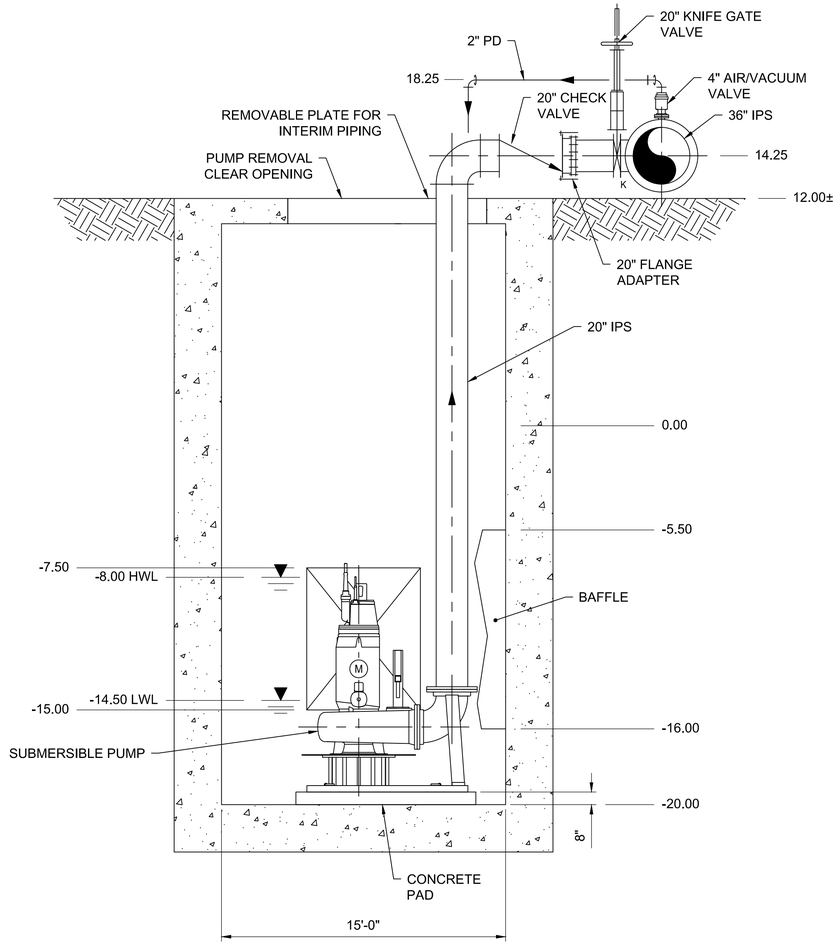
NOTES:

1. THIS CONTRACT DRAWING PROVIDES SUGGESTED INTERIM PUMPING DESIGN FOR BASE BID.
2. ALL EXPOSED PIPING TO BE HEAT TRACED AND INSULATED.
3. REFER TO SPECIFICATION SECTION 01 51 50 - INTERIM PUMPING SYSTEM FOR INTERIM PUMPING SYSTEM OPERATION REQUIREMENTS.
4. SEE SPECIFICATION SECTION 01 51 40 - INTERIM POWER FOR INTERIM POWER PLAN.
5. UPON COMMISSIONING OF PUMPING STATION WITH NEW EQUIPMENT, THE CONTRACTOR SHALL REMOVE ALL INTERIM MECHANICAL EQUIPMENT, INCLUDING BUT NOT LIMITED TO INTERIM PUMPS, VALVES, AND PIPING. DIVERSION CHAMBERS AND INTERIM PUMPING STATION STRUCTURES SHALL REMAIN IN PLACE FOR FUTURE USE AS PART OF AN EMERGENCY PUMP AROUND SYSTEM.



1 M-113 ELEVATION
SCALE: 1/4"=1'-0"



2 M-113 ELEVATION
SCALE: 1/4"=1'-0"

0 4 8 FT.
1/4"=1'-0"

BID SET

SUBMITTAL DATE: OCTOBER 2026

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MECHANICAL
INTERIM PUMPING STATION
SECTIONS

DATE: OCTOBER 2026
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SHEET NO: 123 OF 274
DRAWING NO. M-114.00

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LEGEND - PIPING

- BURIED PIPING (SHOWN DOUBLE LINE)
- ABOVE GROUND SUPPLY PIPING (SHOWN SINGLE LINE)
- ABOVE GROUND PIPING BELOW FLOOR LEVEL (SHOWN SINGLE LINE)
- ABOVE GROUND RETURN PIPING (SHOWN SINGLE LINE)
- BALL VALVE
- BUTTERFLY VALVE
- GATE VALVE
- GLOBE VALVE
- ANGLE VALVE
- CHECK VALVE
- PLUG VALVE
- CALIBRATED BALANCING VALVE
- MULTI-PURPOSE VALVE
- CONTROL VALVE WITH ELECTRIC ACTUATOR
- CONTROL VALVE WITH PNEUMATIC ACTUATOR
- PRESSURE REDUCING VALVE (DIRECT ACTING)
- PRESSURE REDUCING VALVE (PILOT-OPERATED)
- PRESSURE RELIEF VALVE
- DRAIN VALVE (HOSE BIBB)
- DRAIN VALVE - BALL VALVE W/ CAP AND CHAIN
- DRAIN VALVE (HOSE GATE W/ CAP)
- VALVE IN RISER
- AUTOMATIC AIR VENT
- PRESSURE GAUGE WITH BALL VALVE SHUTOFF AND SNUBBER
- THERMOMETER
- PIPE FLEXIBLE CONNECTOR
- PIPE FLEXIBLE COUPLING
- STRAINER
- PIPE ANCHOR
- PIPE GUIDE
- UNION
- FLANGE CONNECTION
- BF — BLIND FLANGE
- DIRECTION OF FLOW
- PITCH PIPE DOWN IN DIRECTION OF ARROW
- CONCENTRIC REDUCER
- ECCENTRIC REDUCER

LEGEND - CONTROLS

- T — THERMOSTAT
- F — FREEZESTAT
- FS — FLOW SWITCH
- SD — DUCT SMOKE DETECTOR
- SW — MANUAL SWITCH
- CO — CARBON MONOXIDE SENSOR
- CO2 — CARBON DIOXIDE SENSOR
- TS — TEMPERATURE SENSOR
- OS — OCCUPANCY SENSOR
- CONTROL WIRING
- M — MOTOR OPERATED DAMPER

LEGEND - MISCELLANEOUS

- NEW WORK (SHOWN DARK LINE)
- EXISTING (SHOWN LIGHT LINE)
- ITEMS TO BE REMOVED
- CONNECT TO EXISTING
- LIMIT OF WORK
- LIMIT OF MATERIAL
- LIMIT OF REMOVAL
- CONTINUATION

LEGEND - DUCTWORK

- AIR EXTRACTOR
- SPLITTER DAMPER
- SQUARED CORNER ELBOW WITH TURNING VANES
- ROUND CORNER ELBOW (r=w)
- TRANSITION FROM SQ. (OR RECT.) TO ROUND (OR FLAT OVAL)
- ELECTRIC DUCT HEATER — EDH
- VOLUME DAMPER — VD
- FIRE DAMPER — FD
- BACKDRAFT DAMPER — BDD
- SUPPLY AIR DIFFUSER OR REGISTER
- RETURN OR EXHAUST REGISTER
- SUPPLY UP
- SUPPLY DOWN
- RETURN/EXHAUST UP
- RETURN/EXHAUST DOWN
- ROUND UP
- ROUND DOWN
- M — MOTOR OPERATED DAMPER
- AD — ACCESS DOOR
- DUCT CAP
- WIRE MESH SCREEN ON OPEN END DUCT
- SUPPLY AIR DIFFUSER — SHADING INDICATES BLOCKED OFF QUADRANTS, ARROWS INDICATE BLOW PATTERN
- RETURN AIR OR EXHAUST AIR GRILLE
- SAD / OAD — SUPPLY AIR DUCT OR OUTSIDE AIR DUCT
- RAD / EAD — RETURN AIR DUCT OR EXHAUST AIR DUCT
- TRANSFER GRILLE OR LOUVER
- DUCT FLEXIBLE CONNECTION
- UH — UNIT HEATER
- UNDERCUT DOOR
- SUPPLY OR OUTSIDE (AIR)
- RETURN OR EXHAUST (AIR)
- ∅ — DIAMETER / ROUND / PHASE

SEQUENCES OF OPERATION

A. ELECTRIC UNIT HEATERS (EUH)

1. THE THERMOSTAT SETPOINT FOR THE HEATERS SHALL BE ADJUSTABLE.
2. EACH ELECTRIC UNIT HEATER SHALL BE CONTROLLED BY A WALL MOUNTED THERMOSTAT. ON A DROP IN SPACE TEMPERATURE BELOW THE THERMAOSTAT SETPOINT 55ºF (ADJ), THE UNIT FAN SHALL START AND THE ELECTRIC HEATING COIL SHALL BE ENERGIZED.
3. WHEN THE SPACE TEMPERATURE IS ABOVE THE THERMOSTAT SETPOINT 55ºF (ADJ), THE FAN SHALL STOP AND THE HEATER SHALL BE DEACTIVATED.

B. SF-1, EF-1, EDH-1

1. THE SUPPLY AIR FAN AND EXHAUST AIR FAN SHALL RUN CONTINUOUSLY. THE SEQUENCE IS REVERSIBLE UNLESS OTHERWISE NOTED.
2. STARTUP: UPON STARTUP, THE SUPPLY AIR MOTOR OPERATED DAMPER SHALL OPEN, THE SUPPLY AIR FAN AND EXHAUST AIR FAN SHALL START.
3. NORMAL OPERATION: IN NORMAL OPERATION MODE THE SUPPLY AIR FAN AND EXHAUST AIR FAN SHALL RUN AT FULL SPEED. WHEN THE OUTSIDE AIR TEMPERATURE IS ABOVE 50ºF (ADJ), THE ELECTRIC DUCT HEATER SHALL BE DISABLED.
4. WINTER OPERATION - HEATING: WHEN THE OUTSIDE TEMPERATURE IS 50ºF (ADJ) OR LOWER, THE ELECTRIC DUCT HEATER SHALL BE ENABLED. THE ELECTRIC DUCT HEATER SHALL OPERATE TO MAINTAIN THE SUPPLY AIR TEMPERATURE SETPOINT 55ºF (ADJ).
5. WINTER OPERATION - ENERGY CONSERVATION: AFTER HEATING MODE IS INITIATED (ELECTRIC DUCT HEATER IS ACTIVE FOR FIVE MINUTES (ADJ), AND THE FOLLOWING CRITERIA ARE MET:
   a. THE OUTDOOR AIR TEMPERATURE IS 50ºF (ADJ) OR LOWER AND
   b. OCCUPANCY IS NOT DETECTED BY ANY ROOM OCCUPANCY SENSOR AND
   c. THE LOWER EXPLOSIVE LIMIT (LEL) SENSOR (BY DIVISION 16) IS NOT IN ALARM

   THE SUPPLY AIR FAN AND EXHAUST AIR FAN SHALL OPERATE AT LOW SPEED AS SCHEDULED. AS REQUIRED BY NFPA 820, IF ANY OF THE CONDITIONS ARE NOT MET, THE SYSTEM STATUS SHALL RETURN TO WINTER OPERATION - HEATING.
6. SAFETIES:

   AFTER STARTUP AIRFLOWS HAVE BEEN ESTABLISHED (APPROXIMATELY 5 MINUTES (ADJ), WHEN
   a. THE SUPPLY DUCT MOUNTED TEMPERATURE SENSOR SENSES A TEMPERATURE BELOW 35ºF (ADJ),
   b. THE SUPPLY AIR DUCT OR RETURN AIR DUCT SMOKE DETECTOR SENSES SMOKE,
   c. THE SUPPLY AIR DUCT DIFFERENTIAL PRESSURE SWITCH SENSES A LOSS OF AIRFLOW
7. THE CONTROLLER SHALL:
   a. SHUT DOWN THE SUPPLY AIR FAN AND CLOSE ITS OUTSIDE AIR DAMPER.
   b. SHUT DOWN THE EXHAUST AIR FAN.
   c. DISABLE THE ELECTRIC DUCT HEATER.
   d. TRANSMIT A TROUBLE ALARM SIGNAL TO THE PLANT PROCESS CONTROL (PLC).

BID SET

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REGISTERED ENGINEER — EDWARD J. CHIANG — No. 111699 — STATE OF NEW YORK

Environmental Protection

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CAPITAL PROJECT WP-269
RECONSTRUCTION OF
PAERDEGAT PUMPING STATION
CONTRACT PS-318
HVAC
LEGEND

DATE: OCTOBER 2026
SCALE: NOT TO SCALE
SHEET NO: 124 OF 274
DRAWING NO. HG-001.00

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ABBREVIATIONS

AC	AIR CONDITIONER
ADJ	ADJUSTABLE
AFF	ABOVE FINISHED FLOOR
APD	AIR PRESSURE DROP
ATC	AUTOMATED TEMPERATURE CONTROL
ADJ	ADJUSTABLE
BDD	BACK DRAFT DAMPER
BHP	BRAKE HORSEPOWER
BOD	BOTTOM OF DUCT
BTU	BRITISH THERMAL UNIT
CFM	CUBIC FEET PER MINUTE
C/L	CENTERLINE
DIA	DIAMETER
DN	DOWN
EA	EXHAUST AIR
ECM	ELECTRONICALLY COMMUTATED MOTOR
EDH	ELECTRIC DUCT HEATER
EER	ENERGY EFFICIENCY RATIO
EF	EXHAUST FAN
EH	EXHAUST HOOD
EL	ELEVATION
ENCL	ENCLOSURE
ER	EXHAUST REGISTER
ERV	ENERGY RECOVERY VENTILATOR
ESP	EXTERNAL STATIC PRESSURE DROP
EUH	ELECTRIC UNIT HEATER
EXIST	EXISTING
FT	FEET
HGT	HEIGHT
HP	HORSEPOWER
IN	INCHES
KW	KILOWATT
L	LOUVER / LONG
LEL	LOWER EXPLOSIVE LIMIT
LRA	LOCKED ROTOR AMPS
MAX	MAXIMUM
MBH	THOUSAND BRITISH THERMAL UNITS PER HOUR
MCA	MINIMUM CIRCUIT AMPS
MFR	MANUFACTURER
MIN	MINIMUM
MOCP	MAXIMUM OVERCURRENT PROTECTION
MTG	MOUNTING
MTR	MOTOR
NTS	NOT TO SCALE
O.C.	ON CENTER
PD	PUMP DISCHARGE (STEAM CONDENSATE)
PH	PHASE
QTY	QUANTITY
RA	RETURN AIR
RAD	RETURN AIR DUCT
SA	SUPPLY AIR
SF	SQUARE FOOT / SUPPLY FAN
SR	SUPPLY REGISTER
TAB	TESTING, ADJUSTING AND BALANCING
TEFC	TOTALLY ENCLOSED, FAN COOLED
TEMP	TEMPERATURE
T.O.W	TOP OF WALL
TSP	TOTAL STATIC PRESSURE
TYP	TYPICAL
VRF	VARIABLE REFRIGERANT FLOW
WC	WATER CLOSET
WG	WATER GAUGE
WMS	WIRE MESH SCREEN

GENERAL NOTES

1. THE DRAWINGS ARE DIAGRAMMATIC ONLY TO SHOW THE SCOPE OF THE WORK INVOLVED. DO NOT SCALE DRAWINGS FOR FABRICATION PURPOSES. FINAL LOCATION OF EQUIPMENT, PIPING AND DUCTWORK SHALL BE DETERMINED IN FIELD. ANY WORK INSTALLED CONTRARY TO OR WITHOUT APPROVAL SHALL BE SUBJECT TO CHANGE.
2. PERFORM ALL WORK IN ACCORDANCE WITH LAWS, REGULATIONS, AND STANDARDS OF LOCAL, STATE AND FEDERAL GOVERNMENTS.
3. COOPERATE AND COORDINATE WITH OTHER TRADES IN EXECUTING THE WORK. PERFORM WORK SO THAT PROGRESS OF ENTIRE PROJECT SHALL NOT BE DELAYED. PROVIDE INFORMATION TO OTHER TRADES, AS REQUESTED. OBTAIN FINAL ROUGHING DIMENSIONS AS REQUIRED TO COMPLETE WORK.
4. SUBMIT SHOP DRAWINGS AND PRODUCT INFORMATION. NO WORK SHALL PROCEED WITHOUT WRITTEN APPROVAL ON EACH ITEM SCHEDULED, SPECIFIED AND/OR SHOWN ON PLAN.
5. PROVIDE PROPER ACCESS TO MATERIAL AND EQUIPMENT REQUIRING INSPECTION, MAINTENANCE OR SERVICE.
6. WHERE SUSPENDED CEILINGS ARE PROVIDED, RUN ALL EQUIPMENT, PIPING, AND DUCTWORK CONCEALED ABOVE SUSPENDED CEILING. SEE ARCHITECTURAL DRAWINGS FOR SUSPENDED CEILING LOCATIONS.
7. PROVIDE ALL NECESSARY PIPING, EQUIPMENT AND SUPPORTS ETC. NOT SHOWN ON THE DRAWINGS OR CALLED FOR IN THE SPECIFICATIONS, BUT NECESSARY TO PROVIDE COMPLETE AND WORKABLE SYSTEMS.
8. PROVIDE COORDINATION DRAWINGS.

HVAC NOTES

1. DUCTWORK AND ACCESSORIES
   - A. DUCTWORK SHALL FOLLOW THE GENERAL ROUTING INDICATED ON THE DRAWINGS. COORDINATE LOCATION WITH ALL PIPING AND EQUIPMENT INSTALLED BY HVAC AND OTHER TRADES.
   - B. DUCTWORK SHALL BE FREE FROM VIBRATION. MAKE AND SEAL DUCT JOINTS AS SPECIFIED.
   - C. ALL RECTANGULAR DUCT ELBOWS SHALL HAVE TURNING VANES.
   - D. PROVIDE SEISMIC RESTRAINTS FOR DUCTWORK WHERE REQUIRED BY THE BUILDING CODE.
   - E. FLEXIBLE DUCT SHALL NOT BE PERMITTED.
   - F. REFER TO ARCHITECTURAL DRAWINGS FOR EXACT LOUVER LOCATIONS, AND SUSPENDED CEILING DIFFUSER AND GRILLE LOCATIONS.
   - G. PROVIDE DUCT ACCESS DOORS AT LOCATIONS AND OF SIZES INDICATED ON THE PLANS AND/OR REQUIRED BY THE SPECIFICATIONS. AT A MINIMUM, PROVIDE ACCESS DOORS TO ALLOW FOR INSPECTION OF FIRE DAMPERS, CONTROL DAMPERS, INSTRUMENTATION AND CONTROL DEVICES, DUCT SMOKE DETECTORS, AIR FILTERS AND COILS FOR DUCTWORK NOT LESS THAN 6 INCHES BY 6 INCHES.
   - H. PROVIDE DAMPERS OF THE SAME MATERIALS AS THE DUCT SYSTEM WHERE THEY ARE INSTALLED.
   - I. FIRE DAMPERS SHALL BE PROVIDED IN NEW DUCTWORK AT FIRE RATED WALLS AND FLOORS. PROVIDE FIRE DAMPERS AND CONNECTING DUCTWORK IN ACCORDANCE WITH NFPA 90A AND LOCAL CODES. ALL NEW FIRE DAMPERS SHALL BE 1-1/2 HOUR RATED.
   - J. PROVIDE ALL NEW LOUVERS WITH 1/2 INCH MESH BIRDSCREEN UNLESS OTHERWISE SPECIFIED.
   - K. COORDINATE WITH ARCHITECTURAL DRAWING FOR OUTSIDE AIR INTAKE AND EXHAUST LOUVER ELEVATION, ROOF AND WALL OPENINGS (SIZE & LOCATION).
   - L. BLANK OFF UNUSED LOUVER AREA WITH 2 INCH THICK RIGID INSULATED ALUMINUM PANELS WHERE LOUVER AREA IS LARGER THAN INTAKE OR EXHAUST AIR PLENUM CONNECTION.
   - M. PROVIDE COVERING TO ALL OPEN ENDS OF DUCTWORK TO PREVENT DUST, DIRT AND DEBRIS FROM ENTERING DURING CONSTRUCTION.
   - N. PROVIDE VOLUME DAMPERS AT ALL NEW SUPPLY, RETURN AND EXHAUST AIR TERMINALS. PROVIDE ALL DAMPERS WITH A POSITION INDICATOR THAT CAN BE EASILY SEEN FROM THE OPERATING LEVEL.
   - O. MAINTAIN MAXIMUM HEADROOM.
2. PIPING AND ACCESSORIES
   - A. PIPING SHALL FOLLOW THE GENERAL ROUTING INDICATED ON DRAWINGS. COORDINATE LOCATION WITH DUCTWORK, EQUIPMENT, AND ALL OTHER PIPING.
   - B. ALL SHUTOFF VALVES SHALL BE INSTALLED IN ACCESSIBLE LOCATIONS. CONCEALED VALVES SHALL BE ACCESSIBLE THROUGH ACCESS PANELS OR ACOUSTIC TILE CEILING.
   - C. PROVIDE PROPER DRAINAGE FOR ALL PIPING SYSTEMS.
   - D. PROVIDE SEISMIC RESTRAINTS FOR PIPING AND EQUIPMENT WHERE REQUIRED BY THE BUILDING CODE.
   - E. MAINTAIN MAXIMUM HEADROOM. UNLESS OTHERWISE INDICATED, RUN ALL PRESSURIZED OVERHEAD HORIZONTAL PIPING MAXIMUM 12" BELOW ROOF STRUCTURAL MEMBERS. PIPING RUNNING ALONG WALLS MAY BE INSTALLED MIN. 8'-0" AFF. RUN ALL GRAVITY OVERHEAD HORIZONTAL PIPING AS HIGH AS POSSIBLE WHILE MAINTAINING REQUIRED PITCH.
   - F. ALL RELIEF VALVES SHALL BE HARD PIPED TO A FLOOR DRAIN. DISCHARGE PIPE SHALL BE MINIMUM FULL SIZE OF RELIEF VALVE OUTLET.
   - G. PROVIDE ALL LOW POINTS IN NEW PIPING SYSTEMS WITH 3/4 INCH DRAIN VALVES AND ALL HIGH POINTS WITH 3/4 INCH VALVED MANUAL AIR VENTS UNLESS OTHERWISE INDICATED AS LARGER SIZE.
   - H. ALL NEW PIPES PENETRATING THROUGH FIRE RATED WALLS SHALL BE SEALED TO ENSURE THE FIRE RATING IS MAINTAINED.

HVAC NOTES (CONTINUED)

3. INSULATION
   - A. INSULATE EXISTING DUCTWORK AND PIPING IF THERE IS NO EXISTING INSULATION OR IF EXISTING INSULATION NEEDS REPAIR. PROVIDE VAPOR BARRIER ON ALL NEW INSULATION.
   - B. INSULATE ALL NEW OUTSIDE AIR INTAKE DUCTS AND PLENUMS UPSTREAM OF AIR HANDLING UNITS, DUCT HEATING COILS AND CONTROL DAMPERS. INSULATE ALL NEW OUTSIDE AIR INTAKE DAMPER SLEEVES. INSULATE ALL NEW EXHAUST AIR DUCTS AND PLENUMS BETWEEN THE DISCHARGE OUTLET AND CONTROL DAMPER. INSULATE ALL NEW SUPPLY AIR DUCTS IN CONCEALED LOCATIONS.
   - C. INSULATE ALL NEW REFRIGERANT SUCTION PIPING.
   - D. INSULATE ALL NEW HOT WATER SUPPLY AND RETURN PIPING. INSULATE ALL NEW COLD WATER PIPING. INSULATE ALL NEW METALLIC A/C CONDENSATE PIPING.
4. ELECTRICAL ENCLOSURES
   - A. "ENCLOSURES" SHALL MEAN ELECTRICAL EQUIPMENT ENCLOSURES AND ASSOCIATED CONDUIT.
   - B. PROVIDE REQUIRED NEMA RATED ELECTRICAL ENCLOSURES. SEE DRAWING EG-004 FOR AREA CLASSIFICATION SCHEDULE FOR REQUIRED NEMA RATINGS.
5. EQUIPMENT
   - A. PROVIDE SEISMIC RESTRAINTS FOR EQUIPMENT WHERE REQUIRED BY THE BUILDING CODE.
   - B. ALL NEW ROTATING EQUIPMENT SHALL HAVE FLEXIBLE PIPE AND/OR DUCT CONNECTIONS AND APPROVED VIBRATION ISOLATORS.
   - C. LOCATE NEW ROOFTOP EQUIPMENT NO CLOSER THAN 15'-0" TO EDGE OF ROOF EXCEPT ROOF OPENINGS AND ROOFTOP EQUIPMENT MAY BE LOCATED WITHIN 15'-0" OF THE ROOF EDGES WHERE EDGE RAILINGS ARE INDICATED ON THE ARCHITECTURAL PLANS.
6. OUTSIDE AIR INTAKES
   - A. OUTSIDE AIR INTAKES AS WELL AS DOORS AND WINDOWS SHALL BE LOCATED A MINIMUM OF 10'-0" FROM ANY EXHAUST AIR VENT OR 25'-0" FROM ANY PLUMBING VENT.
7. TESTING, ADJUSTING AND BALANCING (TAB)
   - A. SUBMIT A CERTIFIED TAB REPORT PREPARED BY AN INDEPENDENT TESTING, ADJUSTING AND BALANCING AGENCY.
   - B. ADJUST ALL FANS IN NEW AIR HANDLING UNITS, NEW MAKE-UP AIR UNITS, NEW EXHAUST FAN UNITS AND NEW SUPPLY FAN UNITS. BALANCE ALL VOLUME DAMPERS ASSOCIATED WITH NEW FANS. ADJUST ALL NEW HOT WATER PUMPS. BALANCE ALL BALANCING VALVES AT NEW HOT WATER COILS, NEW HOT WATER FINNED TUBE RADIATION AND NEW HOT WATER UNIT HEATERS.
   - C. WHERE TAB WORK IS PERFORMED DURING OUTDOOR AIR TEMPERATURE OF 32° F OR LESS, PROVIDE SUFFICIENT INDOOR HEATING TO PREVENT FREEZING OF WATER.
   - D. ADJUST AND BALANCE TO SPECIFIED AIR FLOWS (CFM) WITH ALL DOORS CLOSED.

CONTROL NOTES

- A. FOR ALL EXISTING SYSTEMS REPLACED BY SYSTEMS IN THESE CONTROL SEQUENCES, REMOVE AND PROVIDE NEW CONTROL DEVICES, WIRING AND CONDUIT AS DIRECTED.
- B. PROVIDE ALL WIRING AND COMPONENTS SHOWN AND NOT SHOWN TO ACCOMPLISH THE SPECIFIED CONTROL SEQUENCES.
- C. MOTOR-OPERATED (CONTROL) DAMPERS SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR UNLESS OTHERWISE INDICATED TO BE AN ACCESSORY OF THE HVAC EQUIPMENT. ALL 2-POSITION CONTROL DAMPER ACTUATORS SHALL BE SPRING RETURN UNLESS OTHERWISE UNAVAILABLE DUE TO DAMPER HIGH TORQUE REQUIREMENTS. SPRING RETURN SHALL BE UTILIZED FOR FAIL MODE. DAMPERS SHALL FAIL CLOSED ON LOSS OF POWER UNLESS OTHERWISE INDICATED.
- D. WALL-MOUNT ALL CONTROL PANELS, ROOM THERMOSTATS, ROOM SENSORS AND SWITCHES 5'-0" AFF TO CENTERLINE. WALL-MOUNT ALL DIFFERENTIAL PRESSURE SENSORS AND OUTDOOR SENSORS 8'-0" AFF TO CENTERLINE. ROOM THERMOSTATS MOUNTED ON EXTERIOR WALLS SHALL HAVE INSULATED BACKING.
- E. ALL SAFETIES SUCH AS FREEZESTATS AND DUCT SMOKE DETECTORS SHALL BE WIRED DIRECTLY TO THE ASSOCIATED MOTOR STARTERS.
- F. "CONTROLS" SHALL MEAN ALL CONTROL DEVICES/COMPONENTS AND PANELS, ASSOCIATED WIRING AND CONDUIT.
- G. SEE GENERAL NOTES ON EG-004 FOR ELECTRICAL ENCLOSURE REQUIREMENTS.
- H. ALL EQUIPMENT MUST MEET THE NEMA AREA ELECTRICAL CLASSIFICATION FOR THE SPACE IT IS INSTALLED. REFER TO THE ELECTRICAL DRAWINGS OR EG-004 FOR THE AREA CLASSIFICATION SCHEDULE.

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DESIGNED BY: MOHAMED KHORSHED
CHECKED BY: EDUARDO CHAVIANO, P.E.
DESIGN LEAD: MOHAMED KHORSHED
PROJECT MANAGER: AIMEE BOULET, P.E.
DRAWN BY: MENGHONG WANG

AECOM
605 THIRD AVENUE, 3rd FL.
NEW YORK, NY 10158, US

REGISTERED ENGINEER — EDWARD J. CHAVIANO — No. 111699 — STATE OF NEW YORK

NYC Environmental Protection

ACCOUNTABLE MANAGER: JOHN GOULAS, P.E.
PORTFOLIO MANAGER: KEVIN ELLENWOOD, P.E.
EXECUTIVE DIRECTOR: NAYANKUMAR SHAH, P.E.

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BUREAU OF ENGINEERING DESIGN & CONSTRUCTION
96-05 HORACE HARDING EXPRESSWAY 5th FLOOR
CORONA, NEW YORK 11368
www.nyc.gov/dep

CAPITAL PROJECT WP-269
RECONSTRUCTION OF
PAERDEGAT PUMPING STATION
CONTRACT PS-318
HVAC
ABBREVIATIONS, NOTES

DATE: OCTOBER 2026
SCALE: 1" = 1'-0"
SHEET NO: 125 OF 274
DRAWING NO. HG-002.00

All inquiries regarding this drawing(s) or project should be made to NYC Environmental Protection, Bureau of Engineering Design and Construction.

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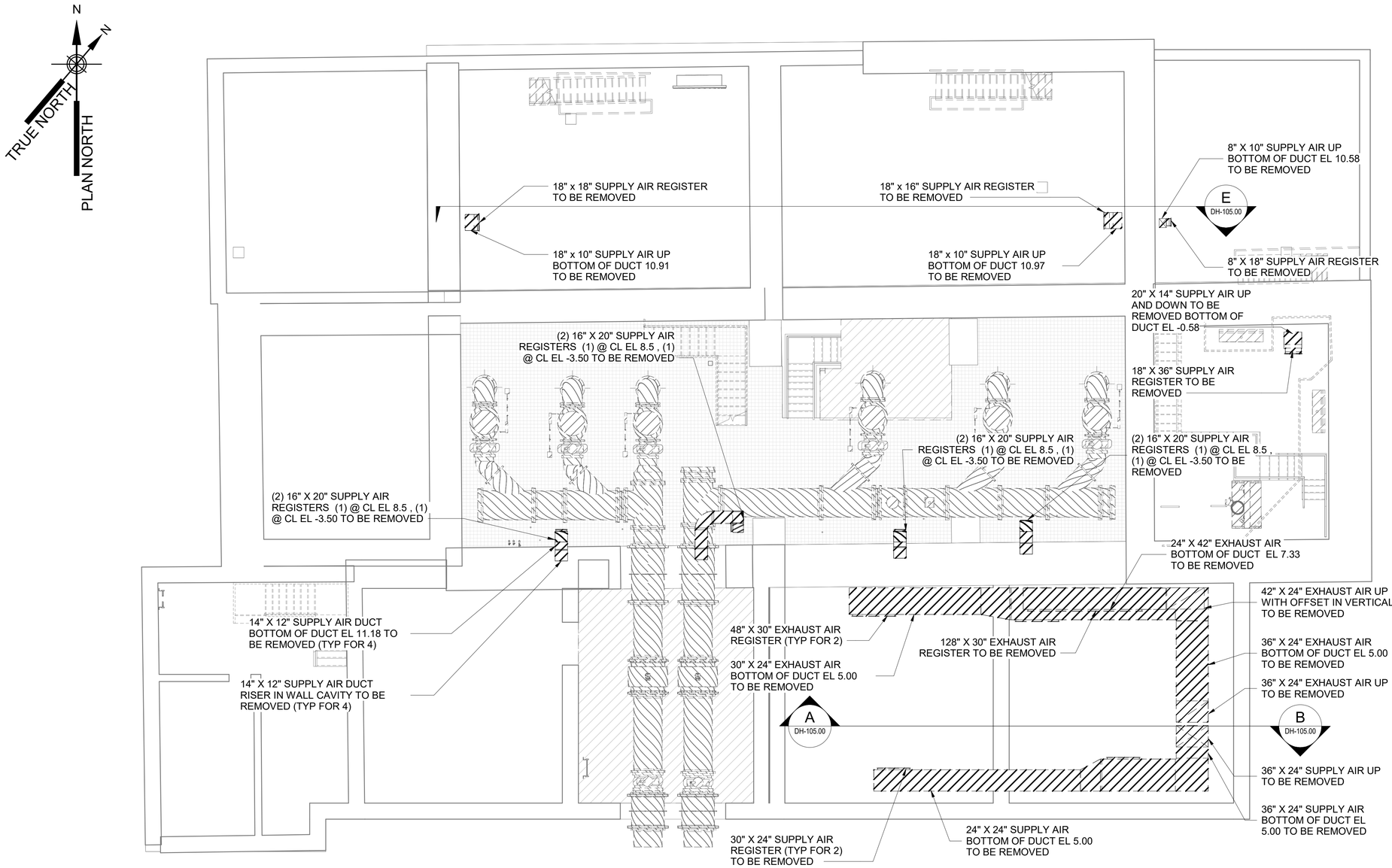

NOTES:

1. REMOVE DUCTWORK AND APPURTENANCES AS INDICATED ON PLANS.

2. DEMOLITION PLANS ARE DIVIDED BY DISCIPLINE. HVAC DEMOLITION IS SHOWN ON DH SHEETS; REFER TO SHEETS OF OTHER DISCIPLINES FOR THEIR SPECIFIC DEMOLITION REQUIREMENTS.

3/16"=1'-0" 0 5 10 FT.

DEMOLITION DISCHARGE PIPING GALLERY, STORAGE ROOMS, ELECTRICAL CHAMBERS - PLAN AT EL 2.83'

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

BID SET

SUBMITTAL DATE: OCTOBER 2026

GRAPHIC SCALES CHECK BEFORE USE

IF SHEET IS LESS THAN 22" X 34" IT IS A REDUCED PRINT. SCALE ACCORDINGLY

NO.	DATE	REVISIONS/DESCRIPTION	APPR'D.

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DESIGN LEAD: MOHAMED KHORSHED
PROJECT MANAGER: AIMEE BOULET, P.E.

AECOM
605 THIRD AVENUE, 3rd FL.
NEW YORK, NY 10158, US

REGISTERED ENGINEER EDUARDO J. CHAVIANO No. 111609 STATE OF NEW YORK

Environmental Protection

ACCOUNTABLE MANAGER: JOHN GOULAS, P.E.
PORTFOLIO MANAGER: KEVIN ELLENWOOD, P.E.
EXECUTIVE DIRECTOR: NAYANKUMAR SHAH, P.E.

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CAPITAL PROJECT WP-269
RECONSTRUCTION OF
PAERDEGAT PUMPING STATION
CONTRACT PS-318
HVAC
DEMOLITION DISCHARGE PIPING GALLERY, STORAGE ROOMS, ELECTRICAL CHAMBERS

DATE: OCTOBER 2026
SCALE: 3/16" = 1'-0"
SHEET NO: 126 OF 274
DRAWING NO. DH-101.00

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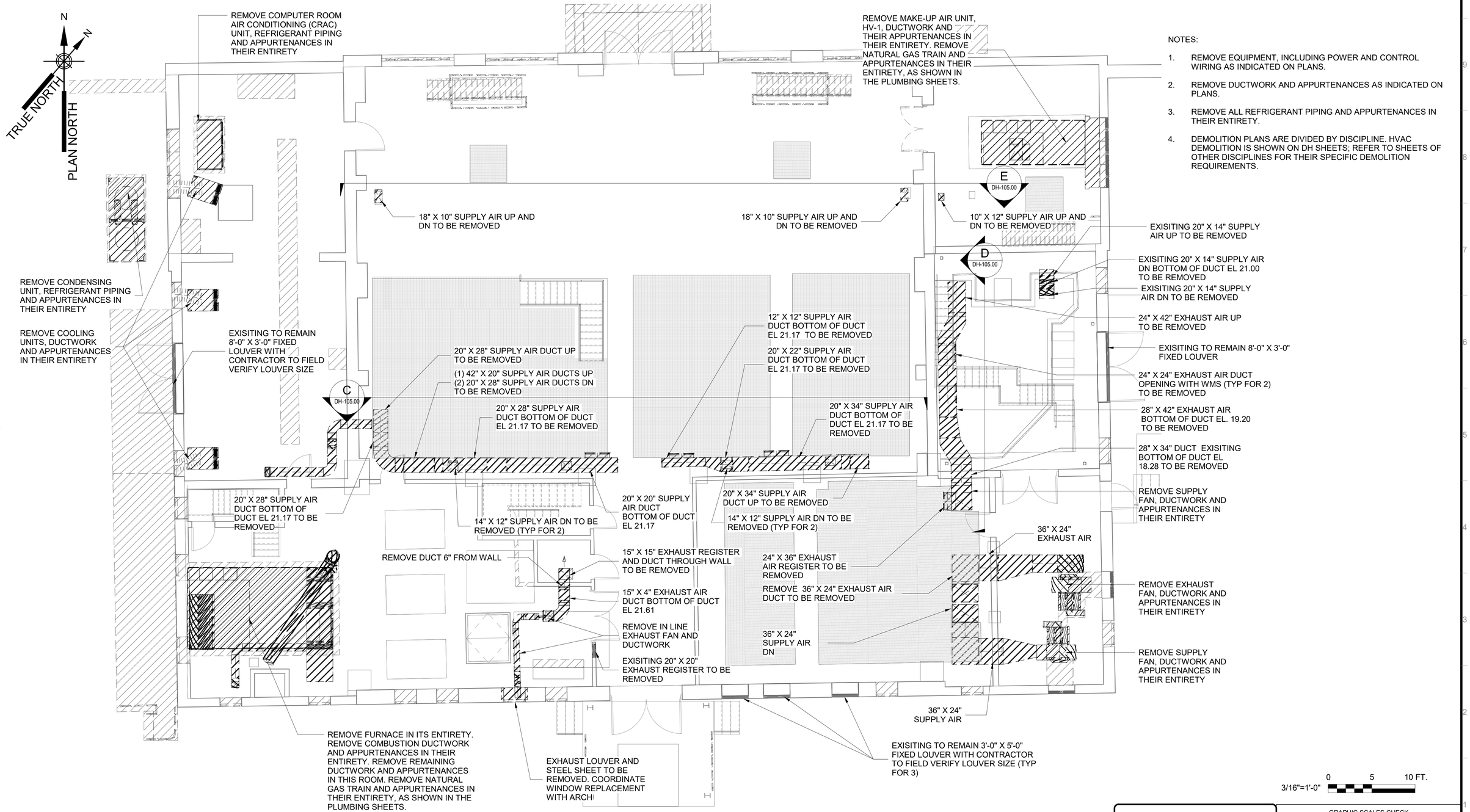

DEMOLITION GROUND FLOOR - PLAN AT EL 13.50'

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

BID SET

SUBMITTAL DATE: OCTOBER 2026

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CAPITAL PROJECT WP-269
RECONSTRUCTION OF PAERDEGAT PUMPING STATION
CONTRACT PS-318
HVAC
DEMOLITION GROUND FLOOR

DATE: OCTOBER 2026
SCALE: 3/16" = 1'-0"
SHEET NO: 127 OF 274
DRAWING NO. DH-102.00

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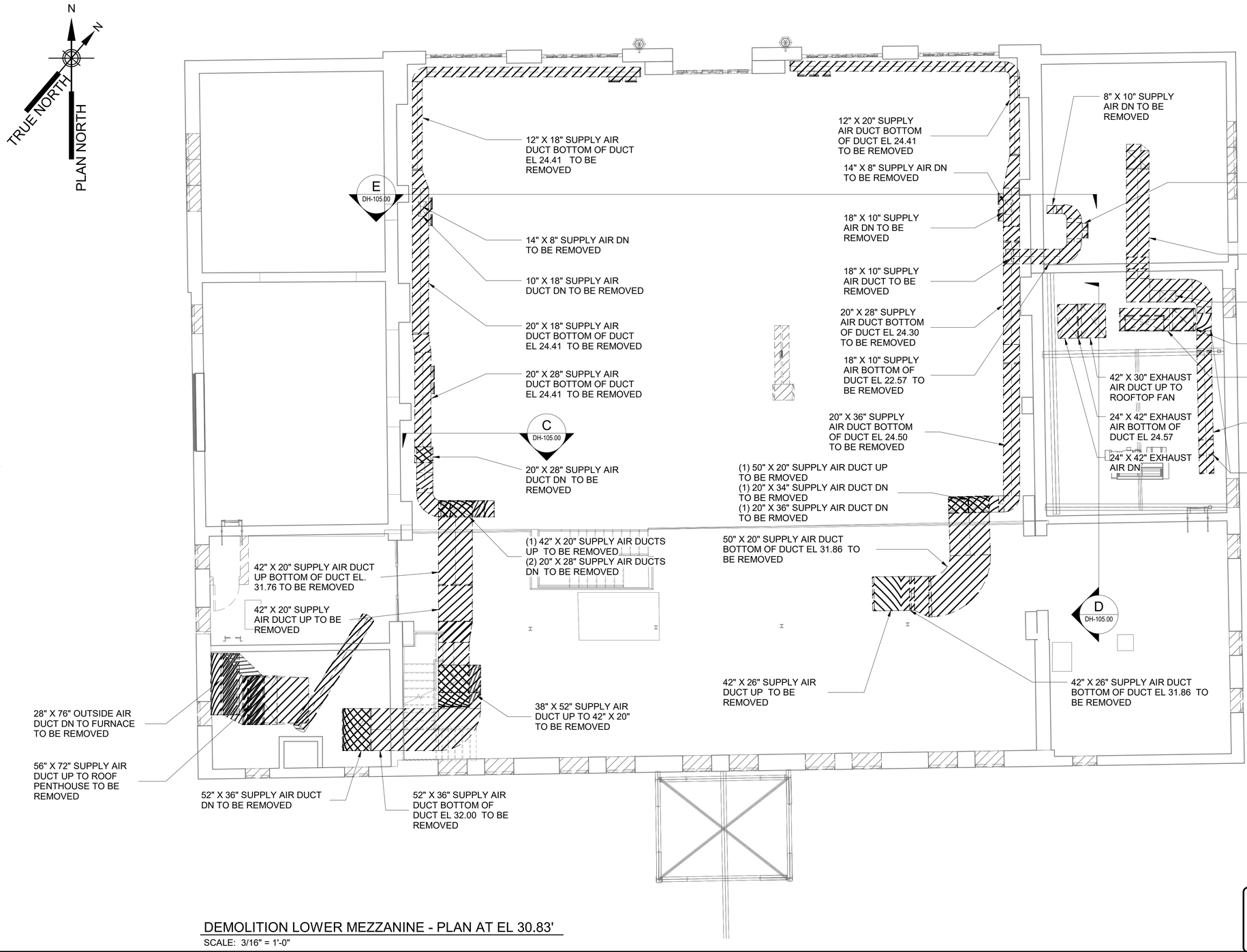

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DEMOLITION LOWER MEZZANINE - PLAN AT EL 30.83'

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

3/16"=1'-0" 0 5 10 FT.

BID SET

SUBMITTAL DATE: OCTOBER 2026

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CAPITAL PROJECT WP-269
RECONSTRUCTION OF
PAERDEGAT PUMPING STATION
CONTRACT PS-318
HVAC
DEMOLITION LOWER MEZZANINE

DATE: OCTOBER 2026
SCALE: 3/16" = 1'-0"
SHEET NO: 128 OF 274
DRAWING NO. DH-103.00

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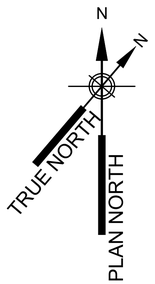

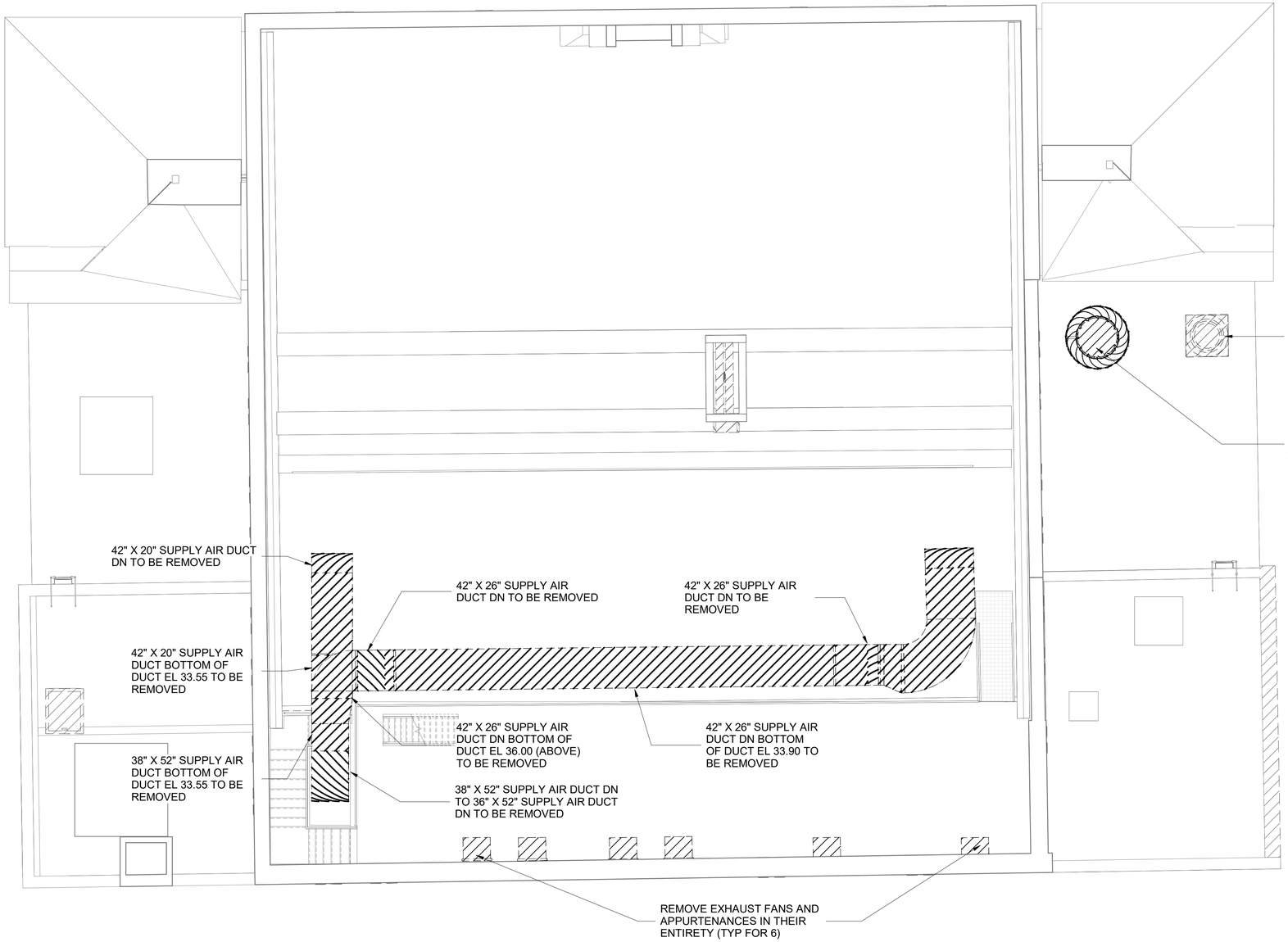

NOTES:

1. REMOVE EQUIPMENT, INCLUDING POWER AND CONTROL WIRING AS INDICATED ON PLANS.
2. REMOVE DUCTWORK AND APPURTENANCES AS INDICATED ON PLANS.
3. DEMOLITION PLANS ARE DIVIDED BY DISCIPLINE. HVAC DEMOLITION IS SHOWN ON DH SHEETS; REFER TO SHEETS OF OTHER DISCIPLINES FOR THEIR SPECIFIC DEMOLITION REQUIREMENTS.

DEMOLITION EAST AND WEST FLAT ROOFS AND UPPER MEZZANINE - PLAN AT EL 33.50'

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

3/16"=1'-0" 0 5 10 FT.

BID SET

SUBMITTAL DATE: OCTOBER 2026

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NEW YORK, NY 10158, US

REGISTERED ENGINEER EDWARD J. CHIVIANO No. 111609 STATE OF NEW YORK

Environmental Protection

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EXECUTIVE DIRECTOR	NAYANKUMAR SHAH, P.E.

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CAPITAL PROJECT WP-269
RECONSTRUCTION OF
PAERDEGAT PUMPING STATION
CONTRACT PS-318
HVAC
DEMOLITION EAST AND WEST FLAT ROOFS AND UPPER MEZZANINE

DATE: OCTOBER 2026
SCALE: 3/16" = 1'-0"
SHEET NO: 129 OF 274
DRAWING NO. DH-104.00

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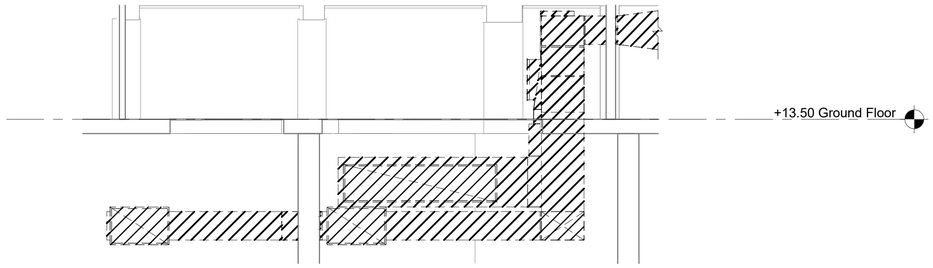
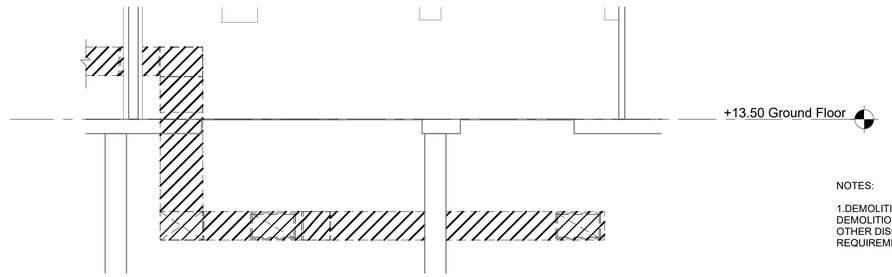


A DH-101.00 LOWER WET WELL NORTH DUCTWORK DEMO

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



B DH-101.00 LOWER WET WELL SOUTH DUCTWORK DEMO

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

NOTES:

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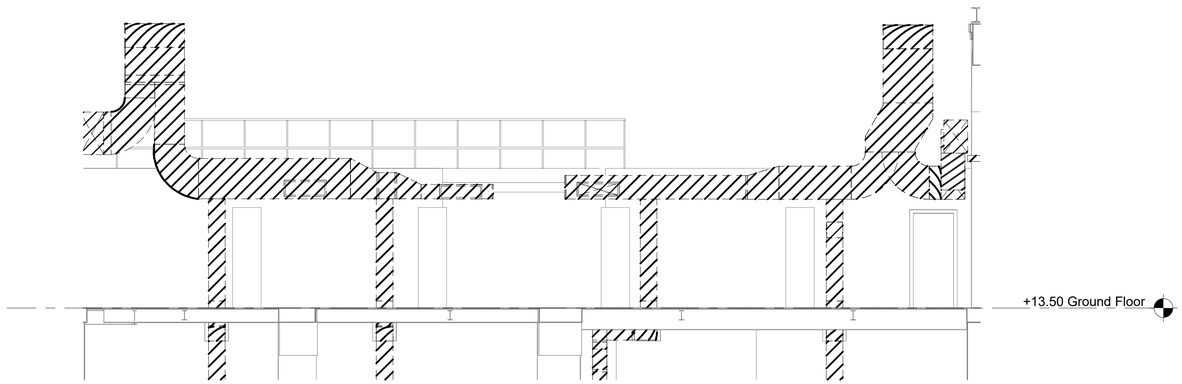
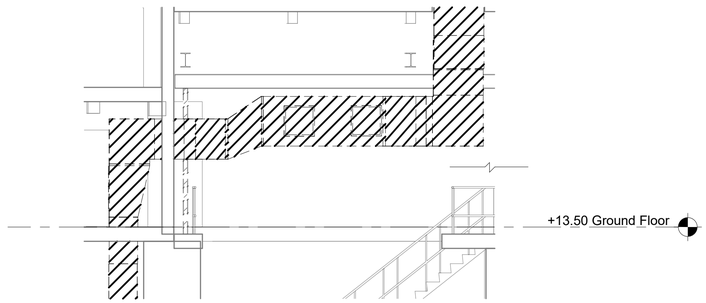


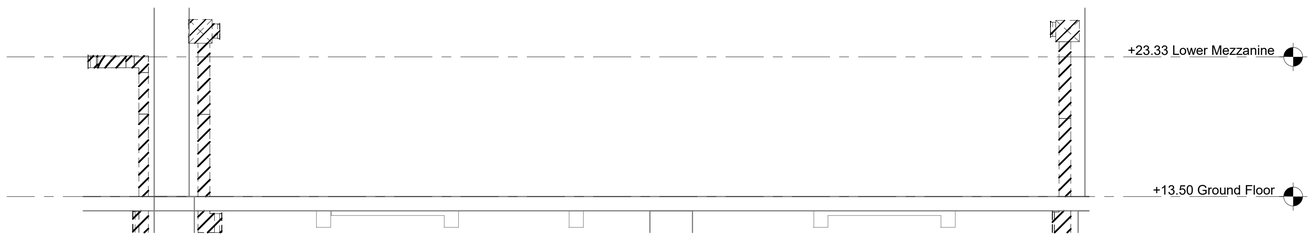
C DH-102.00 GROUND FLOOR UPPER PUMP ROOM SOUTH DUCTWORK DEMO

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



D DH-102.00 GROUND FLOOR SCREENING CHAMBER NORTH DUCTWORK DEMO

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



E DH-101.00 GROUND FLOOR UPPER PUMP ROOM SOUTH DUCTWORK DEMO

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

0 5 10 FT.

3/16"=1'-0"

BID SET

SUBMITTAL DATE: OCTOBER 2026

GRAPHIC SCALES CHECK BEFORE USE

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NO.	DATE	REVISIONS/DESCRIPTION	APPR'D.

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DESIGN LEAD: MOHAMED KHORSHED
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NEW YORK, NY 10158, US

REGISTERED ENGINEER EDWARD J. CHIAVIANO No. 111699 STATE OF NEW YORK

Environmental Protection

ACCOUNTABLE MANAGER: JOHN GOULAS, P.E.
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EXECUTIVE DIRECTOR: NAYANKUMAR SHAH, P.E.

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CORONA, NEW YORK 11368
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CAPITAL PROJECT WP-269
RECONSTRUCTION OF
PAERDEGAT PUMPING STATION
CONTRACT PS-318
HVAC
DEMOLITION SECTION VIEW SOUTH
(MECHANICAL EQUIPMENT ROOM)

DATE: OCTOBER 2026
SCALE: 3/16" = 1'-0"
SHEET NO: 130 OF 274
DRAWING NO. DH-105.00

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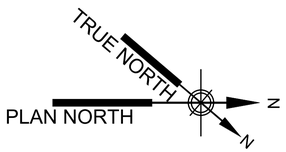
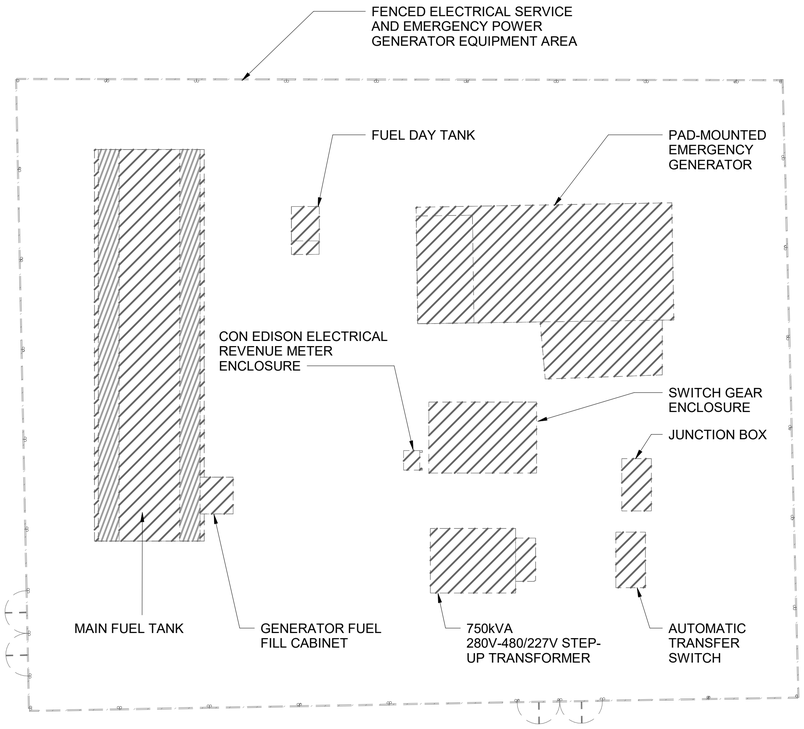


PHOTO KEYNOTES: #

1. DEMOLISH MAIN FUEL TANK AND ITS FUEL FILL CABINET.
2. DEMOLISH FUEL DAY TANK AND SUPPLY AND RETURN LINES.
3. DEMOLISH EMERGENCY GENERATOR.
4. DEMOLISH UTILITY METERING EQUIPMENT ENCLOSURE.
5. DEMOLISH TRANSFORMER.
6. DEMOLISH JUNCTION BOX.
7. DEMOLISH AUTOMATIC TRANSFER SWITCH ENCLOSURE.



DEMOLITION GENERATOR AREA

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

0 5 10 FT.
3/16"=1'-0"

BID SET

SUBMITTAL DATE: OCTOBER 2026

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AECOM
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NEW YORK, NY 10158, US

REGISTERED ENGINEER EDWARD J. CHAVIANO No. 111689 STATE OF NEW YORK

Environmental Protection

ACCOUNTABLE MANAGER: JOHN GOULAS, P.E.
PORTFOLIO MANAGER: KEVIN ELLENWOOD, P.E.
EXECUTIVE DIRECTOR: NAYANKUMAR SHAH, P.E.

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CAPITAL PROJECT WP-269
RECONSTRUCTION OF
PAERDEGAT PUMPING STATION
CONTRACT PS-318
HVAC
DEMOLITION GENERATOR AREA

DATE: OCTOBER 2026
SCALE: AS INDICATED
SHEET NO: 131 OF 274
DRAWING NO. DH- 106.00

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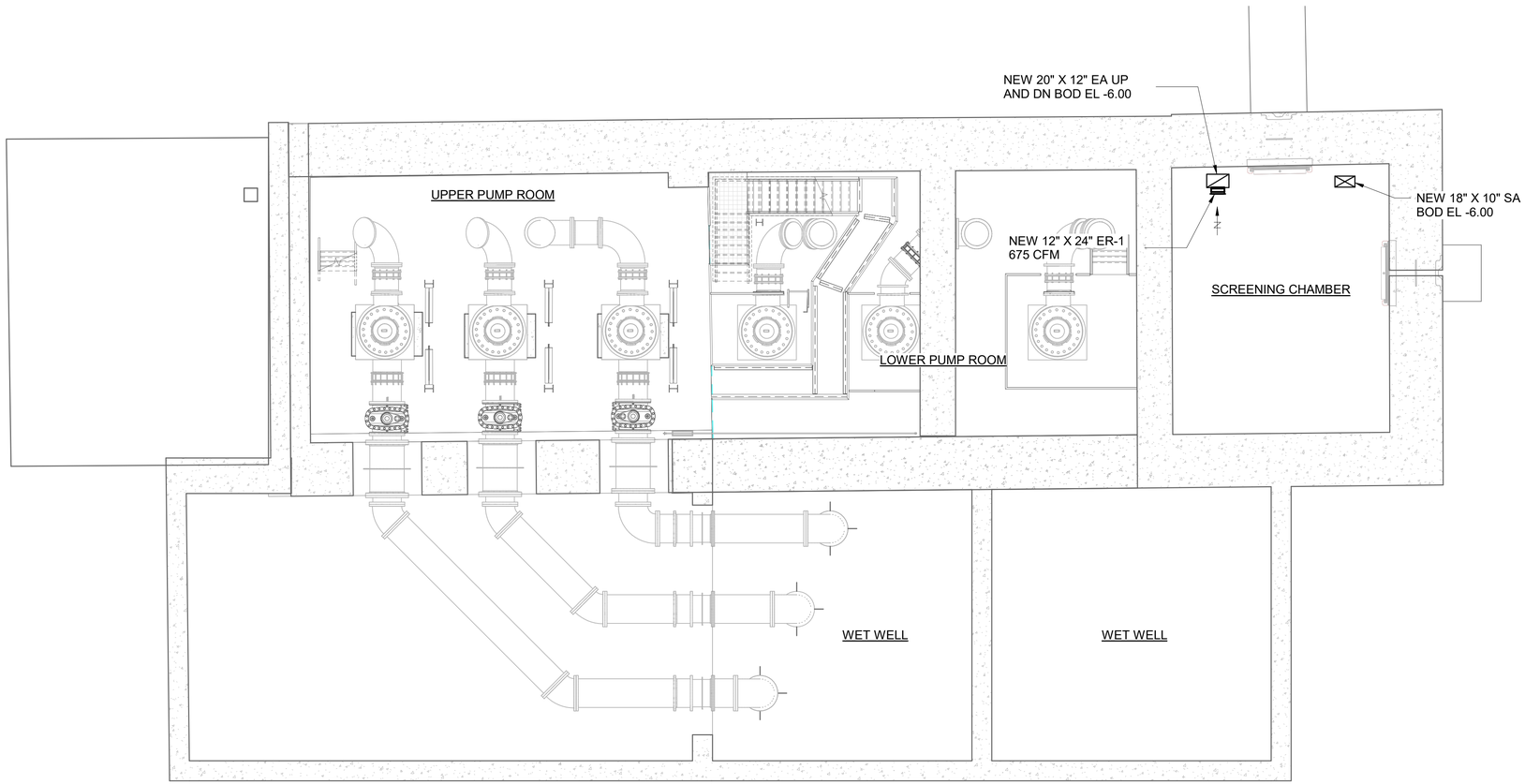

UPPER PUMP ROOM - PLAN AT EL -12.00'

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

3/16"=1'-0" 0 5 10 FT.

BID SET

SUBMITTAL DATE: OCTOBER 2026

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CAPITAL PROJECT WP-269
RECONSTRUCTION OF
PAERDEGAT PUMPING STATION
CONTRACT PS-318
HVAC
UPPER PUMP ROOM

DATE: OCTOBER 2026
SCALE: 3/16" = 1'-0"
SHEET NO: 132 OF 274
DRAWING NO. H-101.00

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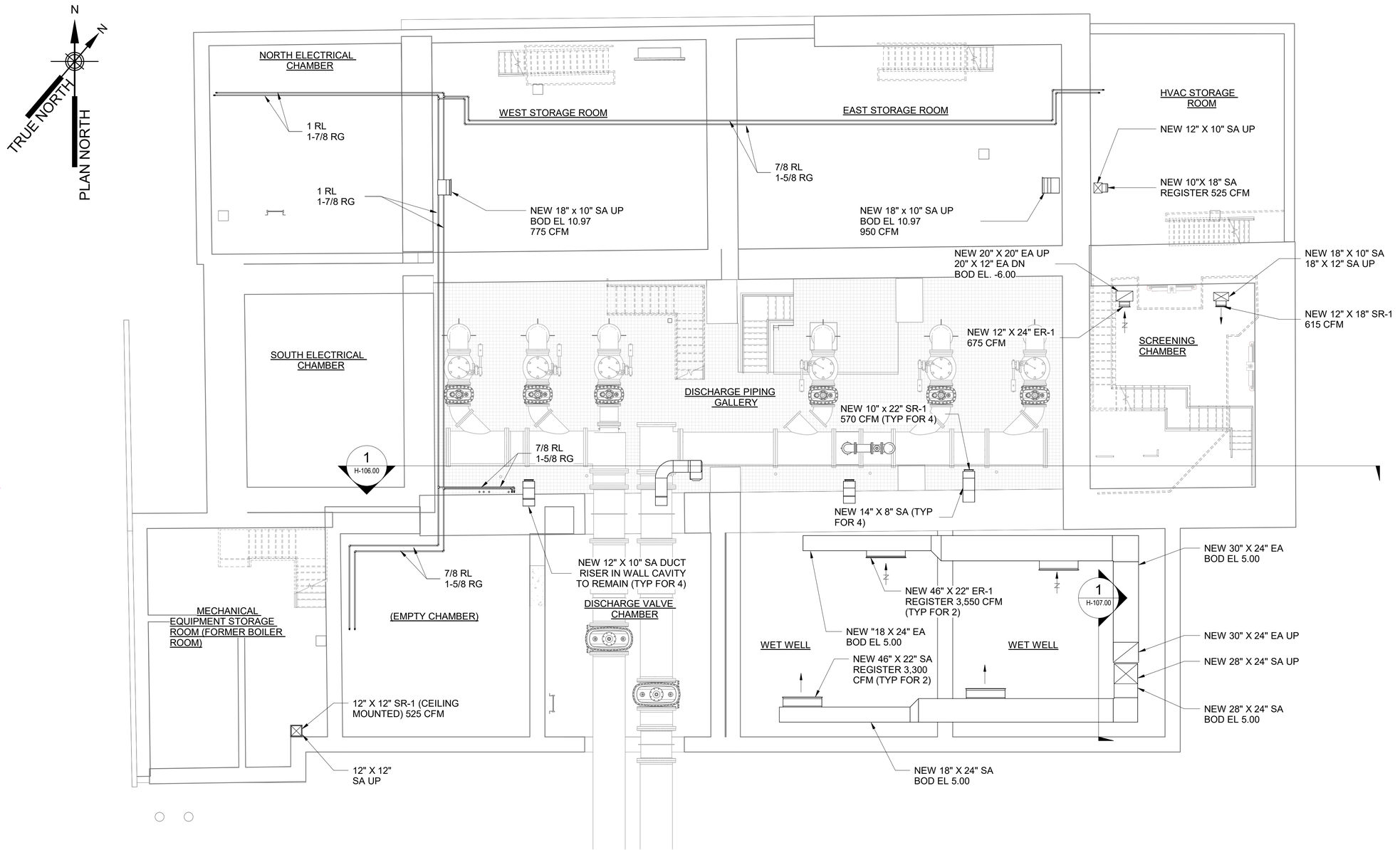

NOTES:

1. REFRIGERANT PIPING IS PRELIMINARY AND DIAGRAMMATICAL. CONTRACTOR TO FIELD VERIFY THE REQUIRED LIQUID AND GAS PIPE SIZE REQUIRED BASED ON FIELD ROUTING OF PIPING AND MFR RECOMMENDATION.

0 5 10 FT.
3/16"=1'-0"

DISCHARGE PIPING GALLERY, STORAGE ROOMS, ELECTRICAL CHAMBERS - PLAN AT EL 2.83'

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

BID SET

SUBMITTAL DATE: OCTOBER 2026

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DRAWN BY: MENGHONG WANG
CHECKED BY: EDUARDO CHAVIANO, P.E.
DESIGN LEAD: MOHAMED KHORSHED
PROJECT MANAGER: AIMEE BOULET, P.E.

AECOM
605 THIRD AVENUE, 3rd FL.
NEW YORK, NY 10158, US

REGISTERED ENGINEER EDWARD J. CHAVIANO No. 111669 STATE OF NEW YORK

Environmental Protection

ACCOUNTABLE MANAGER
JOHN GOULAS, P.E.
PORTFOLIO MANAGER
KEVIN ELLENWOOD, P.E.
EXECUTIVE DIRECTOR
NAYANKUMAR SHAH, P.E.

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BUREAU OF ENGINEERING DESIGN & CONSTRUCTION
96-05 HORACE HARDING EXPRESSWAY 5th FLOOR
CORONA, NEW YORK 11368
www.nyc.gov/dep

CAPITAL PROJECT WP-269
RECONSTRUCTION OF
PAERDEGAT PUMPING STATION
CONTRACT PS-318
HVAC
DISCHARGE PIPING GALLERY, STORAGE ROOMS, ELECTRICAL CHAMBERS

DATE: OCTOBER 2026
SCALE: 3/16" = 1'-0"
SHEET NO: 133 OF 274
DRAWING NO. H-102.00

All inquiries regarding this drawing(s) or project should be made to NYC Environmental Protection, Bureau of Engineering Design and Construction.

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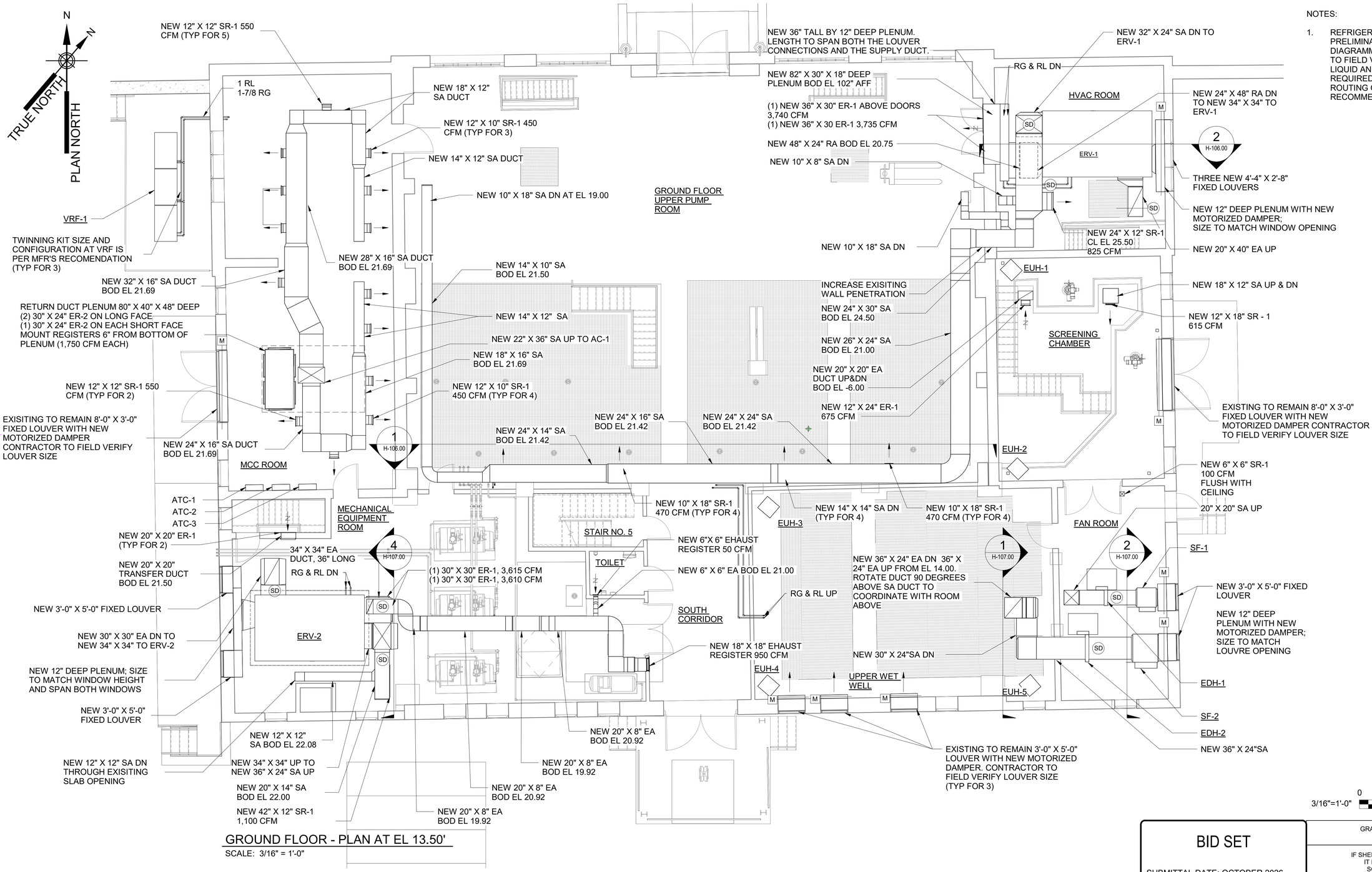

NOTES:

1. REFRIGERANT PIPING IS PRELIMINARY AND DIAGRAMMATICAL. CONTRACTOR TO FIELD VERIFY THE REQUIRED LIQUID AND GAS PIPE SIZE REQUIRED BASED ON FIELD ROUTING OF PIPING AND MFR RECOMMENDATION.

GROUND FLOOR - PLAN AT EL 13.50'

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

0 5 10 FT.
3/16"=1'-0"

BID SET

SUBMITTAL DATE: OCTOBER 2026

GRAPHIC SCALES CHECK BEFORE USE

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AECOM
605 THIRD AVENUE, 3rd FL.
NEW YORK, NY 10158, US

REGISTERED ENGINEER EDUARDO J. CHAVIANO No. 111609 STATE OF NEW YORK

Environmental Protection

ACCOUNTABLE MANAGER: JOHN GOULAS, P.E.
PORTFOLIO MANAGER: KEVIN ELLENWOOD, P.E.
EXECUTIVE DIRECTOR: NAYANKUMAR SHAH, P.E.

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CAPITAL PROJECT WP-269
RECONSTRUCTION OF
PAERDEGAT PUMPING STATION
CONTRACT PS-318
HVAC
GROUND FLOOR

DATE: OCTOBER 2026
SCALE: 3/16" = 1'-0"
SHEET NO: 134 OF 274
DRAWING NO. H-103.00

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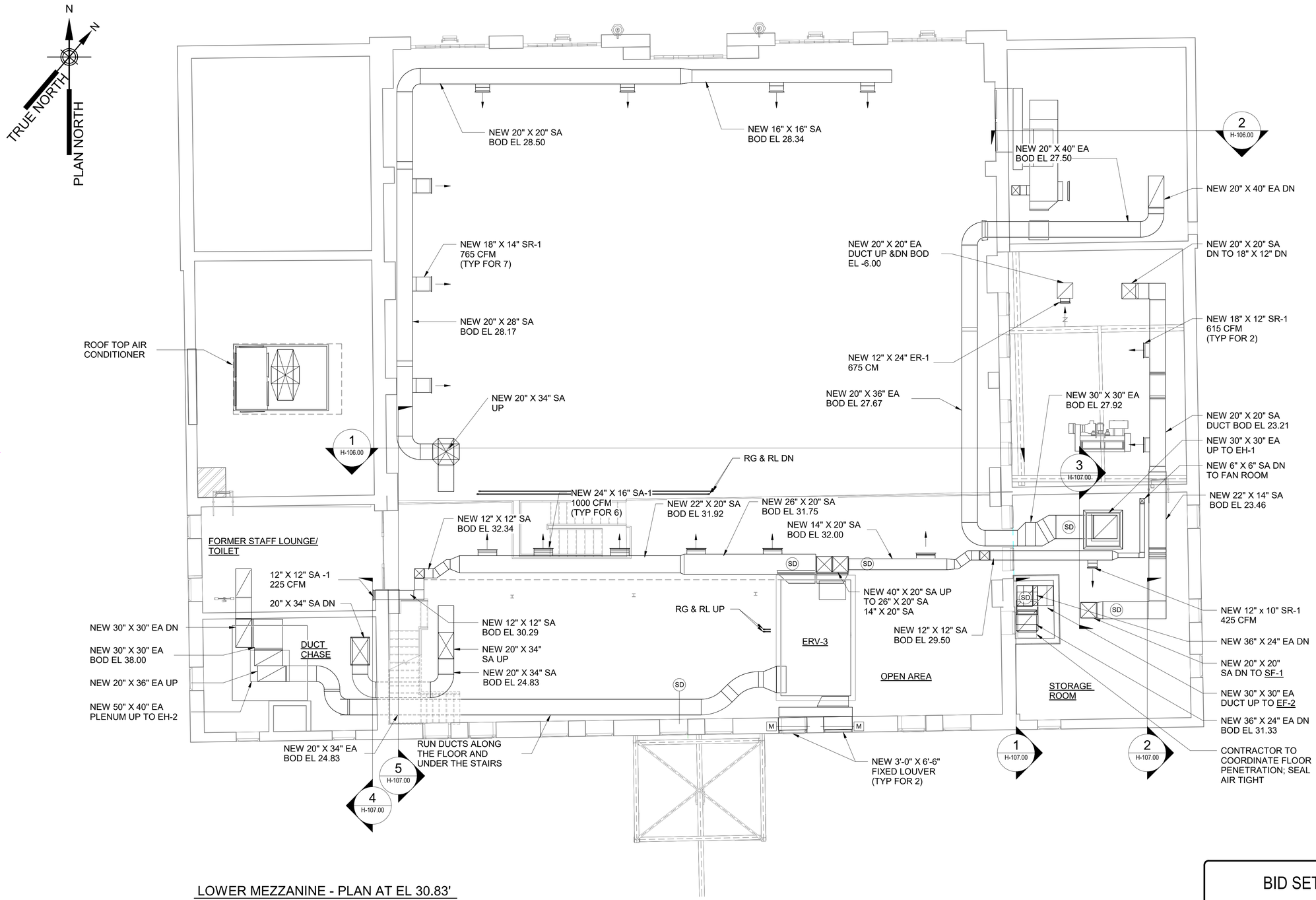

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LOWER MEZZANINE - PLAN AT EL 30.83'

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

3/16"=1'-0" 0 5 10 FT.

BID SET

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NEW YORK, NY 10158, US

REGISTERED ENGINEER EDWARD J. CHIAVIANO No. 111699 STATE OF NEW YORK

Environmental Protection

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CAPITAL PROJECT WP-269
RECONSTRUCTION OF
PAERDEGAT PUMPING STATION
CONTRACT PS-318
HVAC
LOWER MEZZANINE

DATE: OCTOBER 2026
SCALE: 3/16" = 1'-0"
SHEET NO: 135 OF 274
DRAWING NO. H-104.00

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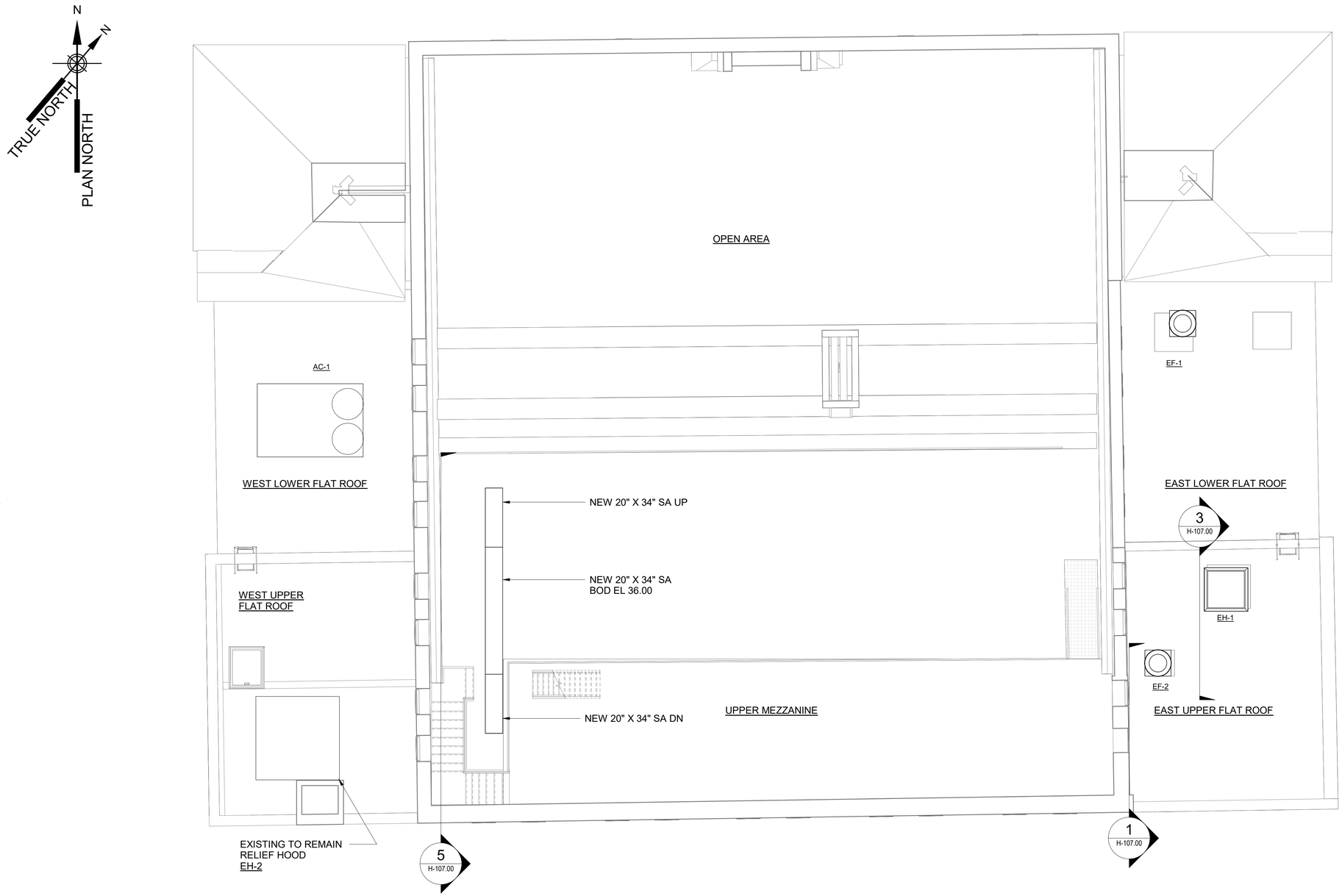

EAST AND WEST FLAT ROOFS AND UPPER MEZZANINE - PLAN AT EL 33.50'

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

0 5 10 FT.
3/16"=1'-0"

BID SET

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REGISTERED ENGINEER — EDWARD J. CHAVIANO — No. 111609 — STATE OF NEW YORK

Environmental Protection

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EXECUTIVE DIRECTOR: NAYANKUMAR SHAH, P.E.

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CAPITAL PROJECT WP-269
RECONSTRUCTION OF
PAERDEGAT PUMPING STATION
CONTRACT PS-318
HVAC
EAST AND WEST FLAT ROOFS AND UPPER MEZZANINE

DATE: OCTOBER 2026
SCALE: 3/16" = 1'-0"
SHEET NO: 136 OF 274
DRAWING NO. H-105.00

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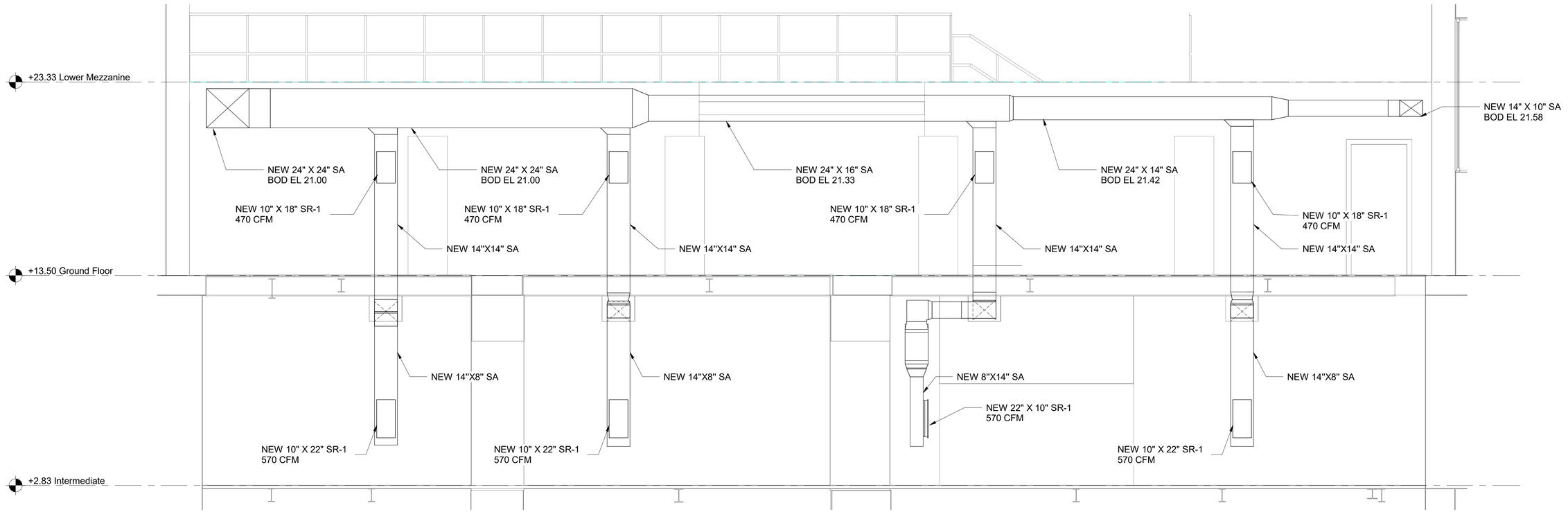
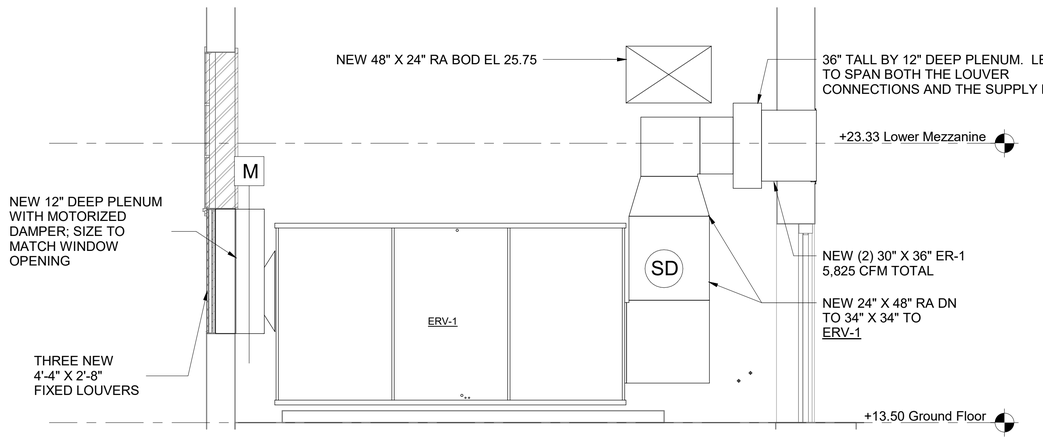


1 H-102.00 GROUND FLOOR AND DISCHARGE PIPING GALLERY VIEW SOUTH

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



2 H-103.00 HVAC ROOM SOUTH

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

3/8"=1'-0" 0 1 2 3 5 FT.

BID SET

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NEW YORK, NY 10158, US

REGISTERED ENGINEER EDWARD J. CHAVIANO Eduardo Chaviano No. 111609 STATE OF NEW YORK

NYC Environmental Protection

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CAPITAL PROJECT WP-269
RECONSTRUCTION OF
PAERDEGAT PUMPING STATION
CONTRACT PS-318
HVAC
SECTIONS 1

DATE: OCTOBER 2026
SCALE: 3/8" = 1'-0"
SHEET NO: 137 OF 274
DRAWING NO. H-106.00

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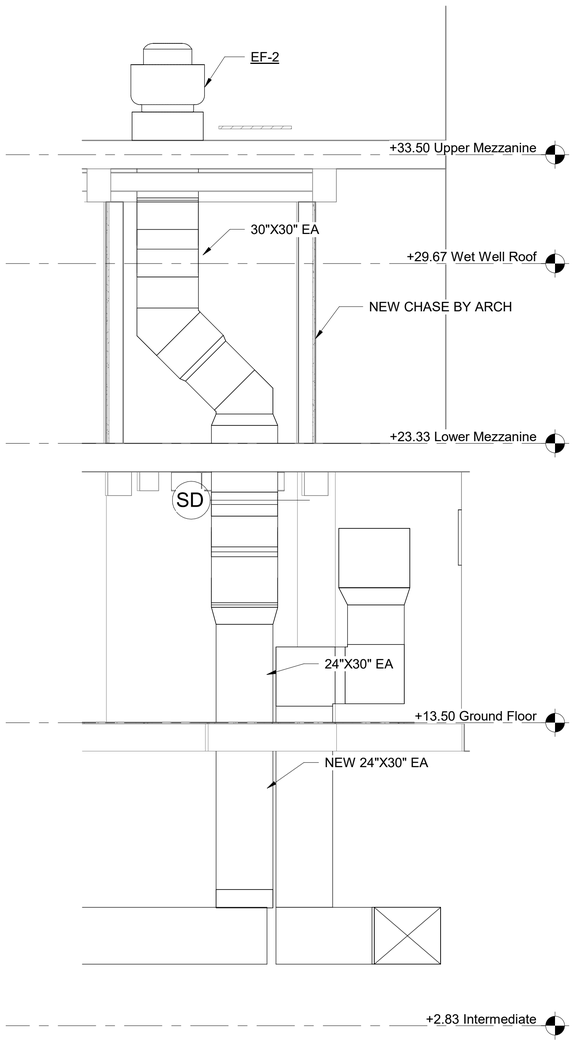
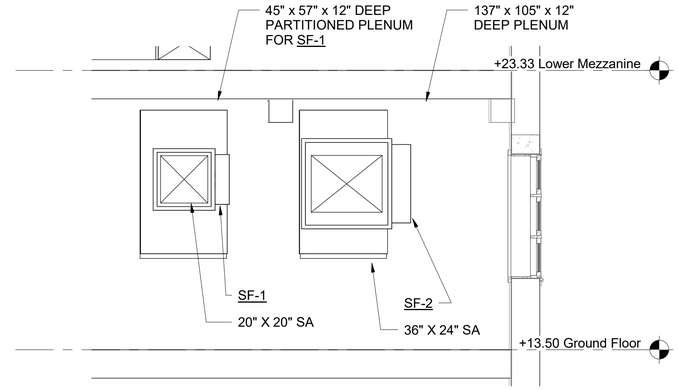


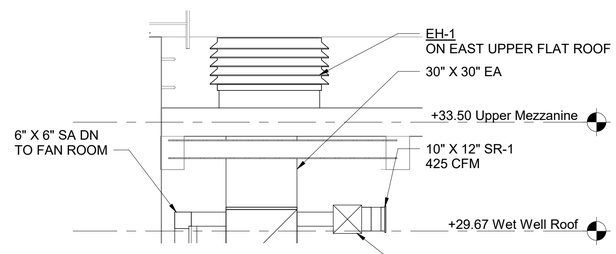
1 H-102.00 WET WELL DUCTWORK EAST

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



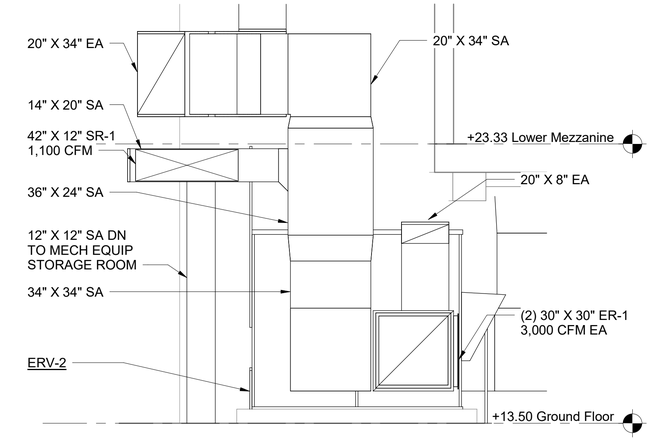
2 H-103.00 FAN ROOM EAST

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



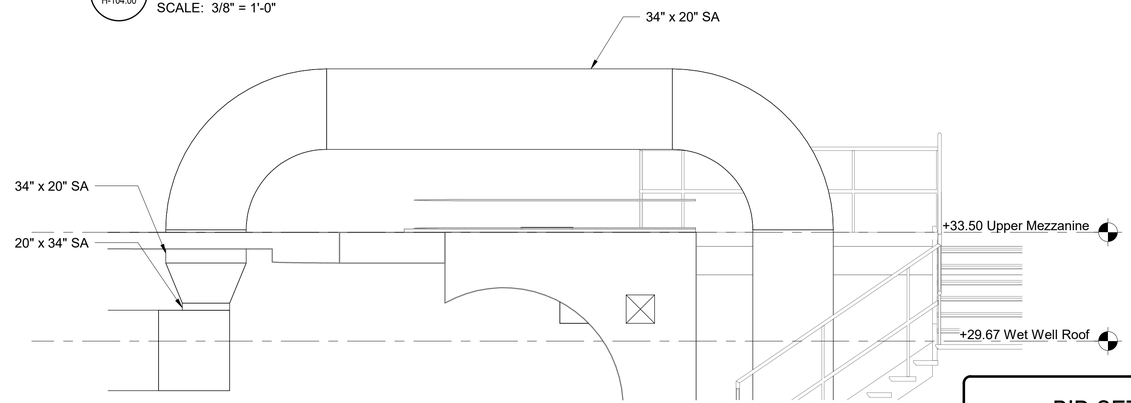
3 H-104.00 MEZZANINE STORAGE ROOM EAST

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



4 H-103.00 MECHANICAL EQUIPMENT ROOM WEST

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



5 H-104.00 UPPER MEZZANINE EAST

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

3/8"=1'-0" 0 1 2 3 5 FT.

BID SET

SUBMITTAL DATE: OCTOBER 2026

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NEW YORK, NY 10158, US

REGISTERED ENGINEER EDWARD J. CHAVIANO No. 111669 STATE OF NEW YORK

NYC Environmental Protection

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CORONA, NEW YORK 11368
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CAPITAL PROJECT WP-269
RECONSTRUCTION OF
PAERDEGAT PUMPING STATION
CONTRACT PS-318
HVAC
SECTIONS 2

DATE: OCTOBER 2026
SCALE: 3/8" = 1'-0"
SHEET NO: 138 OF 274
DRAWING NO. H-107.00

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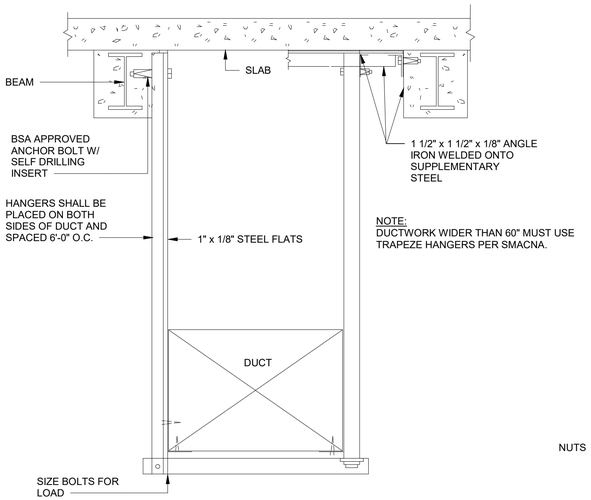
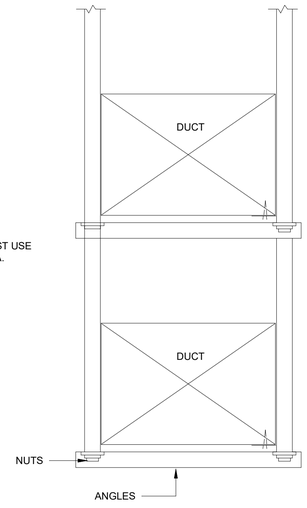


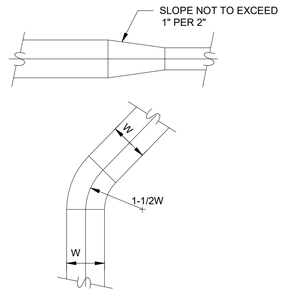
NOTE:
DUCTWORK WIDER THAN 60" MUST USE TRAPEZE HANGERS PER SMACNA.



NOTE: TRAPEZE HANGERS MAY BE USED.

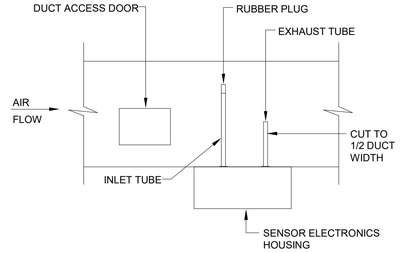
TRAPEZE DUCT HANGER

NTS



CONSTRUCTION OF TRANSITION AND 45° ELBOWS

NTS

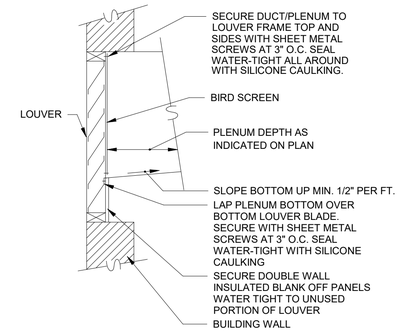


NOTES:

1. HOLE IN INLET TUBE TO FACE AIR STREAM.
2. MOUNT HOUSING IN VERTICAL OR HORIZONTAL PLANE; ANGULAR MOUNTING NOT PERMITTED.
3. TUBES TO RUN PARALLEL TO FLOOR.

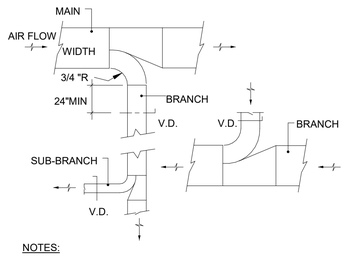
DUCT SMOKE DETECTOR DETAIL

NTS



LOUVER - PLENUM / DUCT CONNECTION DETAIL

NTS

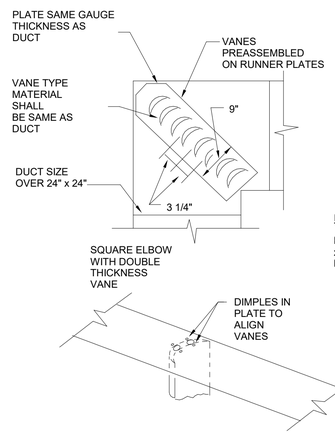


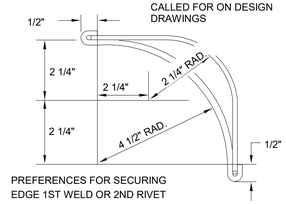
NOTES:

1. PROVIDE VOLUME DAMPERS AT ALL BRANCH CONNECTIONS SERVING SUPPLY, RETURN AND EXHAUST AIR MAINS.
2. PROVIDE VOLUME DAMPERS AT EACH SUB-BRANCH CONNECTIONS SERVING RETURN AND EXHAUST AIR BRANCHES.
3. PROVIDE VOLUME DAMPER AT EACH SUPPLY AIR SUB-BRANCH CONNECTION & SUBSEQUENT SUB-BRANCH CONNECTIONS.
4. VOLUME DAMPERS AT DUCTS OVER 2 SQ.FT. SHALL BE OF THE OPPOSED BLADE TYPE UNLESS OTHERWISE NOTED.

DUCT BRANCH AND SUB-BRANCH CONNECTIONS

NTS





DOUBLE THICKNESS VANES

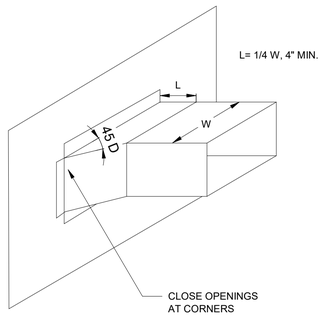
FOR USE IN DUCTS GREATER THAN 24" x 24" IN SIZE. USE SAME GAUGE AS DUCT BUT NOT TO EXCEED 20 GAUGE.

NOTES:

PROVIDE 1 STAY FOR DUCTS 72" TO 120" WIDE & 2 STAYS AT 1/3 POINTS FOR 120" & ABOVE.

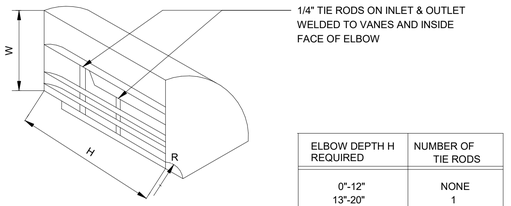
TURNING VANE DETAIL

NTS



45° BRANCH CONNECTION

NTS



ELBOW DEPTH H REQUIRED	NUMBER OF TIE RODS
0"-12"	NONE
13"-20"	1
21"-48"	2
49"-64"	3
65"-80"	4

CONSTRUCTION OF RADIUS ELBOWS

NTS

BID SET

SUBMITTAL DATE: OCTOBER 2026

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CAPITAL PROJECT WP-269
RECONSTRUCTION OF
PAERDEGAT PUMPING STATION
CONTRACT PS-318
HVAC
STANDARD DETAIL - SHEET 1

DATE: OCTOBER 2026
SCALE: AS INDICATED
SHEET NO: 139 OF 274
DRAWING NO. H-108.00

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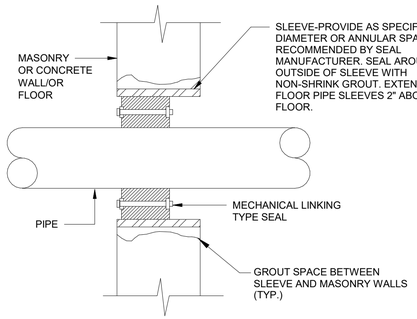
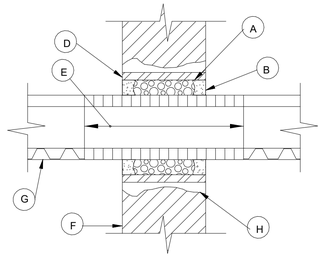


EXTERIOR WALL/FLOOR PIPE PENETRATION DETAIL

NTS



(A) PROVIDE MIN. 1/4" CLEARANCE BETWEEN PIPE SLEEVE OR CORE DRILLED HOLE AND PIPE. PACK CLEARANCE SPACE WITH SPECIFIED INSULATION.

(B) PROVIDE SPECIFIED END SEALANT.

(C) NOT USED.

(D) SLEEVE-PROVIDE AS SPECIFIED.

(E) CALCIUM SILICATE, CELLULAR GLASS, OR APPROVED EQUAL INSULATION THRU PENETRATION AND EXTENDED 2" ON BOTH SIDES OF WALL; PROVIDE METAL JACKET AS SPECIFIED OVER INSULATION.

(F) WALL

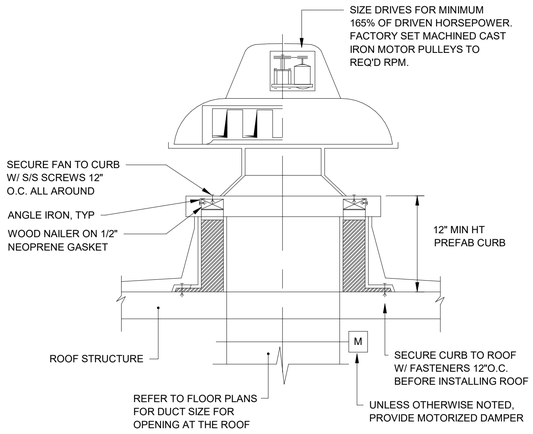
(G) SPECIFIED INSULATION.

(H) GROUT SPACE BETWEEN SLEEVE AND MASONRY WALLS.

INTERIOR WALL PIPE PENETRATION DETAIL

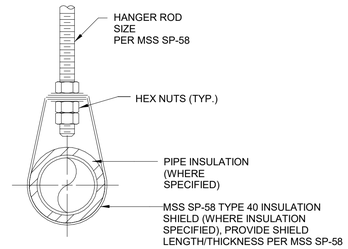
(NOT FOR WATER TIGHT CONSTRUCTION)

NTS



ROOF EXHAUST FAN

NTS



MSS SP-58 TYPE 7 PIPE HANGER DETAIL (FOR 1-1/2" AND SMALLER PIPE SIZES - EXCLUDING INSULATION)

NTS

BID SET

SUBMITTAL DATE: OCTOBER 2026

GRAPHIC SCALES CHECK BEFORE USE

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DESIGNED BY: MOHAMED KHORSHED
DRAWN BY: MENGHONG WANG
CHECKED BY: EDUARDO CHAVIANO, P.E.
DESIGN LEAD: MOHAMED KHORSHED
PROJECT MANAGER: AIMEE BOULET, P.E.

AECOM
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REGISTERED ENGINEER EDUARDO J. CHAVIANO No. 111669 STATE OF NEW YORK

Environmental Protection

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PORTFOLIO MANAGER: KEVIN ELLENWOOD, P.E.
EXECUTIVE DIRECTOR: NAYANKUMAR SHAH, P.E.

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BUREAU OF ENGINEERING DESIGN & CONSTRUCTION
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CORONA, NEW YORK 11368
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CAPITAL PROJECT WP-269
RECONSTRUCTION OF
PAERDEGAT PUMPING STATION
CONTRACT PS-318
HVAC
STANDARD DETAIL - SHEET 2

DATE: OCTOBER 2026
SCALE: AS INDICATED
SHEET NO: 140 OF 274
DRAWING NO. H-109.00

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FAN SCHEDULE

TAG NO.	MANUFACTURER MODEL NO. OR EQUAL	AREA SERVED	TYPE	DRIVE	CFM	ESP (IN. WG.)	MOTOR DATA			
							HP	VOLT	PHASE	ENCL
EF-1	GREENHECK CUBE-180HP	SCREENING CHAMBER	UPBLAST CENTRIFUGAL	BELT	2,700	1.50	1.5	460	3	TEFC
EF-2	GREENHECK CUBE-300	WET WELL	UPBLAST CENTRIFUGAL	BELT	7,100	1.50	5	460	3	TEFC
SF-1	GREENHECK BSQ-160HP	SCREENING CHAMBER	INLINE CENTRIFUGAL	BELT	2,460	1.25	1	460	3	TEFC
SF-2	GREENHECK BSQ-240HP	WET WELL	INLINE CENTRIFUGAL	BELT	6,600	1.25	3	460	3	TEFC

1. MOTOR OPERATED DAMPER.
2. SPRING HANGING ISOLATOR KIT.
3. OSHA MOTOR COVER/BELT GUARD.
4. ALUMINUM CONSTRUCTION.
5. 1/2"x 1/2" ALUMINUM WELDED WIRE MESH INLET GUARD.
6. FACTORY-APPLIED CHEMICAL FUMES RESISTANT COATING - POLYESTER, OR EQUAL, APPLY BEFORE ASSEMBLY OVER ENTIRE AND ACCESSORIES UNIT SO THAT EACH COMPONENT IS COATED INSIDE AND OUT.
7. INSULATED 12" HIGH ROOF CURB; ALUMINUM CONSTRUCTION.
8. INSULATED HOUSING.
9. VARIABLE SPEED CONTROL AND ECM.
10. EXTENDED LUBE LINES.
11. 2-SPEED CONTROL AND ECM.
12. POWER DISCONNECT.
13. WALL COLLAR AND MOTOR SIDE SAFETY CAGE.
14. PREMIUM EFFICIENCY MOTOR.
15. BOLTED ACCESS DOOR.
16. AMCA B SPARK RESISTANT CONSTRUCTION.
17. CURB ADAPTER.
18. BACKDRAFT DAMPER.
19. PROVIDE INVERTER DUTY MOTOR. VFD BY DIV. 16.
20. SECONDARY SUPPORT CABLE.
21. SPEED CONTROLLER.

DIFFUSER, REGISTER AND GRILLE SCHEDULE

TAG NO.	MANUFACTURER MODEL NO.	FUNCTION	TYPE	MATERIAL	NECK SIZE (IN.)	BORDER	DAMPER	MAX APD* (IN. WG)	MAX NC	STYLE
SR-1	TITUS 300RS-SS	SUPPLY	REGISTER	316 STAINLESS STEEL	SEE PLANS	SURFACE MOUNT	YES	0.10	30	DOUBLE DEFLECTION INDIVIDUALLY ADJUSTABLE BLADES SHORT FRONT BLADES, 3/4" BLADE SPACING
ER-1	TITUS 350RL-SS	EXHAUST	REGISTER	316 STAINLESS STEEL	SEE PLANS	SURFACE MOUNT	YES	0.05	30	FIXED 45° DEFLECTION SHORT FRONT BLADES, 3/4" BLADE SPACING

* AT 45° BLADE ANGLE

ENERGY RECOVERY VENTILATOR SCHEDULE

TAG NO.	LOCATION	SERVES	TYPE	AIR HANDLING DATA								HEAT RECOVERY	ELECTRICAL				FILTER TYPE	SELECTION BASED ON MFR / MODEL
				CFM		SP (IN WG)		SUPPLY FAN		EXHAUST FAN								
				TOTAL	MIN OA	ESP	TSP	MTR ENCL.	HP	MTR ENCL.	HP	TYPE	VOLTS	PH	MCA	MOCP		
ERV-1	HVAC ROOM	LOWER LEVELS	WHEEL	7,475	7,235	1.00	1.50	TEFC	10	TEFC	10	DESICCANT WHEEL	460	3	33	40	MERV 8	YORK EVT-88
ERV-2	MECH EQUIP ROOM	DRY WELL	WHEEL	7,225	6,980	1.00	1.50	TEFC	10	TEFC	10	DESICCANT WHEEL	460	3	33	40	MERV 8	YORK EVT-88
ERV-3	HVAC ROOM	UPPER LEVELS	WHEEL	7,050	6,750	1.00	1.50	TEFC	10	TEFC	10	DESICCANT WHEEL	460	3	33	40	MERV 8	YORK EVT-88

* SELECTION BASED ON TRANE, YORK OR EQUAL.

VRF HEAT PUMP SCHEDULE - OUTDOOR UNITS

TAG NO.	MANUFACTURER MODEL NO. OR EQUAL	UNITS SERVED	COOLING DATA					HEATING DATA			COMPRESSORS			FANS		ELECTRICAL DATA (PER MODULE)*					DECIBEL DB (a)	OPER WT (LBS)
			REFRIG TYPE	COOLING CAPACITY (MBH)	AMBIENT TEMP (DB °F)	MIN SAT. SUCTION TEMP. (°F)	MIN EER	HEATING CAPACITY (MBH)	AMBIENT TEMP. (WB °F)	MIN COP	QTY	KW (EA)	LRA (EA)	QTY	KW (EA)	MODULE QTY	MCA	MOCP	VOLTS	PHASE		
VRF-1	YORK YVAHP384	ERV-1, 2, 3	R410A	384	95	-	9.6	432	50	2.2	1	-	-	6	-	3	78	95	460	3	69	2,330

* EACH OUTDOOR UNIT CONSISTS OF FIVE MODULES WITH A SINGLE POWER CONNECTION

1. PROVIDE VRF UNIT AND MOUNT ON 18" STANDS
2. PROVIDE LOW AMBIENT TEMP KIT
3. PROVIDE REFRIGERANT KIT WITH LIQUID AND GAS TWINNING CONNECTIONS AT THE VRF AND AT THE ERV UNIT IT SERVES
4. YORK TO PROVIDE CONTROL PACKAGE AND INTERLOCK WITH EACH ERV THAT IT SERVES

PACKAGED ROOFTOP AIR CONDITIONING UNIT SCHEDULE

TAG NO.	SELECTION BASED ON MFR / MODEL	SERVES	TYPE	TOTAL	MIN OA	SP (IN WG)	FAN			NOMINAL	NET COOLING (MBH)		EAT (°F)		LAT (°F)		COMP.	COND. FAN	REFRIG.	FILTER	HEAT	VOLTS	PH	MCA	MOP	EER
				CFM	CFM	ESP	DRIVE	MTR ENCL.	BHP	HP	TONS	TOTAL	SENSIBLE	DB	WB	DB	WB	NO.	NO./HP	TYPE	EFFIC.	MBH			A	A	
AC-1	TRANE EBC210A4	MCC CONTROL ROOM	ROOFTOP DOWNFLOW	7,000	350	1.25	BELT	ODP	3.75	5	17.5	210.5	208.1	90	69	67	65	2	2/1.0	454-B	-	-	460	3	42	60	11

1. AIR CONDITIONING UNIT SHALL INCLUDE INTAKE HOOD, BAROMETRIC RELIEF HOOD & DAMPER, FILTER, COOLING COIL, FAN SECTION & ELECT. UNPOWERED CONVENIENCE OUTLET. PIPE CONDENSATE DRAINS TO NEAREST ROOF DRAIN.
2. UNIT SHALL BE HIGH EFFICIENCY, SINGLE ZONE VAV, DOWNFLOW CONFIGURATION WITH THROUGH THE BASE ELECTRICAL CONNECTIONS. DRY BULB ECONOMIZER. VAV CONTROL PROVIDED WITH THE AC UNIT.
3. UNIT SHALL INCLUDE FACTORY CONTROLS AND A PROGRAMMABLE ZONE SENSOR. TRANE ACCESSORY BAYSENS119.
4. UNIT SHALL BE SINGLE ZONE VAV WITH DUAL COMPRESSORS.
5. DISCONNECT SWITCH.

GRAVITY ROOF VENT SCHEDULE

TAG NO.	MANUFACTURER MODEL NO. OR EQUAL	UNIT SERVED	TYPE	THROAT SIZE (IN. X IN.)	CFM	MAX. PD (IN. WG.)
EH-1	GREENHECK WRH	ERV-1	LOUVERED EXHAUST	34" X 34"	5,900	0.10

1. ALUMINUM BIRD SCREEN, 1/2" X 1/2" MESH
2. 12" HGT ROOF CURB
3. ALUMINUM PANEL AND BASE

ELECTRIC DUCT HEATER SCHEDULE

TAG NO.	SELECTION BASED ON MFR / MODEL	LOCATION	CAPACITY (KW)	CFM	ELECTRICAL		DUCT DIMENSIONS (INSIDE)		PRESSURE DROP-MAX IN WC	NO. OF HEATING STAGES	CONTROL CIRCUIT VOLTAGE
					VOLT	PH	W	H			
EDH-1	INDEECO ULTRA-SAFE	SF-1	30	2,460	480	3	30	12	0.10	3	120
EDH-2	INDEECO ULTRA-SAFE	SF-2	30	6,600	480	3	42	18	0.10	3	120

1. SLIP-IN OPEN COIL HEATERS MUST INCLUDE THERMAL CUTOUTS, AIRFLOW SWITCH, CONTACTORS, FUSES, AND CONTROL CIRCUIT TRANSFORMER. PROVIDE DUCT MOUNTED TEMPERATURE SENSOR TO CONTROL HEATER.
2. HEATER SHALL BE PROVIDED WITH SCR CONTROL AND DISCONNECT SWITCH.
3. HEATER SHALL INCLUDE LOW AIR FLOW AND HEATER ON PILOT LIGHTS.
4. ALL HEATERS- CONTRACTOR TO COORDINATE TERMINAL BOX LOCATION FROM THE DRAWINGS.
5. CONTROL PANEL SHALL MEET NEMA 4REQUIREMENTS.

ELECTRIC UNIT HEATER SCHEDULE

TAG NO.	MANUFACTURER MODEL NO. OR EQUAL	AREA SERVED	CFM	MTG. HT. (FT.) *	ELECTRICAL DATA				
					KW	HT. STAGES	AMPS	VOLTS	PHASE
EUH-1	INDEECO ULTRA SAFE EXP	SCREENING CHAMBER	-	7.5	15	1	19	480	3
EUH-2		SCREENING CHAMBER	-	7.5	15	1	19	480	3
EUH-3		WET WELL	-	7.5	15	1	19	480	3
EUH-4		WET WELL	-	7.5	15	1	19	480	3
EUH-5		WET WELL	-	7.5	15	1	19	480	3

* MOUNTING HEIGHT IS TO BOTTOM OF UNIT FROM FINISHED FLOOR

1. CHECK ELECTRICAL AREA CLASSIFICATION, PROVIDE EXPLOSION PROOF ELECTRIC UNIT HEATERS IN EXPLOSIVE AREAS
2. MOUNTINGKIT
3. CORROSION RESISTANT
4. CHECK ELECTRICAL AREA CLASSIFICATION, PROVIDE NEMA 7 WALL MOUNTED THERMOSTAT FOR ALL EXPLOSIVE AREAS PROVIDE EXPLOSION PROOF WALL MOUNTED THERMOSTAT
5. 24V CONTROL VOLTAGE
6. WALL THERMOSTAT MIN. RANGE 30-75°F

BID SET

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NEW YORK, NY 10158, US

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Environmental Protection

ACCOUNTABLE MANAGER: JOHN GOULAS, P.E.
PORTFOLIO MANAGER: KEVIN ELLENWOOD, P.E.
EXECUTIVE DIRECTOR: NAYANKUMAR SHAH, P.E.

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CAPITAL PROJECT WP-269
RECONSTRUCTION OF
PAERDEGAT PUMPING STATION
CONTRACT PS-318
HVAC
EQUIPMENT SCHEDULE (FAN, HVAC UNITS, EUHS)

DATE: OCTOBER 2026
SCALE: 1" = 1'-0"
SHEET NO: 141 OF 274
DRAWING NO. H-110.00

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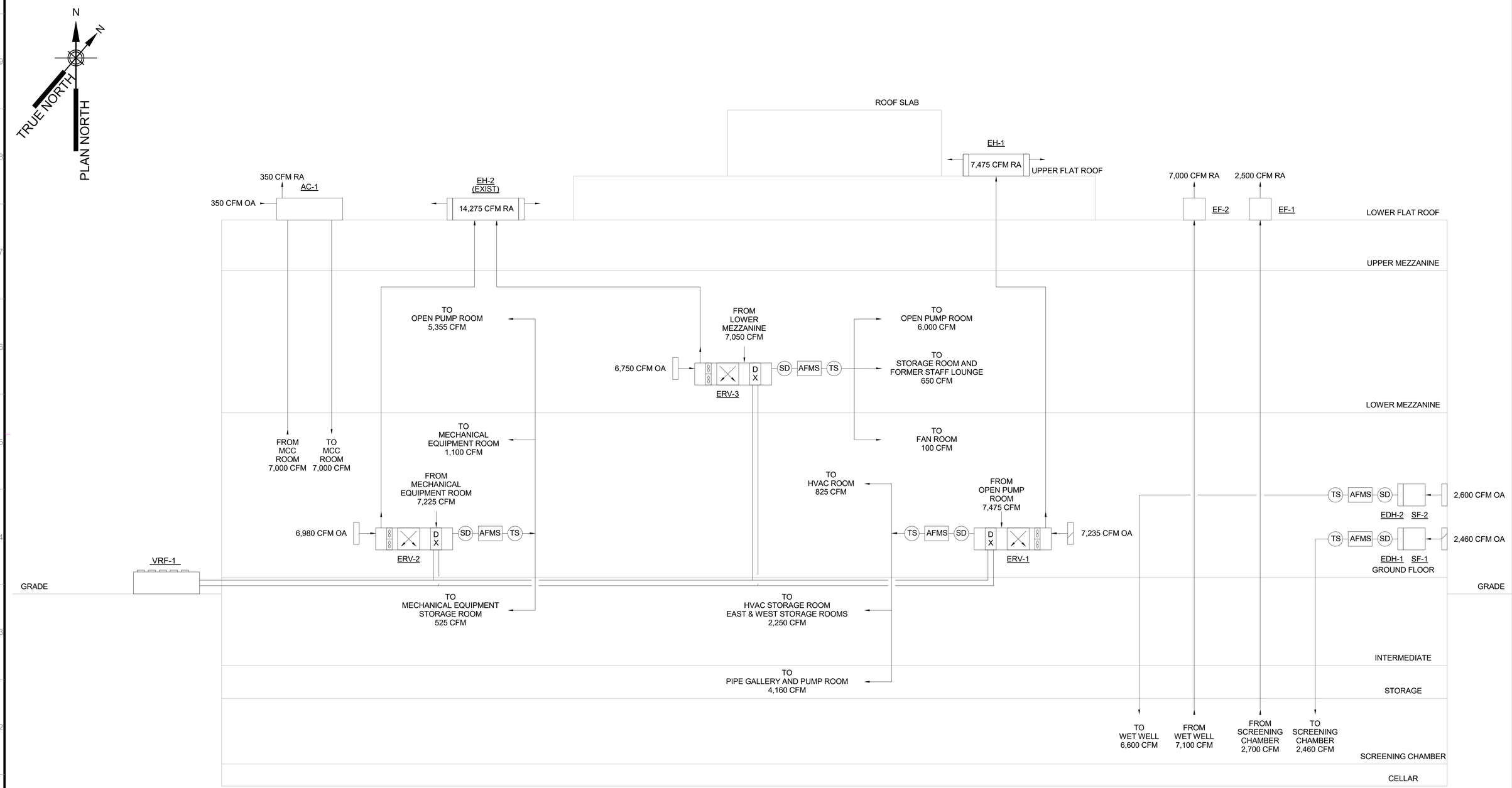

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CAPITAL PROJECT WP-269
RECONSTRUCTION OF
PAERDEGAT PUMPING STATION
CONTRACT PS-318
HVAC
AIR FLOW DIAGRAM

DATE: OCTOBER 2026
SCALE: 12" = 1'-0"
SHEET NO: 142 OF 274
DRAWING NO. H-111.00

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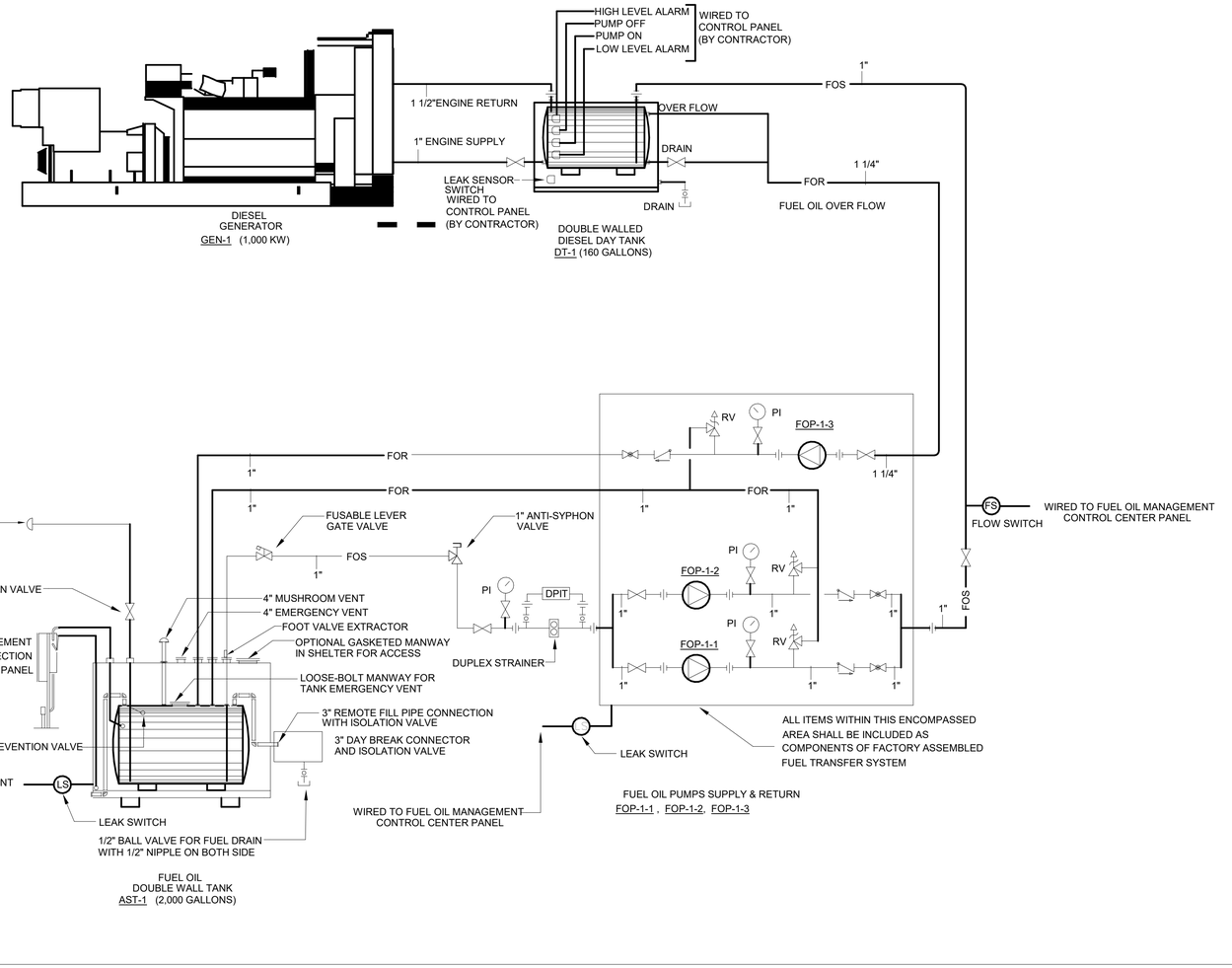

FUEL OIL SYSTEM FLOW DIAGRAM

SCALE: N.T.S.

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CAPITAL PROJECT WP-269
RECONSTRUCTION OF PAERDEGAT PUMPING STATION
CONTRACT PS-318
HVAC
PROCESS FLOW DIAGRAM

DATE: OCTOBER 2026
SCALE: NOT TO SCALE
SHEET NO: 143 OF 274
DRAWING NO. H-112.00

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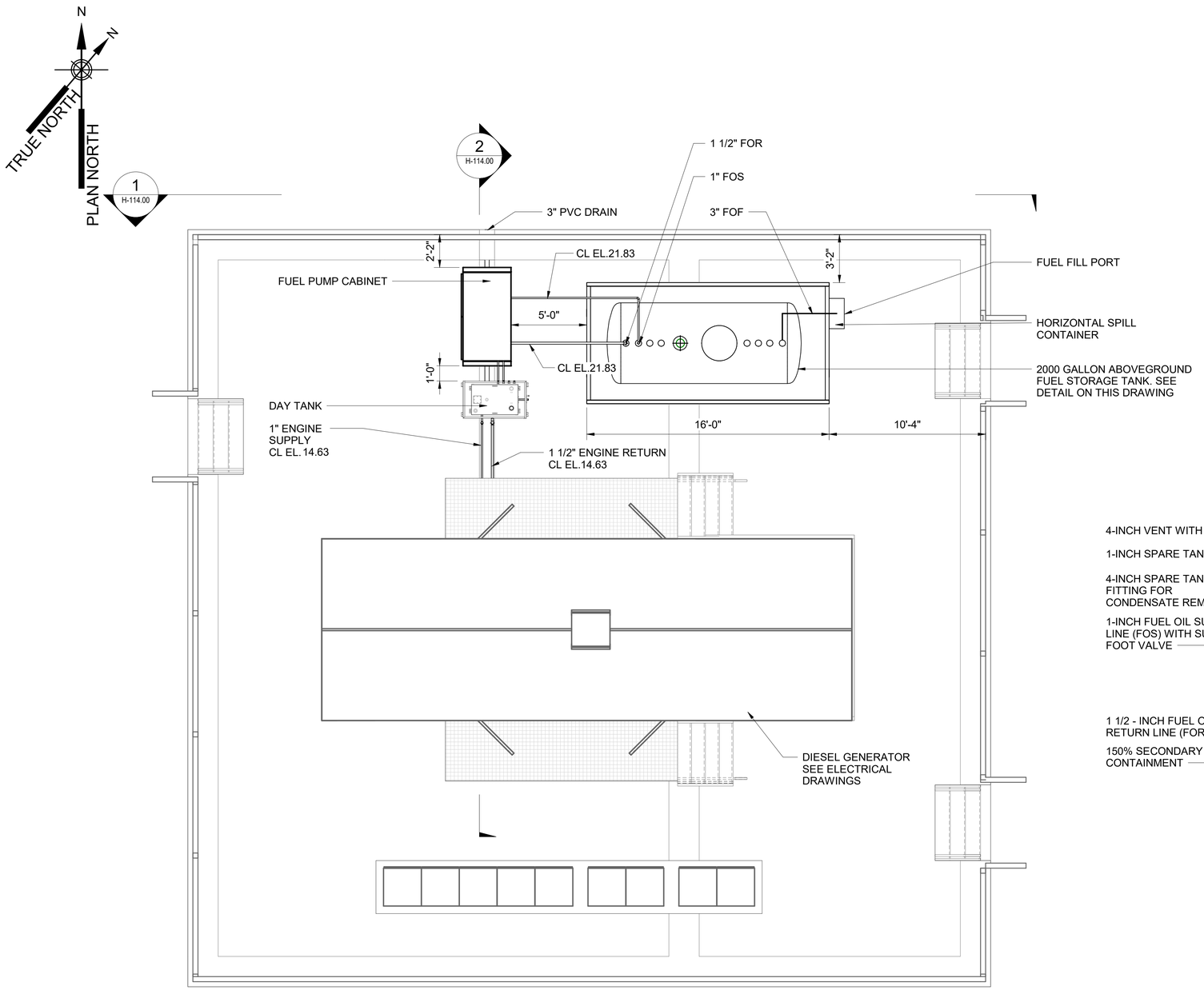
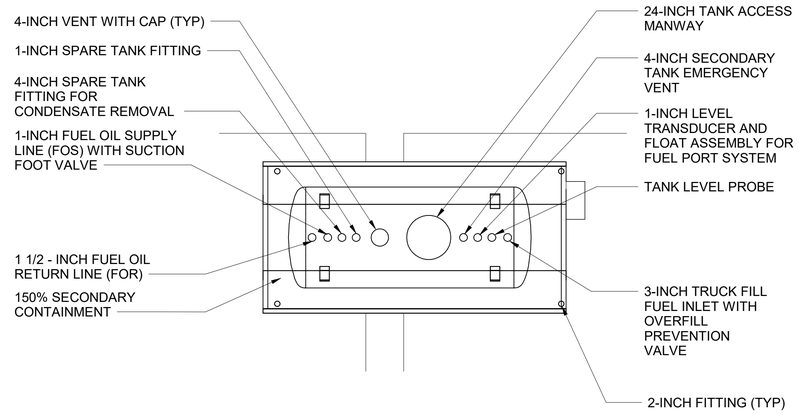


GENERATOR ARRANGEMENT PLAN

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



FUEL STORAGE TANK PLAN VIEW

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

GENERAL NOTES:

1. VERIFY ALL DIMENSIONS AND INFORMATION PRIOR TO INSTALLATION OF EQUIPMENT. ANY CONFLICTS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO PROCEEDING.

2. SUBMIT DETAILS OF SUPPORTS FOR ALL EXPOSED FUEL PIPING.

3. ALL MOUNTING HARDWARE, REGARDLESS OF THE LOCATION AND/OR APPLICATION SHALL BE 316 STAINLESS STEEL.

4. ALL MEASUREMENT AND CONTROL INSTRUMENTATION AND EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S REQUIREMENTS. MAINTAIN MANUFACTURER'S REQUIRED DISTANCE UPSTREAM AND DOWNSTREAM BETWEEN PIPING ELEMENTS SUCH AS FITTINGS AND VALVES.

5. PROVIDE FIRE SUPPRESSION AND PROTECTION IN ACCORDANCE WITH APPLICABLE NYCBC, NFPA, AND FDNY CODES.

0 4 8 FT.

1/4"=1'-0"

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CAPITAL PROJECT WP-269
RECONSTRUCTION OF
PAERDEGAT PUMPING STATION
CONTRACT PS-318
HVAC
GENERAL ARRANGEMENT PLAN
GENERATOR AREA

DATE: OCTOBER 2026
SCALE: 1/4" = 1'-0"
SHEET NO: 144 OF 274
DRAWING NO. H-113.00

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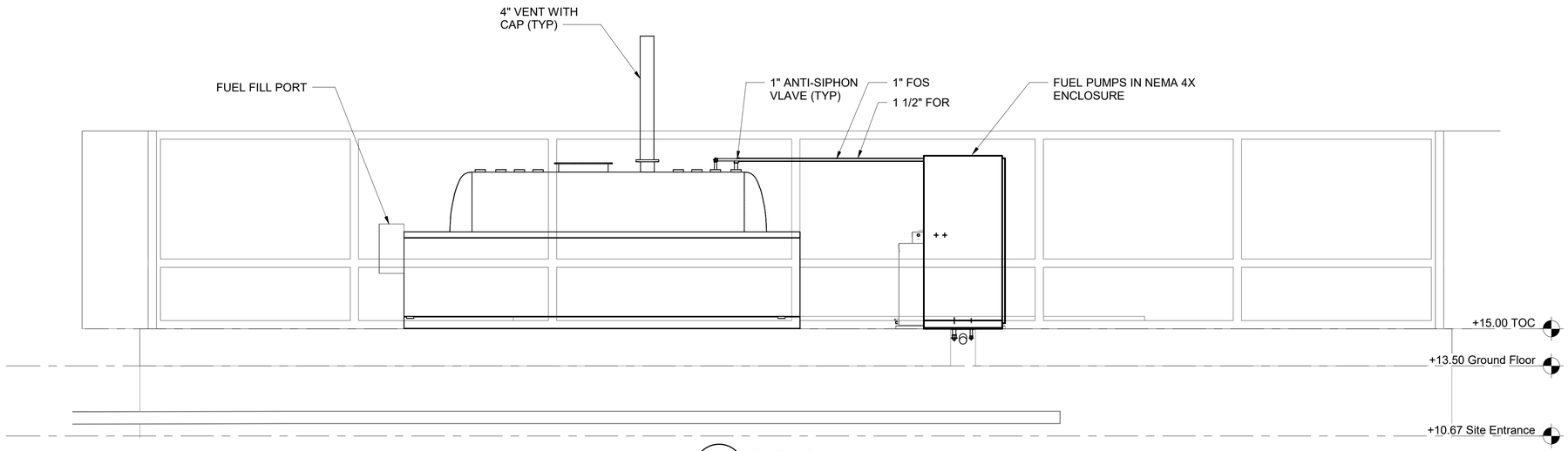
GENERAL NOTES:

1. FUEL STORAGE TANK SHALL BE INSTALLED IN ACCORDANCE WITH ALL APPLICABLE CODES INCLUDING BUT NOT LIMITED TO NYC BUILDING CODE, NYC MECHANICAL CODE AND FDNY CODE.

2. COORDINATE ALL INSPECTIONS AND SPECIAL INSPECTIONS WITH NYCDOB, NYSDEC AND FDNY.

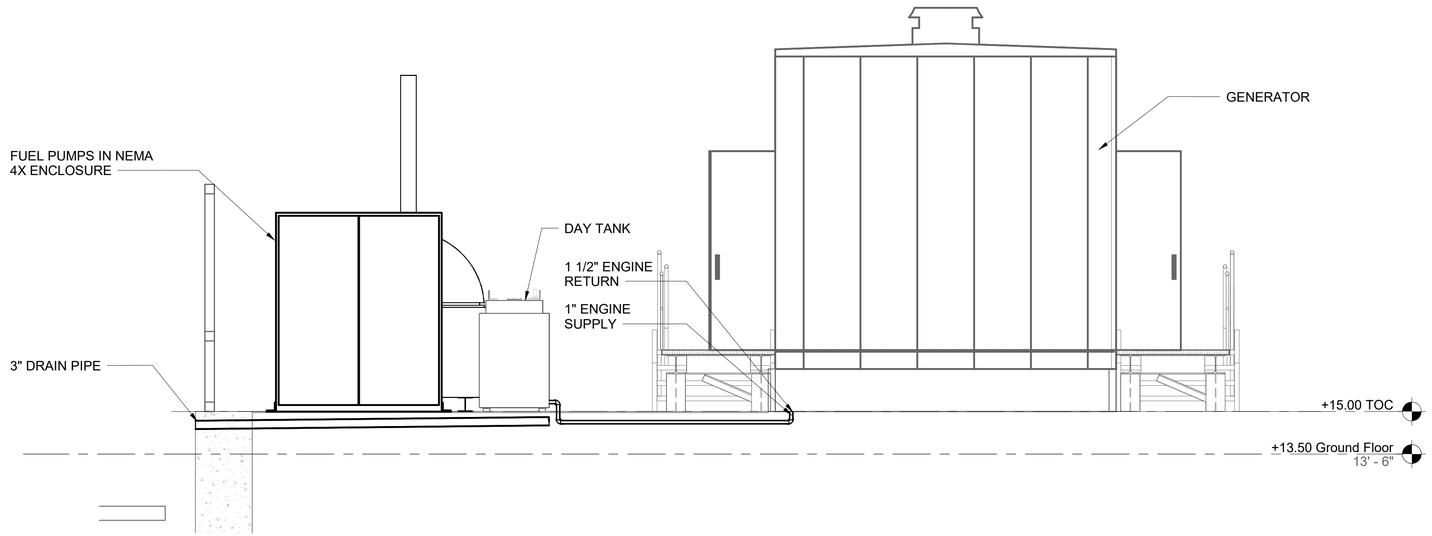
3. OBTAIN TANK REGISTRATIONS FROM NYSDEC PRIOR TO TANK FILLING.

4. FUEL STORAGE TANK RAINHOOD IS NOT SHOWN FOR CLARITY.



1 / H-113.00 SECTION

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



2 / H-113.00 SECTION

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

0 1 2 3 5 FT.

3/8"=1'-0"

BID SET

SUBMITTAL DATE: OCTOBER 2026

GRAPHIC SCALES CHECK BEFORE USE

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NO.	DATE	REVISIONS/DESCRIPTION	APPR'D.

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DRAWN BY: MENGHONG WANG
CHECKED BY: EDUARDO CHAVIANO, P.E.
DESIGN LEAD: MOHAMED KHORSHED
PROJECT MANAGER: AIMEE BOULET, P.E.

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REGISTERED ENGINEER EDUARDO J. CHAVIANO No. 111660 STATE OF NEW YORK

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ACCOUNTABLE MANAGER: JOHN GOULAS, P.E.
PORTFOLIO MANAGER: KEVIN ELLENWOOD, P.E.
EXECUTIVE DIRECTOR: NAYANKUMAR SHAH, P.E.

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CAPITAL PROJECT WP-269
RECONSTRUCTION OF
PAERDEGAT PUMPING STATION
CONTRACT PS-318
HVAC
FUEL STORAGE TANK, DAY TANK, AND PUMPING SYSTEM SECTION

DATE: OCTOBER 2026
SCALE: 3/8" = 1'-0"
SHEET NO: 145 OF 274
DRAWING NO. H-114.00

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FUEL OIL PUMP SCHEDULE

TAG NO.	MANUFACTURER MODEL NO.	SERVICE	TYPE	CAPACITY (GPM)	PRESSURE (PSI)	MOTOR DATA				REMARKS
						HP	VOLTS	PHASE	TYPE	
FOP-1-1	BY CONTRACTOR	FUEL OIL SUPPLY PUMP DUTY	GEAR PUMP	5.5	50	1	460	3	TEFC	(1) (2) (3) (4) (5) (6) (7) (8)
FOP-1-2	BY CONTRACTOR	FUEL OIL SUPPLY PUMP STAND-BY	GEAR PUMP	5.5	50	1	460	3	TEFC	(1) (2) (3) (4) (5) (6) (7) (8)
FOP-1-3	BY CONTRACTOR	FUEL OIL RETURN PUMP	GEAR PUMP	5.5	50	1	460	3	TEFC	(1) (2) (3) (4) (5) (6) (8)

(1) NEMA 4 ENCLOSURE
(2) POSITIVE DISPLACEMENT
(3) ALL COMPONENT SHALL BE COMPLY WITH NFPA 30 AND NFPA 37
(4) CONTROL PANEL
(5) TEMPERATURE RATING
(6) SUCTION LIFT
(6) FACTORY MOUNTED PRESSURE RELIEF VALVE
(7) PROVIDE DUPLEX LEAD/LAG AUTOMATIC OPERATION FOR SUPPLY PUMPS
(8) ISOLATION VALVE, CHECK VALVE, AND FLEXIBLE CONNECTORS

FUEL OIL TANK SCHEDULE

TAG NO.	MANUFACTURER MODEL NO.	LOCATION	SERVICE	CAPACITY (GAL)	MATERIAL	TYPE	DIMENSION	REMARKS
DT-1	BY CONTRACTOR	GENERATOR AREA	MAIN FUEL OIL STORAGE TANK	2,000	CARBON STEEL UL-142 STEEL	DOUBLE-WALL	PER MANUFACTURER	(1) (2) (3) (4) (5) (6) (8) (9) (10) (11)
AST-1	BY CONTRACTOR	GENERATOR AREA	DIESEL DAY TANK	160	UL-142 STEEL	DOUBLE-WALL	PER MANUFACTURER	(1) (2) (3) (4) (5) (6) (7)

(1) LEAK DETECTOR
(2) LEVEL GAUGE
(3) VENT
(4) FILL CONNECTION
(5) OVERFLOW
(6) HIGH/LOW LEVEL ALARM
(7) SUPPLY/RETURN ENGINE CONNECTIONS
(8) SUPPLY/RETURN CONNECTIONS
(9) EMERGENCY VENT
(10) MANWAY
(11) OVERFILL PREVENTION VALVE

DIESEL GENERATOR SCHEDULE

TAG NO.	MANUFACTURER MODEL NO.	LOCATION	SERVICE	FUEL	MOTOR DATA				REMARKS
					RATING	VOLTS	PHASE	FREQUENCY	
GEN-1	BY CONTRACTOR	GENERATOR AREA	EMERGENCY STANDBY GENERATOR	DIESEL	1,000 KW	480 V	3 PH	60 HZ	(1) (2) (3) (4) (5) (6) (7) (8) (9) (10) (11) (12)

(1) WEATHERPROOF AND SOUND ATTENUATION
(2) CRITICAL-GRADE EXHAUST SILENCER
(3) COOLING TYPE
(4) FLEXIBLE FUEL/EXHAUST CONNECTION
(5) DAY TANK CONNECTION
(6) RUNTIME REQUIREMENT
(7) 1,000 KW @ 0.8 POWER FACTOR
(8) AUTOMATIC START/STOP SYSTEM
(9) VIBRATION ISOLATION SPRINGS/PAD
(10) FACTORY-MOUNTED STARTING BATTERIES AND BATTERY CHARGER
(11) INTEGRAL CONTROL PANEL WITH DIGITAL DISPLAY
(12) COMPATIBLE WITH AUTOMATIC TRANSFER SWITCH

BID SET
SUBMITTAL DATE: OCTOBER 2026

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PORTFOLIO MANAGER: KEVIN ELLENWOOD, P.E.
EXECUTIVE DIRECTOR: NAYANKUMAR SHAH, P.E.

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CAPITAL PROJECT WP-269
RECONSTRUCTION OF
PAERDEGAT PUMPING STATION
CONTRACT PS-318
HVAC
SCHEDULES

DATE: OCTOBER 2026
SCALE: NOT TO SCALE
SHEET NO: 146 OF 274
DRAWING NO. H-115.00

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LEGEND

	BURIED PIPING
	ABOVE GROUND PIPING
AW	ACID WASTE
AV	ACID VENT
TW1	TEMPERED WATER (POTABLE)
TWR	TEMPERED WATER RETURN (POTABLE)
HW1	HOT WATER (POTABLE)
W1	COLD WATER (POTABLE)
W2	COLD WATER (NON-POTABLE)
HWR	HOT WATER RETURN (POTABLE)
V	VENT
V	BURIED VENT
	PIPE DROP
	PIPE RISER
	GATE VALVE
	CHECK VALVE
	BALL VALVE
	PRESSURE REDUCING VALVE
FD	FLOOR DRAIN
FCO	FLOOR CLEANOUT
HB	HOSE BIBB
WH	WALL HYDRANT
	VALVE IN RISER
	NEW WORK (SHOWN DARK LINE)
	EXISTING WORK (SHOWN LIGHT LINE)
	DEMOLITION
	CONTIUATION

	EMERGENCY SHOWER AND EYE/FACE WASH
	EMERGENCY EYE/FACE WASH
	OUTDOOR EMERGENCY EYE/FACE WASH
	OUTDOOR EMERGENCY SHOWER
	PRESSURE GAUGE WITH BALL VALVE SHUTOFF AND SNUBBER
	THERMOMETER
	STRAINER
	PITCH DOWN IN DIRECTION OF FLOW
	UNION
	END CAP
	LIMIT OF WORK BY TRADE
WHA	WATER HAMMER ARRESTOR
FS	FLOW SWITCH
	NEW WORK
	LIMIT OF REMOVAL
	HOSE BIBB
	DIRECTION OF FLOW

ABBREVIATIONS

AD	ACCESS DOOR
AFF	ABOVE FINISHED FLOOR
BOD	BOTTOM OF DUCT
CL	CENTER LINE
CO	CLEANOUT
CW	CITY WATER
DEG	DEGREE
DN	DOWN
D	DRAIN
EL	ELEVATION
ET	EXPANSION TANK
EWH	ELECTRIC WATER HEATER
FAI	FRESH AIR INTAKE
FCO	FLOOR CLEANOUT
FD	FLOOR DRAIN
FPHB	FREEZE - PROOF HOSE BIBB
FS	FLOW SWITCH
FT	FOOT, FEET
GAL	GALLONS
GPH	GALLONS PER HOUR
GPM	GALLONS PER MINUTE
HB	HOSE BIBB
HP	HORSEPOWER
HW1	POTABLE HOT WATER
HW2	SERVICE HOT WATER
IN. WC.	INCHES WATER COLUMN
KW	KILOWATTS
LAV	LAVATORY
MAX	MAXIMUM
MFR	MANUFACTURER
MIN	MINIMUM
NTS	NOT TO SCALE
OED	OPEN END DRAIN
ORD	OVERFLOW ROOF DRAIN
OSD	OVERFLOW STORM DRAIN
P	PLUMBING FIXTURE
PIT	PRESSURE INDICATING TRANSMITTER
PRV	PRESSURE REDUCING VALVE
PSIG	POUNDS PER SQUARE INCH (GAUGE)
RD	ROOF DRAIN
RPBFP	REDUCED PRESSURE BACKFLOW PREVENTER
SAN	SANITARY
SCADA	SUPERVISORY CONTROL AND DATA ACQUISITION
SD	STORM DRAIN
SP	SUMP PUMP
SPD	SUMP PUMP DISCHARGE
SS	SERVICE SINK
TW1	TEMPERED WATER
TWR	TEMPERED WATER RETURN
TYP	TYPICAL
V	VENT
VTR	VENT THROUGH ROOF
W1	SERVICE COLD WATER
W2	NONPOTABLE COLD WATER
WC	WATER CLOSET
WCO	WALL CLEANOUT
WH	WALL HYDRANT / WATER HOSE
WHA	WATER HAMMER ARRESTOR
WMS	WIRE MESH SCREEN

GENERAL NOTES:

1. THE DRAWINGS ARE DIAGRAMMATIC ONLY TO SHOW THE SCOPE OF THE WORK. ANY WORK INSTALLED CONTRARY TO OR WITHOUT APPROVAL SHALL BE SUBJECT TO CHANGE. NO EXTRA COMPENSATION WILL BE ALLOWED. DO NOT SCALE DRAWINGS FOR FABRICATION PURPOSES.
2. PERFORM ALL WORK IN STRICT ACCORDANCE WITH LAWS, REGULATIONS, AND STANDARDS OF LOCAL, STATE AND FEDERAL GOVERNMENTS.
3. GIVE ALL NOTICES, FILE PLANS, OBTAIN PERMITS AND LICENSES, PAY FEES AND BACK CHARGES, AND OBTAIN NECESSARY APPROVALS FROM AUTHORITIES HAVING JURISDICTION AS REQUIRED TO PERFORM WORK.
4. COOPERATE AND COORDINATE WITH OTHER TRADES IN EXECUTING THE WORK. PERFORM WORK SO THAT PROGRESS OF ENTIRE PROJECT SHALL NOT BE DELAYED. PROVIDE INFORMATION TO OTHER TRADES AS REQUESTED. OBTAIN FINAL ROUGHING DIMENSIONS AS REQUIRED TO COMPLETE WORK.
5. PERFORM WORK REQUIRED SO AS TO PROVIDE PROPER ACCESS TO MATERIAL AND EQUIPMENT REQUIRING INSPECTION, MAINTENANCE OR SERVICE.
6. PIPING AND EQUIPMENT LAYOUT SHOWN IS DIAGRAMMATIC, LOCATION SHALL BE DETERMINED IN FIELD.
7. SUBMIT SHOP DRAWINGS AND PRODUCT INFORMATION. NO WORK SHALL PROCEED WITHOUT WRITTEN APPROVAL ON EACH ITEM SCHEDULED, SPECIFIED OR SHOWN ON PLAN.
8. ALL EQUIPMENT SHALL BE AS SHOWN ON EQUIPMENT SCHEDULES.

PLUMBING NOTES:

1. PIPING AND ACCESSORIES
   - A. PIPING SHALL FOLLOW THE GENERAL ROUTING INDICATED ON DRAWINGS. COORDINATE LOCATION WITH ALL OTHER PIPING, DUCTWORK, AND EQUIPMENT.
   - B. PROVIDE UNIONS IN CONNECTIONS TO EQUIPMENT FOR REPAIRS AND/OR REPLACEMENT. LOCATE BETWEEN SHUTOFF VALVES AND EQUIPMENT.
   - C. ALL SHUT-OFF VALVES AND WATER HAMMER ARRESTORS SHALL BE INSTALLED IN ACCESSIBLE LOCATIONS.
   - D. PROVIDE PROPER DRAINAGE FOR ALL PIPING SYSTEMS. PITCH DOWN ALL HORIZONTAL DRAIN PIPING MIN. 1/4 INCH PER FOOT FOR 3 INCH AND SMALLER, 1/8 INCH PER FOOT FOR 4 INCH AND LARGER.
   - E. PROVIDE SEISMIC RESTRAINTS FOR PIPING AND EQUIPMENT WHERE REQUIRED BY THE BUILDING CODE.
   - F. MAINTAIN MAXIMUM HEADROOM. UNLESS OTHERWISE INDICATED, RUN ALL PRESSURIZED OVERHEAD HORIZONTAL PIPING MAXIMUM 12" BELOW STRUCTURAL MEMBERS. PIPING RUNNING ALONG WALLS MAY BE INSTALLED MIN. 8'-0" AFF. RUN ALL GRAVITY OVERHEAD HORIZONTAL PIPING AS HIGH AS POSSIBLE WHILE MAINTAINING REQUIRED PITCH.
   - G. PROVIDE FIRE STOP MATERIAL WHERE PIPING PENETRATES FIRE RATED WALLS.
   - H. VERIFY PLUMBING FIXTURE ROUGH-INS PRIOR TO START OF WORK.
   - I. PROVIDE ALL COLD WATER LINES, HOT WATER LINES, AND TEMPERED WATER LINES TO PLUMBING FIXTURES WITH ISOLATION
   - J. SELECT AND INSTALL WATER HAMMER ARRESTORS (WHA) PER PDI WH 201 REQUIREMENTS WHERE INDICATED ON DRAWINGS.
   - K. NO PORTION OF THE SANITARY DRAIN-WASTE-VENT SYSTEM INSTALLED UNDERGROUND SHALL BE LESS THAN TWO INCHES IN DIAMETER.
   - L. SANITARY PLUMBING VENTS THROUGH ROOF THAT ARE GREATER THAN 25 FEET HORIZONTALLY FROM ALL FRESH AIR INTAKES SHALL BE TERMINATED MINIMUM 18", BUT NO MORE THAN 24" ABOVE ROOF.
   - M. SANITARY PLUMBING VENTS THAT TERMINATE NO LESS THAN TWO FEET ABOVE THE TOP OF A FRESH AIR INTAKE MAY BE LOCATED AS CLOSE AS TEN FEET.
   - N. WITH EXCEPTION OF TRAP PRIMER PIPING, RUN ALL BURIED PIPING BENEATH, NOT IN, CONCRETE FLOOR SLABS. BURIED TRAP PRIMER PIPING SHALL BE RUN THROUGH CONCRETE FLOOR SLAB AND SLEEVED IN POLYETHYLENE TUBING.
   - O. NO PLUMBING PIPING SHALL BE PERMITTED IN ELECTRICAL ROOM AND STAIRWELLS; NO GAS PIPING SHALL BE PERMITTED IN ELECTRICAL ROOM, CHEMICAL STORAGE AREAS AND STAIRWELLS.
   - P. INSTALL DOMESTIC WATER HEATER INTAKE/EXHAUST PIPING IN ACCORDANCE WITH MFR INSTRUCTIONS. INSTALL DOMESTIC WATER HEATER CONDENSATE ACIDIC NEUTRALIZING TUBE IN ACCORDANCE WITH MFR INSTRUCTIONS.
   - Q. MOUNT HOSE BIBBS 3'-0" AFF.
2. INSULATION
   - A. INSULATE ALL COLD WATER (W1) (W2), DOMESTIC HOT WATER (HW1) AND EMERGENCY SHOWER/EYE/FACE WASH TEMPERED WATER (TW1 & TWR) PIPING. INSULATE ALL HORIZONTAL ROOF DRAIN LEADERS AND UNDERSIDE OF ROOF DRAIN BODIES.
3. ELECTRICAL ENCLOSURES
   - A. ENCLOSURES SHALL MEAN ELECTRICAL EQUIPMENT ENCLOSURES AND ASSOCIATED CONDUIT.
   - B. ENCLOSURES SHALL BE RATED IN ACCORDANCE WITH THE AREA CLASSIFICATION SCHEDULE PER ELECTRICAL DRAWING EG-004.
4. FLASHING
   - A. ALL FLASHING OF PIPE PENETRATIONS THROUGH EXTERIOR WALLS AND ROOF SHALL BE BY GENERAL CONTRACTOR.

BID SET

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ACCOUNTABLE MANAGER: JOHN GOULAS, P.E.
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CAPITAL PROJECT WP-269
RECONSTRUCTION OF
PAERDEGAT PUMPING STATION
CONTRACT PS-318
PLUMBING
PLUMBING LEGEND, ABBREVIATIONS & GENERAL NOTES

DATE: OCTOBER 2026
SCALE: NOT TO SCALE
SHEET NO: 147 OF 274
DRAWING NO. PG-001.00

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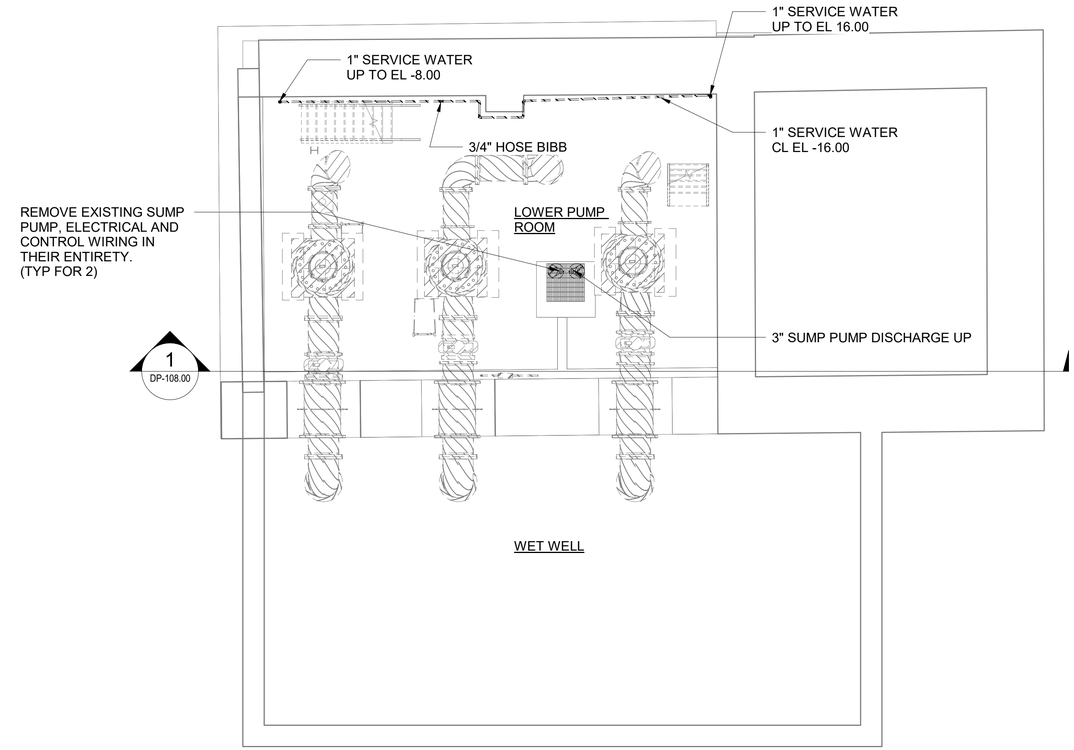
NOTES:

1. REMOVE SUMP PUMPS PIPING AND APPURTENANCES IN THEIR ENTIRETY UNLESS SHOWN OTHERWISE.
2. REMOVE SERVICE WATER FIXTURES, PIPING AND APPURTENANCES IN THEIR ENTIRETY.
3. DEMOLITION PLANS ARE DIVIDED BY DISCIPLINE. PLUMBING DEMOLITION IS SHOWN ON DP SHEETS; REFER TO SHEETS OF OTHER DISCIPLINES FOR THEIR SPECIFIC DEMOLITION REQUIREMENTS.



DEMOLITION LOWER PUMP ROOM, WET WELL, SCREENING CHAMBER - PLAN AT EL -20.00'

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

0 5 10 FT.
3/16"=1'-0"

BID SET

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CAPITAL PROJECT WP-269
RECONSTRUCTION OF PAERDEGAT PUMPING STATION
CONTRACT PS-318
PLUMBING
DEMOLITION LOWER PUMP ROOM, WET WELL, SCREENING CHAMBER

DATE: OCTOBER 2026
SCALE: 3/16" = 1'-0"
SHEET NO: 148 OF 274
DRAWING NO. DP-101.00

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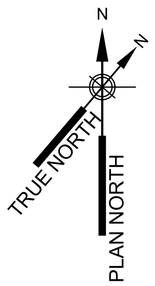
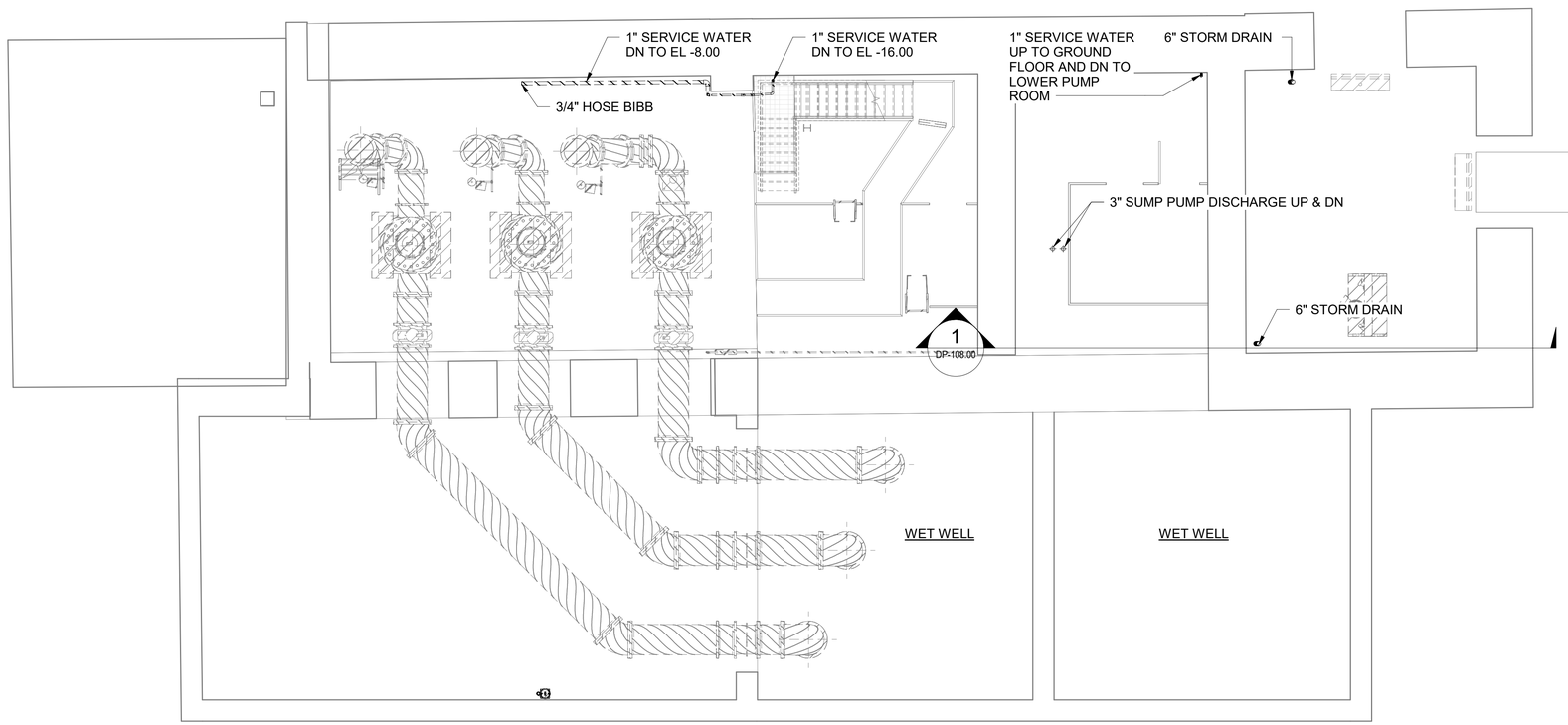


NOTES:

1. REMOVE STORM DRAIN (RAIN LEADER) PIPING AND APPURTENANCES IN THEIR ENTIRETY UNLESS SHOWN OTHERWISE.
2. REMOVE SERVICE WATER FIXTURES, PIPING AND APPURTENANCES IN THEIR ENTIRETY.
3. DEMOLITION PLANS ARE DIVIDED BY DISCIPLINE. PLUMBING DEMOLITION IS SHOWN ON DP SHEETS; REFER TO SHEETS OF OTHER DISCIPLINES FOR THEIR SPECIFIC DEMOLITION REQUIREMENTS.



DEMOLITION UPPER PUMP ROOM - PLAN AT EL -12.00'

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

3/16"=1'-0" 0 5 10 FT.

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CONTRACT PS-318
PLUMBING
DEMOLITION UPPER PUMP ROOM

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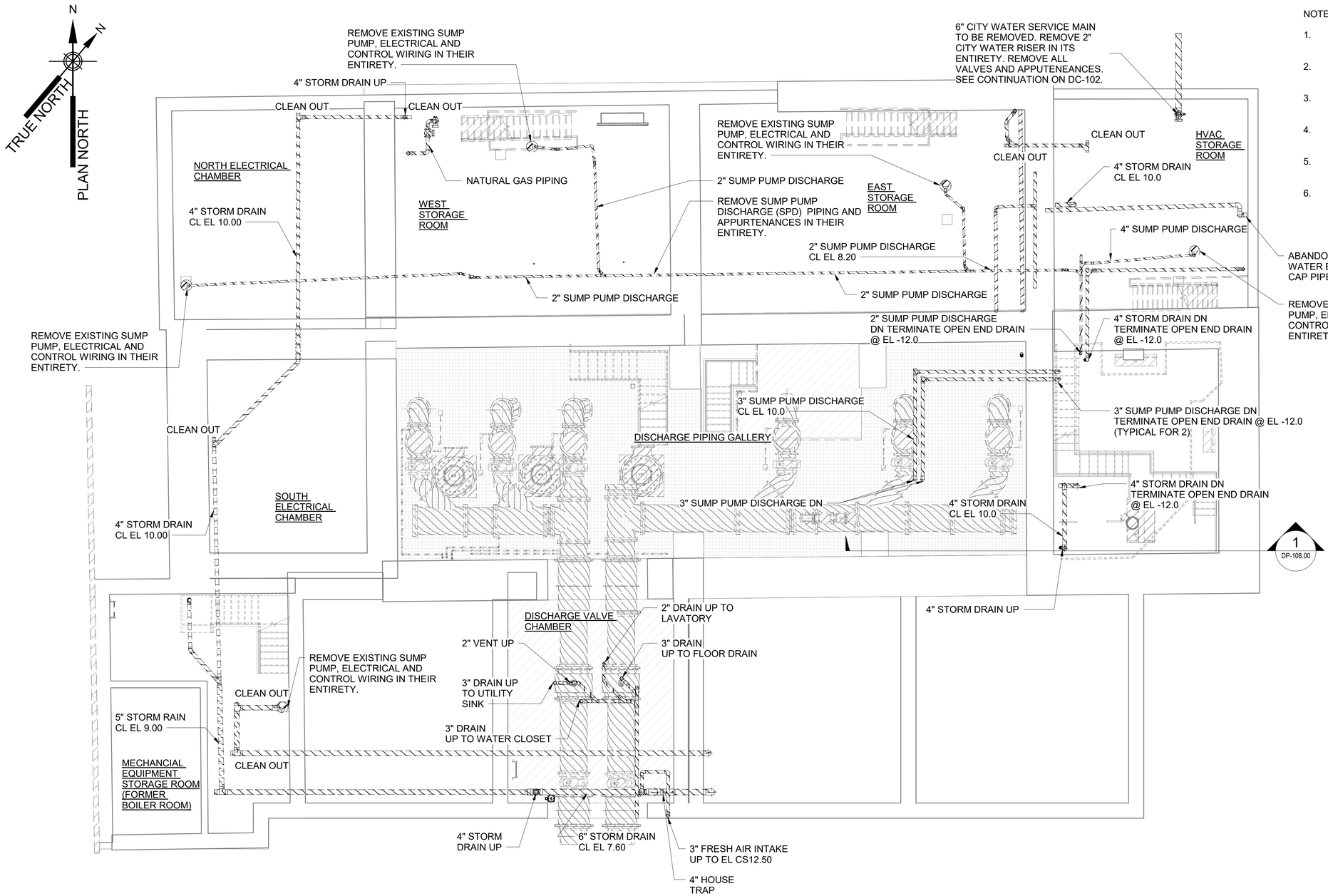

NOTES:

1. REMOVE STORM DRAIN (RAIN LEADER) PIPING AND APPURTENANCES IN THEIR ENTIRETY UNLESS SHOWN OTHERWISE.
2. REMOVE SEWER DRAIN PIPING AND APPURTENANCES IN THEIR ENTIRETY.
3. REMOVE POTABLE WATER FIXTURES, PIPING AND APPURTENANCES IN THEIR ENTIRETY UNLESS SHOWN OTHERWISE.
4. REMOVE SERVICE WATER FIXTURES, PIPING AND APPURTENANCES IN THEIR ENTIRETY.
5. REMOVE NATURAL GAS PIPING AND APPURTENANCES IN THEIR ENTIRETY.
6. DEMOLITION PLANS ARE DIVIDED BY DISCIPLINE. PLUMBING DEMOLITION IS SHOWN ON DP SHEETS; REFER TO SHEETS OF OTHER DISCIPLINES FOR THEIR SPECIFIC DEMOLITION REQUIREMENTS.

DEMOLITION DISCHARGE PIPING GALLERY, STORAGE ROOMS, ELECTRICAL CHAMBERS - PLAN AT EL 2.83'

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

0 5 10 FT.
3/16"=1'-0"

BID SET

SUBMITTAL DATE: OCTOBER 2026

GRAPHIC SCALES CHECK BEFORE USE

IF SHEET IS LESS THAN 22" X 34" IT IS A REDUCED PRINT. SCALE ACCORDINGLY

NO.	DATE	REVISIONS/DESCRIPTION	APPR'D.

DESIGNED BY: MOHAMED KHORSHED
DRAWN BY: MENGHONG WANG
CHECKED BY: EDUARDO CHAVIANO, P.E.
DESIGN LEAD: MOHAMED KHORSHED
PROJECT MANAGER: AIMEE BOULET, P.E.

AECOM
605 THIRD AVENUE, 3rd FL.
NEW YORK, NY 10158, US

REGISTERED ENGINEER EDUARDO J. CHAVIANO No. 111699 STATE OF NEW YORK

Environmental Protection

ACCOUNTABLE MANAGER: JOHN GOULAS, P.E.
PORTFOLIO MANAGER: KEVIN ELLENWOOD, P.E.
EXECUTIVE DIRECTOR: NAYANKUMAR SHAH, P.E.

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BUREAU OF ENGINEERING DESIGN & CONSTRUCTION
96-05 HORACE HARDING EXPRESSWAY 5th FLOOR
CORONA, NEW YORK 11368
www.nyc.gov/dep

CAPITAL PROJECT WP-269
RECONSTRUCTION OF
PAERDEGAT PUMPING STATION
CONTRACT PS-318
PLUMBING
DEMOLITION DISCHARGE PIPING GALLERY, STORAGE ROOMS, ELECTRICAL CHAMBERS

DATE: OCTOBER 2026
SCALE: 3/16" = 1'-0"
SHEET NO: 150 OF 274
DRAWING NO. DP-103.00

All inquiries regarding this drawing(s) or project should be made to NYC Environmental Protection, Bureau of Engineering Design and Construction.

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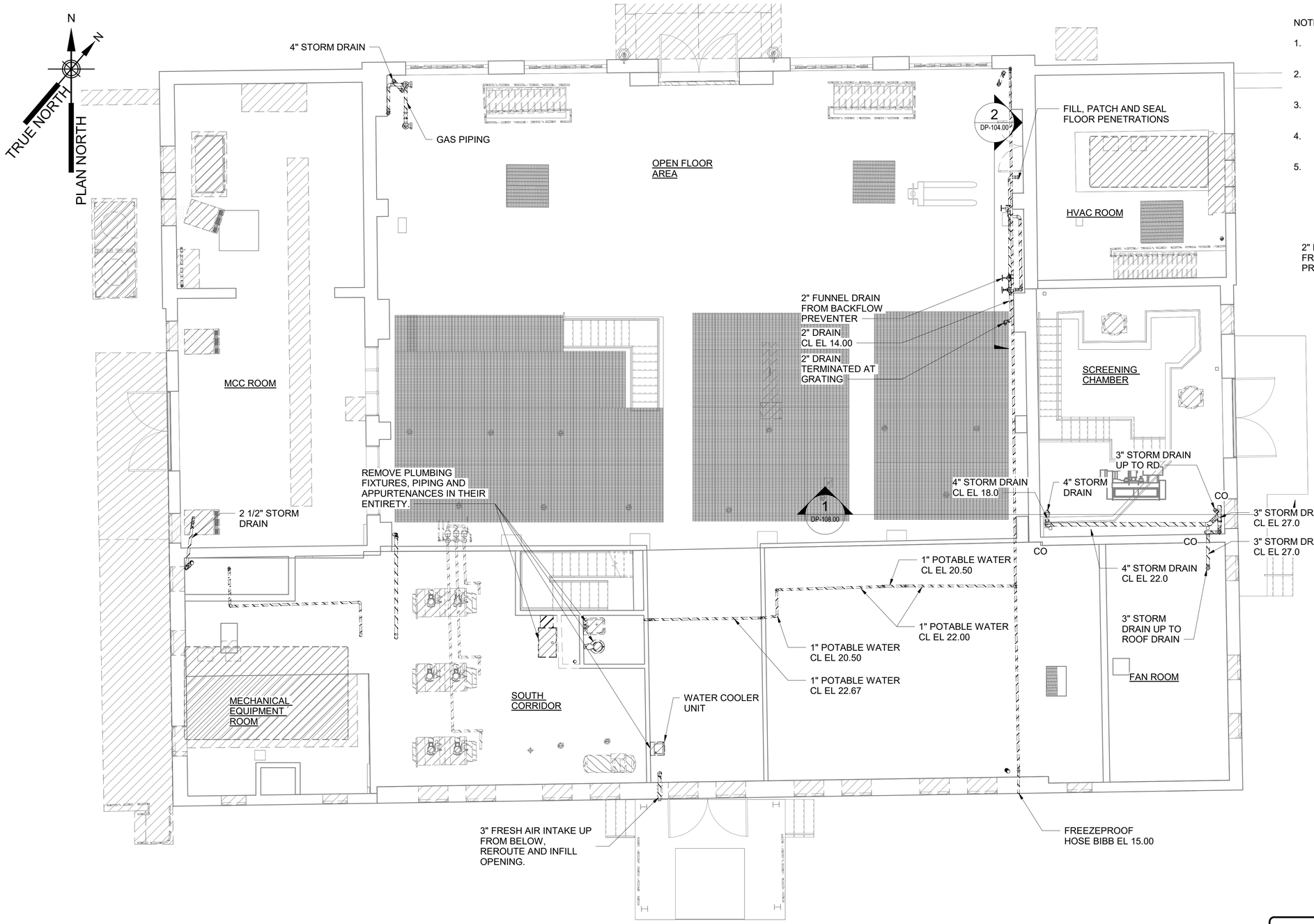

NOTES:

1. REMOVE STORM DRAIN (RAIN LEADER) PIPING AND APPURTENANCES IN THEIR ENTIRETY UNLESS SHOWN OTHERWISE.
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3. REMOVE POTABLE WATER FIXTURES, PIPING AND APPURTENANCES IN THEIR ENTIRETY UNLESS SHOWN OTHERWISE.
4. REMOVE NATURAL GAS PIPING AND APPURTENANCES IN THEIR ENTIRETY.
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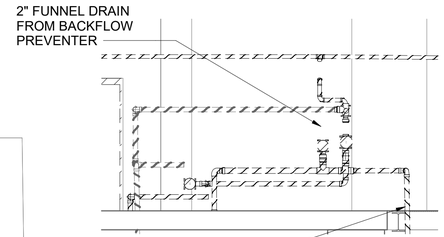

2 DP-104.00 SECTION

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

DEMOLITION GROUND FLOOR - PLAN AT EL 13.50'

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

0 5 10 FT.
3/16"=1'-0"

BID SET

SUBMITTAL DATE: OCTOBER 2026

GRAPHIC SCALES CHECK BEFORE USE

IF SHEET IS LESS THAN 22" X 34" IT IS A REDUCED PRINT. SCALE ACCORDINGLY

NO.	DATE	REVISIONS/DESCRIPTION	APPR'D.

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DRAWN BY: MENGHONG WANG
CHECKED BY: EDUARDO CHAVIANO, P.E.
DESIGN LEAD: MOHAMED KHORSHED
PROJECT MANAGER: AIMEE BOULET, P.E.

AECOM
605 THIRD AVENUE, 3rd FL.
NEW YORK, NY 10158, US

REGISTERED ENGINEER EDUARDO J. CHAVIANO No. 111609 STATE OF NEW YORK

NYC Environmental Protection

ACCOUNTABLE MANAGER: JOHN GOULAS, P.E.
PORTFOLIO MANAGER: KEVIN ELLENWOOD, P.E.
EXECUTIVE DIRECTOR: NAYANKUMAR SHAH, P.E.

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96-05 HORACE HARDING EXPRESSWAY 5th FLOOR
CORONA, NEW YORK 11368
www.nyc.gov/dep

CAPITAL PROJECT WP-269
RECONSTRUCTION OF
PAERDEGAT PUMPING STATION
CONTRACT PS-318
PLUMBING
DEMOLITION GROUND FLOOR (OPEN AREA, SCREENING CHAMBER, MECH EQUIP RM)

DATE: OCTOBER 2026
SCALE: AS INDICATED
SHEET NO: 151 OF 274
DRAWING NO. DP-104.00

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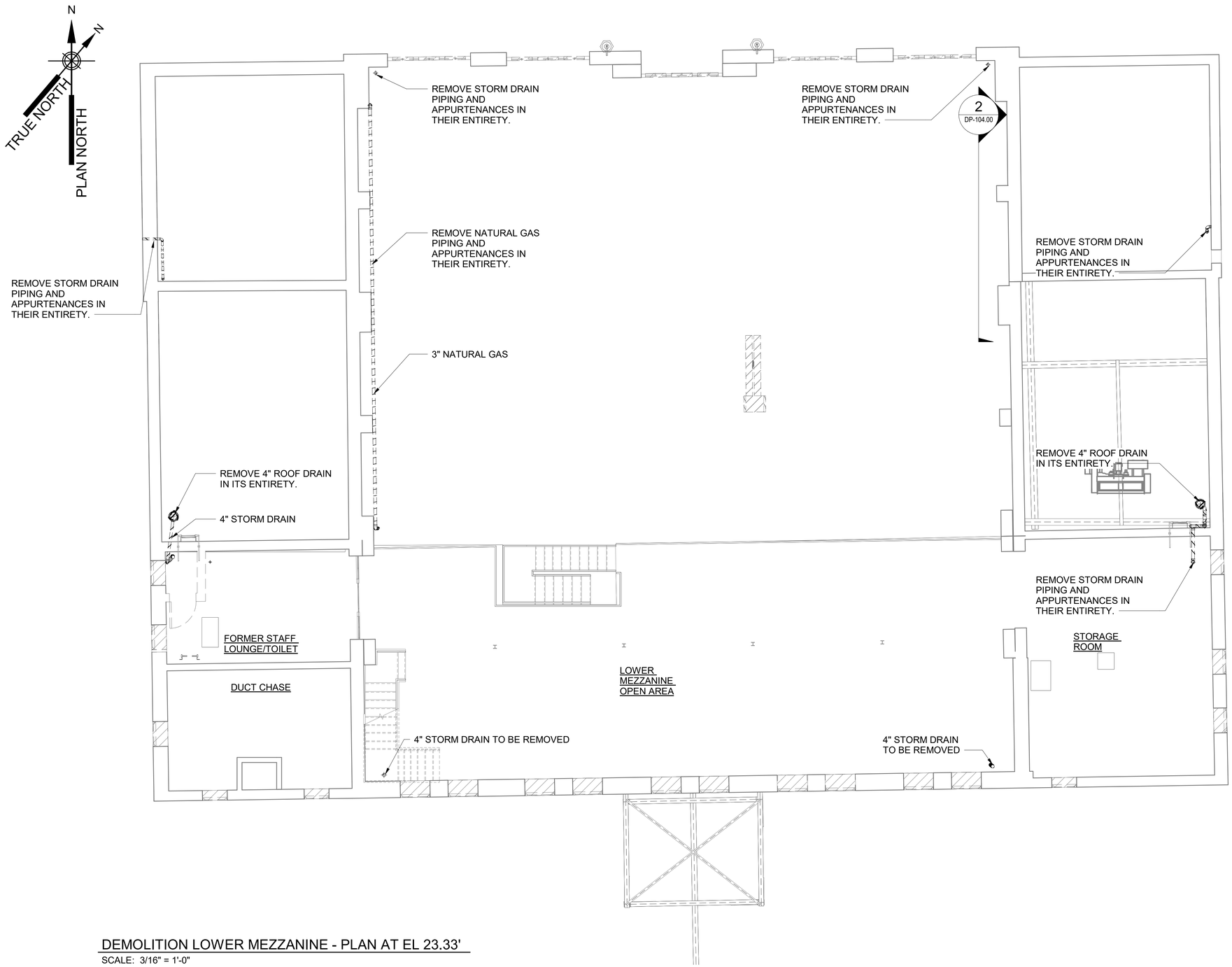

NOTES:

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2. REMOVE NATURAL GAS PIPING AND APPURTENANCES IN THEIR ENTIRETY.
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DEMOLITION LOWER MEZZANINE - PLAN AT EL 23.33'

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

0 5 10 FT.
3/16"=1'-0"

BID SET

SUBMITTAL DATE: OCTOBER 2026

GRAPHIC SCALES CHECK BEFORE USE

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NO.	DATE	REVISIONS/DESCRIPTION	APPR'D.

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DRAWN BY: MENGHONG WANG
CHECKED BY: EDUARDO CHAVIANO, P.E.
DESIGN LEAD: MOHAMED KHORSHED
PROJECT MANAGER: AIMEE BOULET, P.E.

AECOM
605 THIRD AVENUE, 3rd FL.
NEW YORK, NY 10158, US

REGISTERED ENGINEER EDUARDO J. CHAVIANO No. 111699 STATE OF NEW YORK

Environmental Protection

ACCOUNTABLE MANAGER: JOHN GOULAS, P.E.
PORTFOLIO MANAGER: KEVIN ELLENWOOD, P.E.
EXECUTIVE DIRECTOR: NAYANKUMAR SHAH, P.E.

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CORONA, NEW YORK 11368
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CAPITAL PROJECT WP-269
RECONSTRUCTION OF
PAERDEGAT PUMPING STATION
CONTRACT PS-318
PLUMBING
DEMOLITION LOWER MEZZANINE

DATE: OCTOBER 2026
SCALE: 3/16" = 1'-0"
SHEET NO: 152 OF 274
DRAWING NO. DP-105.00

All inquiries regarding this drawing(s) or project should be made to NYC Environmental Protection, Bureau of Engineering Design and Construction.

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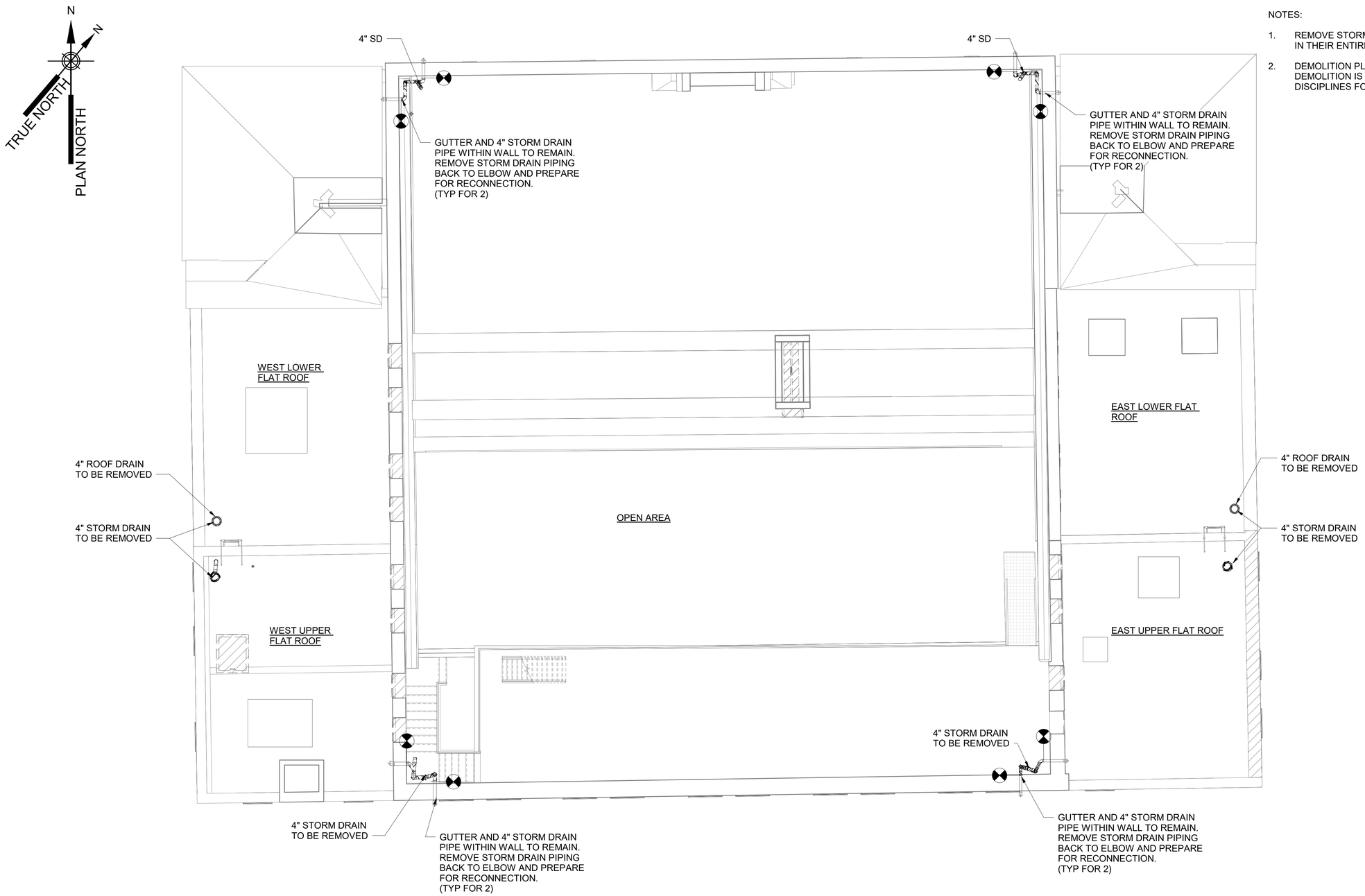

NOTES:

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3/16"=1'-0" 0 5 10 FT.

DEMOLITION EAST AND WEST FLAT ROOFS AND UPPER MEZZANINE - PLAN AT EL 33.50'

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

BID SET

SUBMITTAL DATE: OCTOBER 2026

GRAPHIC SCALES CHECK BEFORE USE

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NO.	DATE	REVISIONS/DESCRIPTION	APPR'D.

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DRAWN BY: MENGHONG WANG
CHECKED BY: EDUARDO CHAVIANO, P.E.
DESIGN LEAD: MOHAMED KHORSHED
PROJECT MANAGER: AIMEE BOULET, P.E.

AECOM
605 THIRD AVENUE, 3rd FL.
NEW YORK, NY 10158, US

REGISTERED ENGINEER EDUARDO J. CHAVIANO No. 111649 STATE OF NEW YORK

Environmental Protection

ACCOUNTABLE MANAGER: JOHN GOULAS, P.E.
PORTFOLIO MANAGER: KEVIN ELLENWOOD, P.E.
EXECUTIVE DIRECTOR: NAYANKUMAR SHAH, P.E.

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CORONA, NEW YORK 11368
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CAPITAL PROJECT WP-269
RECONSTRUCTION OF
PAERDEGAT PUMPING STATION
CONTRACT PS-318
PLUMBING
DEMOLITION EAST AND WEST FLAT ROOFS AND UPPER MEZZANINE

DATE: OCTOBER 2026
SCALE: 3/16" = 1'-0"
SHEET NO: 153 OF 274
DRAWING NO. DP-106.00

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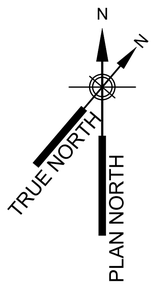

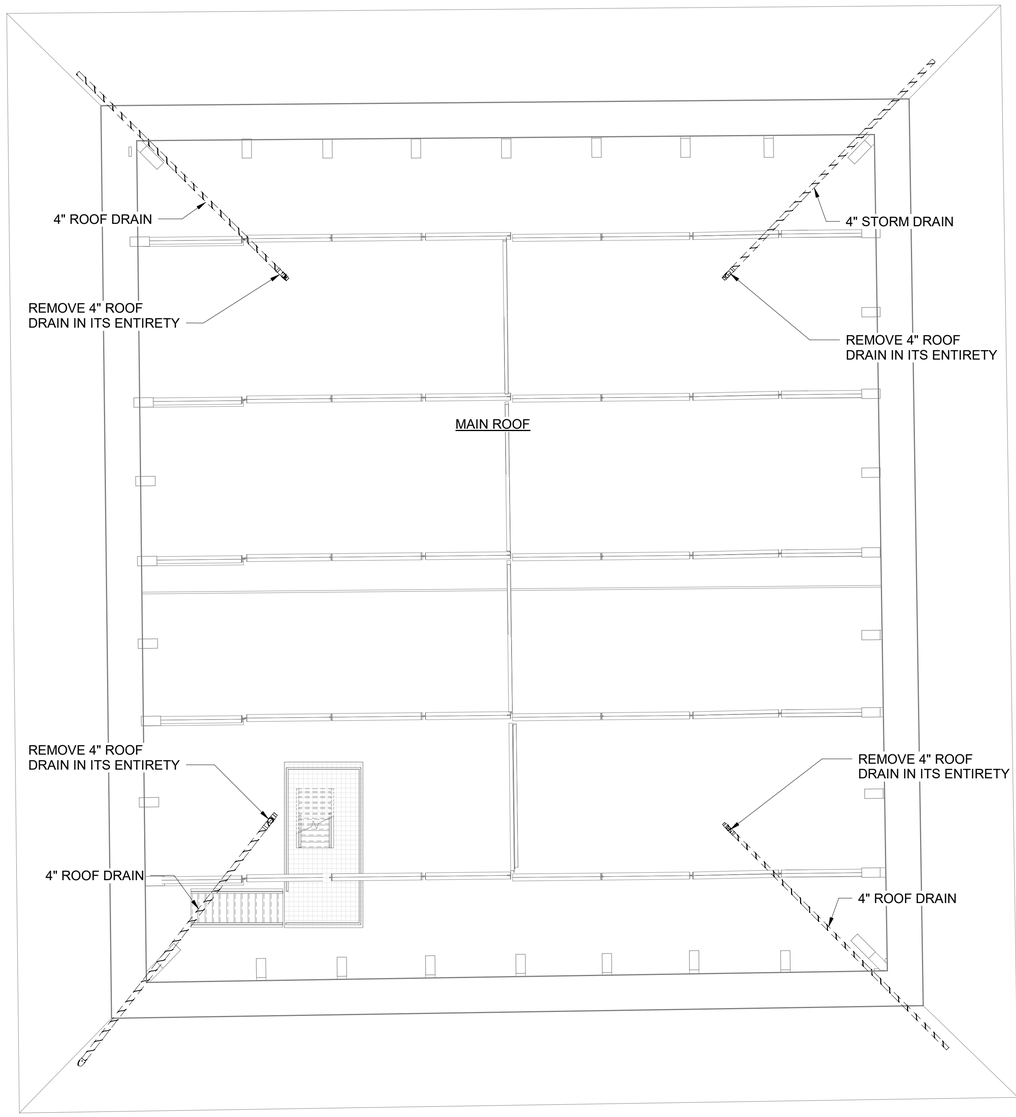

NOTES:

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0 5 10 FT.
3/16"=1'-0"

DEMOLITION MAIN ROOF - PLAN AT EL 42.33'

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

BID SET

SUBMITTAL DATE: OCTOBER 2026

GRAPHIC SCALES CHECK BEFORE USE

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NO.	DATE	REVISIONS/DESCRIPTION	APPR'D.

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DRAWN BY: MENGHONG WANG
CHECKED BY: EDUARDO CHAVIANO, P.E.
DESIGN LEAD: MOHAMED KHORSHED
PROJECT MANAGER: AIMEE BOULET, P.E.

AECOM
605 THIRD AVENUE, 3rd FL.
NEW YORK, NY 10158, US

REGISTERED ENGINEER EDUARDO J. CHAVIANO Executed Drawing NO. 111649 STATE OF NEW YORK

Environmental Protection

ACCOUNTABLE MANAGER: JOHN GOULAS, P.E.
PORTFOLIO MANAGER: KEVIN ELLENWOOD, P.E.
EXECUTIVE DIRECTOR: NAYANKUMAR SHAH, P.E.

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CORONA, NEW YORK 11368
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CAPITAL PROJECT WP-269
RECONSTRUCTION OF
PAERDEGAT PUMPING STATION
CONTRACT PS-318
PLUMBING
DEMOLITION MAIN ROOF

DATE: OCTOBER 2026
SCALE: 3/16" = 1'-0"
SHEET NO: 154 OF 274
DRAWING NO. DP-107.00

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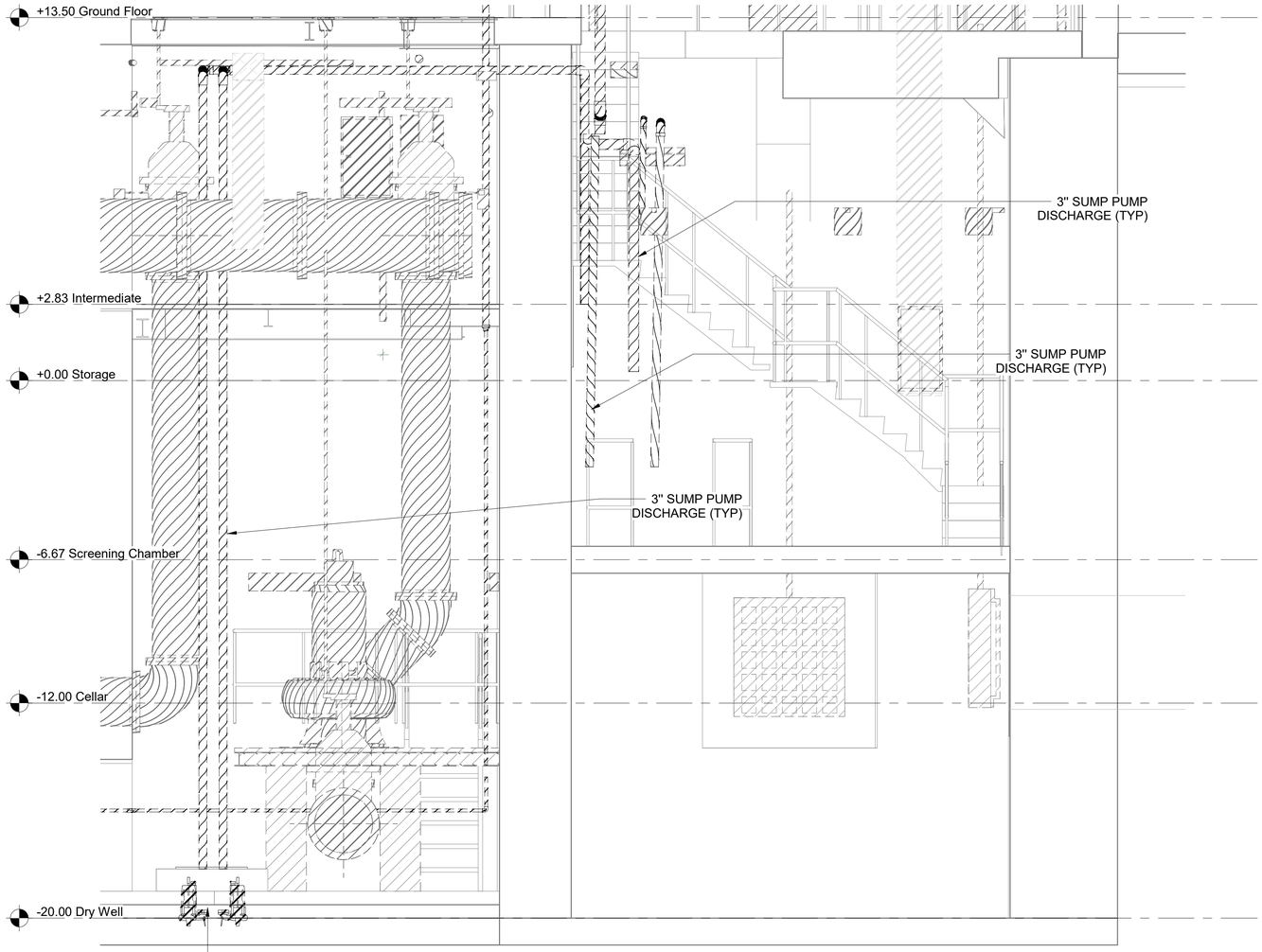

1 DP-101.00 DEMOLITION SECTION VIEW NORTH

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

NOTES:

1. DEMOLITION PLANS ARE DIVIDED BY DISCIPLINE. PLUMBING DEMOLITION IS SHOWN ON DP SHEETS; REFER TO SHEETS OF OTHER DISCIPLINES FOR THEIR SPECIFIC DEMOLITION REQUIREMENTS.

0 1 2 3 5 FT.
3/8"=1'-0"

BID SET

SUBMITTAL DATE: OCTOBER 2026

GRAPHIC SCALES CHECK BEFORE USE

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NO.	DATE	REVISIONS/DESCRIPTION	APPR'D.

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DRAWN BY: MENGHONG WANG
CHECKED BY: EDUARDO CHAVIANO, P.E.
DESIGN LEAD: MOHAMED KHORSHED
PROJECT MANAGER: AIMEE BOULET, P.E.

AECOM
605 THIRD AVENUE, 3rd FL.
NEW YORK, NY 10158, US

REGISTERED ENGINEER EDUARDO J. CHAVIANO No. 111649 STATE OF NEW YORK

Environmental Protection

ACCOUNTABLE MANAGER: JOHN GOULAS, P.E.
PORTFOLIO MANAGER: KEVIN ELLENWOOD, P.E.
EXECUTIVE DIRECTOR: NAYANKUMAR SHAH, P.E.

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CAPITAL PROJECT WP-269
RECONSTRUCTION OF
PAERDEGAT PUMPING STATION
CONTRACT PS-318
PLUMBING
DEMOLITION SECTION VIEW NORTH (HVAC ROOM N WALL - WATER METER)

DATE: OCTOBER 2026
SCALE: 3/8" = 1'-0"
SHEET NO: 155 OF 274
DRAWING NO. DP-108.00

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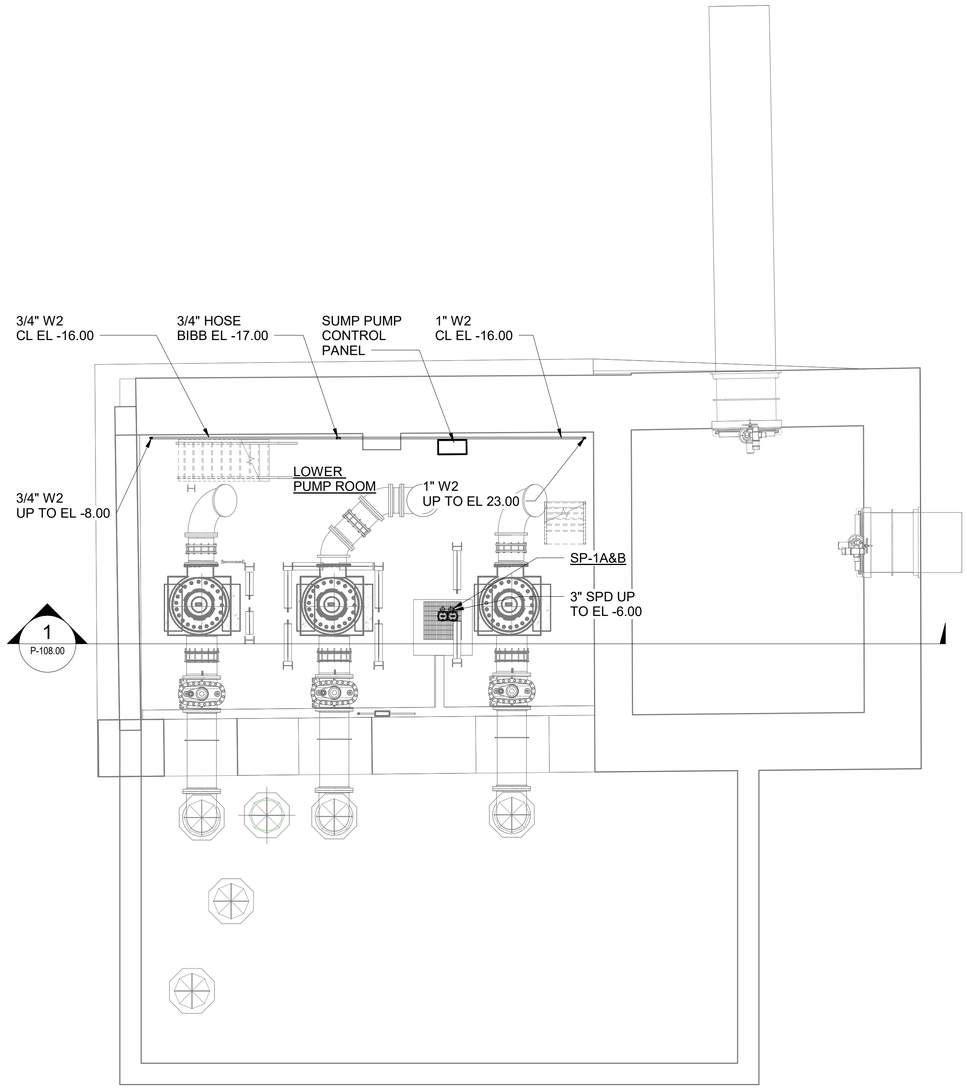

LOWER PUMP ROOM, WET WELL, SCREENING CHAMBER - PLAN AT EL -20.00'

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

0 5 10 FT.

3/16"=1'-0"

BID SET

SUBMITTAL DATE: OCTOBER 2026

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NO.	DATE	REVISIONS/DESCRIPTION	APPR'D.

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DRAWN BY: MENGHONG WANG
CHECKED BY: EDUARDO CHAVIANO, P.E.
DESIGN LEAD: MOHAMED KHORSHED
PROJECT MANAGER: AIMEE BOULET, P.E.

AECOM
605 THIRD AVENUE, 3rd FL.
NEW YORK, NY 10158, US

REGISTERED ENGINEER EDUARDO J. CHAVIANO No. 111689 STATE OF NEW YORK

Environmental Protection

ACCOUNTABLE MANAGER
JOHN GOULAS, P.E.
PORTFOLIO MANAGER
KEVIN ELLENWOOD, P.E.
EXECUTIVE DIRECTOR
NAYANKUMAR SHAH, P.E.

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CAPITAL PROJECT WP-269
RECONSTRUCTION OF
PAERDEGAT PUMPING STATION
CONTRACT PS-318
PLUMBING
LOWER PUMP ROOM, WET WELL, SCREENING CHAMBER

DATE: OCTOBER 2026
SCALE: 3/16" = 1'-0"
SHEET NO: 156 OF 274
DRAWING NO. P-101.00

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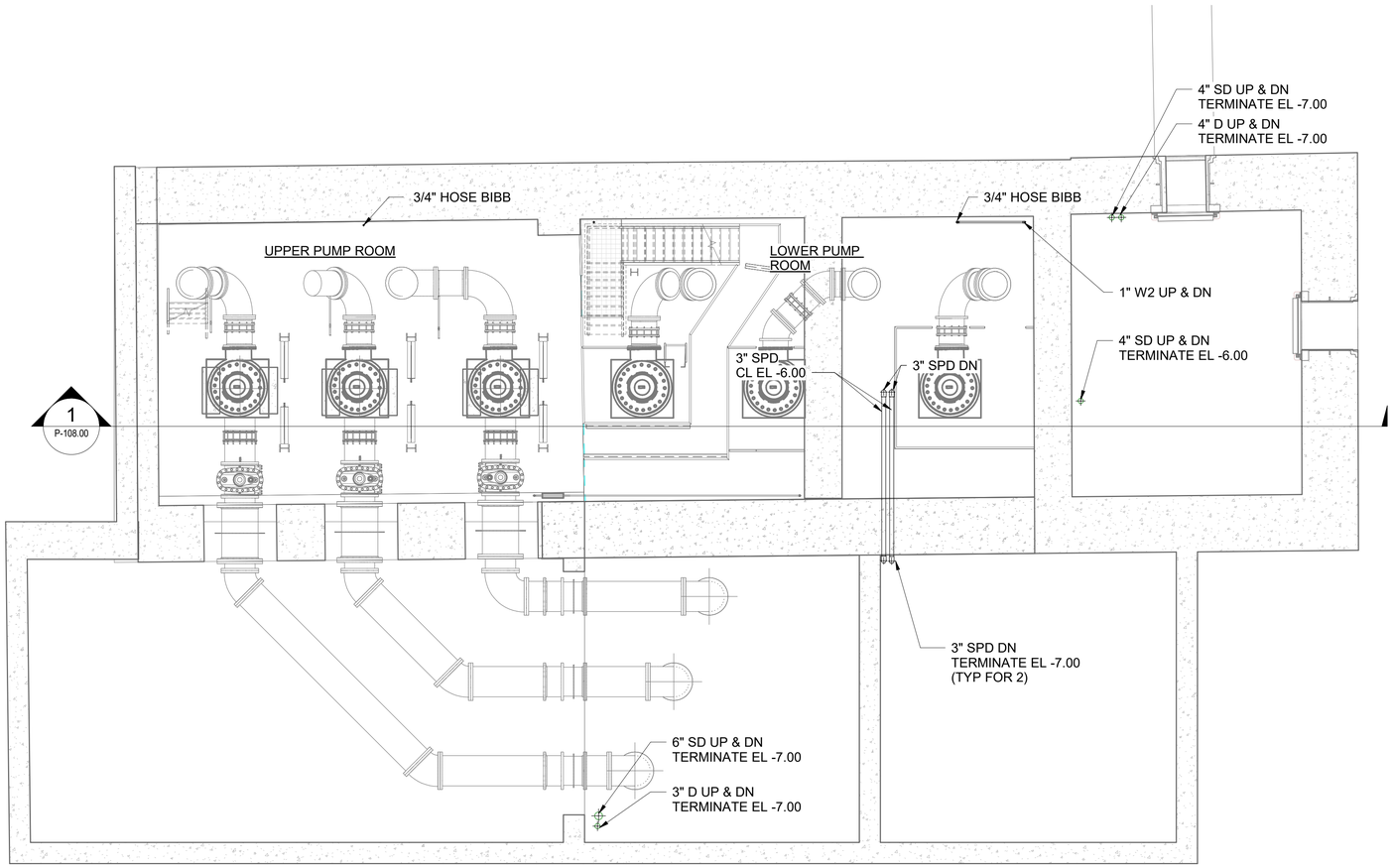

UPPER PUMP ROOM - PLAN AT EL -12.00'

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

0 5 10 FT.
3/16"=1'-0"

BID SET

SUBMITTAL DATE: OCTOBER 2026

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DESIGN LEAD: MOHAMED KHORSHED
PROJECT MANAGER: AIMEE BOULET, P.E.

AECOM
605 THIRD AVENUE, 3rd FL.
NEW YORK, NY 10158, US

REGISTERED ENGINEER EDWARDO J. CHAVIANO No. 111609 STATE OF NEW YORK

Environmental Protection

ACCOUNTABLE MANAGER
JOHN GOULAS, P.E.
PORTFOLIO MANAGER
KEVIN ELLENWOOD, P.E.
EXECUTIVE DIRECTOR
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96-05 HORACE HARDING EXPRESSWAY 5th FLOOR
CORONA, NEW YORK 11368
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CAPITAL PROJECT WP-269
RECONSTRUCTION OF
PAERDEGAT PUMPING STATION
CONTRACT PS-318
PLUMBING
UPPER PUMP ROOM

DATE: OCTOBER 2026
SCALE: 3/16" = 1'-0"
SHEET NO: 157 OF 274
DRAWING NO. P-102.00

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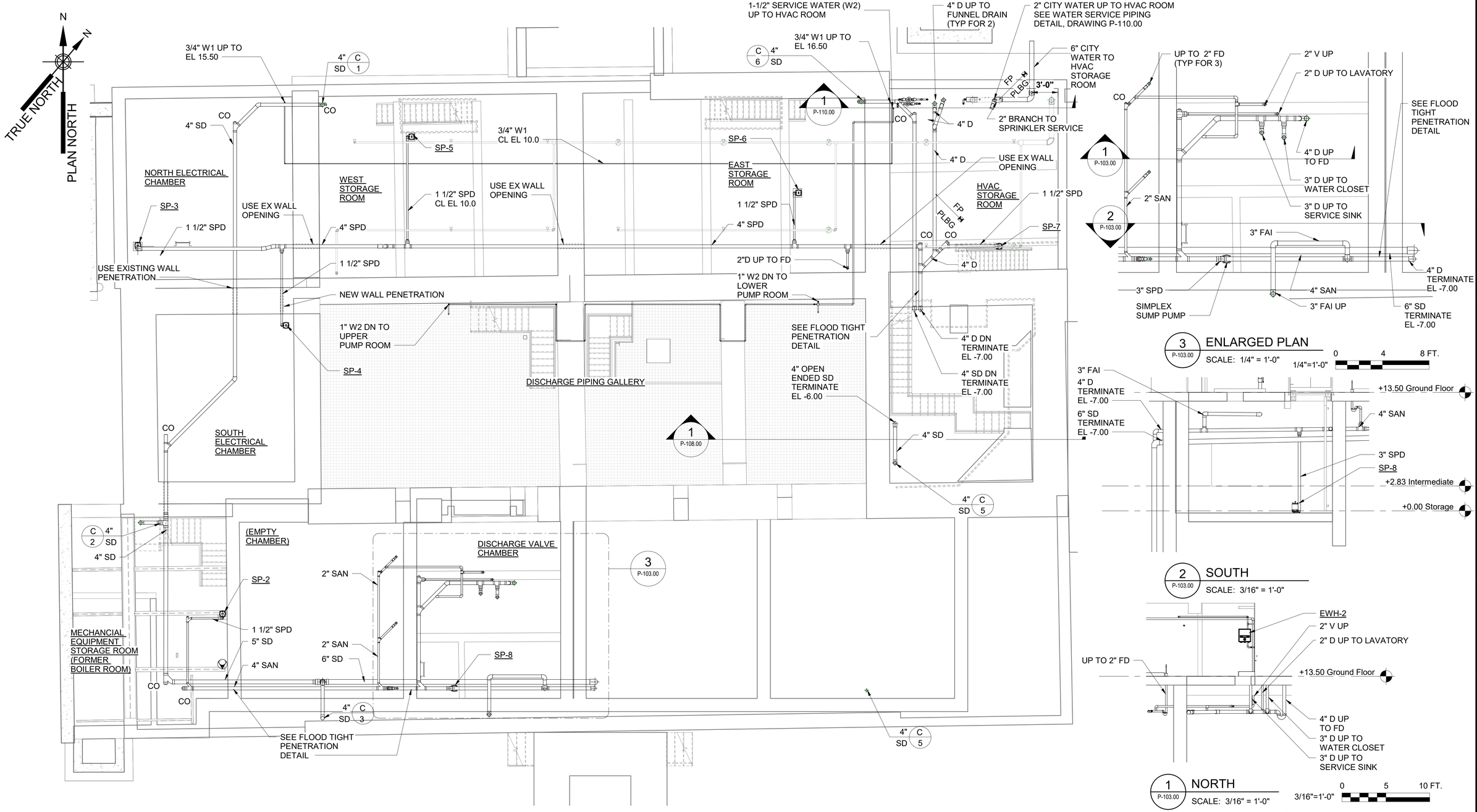

DISCHARGE PIPING GALLERY, STORAGE ROOMS, ELECTRCIAL CHAMBERS - PLAN AT EL 2.83'

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

X / Y — SYMBOL REFERS TO RISER TO RISER DIAGRAM COLUMN LOCATION; SEE RISER DIAGRAMS ON SHEET P-112 FOR COORDINATION

BID SET

SUBMITTAL DATE: OCTOBER 2026

GRAPHIC SCALES CHECK BEFORE USE

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NO.	DATE	REVISIONS/DESCRIPTION	APPR'D.

DESIGNED BY: MOHAMED KHORSHED
DRAWN BY: MENGHONG WANG
CHECKED BY: EDUARDO CHAVIANO, P.E.
DESIGN LEAD: MOHAMED KHORSHED
PROJECT MANAGER: AIMEE BOULET, P.E.

AECOM
605 THIRD AVENUE, 3rd FL.
NEW YORK, NY 10158, US

REGISTERED ENGINEER EDWARD J. CHAVIANO No. 111689 STATE OF NEW YORK

Environmental Protection

ACCOUNTABLE MANAGER	JOHN GOULAS, P.E.
PORTFOLIO MANAGER	KEVIN ELLENWOOD, P.E.
EXECUTIVE DIRECTOR	NAYANKUMAR SHAH, P.E.

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BUREAU OF ENGINEERING DESIGN & CONSTRUCTION
96-05 HORACE HARDING EXPRESSWAY 5th FLOOR
CORONA, NEW YORK 11368
www.nyc.gov/dep

CAPITAL PROJECT WP-269
RECONSTRUCTION OF PAERDEGAT PUMPING STATION
CONTRACT PS-318
PLUMBING
DISCHARGE PIPING GALLERY, STORAGE ROOMS, ELECTRICAL CHAMBERS

DATE: OCTOBER 2026
SCALE: 3/16" = 1'-0"
SHEET NO: 158 OF 274
DRAWING NO. P-103.00

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Autodesk Docs://CI-AMER (USA) 60619010-PS-DES-5/PAER-P-MODEL_AECOM.rvt
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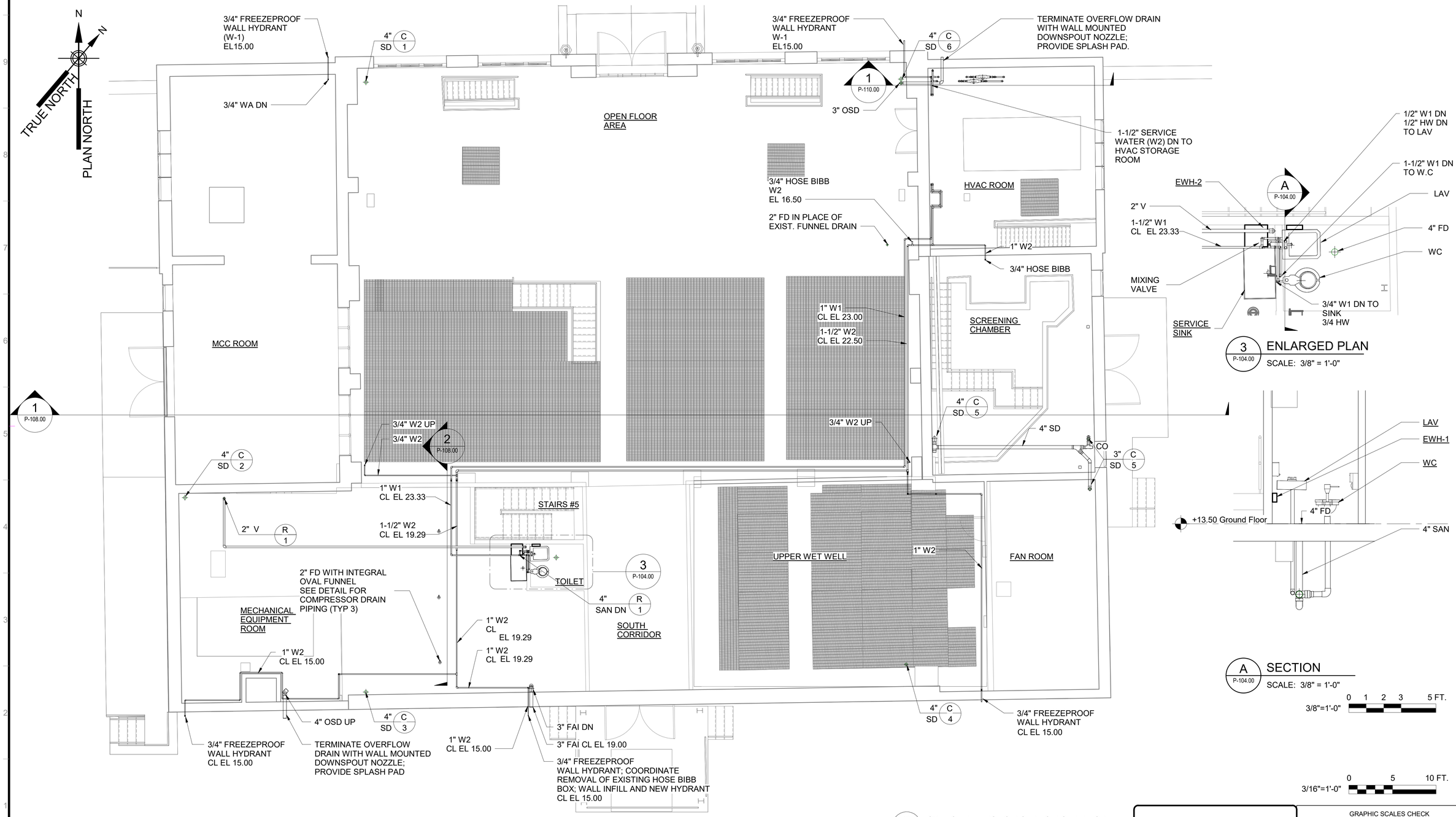

GROUND FLOOR - PLAN AT EL 13.50'

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

X / Y SYMBOL REFERS TO RISER TO RISER DIAGRAM COLUMN LOCATION; SEE RISER DIAGRAMS ON SHEET P-112 FOR COORDINATION

BID SET

SUBMITTAL DATE: OCTOBER 2026

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DESIGN LEAD: MOHAMED KHORSHED
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AECOM
605 THIRD AVENUE, 3rd FL.
NEW YORK, NY 10158, US

REGISTERED ENGINEER EDWARD J. CHAVIANO No. 111609 STATE OF NEW YORK

Environmental Protection

ACCOUNTABLE MANAGER: JOHN GOULAS, P.E.
PORTFOLIO MANAGER: KEVIN ELLENWOOD, P.E.
EXECUTIVE DIRECTOR: NAYANKUMAR SHAH, P.E.

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CORONA, NEW YORK 11368
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CAPITAL PROJECT WP-269
RECONSTRUCTION OF PAERDEGAT PUMPING STATION
CONTRACT PS-318
PLUMBING
GROUND FLOOR (OPEN AREA, SCREENING CHAMBER, MECH EQUIP RM)

DATE: OCTOBER 2026
SCALE: AS INDICATED
SHEET NO: 159 OF 274
DRAWING NO. P-104.00

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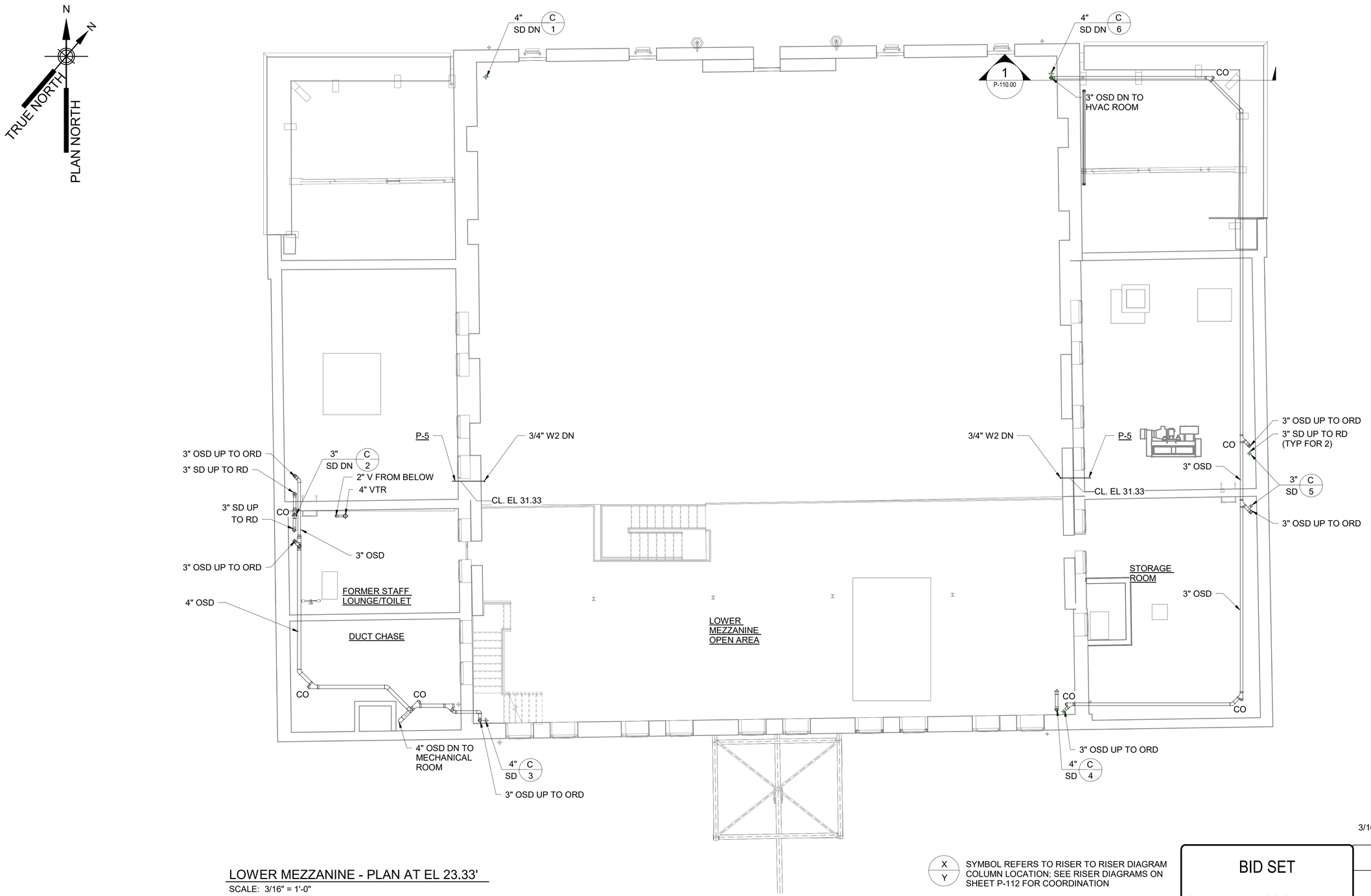

0 5 10 FT.
3/16"=1'-0"

LOWER MEZZANINE - PLAN AT EL 23.33'

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

X / Y — SYMBOL REFERS TO RISER TO RISER DIAGRAM COLUMN LOCATION; SEE RISER DIAGRAMS ON SHEET P-112 FOR COORDINATION

BID SET

SUBMITTAL DATE: OCTOBER 2026

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AECOM
605 THIRD AVENUE, 3rd FL.
NEW YORK, NY 10158, US

REGISTERED ENGINEER EDWARD J. CHIANTIA Edward J. Chiantia No. 111609 STATE OF NEW YORK

Environmental Protection

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PORTFOLIO MANAGER: KEVIN ELLENWOOD, P.E.
EXECUTIVE DIRECTOR: NAYANKUMAR SHAH, P.E.

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96-05 HORACE HARDING EXPRESSWAY 5th FLOOR
CORONA, NEW YORK 11368
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CAPITAL PROJECT WP-269
RECONSTRUCTION OF
PAERDEGAT PUMPING STATION
CONTRACT PS-318
PLUMBING
LOWER MEZZANINE

DATE: OCTOBER 2026
SCALE: 3/16" = 1'-0"
SHEET NO: 160 OF 274
DRAWING NO. P-105.00

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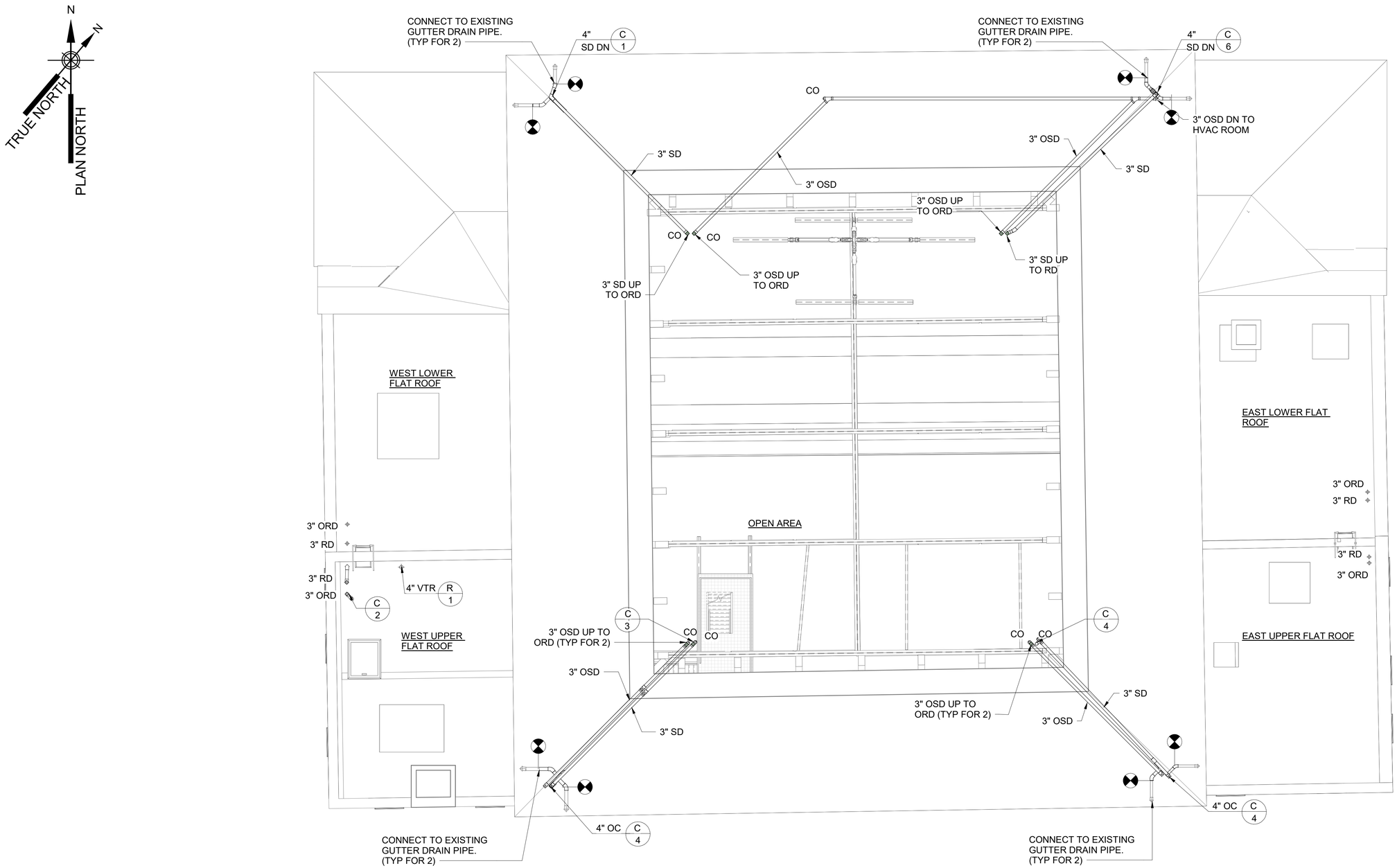

0 5 10 FT.
3/16"=1'-0"

EAST AND WEST FLAT ROOFS AND UPPER MEZZANINE - PLAN AT EL 33.50'

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

X / Y — SYMBOL REFERS TO RISER TO RISER DIAGRAM COLUMN LOCATION; SEE RISER DIAGRAMS ON SHEET P-112 FOR COORDINATION

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AECOM
605 THIRD AVENUE, 3rd FL.
NEW YORK, NY 10158, US

REGISTERED ENGINEER EDUARDO J. CHAVIANO No. 111649 STATE OF NEW YORK

Environmental Protection

ACCOUNTABLE MANAGER: JOHN GOULAS, P.E.
PORTFOLIO MANAGER: KEVIN ELLENWOOD, P.E.
EXECUTIVE DIRECTOR: NAYANKUMAR SHAH, P.E.

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CORONA, NEW YORK 11368
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CAPITAL PROJECT WP-269
RECONSTRUCTION OF PAERDEGAT PUMPING STATION
CONTRACT PS-318
PLUMBING
EAST AND WEST FLAT ROOFS AND UPPER MEZZANINE

DATE: OCTOBER 2026
SCALE: 3/16" = 1'-0"
SHEET NO: 161 OF 274
DRAWING NO. P-106.00

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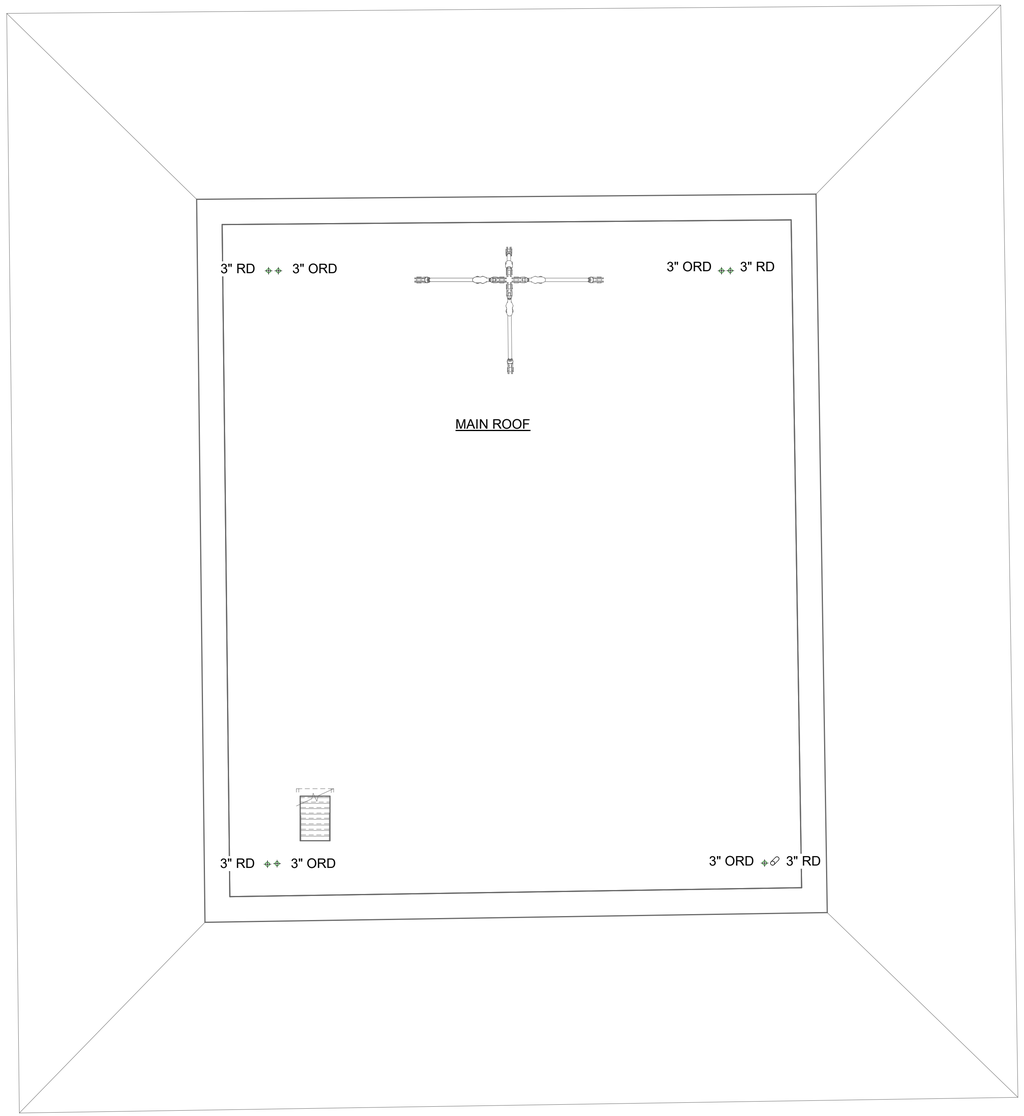

MAIN ROOF - PLAN AT EL 42.33'

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

3/16"=1'-0" 0 5 10 FT.

BID SET

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CAPITAL PROJECT WP-269
RECONSTRUCTION OF
PAERDEGAT PUMPING STATION
CONTRACT PS-318
PLUMBING
MAIN ROOF

DATE: OCTOBER 2026
SCALE: 3/16" = 1'-0"
SHEET NO: 162 OF 274
DRAWING NO. P-107.00

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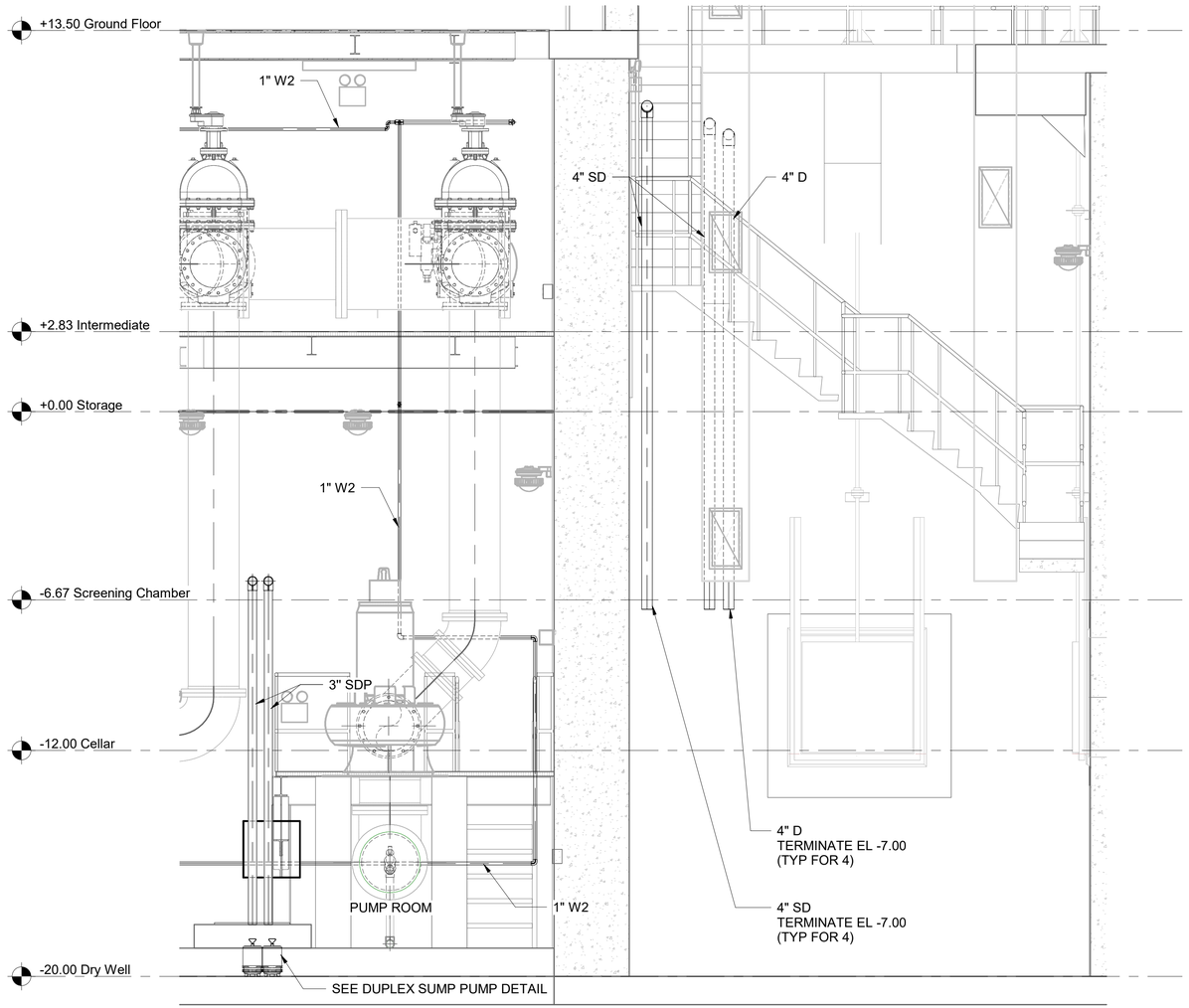
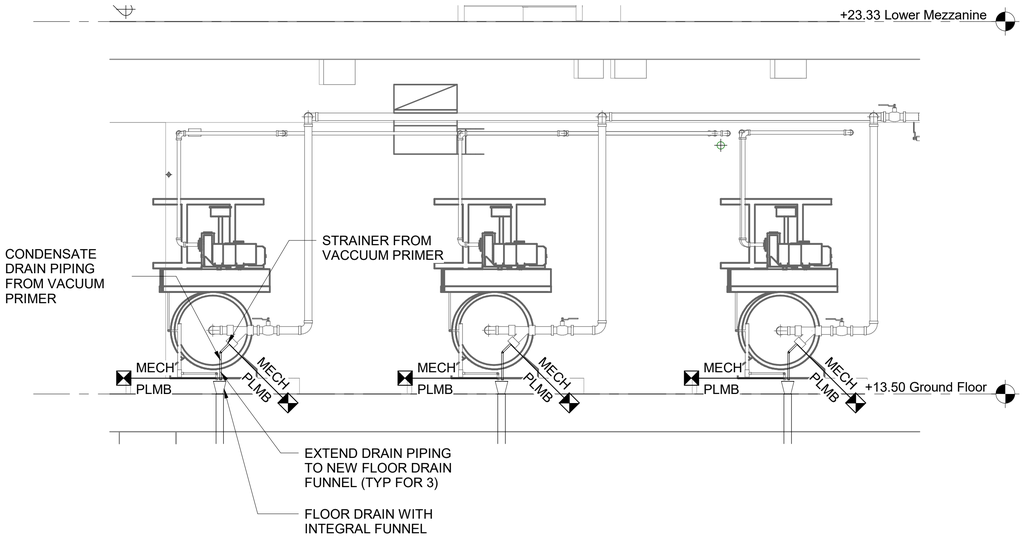


1 P-101.00 SECTION VIEW NORTH

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



2 P-104.00 VACUUM PRIMING SYSTEMS DRAIN PIPING DETAIL

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

0 1 2 4 FT.
1/2"=1'-0"

0 1 2 3 5 FT.
3/8"=1'-0"

BID SET

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AECOM
605 THIRD AVENUE, 3rd FL.
NEW YORK, NY 10158, US

REGISTERED ENGINEER EDWARD J. CHAVIANO No. 111699 STATE OF NEW YORK

Environmental Protection

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PORTFOLIO MANAGER: KEVIN ELLENWOOD, P.E.
EXECUTIVE DIRECTOR: NAYANKUMAR SHAH, P.E.

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CAPITAL PROJECT WP-269
RECONSTRUCTION OF
PAERDEGAT PUMPING STATION
CONTRACT PS-318
PLUMBING
SECTION VIEW NORTH (HVAC ROOM N WALL - WATER METER)

DATE: OCTOBER 2026
SCALE: AS INDICATED
SHEET NO: 163 OF 274
DRAWING NO. P-108.00

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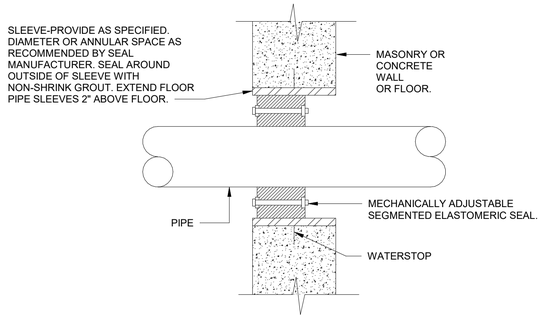
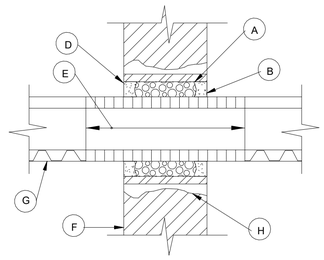


EXTERIOR FLOOD TIGHT WALL/FLOOR PIPE PENETRATION DETAIL

NTS

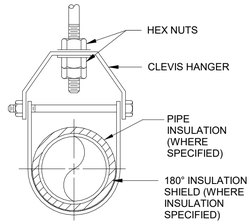


INTERIOR WALL/FLOOR PIPE PENETRATION DETAIL

(NOT FOR WATERTIGHT CONSTRUCTION)

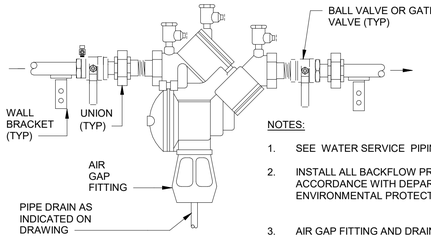
NTS

- (A) PROVIDE MIN. 1" CLEARANCE BETWEEN PIPE SLEEVE OR CORE DRILLED HOLE AND PIPE; PACK CLEARANCE SPACE WITH SPECIFIED INSULATION.
- (B) PROVIDE SPECIFIED END SEALANT.
- (C) NOT USED.
- (D) SLEEVE-PROVIDE AS SPECIFIED. EXTEND FLOOR PIPE SLEEVES 2" ABOVE FLOOR.
- (E) CALCIUM SILICATE OR APPROVED EQUAL INSULATION THRU PENETRATION AND EXTENDED 2" ON BOTH SIDES OF WALL OR FLOOR; PROVIDE METAL JACKET AS SPECIFIED OVER INSULATION.
- (F) WALL OR FLOOR.
- (G) SPECIFIED INSULATION.
- (H) GROUT SPACE BETWEEN SLEEVE & MASONRY WALLS.



TYPICAL PIPE SUPPORT DETAIL

NTS

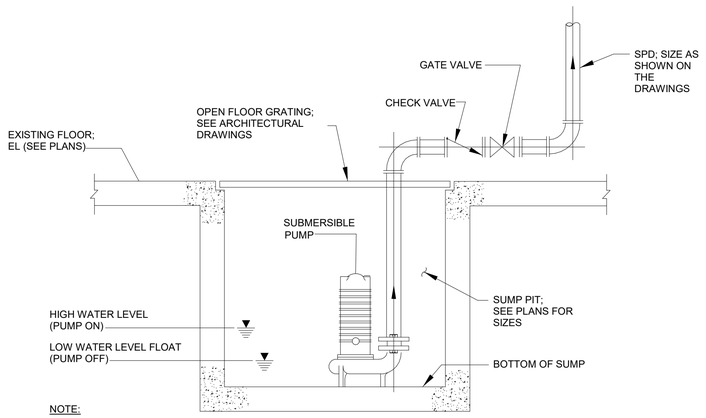


NOTES:

1. SEE WATER SERVICE PIPING DETAIL FOR SIZES.
2. INSTALL ALL BACKFLOW PREVENTERS IN ACCORDANCE WITH DEPARTMENT ENVIRONMENTAL PROTECTION REGULATION.
3. AIR GAP FITTING AND DRAIN PIPE SIZED PER MFR.
4. PROVIDE STRAINER AT RPBFP INLET.

REDUCED PRESSURE BACKFLOW PREVENTER DETAIL

NTS

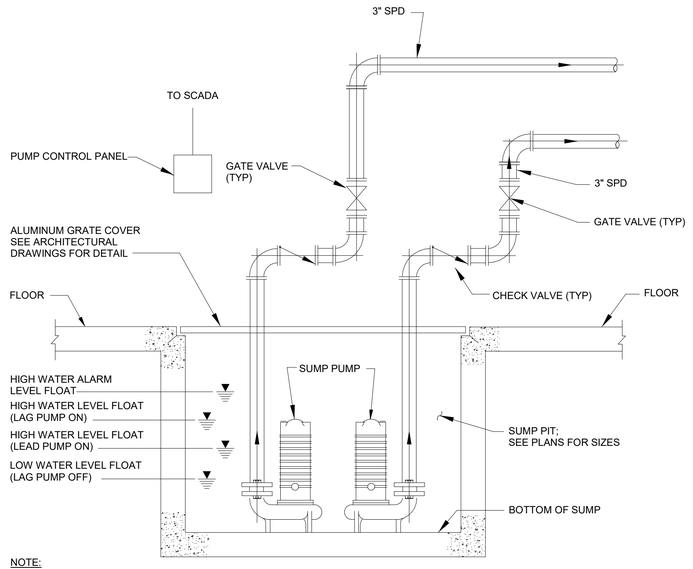


NOTE:

1. SEE SUMP PUMP SCHEDULE FOR OPERATING LEVELS.

SUMP PUMP DETAIL

NTS

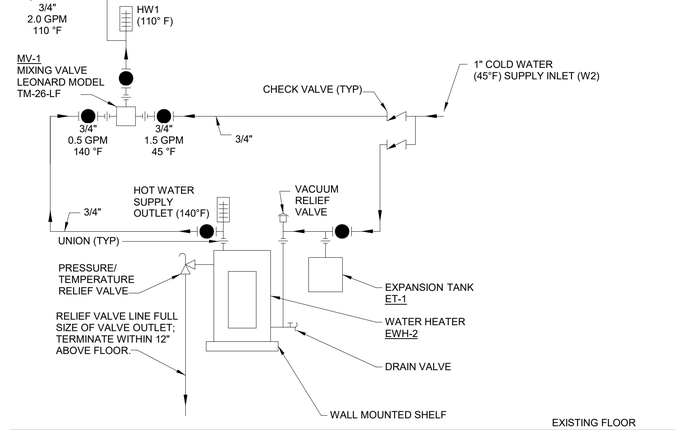


NOTE:

1. SEE SUMP PUMP SCHEDULE FOR OPERATING AND ALARM LEVELS.

DUPLEX SUMP PUMP DETAIL

NTS



STORAGE TYPE ELECTRIC WATER HEATER WATER PIPING DETAIL

NTS

BID SET

SUBMITTAL DATE: OCTOBER 2026

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CHECKED BY: EDUARDO CHAVIANO, P.E.
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PROJECT MANAGER: AIMEE BOULET, P.E.
DRAWN BY: MENGHONG WANG

AECOM
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Environmental Protection

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96-05 HORACE HARDING EXPRESSWAY 5th FLOOR
CORONA, NEW YORK 11368
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CAPITAL PROJECT WP-269
RECONSTRUCTION OF
PAERDEGAT PUMPING STATION
CONTRACT PS-318
PLUMBING
STANDARD DETAIL 1

DATE: OCTOBER 2026
SCALE: AS INDICATED
SHEET NO: 164 OF 274
DRAWING NO. P-109.00

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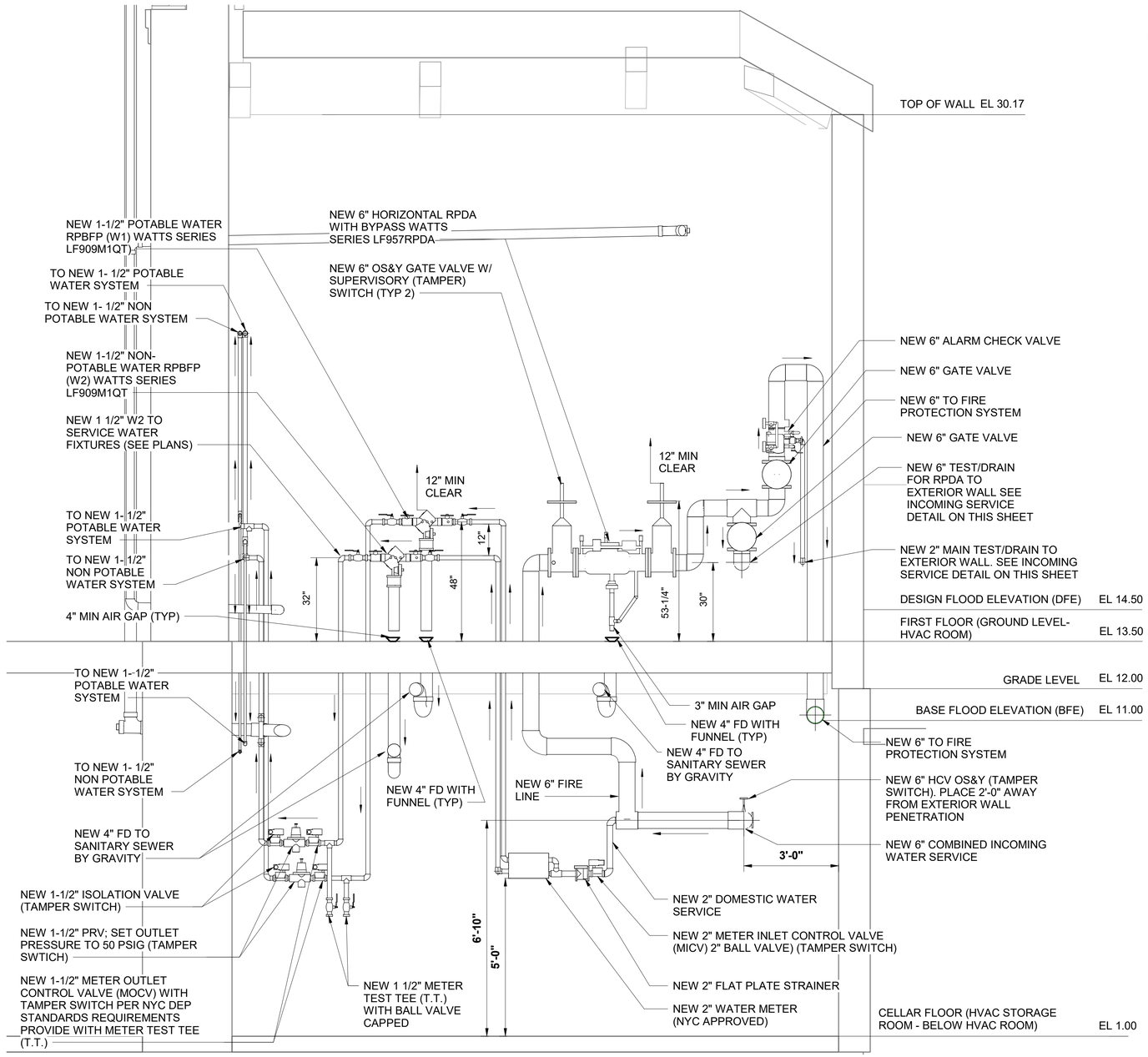

KEYNOTES: (#)

1. SEE FIRE PROTECTION DRAWINGS FOR MORE DETAIL.

NOTES:
1. FEED TO BFP, DO NOT TAP OR CONNECT TO THIS LINE.
2. MAXIMUM CLEARANCE FOR HANDLE OF ASSEBLY SHAL BE 66" FROM THE FLOOR.

WATER SERVICE PIPING SECTION

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

1/2"=1'-0" 0 1 2 4 FT.

BID SET

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CAPITAL PROJECT WP-269
RECONSTRUCTION OF PAERDEGAT PUMPING STATION
CONTRACT PS-318
PLUMBING
STANDARD DETAIL 2

DATE: OCTOBER 2026
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PLUMBING FIXTURE SCHEDULE

TAG NO.	MANUFACTURER MODEL NO.	FIXTURE TYPE	FIXTURE DIMENSIONS (WHERE APPLICABLE)	WATER USAGE	SOIL OR WASTE	VENT	COLD WATER	HOT WATER	TEMPERED WATER	REMARKS
P-1	--	WATER CLOSET	N/A	1.28 GALLONS PER FLUSH	3"	2"	1"	-	-	①
P-2	-	LAVATORY	MINIMUM DIMENSIONS 24" WIDE X 20" FRONT TO REAR	0.5 GPM AT 60 PSIG FLOW RESSURE	1 1/2"	1 1/2"	1/2"	1/2"	-	②
P-3	-	SERVICE SINK	24" WIDE X 24" FRONT TO REAR	-	3"	1 1/2"	1/2"	1/2"	-	③
P-4	--	HOSE BIBB	N/A	-	-	-	3/4"	-	-	④
P-5	--	WALL HYDRANT (FREEZEPROOF)	N/A	-	-	-	3/4"	-	-	④

① WATER CLOSET: ASME A112.19.2, ADA COMPLIANT, WHITE VITREOUS CHINA, TOP SPUD INLET, FLOOR MOUNTED/FLOOR OUTLET, SIPHON JET, INTEGRAL TRAP, ELONGATED BOWL, AND WHITE SOLID PLASTIC ELONGATED OPEN FRONT SEAT; MANUAL NONHOLD-OPEN FLUSH VALVE, CHROME PLATED COPPER ALLOY, INCLUDING VACUUM BREAKER AND ANGLE (CONTROL-STOP) VALVE WITH BACK CHECK. HEIGHT TO TOP OF SEAT SHALL BE 17" TO 19" ABOVE FLOOR. PROVIDE WITH WATER SENSE

② LAVATORY: ASME A112.19.2, ADA COMPLIANT, WHITE VITREOUS CHINA, WALL HUNG, FRONT CONCEALED OVERFLOW; ASME A112.18.1 CHROME PLATED COPPER ALLOY CENTERSET FAUCET (4" CENTERS) WITH LEVER HANDLES, AERATOR AND SUPPLY FITTINGS; PERFORATED GRID STRAINER WITH ADA COMPLIANT OFFSET TAILPIECE AND 1 1/4" ADJUSTABLE P-TRAP, ASME A112.18.2.

③ SERVICE SINK: ASME 112.6.7 SANITARY FLOOR SINKS, ANSI Z124.6 PLASTIC SINKS 3 INCH P-TRAP STANDARD, MINIMUM 9 INCH SPLASHBACK, AND STAINLESS STEEL RIM GUARD. PROVIDE ASME A112.18.1M COPPER ALLOY BACK-MOUNTED COMBINATION FAUCETS WITH VACUUM BREAKER, SPOUT WITH PAIL HOOK AND 3/4 INCH EXTERNAL HOSE THREADS, ROUGH CHROME FINISH.

④ PROVIDE VACUUM BREAKER.

SUMP PUMP SCHEDULE

TAG NO.	MANUFACTURER MODEL NO.	LOCATION	MIN. CAPACITY (GPM)	TOTAL HEAD (FT.)	LEAD PUMP "ON" POINT (IN.)**	LAG PUMP "ON" POINT (IN.)**	LEAD PUMP "OFF" POINT (IN.)**	LAG PUMP "OFF" POINT (IN.)**	HIGH WATER ALARM (IN.)**	MOTOR DATA (EACH PUMP)			REMARKS
										HP	VOLT	PHASE	
SP-1 A&B	GOULDS GSP0511	LOWER PUMP ROOM	52	19	16	18	4	4	20	1/2	115	1	②④
SP-2	HYDROMATIC HP50	MECH EQUIP STORAGE ROOM	30	28	9	-	4	-	-	1/2	115	1	①③⑤
SP-3		NORTH ELECTRICAL CHAMBER	30	23	9	-	4	-	-	1/2	115	1	①③⑤
SP-4		SOUTH ELECTRICAL CHAMBER	30	24	9	-	4	-	-	1/2	115	1	①③⑤
SP-5		WEST STORAGE ROOM	30	20	9	-	4	-	-	1/2	115	1	①③⑤
SP-6		EAST STORAGE ROOM	30	18	9	-	4	-	-	1/2	115	1	①③⑤
SP-7		HVAC STORAGE ROOM	30	17	9	-	4	-	-	1/2	115	1	①③⑤
SP-8		DISCHARGE VALVE CHAMBER	30	16	9	-	4	-	-	1/2	115	1	①③⑤

* SELECTION BASED ON GOULDS; ZOELLER, GOULD OR HYDROMATIC ARE ACCEPTABLE MANUFACTURERS.
** OPERATING AND ALARM LEVELS ARE MEASURED FROM BOTTOM OF SUMP BASIN.
1. SIMPLEX
2. DUPLEX
3. AUTOMATIC CONTROL
4. PROVIDE WITH CONTROL PANEL AND CONNECT TO SCADA
5. PROVIDE 20' POWER CORD.

ELECTRIC POINT-OF-USE DOMESTIC WATER HEATER SCHEDULE

TAG NO.	MANUFACTURER MODEL NO.	LOCATION	FUEL TYPE	INPUT(KW)	MIN. PERFORMANCE	VOLTS	PHASE	REMARKS
EWH-1	RHEEM RTEX-06	TOILET	ELECTRIC	5.5	0.5 GPM @75° ΔT	208	1	①

① MOUNT UNDER SINK.

STORAGE TYPE ELECTRIC WATER HEATER SCHEDULE

TAG NO.	MANUFACTURER MODEL NO.	LOCATION	STORAGE CAPACITY (GALLONS)	MIN. RECOVERY 80 DEG. F RISE-GPH	MAX. INPUT (kW)	VOLTS	PHASE	MAX. AMPS	OPER. WT. (LBS)	REMARKS
EWH-2	RHEEM RGSP30	MECHANICAL EQUIPMENT ROOM	30	30	6.0	208	3	21.7	-	① ②

* SELECTION BASED ON RHEEM; RHEEM RUUD OR EQUAL ARE ACCEPTABLE MANUFACTURERS.

① PRESSURE/TEMPERATURE RELIEF VALVE

② DRAIN VALVE

EXPANSION TANK SCHEDULE*

TAG NO.	MANUFACTURER MODEL NO.*	LOCATION AND SERVICE	MIN. RECOVERY 80 DEG. F RISE-GPH	PRE-CHARGED PRESSURE (PSIG)	MOUNTING	OPER. WT. (LBS)	REMARKS
ET-1	AMTROL ST-12C-DD	MECHANICAL EQUIPMENT ROOM	5.5	75	IN-LINE	-	①

* SELECTION BASED ON AMTROL; AMTROL, TACO OR BELL & GOSSETT ARE ACCEPTABLE MANUFACTURERS.

① ASME STAMP, 150 PSIG WORKING PRESSURE.

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CAPITAL PROJECT WP-269
RECONSTRUCTION OF
PAERDEGAT PUMPING STATION
CONTRACT PS-318
PLUMBING
EQUIPMENT SCHEDULE

DATE: OCTOBER 2026
SCALE: NOT TO SCALE
SHEET NO: 166 OF 274
DRAWING NO. P-111.00

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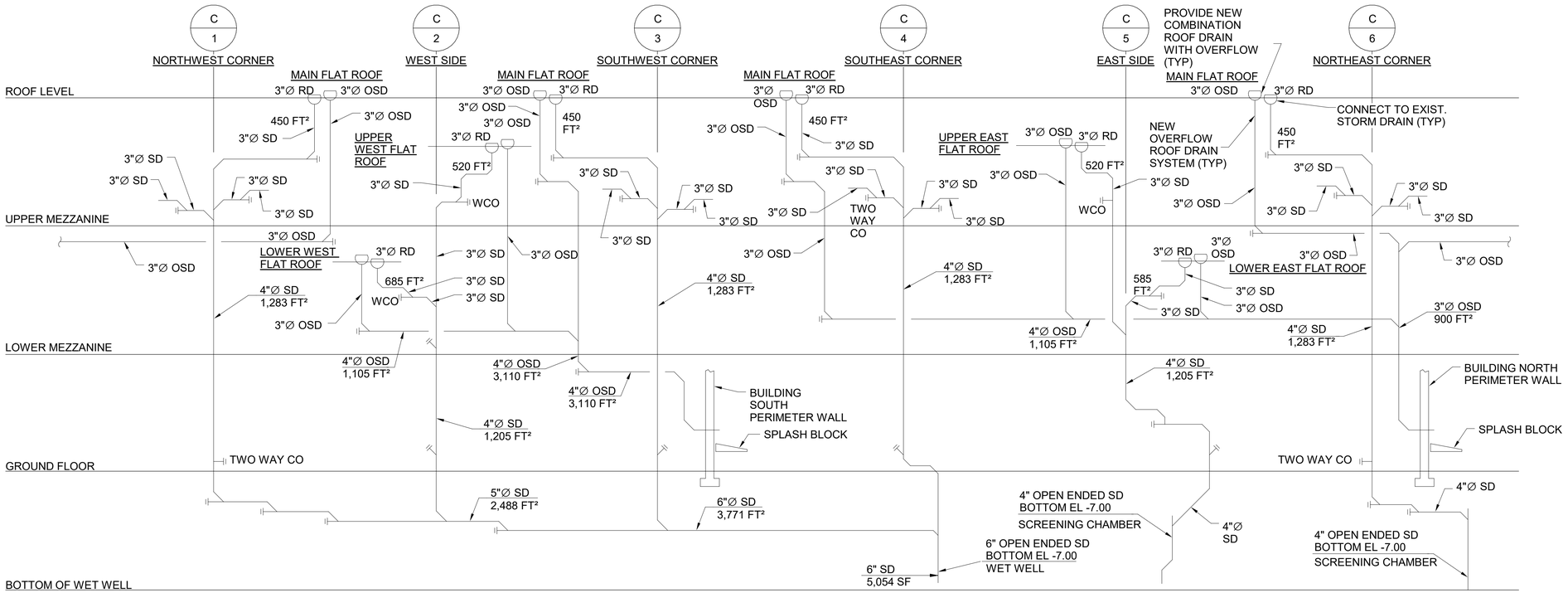
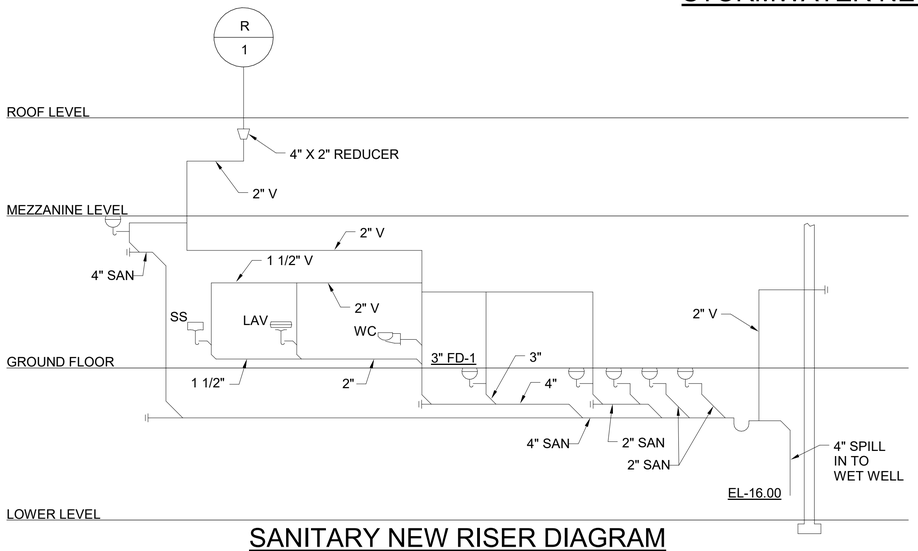
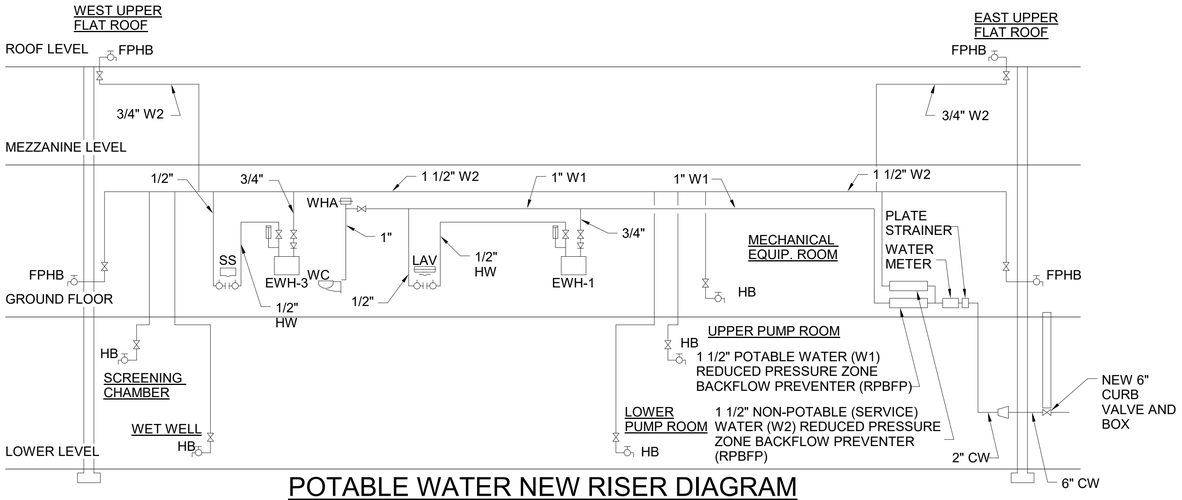


STORMWATER NEW RISER DIAGRAM



SANITARY NEW RISER DIAGRAM



POTABLE WATER NEW RISER DIAGRAM

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CAPITAL PROJECT WP-269
RECONSTRUCTION OF PAERDEGAT PUMPING STATION
CONTRACT PS-318
PLUMBING
RISER DIAGRAM

DATE: OCTOBER 2026
SCALE: NOT TO SCALE
SHEET NO: 167 OF 274
DRAWING NO. P-112.00

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SPRINKLER LEGEND

- BRANCH - BOTTOM CONNECTION
- BRANCH - TOP CONNECTION
- BURIED PIPE
- CAP PIPE
- FLANGE
- PIPE ELBOW DOWN
- PIPE ELBOW UP
- TEE
- UNION
- BALL VALVE
- CHECK VALVE
- NON-INDICATING GATE VALVE
- INDICATING GATE VALVE
- RPDA ASSEMBLY WITH OS&Y VALVES
- OS&Y GATE VALVE WITH TAMPER SWITCH
- AUTOMATIC AIR RELEASE VALVE
- FHV — FIRE HOSE VALVE
- PRESSURE RELIEF VALVE
- WYE STRAINER
- SIAMESE FIRE DEPARTMENT CONNECTION
- 3-WAY FIRE DEPARTMENT CONNECTION
- FLEXIBLE PIPE CONNECTOR
- PRESSURE GAUGE WITH BALL VALVE SHUTOFF AND SNUBBER
- RISER
- UPRIGHT SPRINKLER
- ELECTRIC ALARM BELL
- PIPE SLOPED DOWN
- WATER FLOW SWITCH
- F — FIRE PUMP
- J — JOCKEY PUMP
- M — FLOW METER

GENERAL NOTES

1. ALL WORKING DRAWINGS AND CALCULATIONS SHALL BE STAMPED AND SIGNED BY THE CONTRACTOR'S LICENSED FIRE PROTECTION PROFESSIONAL ENGINEER AND SHALL BE SUBMITTED TO THE LOCAL FIRE DEPARTMENT FOR APPROVAL AND PERMIT PRIOR TO THE COMMENCEMENT OF ANY FIRE SUPPRESSION WORK. ALL WORKING DRAWINGS AND CALCULATIONS AS DESCRIBED ABOVE SHALL ALSO BE SUBMITTED TO THE ENGINEER FOR APPROVAL PRIOR TO THE COMMENCEMENT OF ANY FIRE SUPPRESSION WORK.
2. USE GROUPS IN THIS STRUCTURE ARE NOT TO EXCEED THOSE INDICATED ON THE ARCHITECTURAL DRAWINGS. A FIRE PROTECTION AND HYDRAULIC ANALYSIS INDICATING THE ACCEPTABILITY OF THE FIRE SUPPRESSION SYSTEMS AND ASSOCIATED SYSTEMS TO ADEQUATELY SERVE THE PROPOSED USE GROUPS SHALL BE CONDUCTED BY A LICENSED FIRE PROTECTION PROFESSIONAL ENGINEER PRIOR TO USE GROUP CHANGES OF A GREATER HAZARD.
3. DURING CONSTRUCTION, PROVIDE FIRE PREVENTION SAFEGUARDING IN ACCORDANCE WITH NFPA 241 AND OWNER PROCEDURES.
4. MAINTAIN MAXIMUM HEADROOM FOR ALL PIPING.
5. UNLESS OTHERWISE SPECIFIED, ENCLOSURES FOR ELECTRICAL COMPONENTS SHALL BE NEMA TYPE 4 AS LOCATED WHERE INDICATED ON THE FIRE SUPPRESSION DRAWINGS. ENCLOSURE SHALL MEAN ELECTRICAL EQUIPMENT ENCLOSURES AND ASSOCIATED CONDUIT.
6. NUMERIC SCALES APPLY TO FULL SIZE DRAWINGS ONLY. REFER TO GRAPHIC SCALES FOR REDUCED SIZE DRAWINGS.

ABBREVIATIONS

AFF	ABOVE FINISHED FLOOR
ATS	AUTOMATIC TRANSFER SWITCH
℄	CENTER LINE
DCBFP	DOUBLE CHECK BACKFLOW PREVENTER
DN	DOWN
EXIST	EXISTING
FACP	FIRE ALARM CONTROL PANEL
FD	FLOOR DRAIN
FHV	FIRE HOSE VALVE
FP	FIRE PROTECTION
FS	FLOW SWITCH
FW	FIRE WATER
GPM	GALLONS PER MINUTE
MAX	MAXIMUM
MIN	MINIMUM
NAC	NOTIFICATION APPLIANCE CIRCUIT
NC	NORMALLY CLOSED
NO	NORMALLY OPEN
OS&Y	OUTSIDE SCREW AND YOKE
PIB	PREMISES INFORMATION BOX
PLBG	PLUMBING
PSIG	POUNDS PER SQUARE INCH GAUGE
SLC	SIGNALING LINE CIRCUIT
SQ FT	SQUARE FEET
TYP	TYPICAL
WSP	WET SPRINKLER PIPE
VIF	VERIFY IN FIELD

MISCELLANEOUS LEGEND

- NEW WORK, PIPING (SHOWN DARK)
- NEW WORK BY OTHERS (SHOWN LIGHT)
- CONNECT TO EXISTING
- LIMIT OF REMOVAL
- LIMIT OF WORK
- AREA TO BE SPRINKLED
- ITEMS TO BE REMOVED
- CONTINUATION

WATER-BASED FIRE SUPPRESSION SPRINKLER SYSTEMS

1. THE CONTRACTOR SHALL DESIGN SPRINKLER SYSTEMS AND PRODUCE A COMPLETE SET OF WORKING DRAWINGS IN ACCORDANCE WITH NFPA 13-2022 ADOPTED BY NYC BUILDING CODE. SYSTEMS SHALL BE HYDRAULICALLY CALCULATED PER THE DESIGN CRITERIA PROVIDED AND REQUIRED.
2. THE OWNER IS TO PROVIDE HEAT AS REQUIRED THROUGHOUT THE BUILDING TO PREVENT WATER IN THE SYSTEM FROM FREEZING. THE OWNER IS ALSO TO MAINTAIN THE SYSTEM IN ACCORDANCE WITH THE REQUIREMENTS OF NFPA 25 TESTING AND MAINTENANCE CRITERIA.
3. THESE FIRE SUPPRESSION DRAWINGS ARE NOT INTENDED TO SHOW SPRINKLER HEAD LOCATIONS, NUMBER OF SPRINKLER HEADS, OR THE SIZE AND ROUTING OF SPRINKLER PIPING. THIS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL COORDINATE WITH THE ARCHITECTURAL DRAWINGS.
4. THE DESIGN AREAS AND DENSITIES INDICATED ON THE FIRE SUPPRESSION DRAWINGS ARE FOR REFERENCE ONLY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING ALL DESIGN AREAS AND DENSITIES IN STRICT ACCORDANCE WITH NFPA 13.
5. SPRINKLER HEADS SHALL BE UL LISTED AND FM APPROVED FOR THE INSTALLATION APPLICATION AND CONFIGURATION SPECIFIC TO THIS PROJECT AND SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS. POSITION ALL HEADS IN ACCORDANCE WITH NFPA 13, UL, FM AND THE MANUFACTURER'S INSTRUCTIONS. ALL HEADS SHALL BE OF THE SAME MANUFACTURER.
6. SPRINKLER HEADS SHALL BE STANDARD RESPONSE, STANDARD COVERAGE. SPRINKLER HEAD K-FACTOR SHALL BE 5.6 MINIMUM.

FIRE WATER SUPPLY HYDRAULIC DATA

1. THE FOLLOWING IS 08/13/2026 AT 09:20 AM FIRE WATER SUPPLY HYDRAULIC DATA FOR BIDDING PURPOSES. THE CONTRACTOR SHALL PERFORM A FIRE HYDRANT FLOW TEST ON THE SITE THAT SHALL BE USED TO PERFORM HYDRAULIC CALCULATIONS FOR DESIGN OF ALL WATER-BASED FIRE SUPPRESSION SYSTEMS:

STATIC PRESSURE:	53 PSIG
RESIDUAL PRESSURE:	52 PSIG
FLOW:	500 GPM
PROVIDED BY:	URSZULA KRAJEWSKY
FIRE HYDRANT LOCATIONS:	FLATLANDS AVENUE FIRST AND SECOND HYDRANTS OF EAST SIDE OF RALPH AVENUE

SPRINKLER SYSTEMS DESIGN CRITERIA

1. PROVIDE FULL COVERAGE AUTOMATIC WET PIPE SPRINKLER SYSTEM IN SPACES INDICATED PER NFPA 13.
2. PROVIDE NFPA 13 HAZARD CLASSIFICATIONS AS FOLLOWS AS INDICATED ON FLOOR PLANS:

SPACE	NFPA 13 HAZARD CLASSIFICATION	DENSITY	SYSTEM TYPE
PAERDEGAT PUMPING STATION LOWER LEVEL	ORDINARY HAZARD GROUP 1	0.15 GPM OVER 1500 SQ FT OR LESS	WET PIPE

3. PROVIDE SPRINKLERS IN ALL SPACES INDICATED ON DRAWINGS ACCORDING TO NFPA 13-2022, ARTICLE 8.15.
4. PROVIDE SPRINKLERS IN ALL ANCILLARY SPACES REQUIRED BY NFPA 13-2022, ARTICLE 8.15, EXCEPT NO SPRINKLERS IN ELECTRICAL ROOMS THAT ARE 2-HOUR FIRE RATED, CONTAIN ONLY DRY TYPE ELECTRICAL EQUIPMENT, AND ARE NOT USED FOR STORAGE SPACE.
5. PROVIDE SPRINKLERS AROUND AND BELOW OBSTRUCTIONS REQUIRED BY NFPA 13-2022, CHAPTER 8.
6. HYDRAULIC CALCULATIONS SHALL INCORPORATE A MINIMUM 10 PSI CUSHION AT DESIGN CONDITIONS TO ALLOW FOR FUTURE DEGRADATION OF THE WATER SUPPLY.
7. ALL PIPING AND COMPONENTS SUBJECT TO PRESSURE SHALL BE RATED FOR MINIMUM 175 PSIG WORKING PRESSURE.

3/16"=1'-0" 0 5 10 FT.

BID SET

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CAPITAL PROJECT WP-269
RECONSTRUCTION OF
PAERDEGAT PUMPING STATION
CONTRACT PS-318
SPRINKLER
NOTES, LEGEND AND ABBREVIATIONS

DATE: OCTOBER 2026
SCALE: 1" = 1'-0"
SHEET NO: 168 OF 274
DRAWING NO. SPG-001.00

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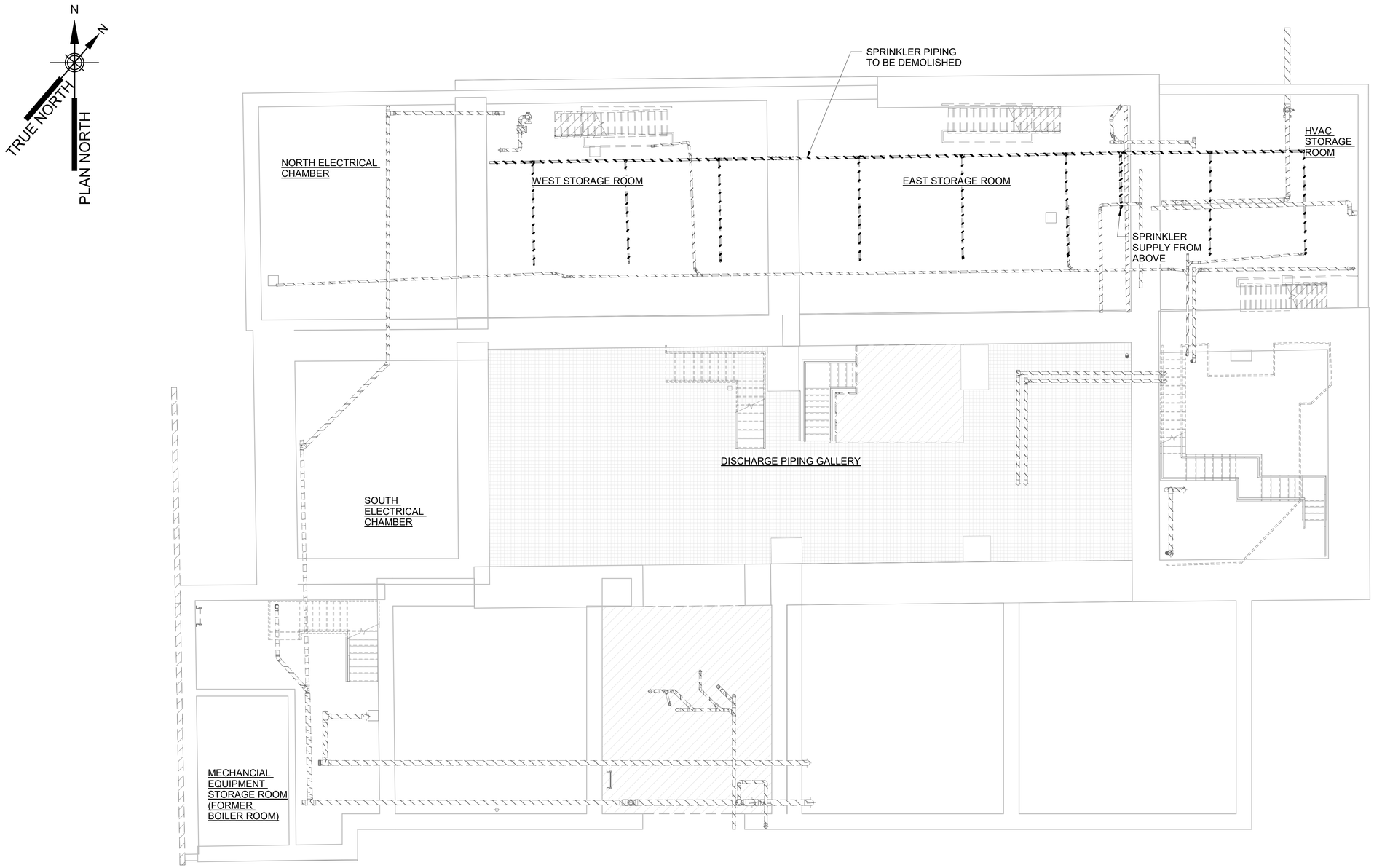

NOTES:

1. DEMOLITION PLANS ARE DIVIDED BY DISCIPLINE. FIRE PROTECTION DEMOLITION IS SHOWN ON DF SHEETS; REFER TO SHEETS OF OTHER DISCIPLINES FOR THEIR SPECIFIC DEMOLITION REQUIREMENTS.

PAERDEGAT FIRE PROTECTION FIRST LEVEL BELOW GROUND - DEMOLITION

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

3/16"=1'-0" 0 5 10 FT.

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CAPITAL PROJECT WP-269
RECONSTRUCTION OF
PAERDEGAT PUMPING STATION
CONTRACT PS-318
SPRINKLER
DEMOLITION DISCHARGE PIPING GALLERY, STORAGE ROOMS, ELECTRICAL CHAMBERS

DATE: OCTOBER 2026
SCALE: 3/16" = 1'-0"
SHEET NO: 169 OF 274
DRAWING NO. DSP-001.00

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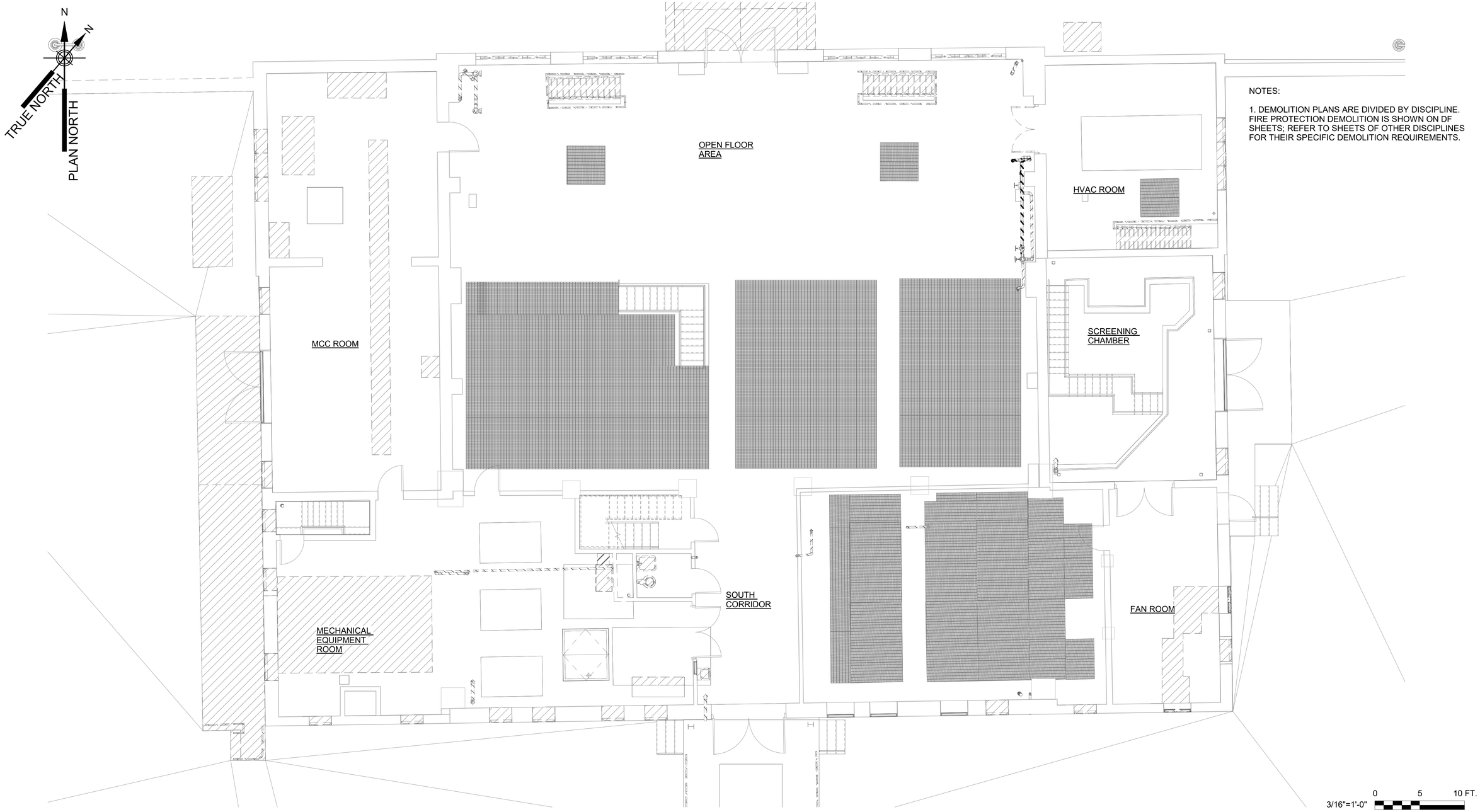

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PAERDEGAT FIRE PROTECTION GROUND FLOOR LEVEL - DEMOLITION

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CAPITAL PROJECT WP-269
RECONSTRUCTION OF
PAERDEGAT PUMPING STATION
CONTRACT PS-318
SPRINKLER
DEMOLITION GROUND FLOOR (OPEN AREA, SCREENING CHAMBER, MECH EQUIP RM)

DATE: OCTOBER 2026
SCALE: 3/16" = 1'-0"
SHEET NO: 170 OF 274
DRAWING NO. DSP-002.00

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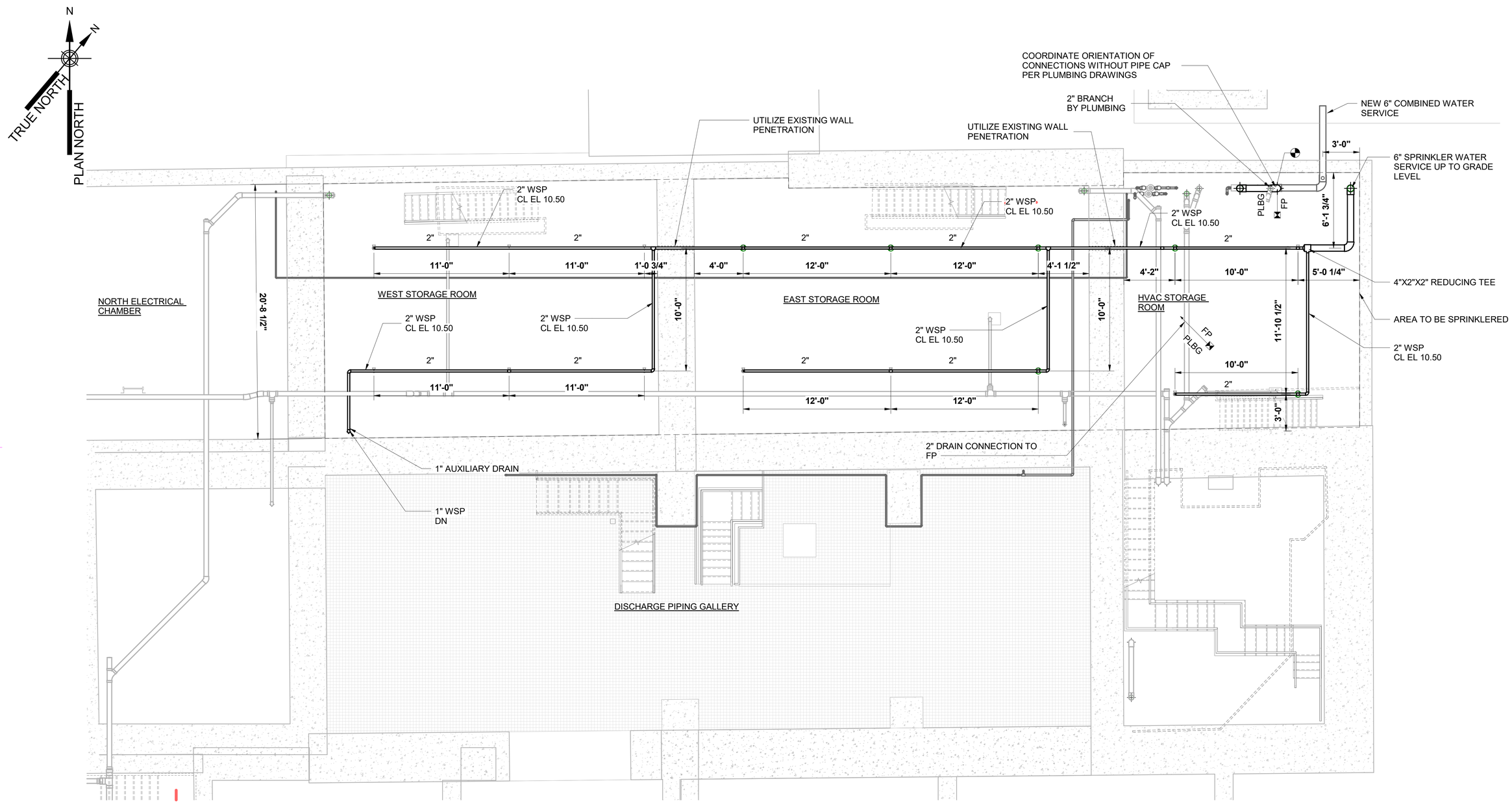

0 4 8 FT.
1/4"=1'-0"

PAERDEGAT FIRE PROTECTION FIRST LEVEL BELOW GROUND

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

BID SET

SUBMITTAL DATE: OCTOBER 2026

GRAPHIC SCALES CHECK BEFORE USE

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DRAWN BY: MENGHONG WANG
CHECKED BY: SHANE HATMAKER, P.E.
DESIGN LEAD: MOHAMED KHORSHED
PROJECT MANAGER: AIMEE BOULET, P.E.

AECOM
605 THIRD AVENUE, 3rd FL.
NEW YORK, NY 10158, US

REGISTERED ENGINEER EDWARD J. CHAVANO No. 111699 STATE OF NEW YORK

Environmental Protection

ACCOUNTABLE MANAGER	JOHN GOULAS, P.E.
PORTFOLIO MANAGER	KEVIN ELLENWOOD, P.E.
EXECUTIVE DIRECTOR	NAYANKUMAR SHAH, P.E.

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CAPITAL PROJECT WP-269
RECONSTRUCTION OF
PAERDEGAT PUMPING STATION
CONTRACT PS-318
SPRINKLER
PAERDEGAT - DISCHARGE PIPING GALLERY, STORAGE ROOMS, ELECTRICAL CHAMBERS

DATE: OCTOBER 2026
SCALE: 1/4" = 1'-0"
SHEET NO: 171 OF 274
DRAWING NO. SP-001.00

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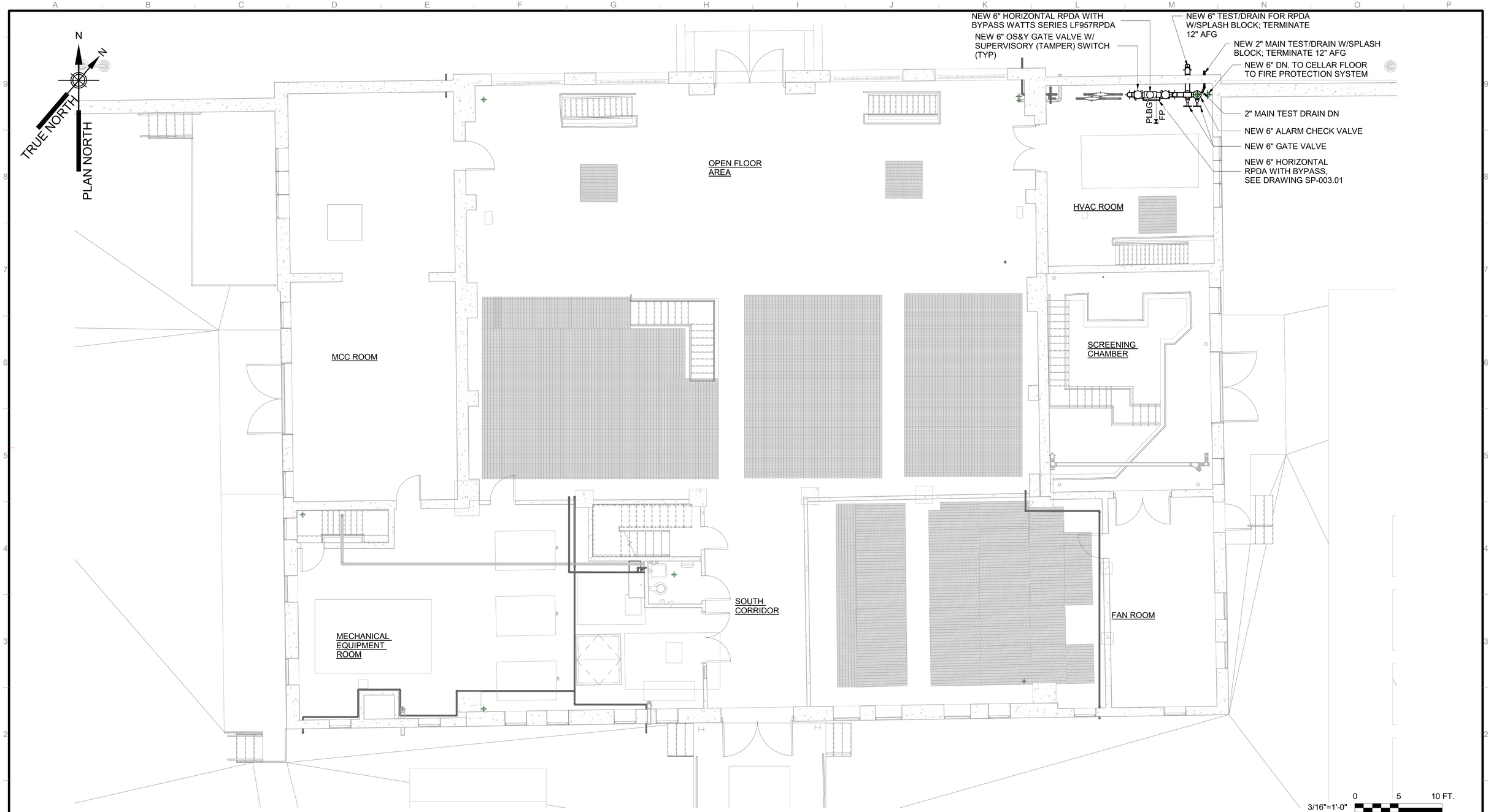

PAERDEGAT FIRE PROTECTION GROUND FLOOR LEVEL

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NEW YORK, NY 10158, US

REGISTERED ENGINEER EDWARD J. CHAYKO No. 111649 STATE OF NEW YORK

Environmental Protection

ACCOUNTABLE MANAGER: JOHN GOULAS, P.E.
PORTFOLIO MANAGER: KEVIN ELLENWOOD, P.E.
EXECUTIVE DIRECTOR: NAYANKUMAR SHAH, P.E.

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CAPITAL PROJECT WP-269
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PAERDEGAT PUMPING STATION
CONTRACT PS-318
SPRINKLER
PAERDEGAT - GROUND FLOOR (OPEN AREA, SCREENING CHAMBER, MECH EQUIP RM)

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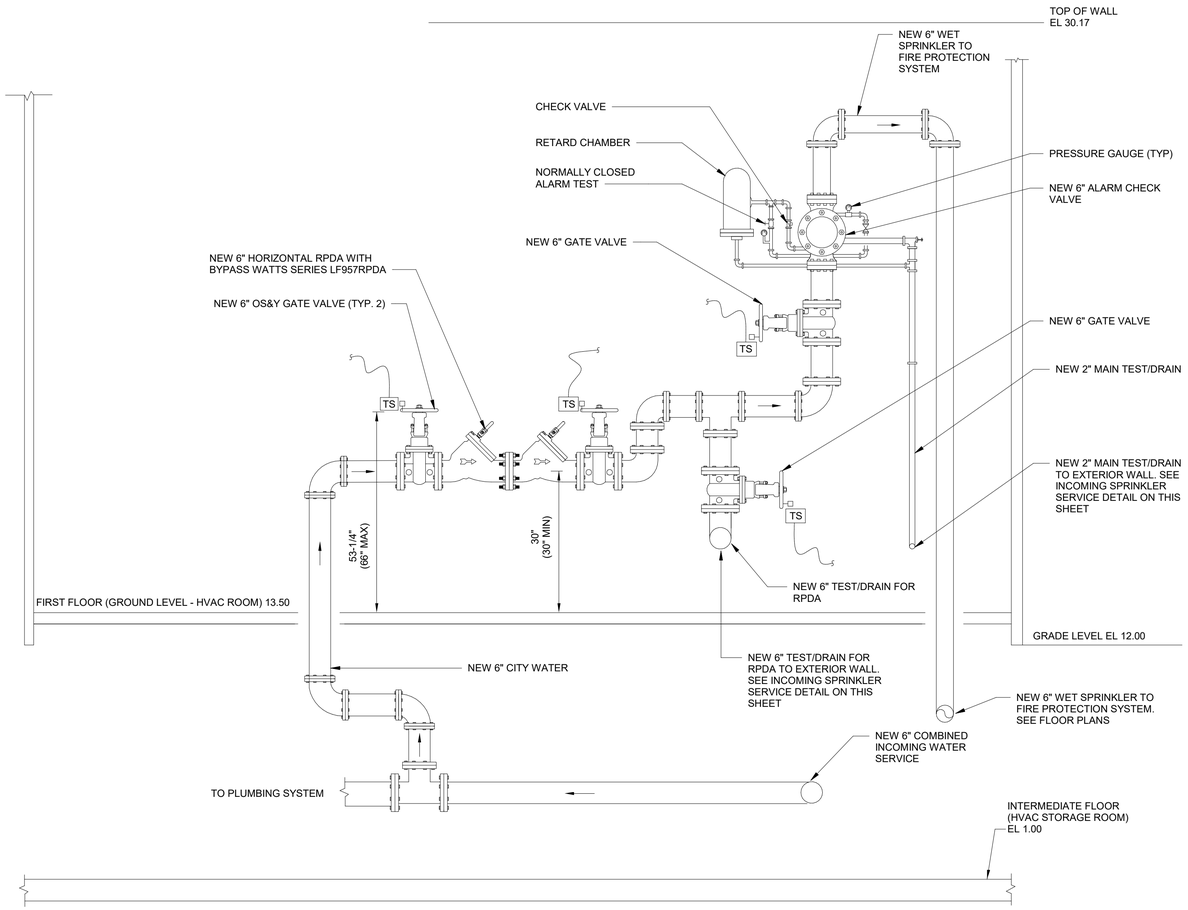
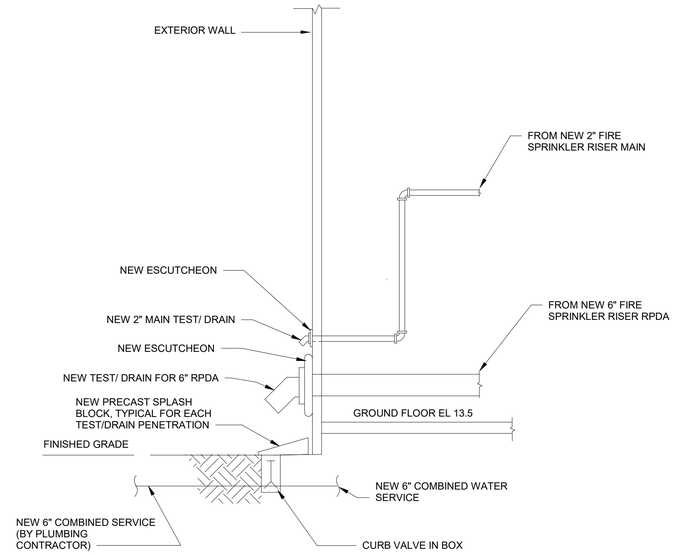


NOTES:

1. PROVIDE IDENTIFICATION SIGNS PER NFPA 13.
2. PROVIDE BACKFLOW PREVENTER IN ACCORDANCE WITH THE CITY OF NEW YORK BUREAU OF WATER AND SEWER OPERATIONS CROSS-CONNECTION CONTROL PROGRAM HANDBOOK (2019).

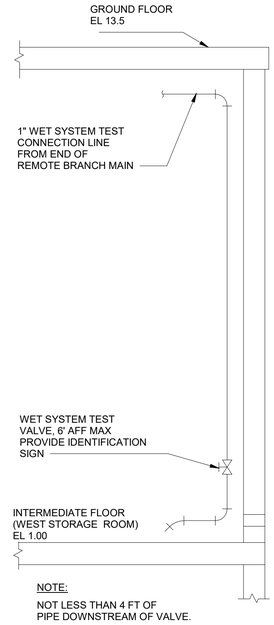
SPRINKLER RISER WITH HORIZONTAL RPDA

NOT TO SCALE



INCOMING SPRINKLER SERVICE DETAIL

NOT TO SCALE



NOTE:

NOT LESS THAN 4 FT OF PIPE DOWNSTREAM OF VALVE.

INSPECTOR'S TEST CONNECTION WET PIPE DETAIL

NOT TO SCALE

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NEW YORK, NY 10158, US

REGISTERED ENGINEER EDWARD J. CHAYKA No. 111668 STATE OF NEW YORK

Environmental Protection

ACCOUNTABLE MANAGER: JOHN GOULAS, P.E.
PORTFOLIO MANAGER: KEVIN ELLENWOOD, P.E.
EXECUTIVE DIRECTOR: NAYANKUMAR SHAH, P.E.

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CAPITAL PROJECT WP-269
RECONSTRUCTION OF
PAERDEGAT PUMPING STATION
CONTRACT PS-318
SPRINKLER
DETAILS 1

DATE: OCTOBER 2026
SCALE: AS INDICATED
SHEET NO: 173 OF 274
DRAWING NO. SP-003.00

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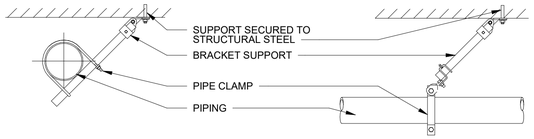
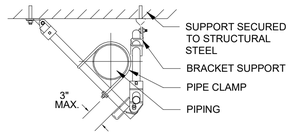


LATERAL (TRANSVERSE) BRACE



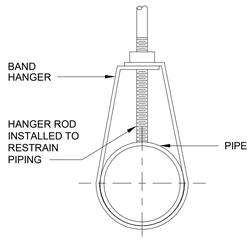
LONGITUDINAL BRACE

LONGITUDINAL/LATERAL BRACE

NOTE:
ALL PIPING SHALL BE SEISMICALLY BRACED AND INSTALLED PER NFPA 13-2022.

SEISMIC PIPE BRACING DETAILS

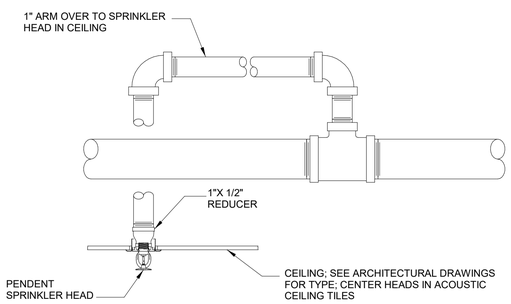
NOT TO SCALE



PIPING 2" AND SMALLER

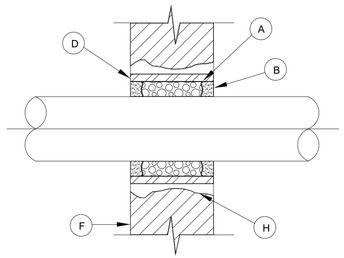
TYPICAL PIPE SUPPORT DETAILS

NOT TO SCALE



SPRINKLER HEAD ARM OVER DETAIL

NOT TO SCALE

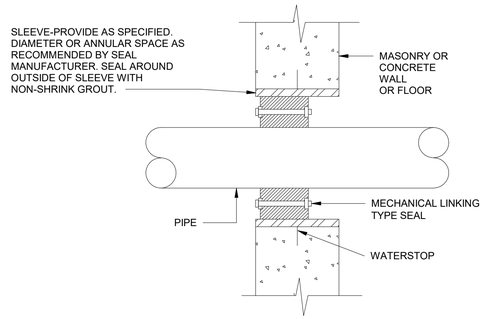


INTERIOR WALL/FLOOR THRU-PENETRATION DETAIL

(NOT FOR WATER TIGHT CONSTRUCTION)

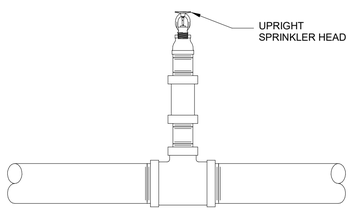
NOT TO SCALE

- (A) PROVIDE MIN. 1" CLEARANCE BETWEEN PIPE SLEEVE OR CORE DRILLED HOLE AND PIPE; PACK CLEARANCE SPACE WITH SPECIFIED INSULATION.
- (B) PROVIDE SPECIFIED END SEALANT.
- (C) NOT USED.
- (D) SLEEVE-PROVIDE AS SPECIFIED. EXTEND FLOOR PIPE SLEEVES 2" ABOVE FLOOR.
- (E) CALCIUM SILICATE OR APPROVED EQUAL INSULATION THRU PENETRATION AND EXTENDED 2" ON BOTH SIDES OF WALL.; PROVIDE METAL JACKET AS SPECIFIED OVER INSULATION.
- (F) WALL OR FLOOR.
- (G) NOT USED.
- (H) GROUT SPACE BETWEEN SLEEVE & MASONRY WALLS.



EXTERIOR WALL/FLOOR PIPE PENETRATION DETAIL

NOT TO SCALE



UPRIGHT SPRINKLER HEAD DETAIL

NOT TO SCALE

BID SET

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NEW YORK, NY 10158, US

REGISTERED ENGINEER EDWARD J. CHAYKAS No. 111689 STATE OF NEW YORK

Environmental Protection

ACCOUNTABLE MANAGER: JOHN GOULAS, P.E.
PORTFOLIO MANAGER: KEVIN ELLENWOOD, P.E.
EXECUTIVE DIRECTOR: NAYANKUMAR SHAH, P.E.

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CAPITAL PROJECT WP-269
RECONSTRUCTION OF
PAERDEGAT PUMPING STATION
CONTRACT PS-318
SPRINKLER
DETAILS 2

DATE: OCTOBER 2026
SCALE: AS INDICATED
SHEET NO: 174 OF 274
DRAWING NO. SP-004.00

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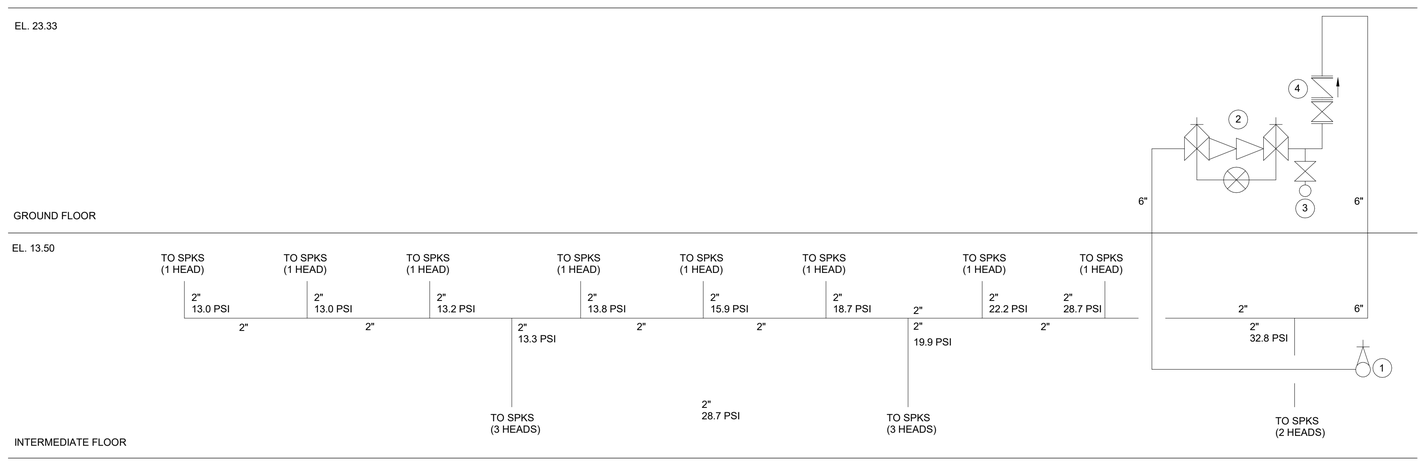
SPRINKLER RISER LEGEND

1. NEW 6" COMBINED SERVICE CITY WATER WITH NEW 6" HCV OS&Y VALVE WITH TAMPER SWITCH.
2. NEW 6" HORIZONTAL RPDA WITH BYPASS WATTS SERIES LF957RPDA
3. NEW 6" TEST/DRAIN FOR RPDA TO EXTERIOR WALL
4. NEW 6" ALARM CHECK VALVE AND 6" GATE VALVE WITH 2" MAIN TEST/DRAIN TO EXTERIOR WALL



SPRINKLER RISER DIAGRAM

SPRINKLER SCHEDULE - ORDINARY HAZARD GROUP 1

LEGEND	TYPE	AREA	MAKE	MODEL	MAX. TEMP. RATING	DENSITY	K-FACTOR	APPROVALS	APPROVALS
P	PENDENT (STANDARD RESPONSE)	ORDINARY HAZARD GRP 1	RELIABLE	F1FR-56	155°F/200°F	0.15 GPM/SQ. FT	5.6	BRASS FRAME BRONZE DEFELECTOR	UL, FM
U	UPRIGHT (STANDARD RESPONSE)	ORDINARY HAZARD GRP 1	RELIABLE	F1FR-56 UPRIGHT	155°F/200°F	0.15 GPM/SQ. FT	5.6	BRASS FRAME BRONZE DEFELECTOR	UL, FM

NOTES:

1. FOR ORDINARY HAZARD GROUP 1 AREAS; DENSITY PER NFPA 13
2. FOR EXPOSED PIPING IN ORDINARY HAZARD GROUP 1 SPACES

SPRINKLER PIPING SCHEDULE - ORDINARY HAZARD GROUP 1

ITEM	TYPE	MATERIAL	SIZE	STANDARDS	APPROVALS	NOTES
P-1	MAIN RISERS AND MAINS	SCHEDULE 40 BLACK STEEL	2"	ASTM A53/A795 NFPA 13	UL, FM	WELDED OR GROOVED; SIZED BY HYDRAULIC CALC; NO NONMETALLIC PIPING
P-2	BRANCH LINES	SCHEDULE 40 BLACK STEEL	2"	ASTM A53/A795 NFPA 13	UL, FM	THREADED OR GROOVED; SLOPE AND SUPPORT PER NFPA 13
P-3	SPRINKLER DROPS	SCHEDULE 40 BLACK STEEL	2"	ASTM A53/A795 NFPA 13	UL, FM	THREADED OUTLETS TO HEADS; MINIMIZE FITTINGS; COORDINATE WITH CEILING
P-4	FITTINGS (MAIN & BRANCHES)	DUCTILE IRON FITTINGS; GROOVED OR THREADED	MATCH PIPE	ASME B16.3/B16.9 NFPA 13	UL, FM	USE LISTED TEES, ELBOWS, COUPLINGS, PRESSURE CLASS TO MATCH SYSTEM
P-5	HANGERS & SUPPORTS	STEEL HANGER ROD, CLAMPS AND INSERTS	-	NFPA 13	UL	SPACING, TYPE, AND ATTACHMENT PER NFPA 13 & NYC AMENDMENTS

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CAPITAL PROJECT WP-269
RECONSTRUCTION OF
PAERDEGAT PUMPING STATION
CONTRACT PS-318
SPRINKLER
DETAILS 3

DATE: OCTOBER 2026
SCALE: 1" = 1'-0"
SHEET NO: 175 OF 274
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FIRE ALARM SYSTEM SYMBOLS

A/V 110	AUDIO/VISUAL ALARM INDICATOR (HORN/STROBE) NUMBER INDICATES STROBE CANDELA RATING WHEN OTHER THAN 75
F 110	HORN/STROBE LIGHT. NUMBER INDICATES STROBE CANDELA RATING WHEN OTHER THAN 75
C SL 110	STROBE LIGHT NUMBER INDICATES STROBE CANDELA RATING WHEN OTHER THAN 75 (C: CEILING MOUNTED; WALL MOUNTED UNLESS OTHERWISE NOTED XP: INDICATES EXPLOSION PROOF CO: AMBER COLORED CARBON MONOXIDE STROBE)
FC	MANUAL PULL STATION
FACP	FIRE ALARM CONTROL PANEL
B	BELL
FAAS	FIRE ALARM ANNUNCIATOR STATION
FS	FLOW SWITCH
TS	VALVE TAMPER SWITCH
	END OF LINE RESISTOR
FD	FLAME DETECTOR
CO	CARBON MONOXIDE DETECTOR WITH SOUNDING BASE
SD	SMOKE DETECTOR, MULTISENSOR
SD I	SMOKE DETECTOR, IONIZATION
SD P	SMOKE DETECTOR, PHOTOELECTRIC
C HD 135°F WP/XP	CONVENTIONAL HEAT DETECTOR WITH MONITOR MODULE (FIXED AND RATE OF RISE) WP - WEATHER PROOF XP - EXPLOSION PROOF
C S/R DD XP	CONVENTIONAL DUCT DETECTOR WITH MONITOR MODULE S - SUPPLY R - RETURN XP - EXPLOSION PROOF
MM	MONITOR MODULE
CM	CONTROL MODULE AND LOAD RELAY
DACT	DIGITAL ALARM COMMUNICATOR TRANSMITTER
IM	ISOLATOR MODULE
PS	POWER SUPPLY
	OUTDOOR CELLULAR ANTENNA

	DEMOLITION HATCHING
	LIGHT LINE - EXISTING WORK
	DARK LINE - NEW WORK
	AUTOMATIC TRANSFER SWITCH
	DELTA/WYE TRANSFORMER CONNECTION W/GROUND
	TRANSFORMER - SIZE AS NOTED ON THE DRAWINGS
F 30/20	FUSED DISCONNECT SWITCH FIRST NUMBER DENOTES SWITCH AMP RATING SECOND NUMBER DENOTES FUSE SIZE.

GENERAL NOTES:

1. PROVIDE BATTERY SYSTEM FOR ALL FACPs IN ACCORDANCE WITH SPECIFICATION 28 31 00 AND NYC ELECTRICAL CODE 760.41.
2. ALL WIRING ASSOCIATED WITH THE FIRE ALARM SYSTEM SHALL BE RUN IN RIGID METAL CONDUIT. ALL CONDUIT AND WIRES FOR THE FIRE ALARM SYSTEM SHALL BE PROVIDED UNDER THIS CONTRACT. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS THAT SHALL INCLUDE THE FOLLOWING (THIS INFORMATION IS NOT SHOWN ON THE DRAWINGS): CONDUIT AND WIRE SCHEDULE BETWEEN THE DIFFERENT COMPONENTS OF THE FIRE ALARM SYSTEM AND THE PHYSICAL ROUTING OF ALL CONDUITS. CONDUIT AND WIRE SCHEDULE SHALL INCLUDE THE FOLLOWING INFORMATION; CONDUIT TAG NUMBERS, CONDUIT SIZE, CABLE QUANTITY, CABLE SIZE, FROM, TO, AND REMARKS.
3. CONTRACTOR SHALL PROVIDE CLASS A LOOPED SLC CIRCUITS AND CLASS B NAC CIRCUITS.
4. ALL CONDUITS SUPPLYING 120-VOLT POWER TO THE FIRE ALARM CONTROL PANEL AND/OR TO OUTLYING NODE CABINETS, SHALL CONTAIN A GREEN INSULATED GROUNDING CONDUCTOR SIZED IN ACCORDANCE WITH THE NEW YORK CITY ELECTRICAL CODE (#10 AWG MINIMUM). THE GROUNDING CONDUCTOR SHALL BE CONNECTED TO THE GROUND BUS OR OTHER SUITABLE GROUNDING TERMINAL IN EACH BOX AND CABINET IN WHICH IT ENTERS. AT THE FUSED DISCONNECT SUPPLYING POWER TO EACH FACP PROVIDE A GROUNDING ELECTRODE CONDUCTOR SIZED AND INSTALLED IN ACCORDANCE WITH THE NEW YORK CITY ELECTRICAL CODE (#10 AWG MINIMUM).
5. RISER DIAGRAMS DEPICT THE MINIMUM NUMBER OF UNITS. CONTRACTOR SHALL PROVIDE ADEQUATE TYPE AND QUANTITY OF FIRE ALARM UNITS IN ACCORDANCE WITH THE REQUIREMENTS OF NFPA 72, NATIONAL FIRE ALARM CODE, AND THE BUILDING CODE OF THE CITY OF NEW YORK. THIS RISER DIAGRAM DEPICTS SLC, NAC, AND DATA CIRCUITS ONLY. ALL OTHER DEVICES SUCH AS BATTERY CABINETS, RELAY CABINETS, BELLS AND ANY OTHER DEVICE OR APPURTENANCE REQUIRED FOR SYSTEM OPERATION SHALL BE PROVIDED AS SHOWN ON THE PLAN DRAWINGS, AS NEEDED FOR SYSTEM OPERATION AND AS PER SPECIFICATION 28 31 00.
6. ALL DEVICES SHALL BE LOCATED WITH CLEAR ACCESS FOR MAINTENANCE AND INSPECTION AS PER NFPA 72. LOCATIONS FOR CEILING MOUNTED SMOKE/HEAT DETECTORS SHALL BE COORDINATED SUCH THAT SUFFICIENT SPACE AND CLEARANCE IS PROVIDED FOR ACCESSING DEVICE FOR INSPECTION, MAINTENANCE AND REPLACEMENT.
7. ALL SPOT TYPE SMOKE DETECTORS SHALL BE LOCATED A MINIMUM OF 3 FEET FROM AIR REGISTERS, GRILLES, OR OTHER SOURCES OF AIRFLOW.
8. ALL DUCT SMOKE DETECTORS SHALL BE PROVIDED WITH A REMOTE TEST/ALARM INDICATION STATION MOUNTED AT AN ACCESSIBLE LOCATION NEAR THE DUCT DETECTOR.
9. PROVIDE BOOSTER POWER SUPPLIES FOR NAC CIRCUITS AS DETERMINED BY THE FIRE ALARM SYSTEM VENDOR BASED ON CIRCUIT LOAD AND VOLTAGE DROP. BOOSTER POWER SUPPLIES SHALL BE PROVIDED 120V POWER FROM THE SAME FUSED DISCONNECT PROVIDING POWER FOR THE FIRE ALARM FACPs.
10. REFER TO CONDUIT AND CABLE SCHEDULES ON ELECTRICAL DRAWINGS FOR FIRE ALARM CONDUITS BETWEEN ENCLOSURES/BUILDINGS.
11. ALL EQUIPMENT ASSOCIATED WITH THE FIRE ALARM SYSTEM SHALL BE PAINTED IN RED.
12. THE CONTRACTOR SHALL PERFORM A COMPLETE SYSTEM STARTUP AND TESTING IN ACCORDANCE WITH THE APPLICABLE CODE REQUIREMENTS PRIOR TO FINALIZING THE AS-BUILT DRAWINGS. FOLLOWING SUCCESSFUL COMPLETION OF THE PRE-TEST, THE CONTRACTOR SHALL SUBMIT THE AS-BUILT DRAWINGS TO THE ENGINEER OF RECORD FOR REVIEW AND SEALING. THE SEALED AS-BUILT DRAWINGS SHALL THEN BE FORWARDED TO THE EXPEDITER FOR SUBMISSION TO THE FIRE DEPARTMENT TO OBTAIN THE REQUIRED SYSTEM INSPECTION.

ABBREVIATIONS

#	NUMBER
&	AND
1ST	FIRST
2ND	SECOND
A	AMPERES
ADMIN	ADMINISTRATION
ALM	ALARM
ASS'T	ASSISTANT
ATC	AUTOMATIC TEMPERATURE CONTROL
ATS	AUTO TRANSFER SWITCH
AUX	AUXILIARY
AWG	AMERICAN WIRE GAUGE
BLDG BSMT	BUILDING BASEMENT
C OR CND	CONDUIT OR CONTROL CONDUIT
CAT	CATEGORY
CLF	CURRENT-LIMITING FUSE
CNTRL	CONTROL
CO	CARBON MONOXIDE
COMP	COMPRESSOR
CONT	CONTINUATION
CONTR	CONTROLLER
CORR	CORRIDOR
CPT	CONTROL POWER TRANSFORMER
CTL, CTRL	CONTROL
DCU	DISTRIBUTED CONTROL UNIT
DD	DUCT DETECTOR
DIN	DEUTSCHES INSTITUT FUR NORMUNG
DN	DOWN
DWG	DRAWING
E	EAST
EF	EXHAUST FAN
EJ	EXPANSION JOINT
EL, ELEV	ELEVATION
ELEC	ELECTRICAL
ELECT	ELECTRICAL
EOL	END OF LINE
EXIST	EXISTING
FACP	FIRE ALARM CONTROL PANEL
FAP	FIRE ALARM PANEL
FCO	FUSE CUT OUT
FL, FLR	FLOOR
FPLP	POWER LIMITED PLENUM CABLE
FPP	FIBER PATCH PANEL
FST, FT	FINAL SETTLING TANKS
G&S, GS	GRIT AND SCUM
GEN	GENERATOR
GSM	GLOBAL SYSTEM FOR MOBILE COMMUNICATIONS
H&V, HV	HEATING AND VENTILATING
HMI	HUMAN MACHINE INTERFACE
HP	HIGH POINT
HVAC	HEATING, VENTILATION & AIR CONDITIONING
INSTR	INSTRUMENTATION
KV	KILOVOLT
KVA	KILOVOLT-AMPERE
LCP	LOCAL CONTROL PANEL
LP	LIGHTING PANEL
LTE	LONG TERM EVOLUTION
MACH	MACHINE
MCC	MOTOR CONTROL CENTER
MECH	MECHANICAL
MFAP	MAIN FIRE ALARM PANEL
MS	MAIN SUBSTATION
MULTI	MULTIPLE
N	NORTH
N.O.	NORMALLY OPEN
NAC	NOTIFICATION APPLIANCE CIRCUIT
NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
NO	NUMBER
NTS	NOT TO SCALE
NYC	NEW YORK CITY
OC	ODOR CONTROL
OCF	ODOR CONTROL FAN
P	POLE
P&PH, PPH	PUMP AND POWERHOUSE
PH	PHASE
PNL	PANEL
PRESS	PRESSURE
PROC	PROCESS
PS	POWER SUPPLY
PST	PRIMARY SETTLING TANK
RM	ROOM
RMS	ROOT MEAN SQUARE
RSL	RETURN SLUDGE
RWS	RETURN WASTE SLUDGE
SC, SPC	SLUDGE PROCESSING COMPLEX
SLC	SIGNALING LINE CIRCUIT
SR	SENIOR
STW	STREET WORKER
SYM	SYMMETRICAL
T/F	TRANSFORMER
TB	TERMINAL BOX
TBL	TROUBLE
TRANSF	TRANSFER
TYP	TYPICAL
TS	TAMPER SWITCH
UL	UNDERWRITER LABORATORIES
UPS	UNINTERRUPTIBLE POWER SUPPLY
V	VOLT
VAC	VOLTAGE ALTERNATING CURRENT
VDC	VOLTAGE DIRECT CURRENT
VFD	VARIABLE FREQUENCY DRIVE
W	WATT
WF, WFS	WATER FLOW SWITCH
WSL	WASTE SLUDGE
Y	WYE
XP	EXPLOSION PROOF

AREAS CLASSIFICATION AND EQUIPMENT ENCLOSURE SCHEDULE

ROOM OR AREA	AREA CLASSIFICATION	ENCLOSURE RATING
ELECTRICAL ROOM	DUSTY	NEMA 12
WET WELL, SCREEN CHAMBER	CLASS I DIV 1	NEMA 7
FIRST, SECOND AND THIRD LEVELS BELOW GROUND	WET AND CORROSIVE	NEMA 4X
ALL OTHER INDOOR AND OUTDOOR LOCATIONS	WET AND CORROSIVE	NEMA 4X

BID SET

SUBMITTAL DATE: OCTOBER 2026

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DRAWN BY: B. ROY
CHECKED BY: E. AMABA, P.E.
DESIGN LEAD: E. JAMES, P.E.
PROJECT MANAGER: AIMEE BOULET, P.E.

ELECSYS ENGINEERING GROUP

STATE OF NEW YORK ELIZO JAMES 095309 PROFESSIONAL ENGINEER

NYC Environmental Protection

ACCOUNTABLE MANAGER: JOHN GOULAS, P.E.
PORTFOLIO MANAGER: KEVIN ELLENWOOD, P.E.
EXECUTIVE DIRECTOR: NAYANKUMAR SHAH, P.E.

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CAPITAL PROJECT WP-269
RECONSTRUCTION OF
PAERDEGAT PUMPING STATION
CONTRACT PS-318
FIRE ALARM
FIRE ALARM SYSTEM SYMBOLS, LEGEND, ABBREVIATIONS AND GENERAL NOTES

DATE: OCTOBER 2026
SCALE: AS INDICATED
SHEET NO: 176 OF 274
DRAWING NO. FA-001.00

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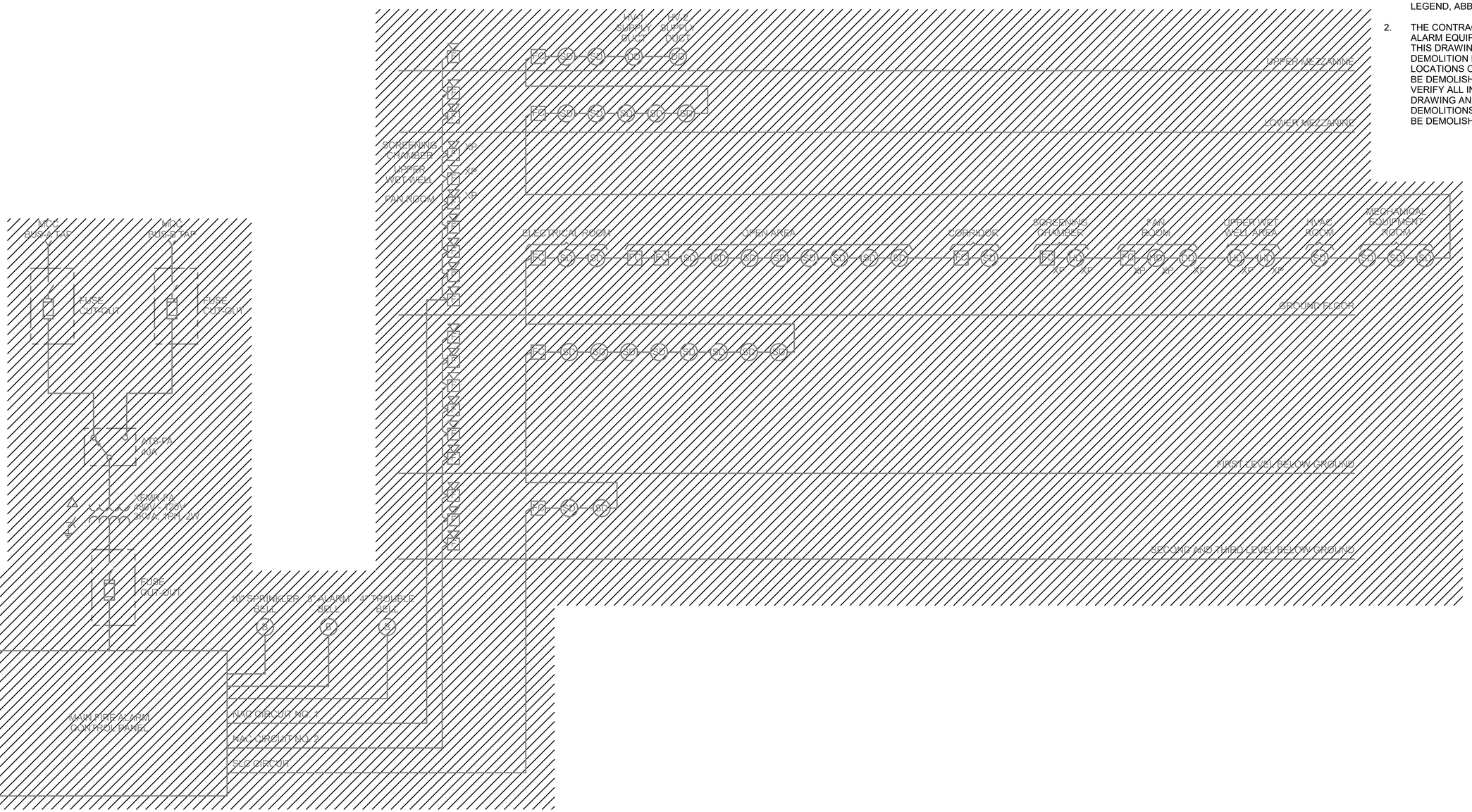

EXISTING FIRE ALARM SYSTEM RISER DIAGRAM

N.T.S.

NOTES:

1. REFER TO FA-001 FOR FIRE ALARM SYMBOLS, LEGEND, ABBREVIATIONS AND GENERAL NOTES.
2. THE CONTRACTOR SHALL DEMOLISH ALL FIRE ALARM EQUIPMENT AND DEVICES INDICATED ON THIS DRAWING. REFER TO THE FIRE ALARM DEMOLITION DRAWINGS FOR SPECIFIC LOCATIONS OF ALL EQUIPMNT AND DEVICES TO BE DEMOLISHED. THE CONTRACTOR SHALL FIELD VERIFY ALL INFORMATION SHOWN ON THIS DRAWING AND THE ASSOCIATED FIRE ALARM DEMOLITIONS. ALL WIRING AND CONDUIT SHALL BE DEMOLISHED IN ITS ENTIRETY.

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Environmental Protection

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CAPITAL PROJECT WP-269
RECONSTRUCTION OF
PAERDEGAT PUMPING STATION
CONTRACT PS-318
FIRE ALARM
EXISTING FIRE ALARM SYSTEM RISER DIAGRAM

DATE: OCTOBER 2026
SCALE: AS INDICATED
SHEET NO: 177 OF 274
DRAWING NO. DFA-101.00

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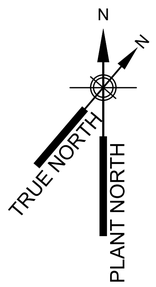
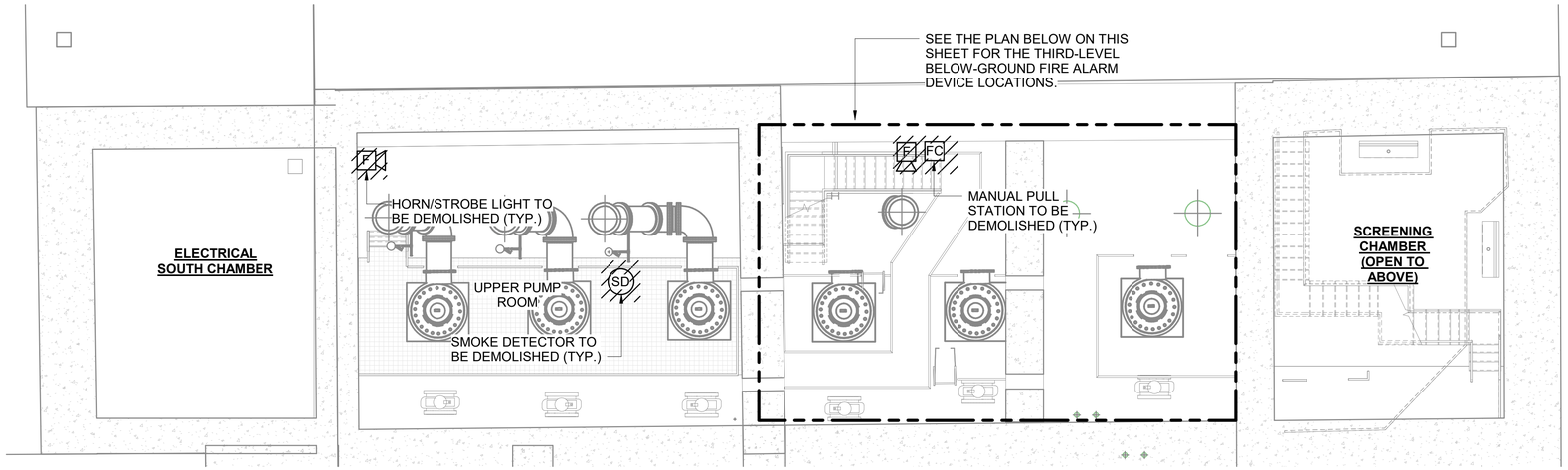
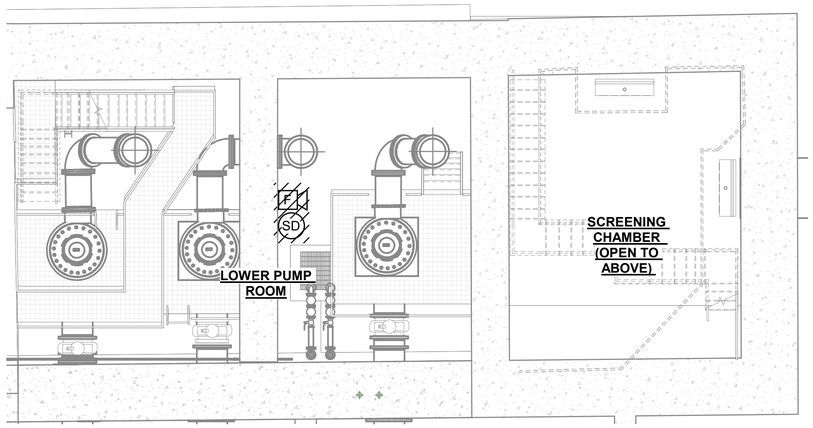




SECOND LEVEL BELOW GROUND FIRE ALARM DEMOLITION PLAN

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



THIRD LEVEL BELOW GROUND FIRE ALARM DEMOLITION PLAN

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

NOTES:

1. REFER TO FA-001 FOR FIRE ALARM SYMBOLS, LEGEND, ABBREVIATIONS AND GENERAL NOTES.
2. THE CONTRACTOR SHALL DEMOLISH ALL FIRE ALARM EQUIPMENT AND DEVICES INDICATED ON THIS DRAWING.THE CONTRACTOR SHALL FIELD VERIFY ALL INFORMATION SHOWN ON THIS DRAWING AND THE ASSOCIATED FIRE ALARM DEMOLITIONS. ALL WIRING AND CONDUIT SHALL BE DEMOLISHED IN ITS ENTIRETY.

0 5 10 FT.
3/16"=1'-0"

BID SET

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STATE OF NEW YORK ELDO JAMES 095309 LICENSED PROFESSIONAL ENGINEER

Environmental Protection

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CAPITAL PROJECT WP-269
RECONSTRUCTION OF
PAERDEGAT PUMPING STATION
CONTRACT PS-318
FIRE ALARM
SECOND AND THIRD LEVEL BELOW GROUND - FIRE ALARM SYSTEM DEMOLITION PLAN

DATE: OCTOBER 2026
SCALE: AS INDICATED
SHEET NO: 178 OF 274
DRAWING NO. DFA-102.00

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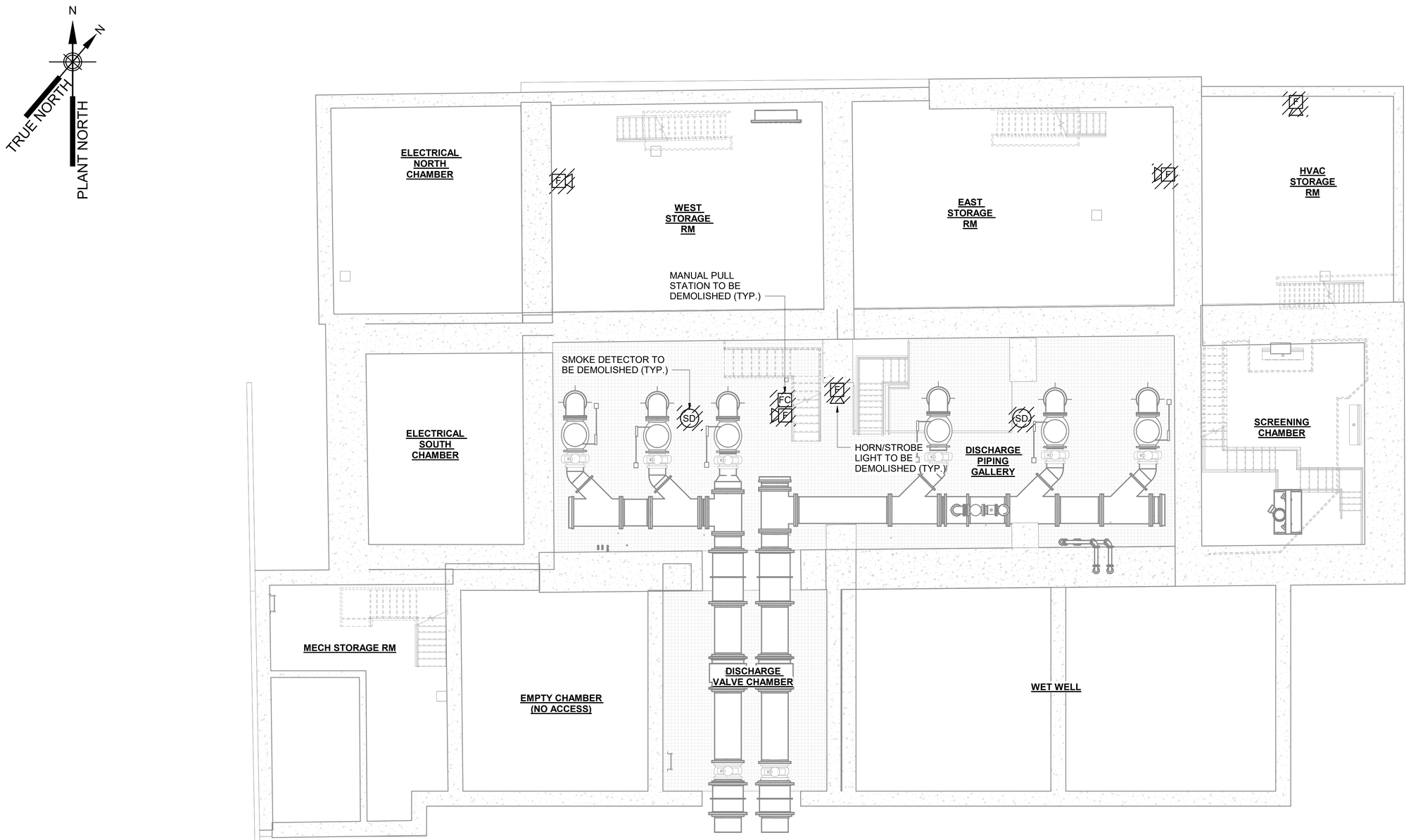

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FIRST LEVEL BELOW GROUND FIRE ALARM DEMOLITION PLAN

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

0 5 10 FT.
3/16"=1'-0"

BID SET

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CAPITAL PROJECT WP-269
RECONSTRUCTION OF PAERDEGAT PUMPING STATION
CONTRACT PS-318
FIRE ALARM
FIRST LEVEL BELOW GROUND - FIRE ALARM SYSTEM DEMOLITION PLAN

DATE: OCTOBER 2026
SCALE: AS INDICATED
SHEET NO: 179 OF 274
DRAWING NO. DFA-103.00

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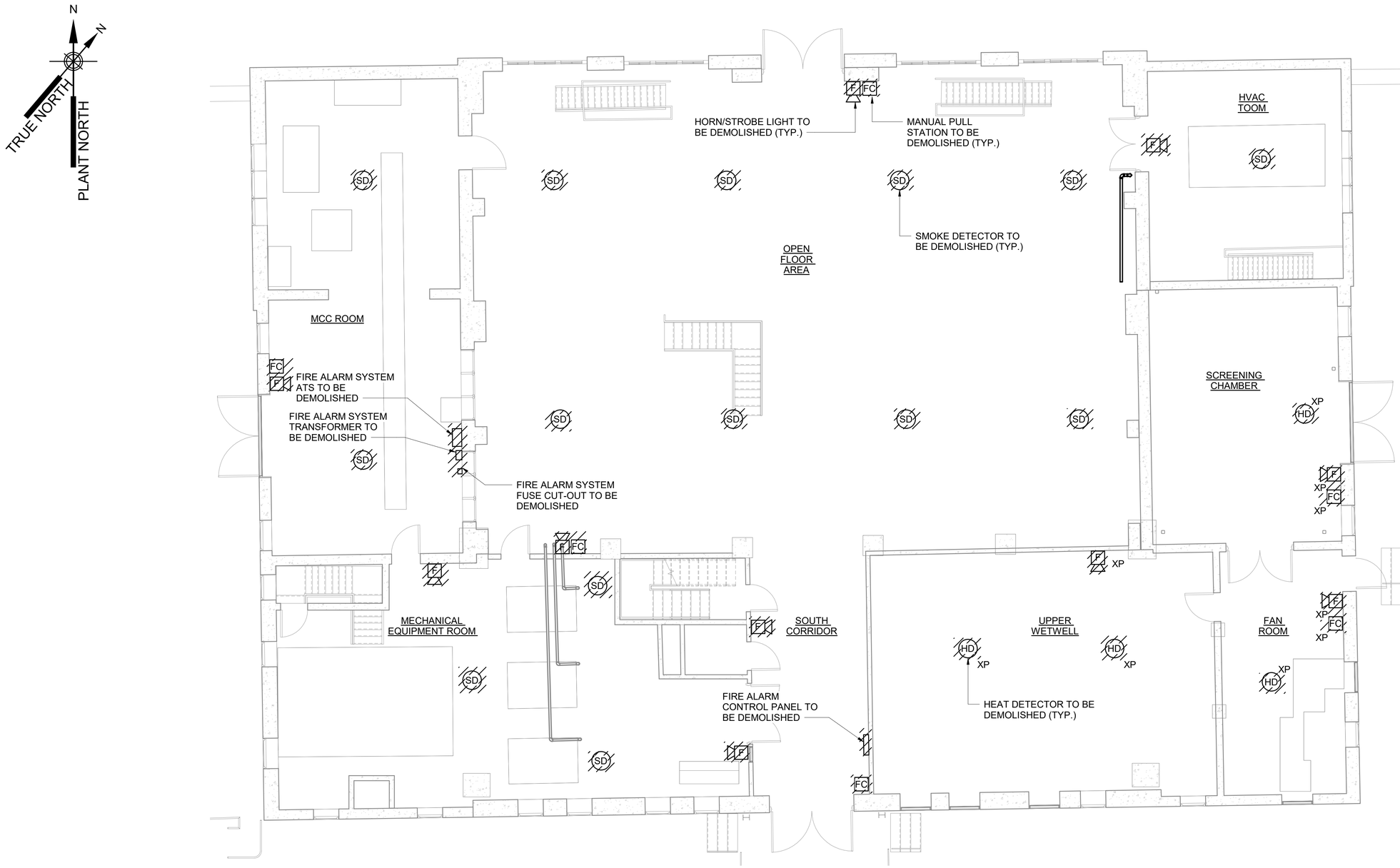

NOTES:

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GROUND FLOOR FIRE ALARM DEMOLITION PLAN

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

0 5 10 FT.
3/16"=1'-0"

BID SET

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NYC Environmental Protection

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PORTFOLIO MANAGER	KEVIN ELLENWOOD, P.E.
EXECUTIVE DIRECTOR	NAYANKUMAR SHAH, P.E.

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RECONSTRUCTION OF
PAERDEGAT PUMPING STATION
CONTRACT PS-318
FIRE ALARM
GROUND FLOOR - FIRE ALARM SYSTEM DEMOLITION PLAN

DATE: OCTOBER 2026
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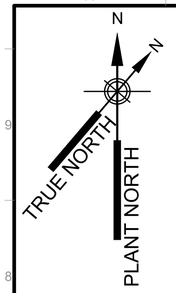
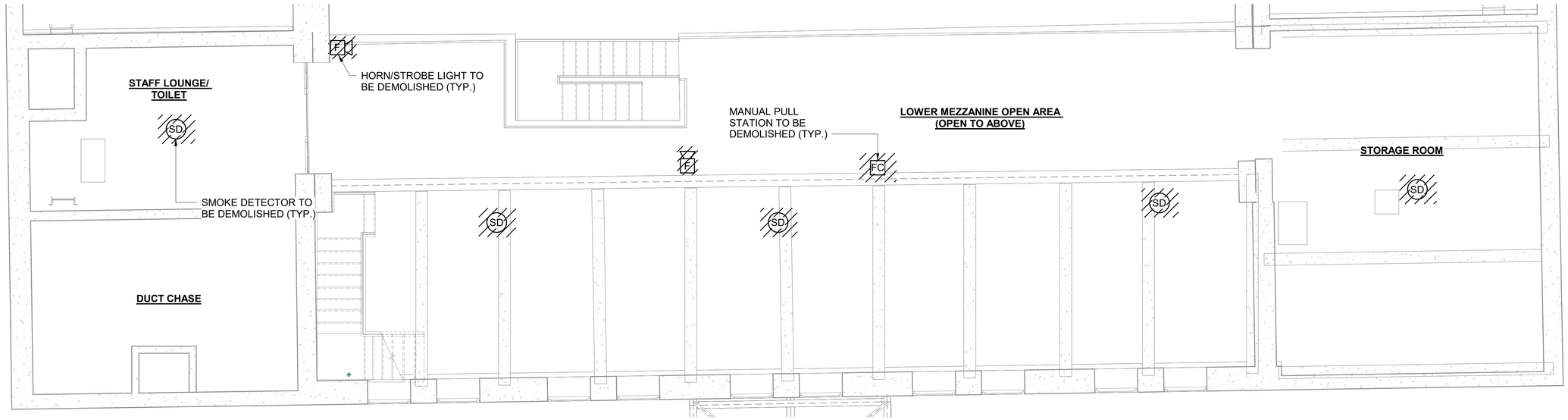
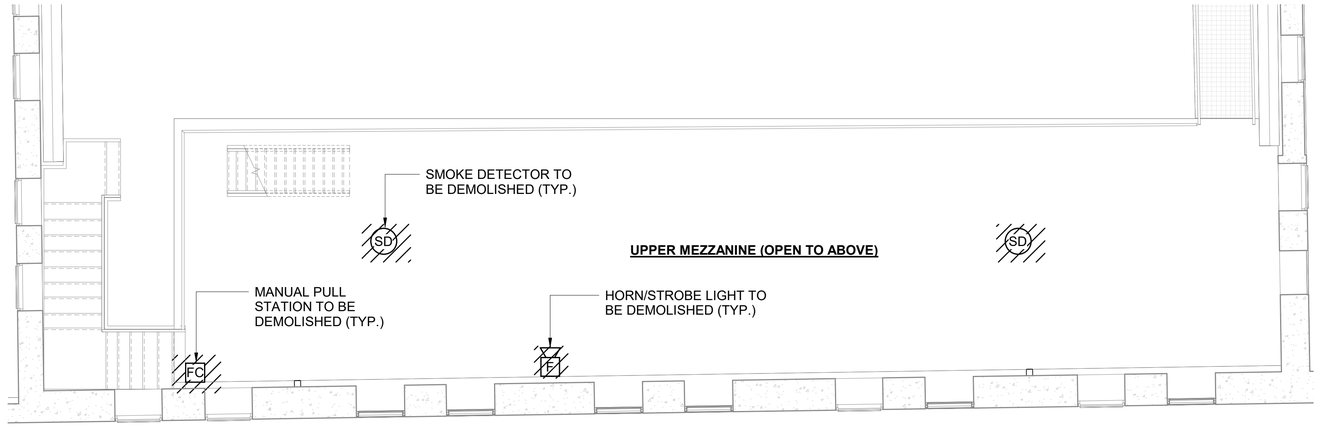




LOWER MEZZANINE FIRE ALARM DEMOLITION PLAN

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



UPPER MEZZANINE FIRE ALARM DEMOLITION PLAN

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

NOTES:

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2. THE CONTRACTOR SHALL DEMOLISH ALL FIRE ALARM EQUIPMENT AND DEVICES INDICATED ON THIS DRAWING.THE CONTRACTOR SHALL FIELD VERIFY ALL INFORMATION SHOWN ON THIS DRAWING AND THE ASSOCIATED FIRE ALARM DEMOLITIONS. ALL WIRING AND CONDUIT SHALL BE DEMOLISHED IN ITS ENTIRETY.

0 4 8 FT.
1/4"=1'-0"

BID SET

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DESIGN LEAD: E. JAMES, P.E.
PROJECT MANAGER: AIMEE BOULET, P.E.

DRAWN BY: B. ROY

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STATE OF NEW YORK · ELDO JAMES · 088309 · LICENSED PROFESSIONAL ENGINEER

NYC Environmental Protection

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RECONSTRUCTION OF
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CONTRACT PS-318
FIRE ALARM
UPPER AND LOWER MEZZANINE - FIRE ALARM
SYSTEM DEMOLITION PLAN

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SCALE: AS INDICATED
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DRAWING NO. DFA-105.00

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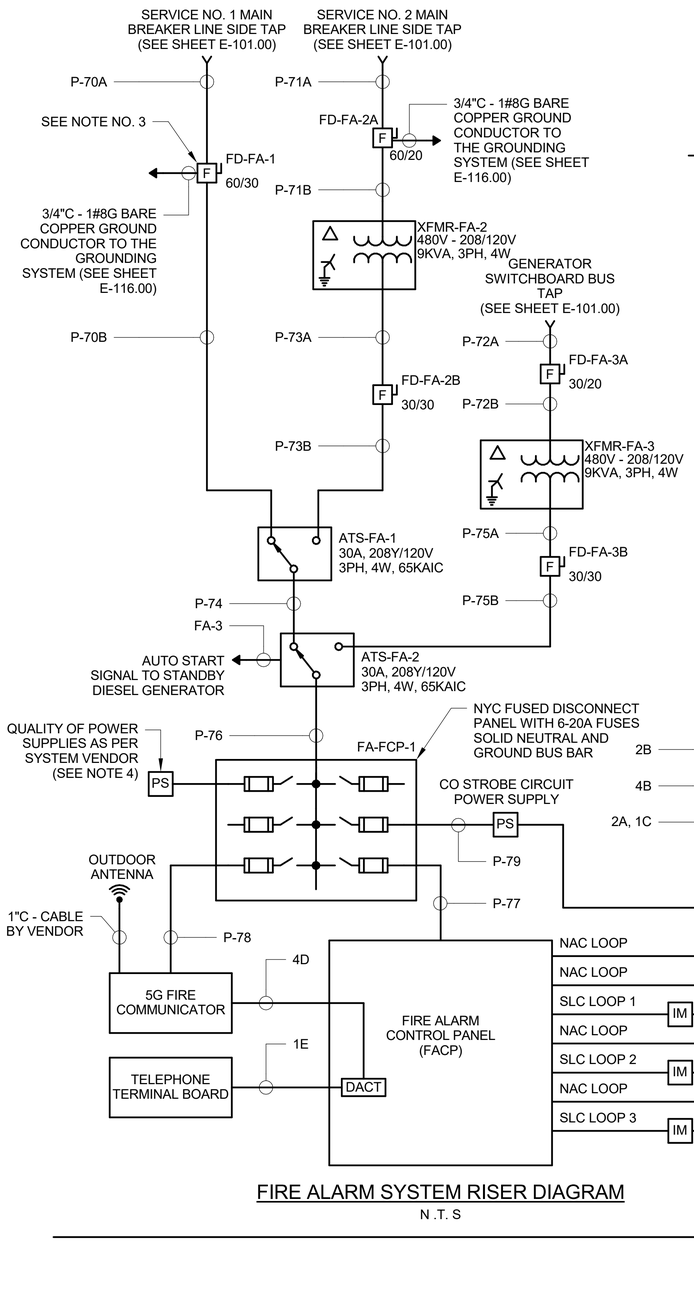
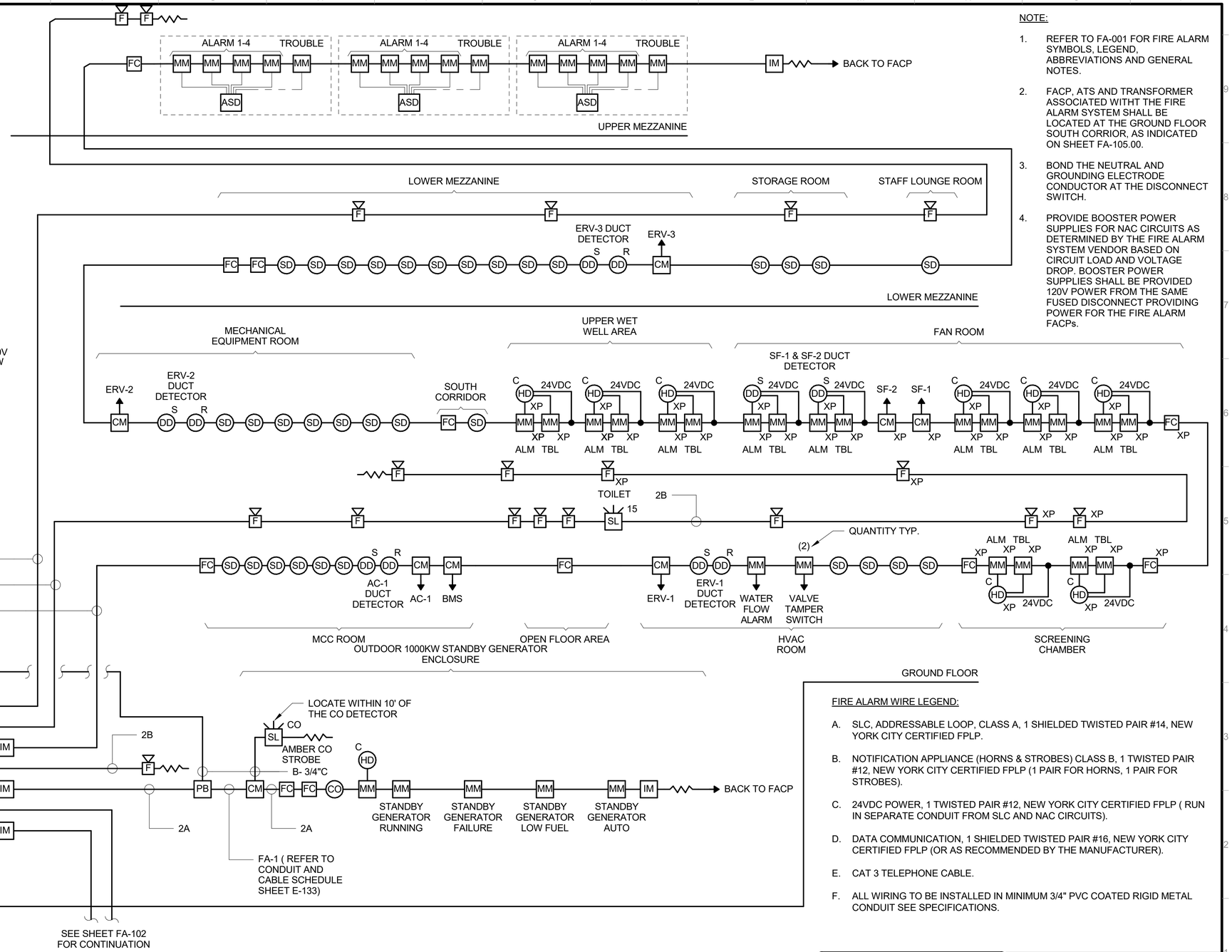


FIRE ALARM SYSTEM RISER DIAGRAM

N .T. S



NOTE:

1. REFER TO FA-001 FOR FIRE ALARM SYMBOLS, LEGEND, ABBREVIATIONS AND GENERAL NOTES.
2. FACP, ATS AND TRANSFORMER ASSOCIATED WITHT THE FIRE ALARM SYSTEM SHALL BE LOCATED AT THE GROUND FLOOR SOUTH CORRIOR, AS INDICATED ON SHEET FA-105.00.
3. BOND THE NEUTRAL AND GROUNDING ELECTRODE CONDUCTOR AT THE DISCONNECT SWITCH.
4. PROVIDE BOOSTER POWER SUPPLIES FOR NAC CIRCUITS AS DETERMINED BY THE FIRE ALARM SYSTEM VENDOR BASED ON CIRCUIT LOAD AND VOLTAGE DROP. BOOSTER POWER SUPPLIES SHALL BE PROVIDED 120V POWER FROM THE SAME FUSED DISCONNECT PROVIDING POWER FOR THE FIRE ALARM FACPs.

FIRE ALARM WIRE LEGEND:

A. SLC, ADDRESSABLE LOOP, CLASS A, 1 SHIELDED TWISTED PAIR #14, NEW YORK CITY CERTIFIED FPLP.

B. NOTIFICATION APPLIANCE (HORNS & STROBES) CLASS B, 1 TWISTED PAIR #12, NEW YORK CITY CERTIFIED FPLP (1 PAIR FOR HORNS, 1 PAIR FOR STROBES).

C. 24VDC POWER, 1 TWISTED PAIR #12, NEW YORK CITY CERTIFIED FPLP (RUN IN SEPARATE CONDUIT FROM SLC AND NAC CIRCUITS).

D. DATA COMMUNICATION, 1 SHIELDED TWISTED PAIR #16, NEW YORK CITY CERTIFIED FPLP (OR AS RECOMMENDED BY THE MANUFACTURER).

E. CAT 3 TELEPHONE CABLE.

F. ALL WIRING TO BE INSTALLED IN MINIMUM 3/4" PVC COATED RIGID METAL CONDUIT SEE SPECIFICATIONS.

BID SET

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ELECSYS ENGINEERING GROUP

EDO JAMES 089309 LICENSED PROFESSIONAL ENGINEER STATE OF NEW YORK

NYC Environmental Protection

ACCOUNTABLE MANAGER: JOHN GOULAS, P.E.
PORTFOLIO MANAGER: KEVIN ELLENWOOD, P.E.
EXECUTIVE DIRECTOR: NAYANKUMAR SHAH, P.E.

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BUREAU OF ENGINEERING DESIGN & CONSTRUCTION
96-05 HORACE HARDING EXPRESSWAY 5th FLOOR
CORONA, NEW YORK 11368
www.nyc.gov/dep

CAPITAL PROJECT WP-269
RECONSTRUCTION OF PAERDEGAT PUMPING STATION
CONTRACT PS-318
FIRE ALARM
FIRE ALARM SYSTEM RISER DIAGRAM
SHEET 1 OF 2

DATE: OCTOBER 2026
SCALE: AS INDICATED
SHEET NO: 182 OF 274
DRAWING NO. FA-101.00

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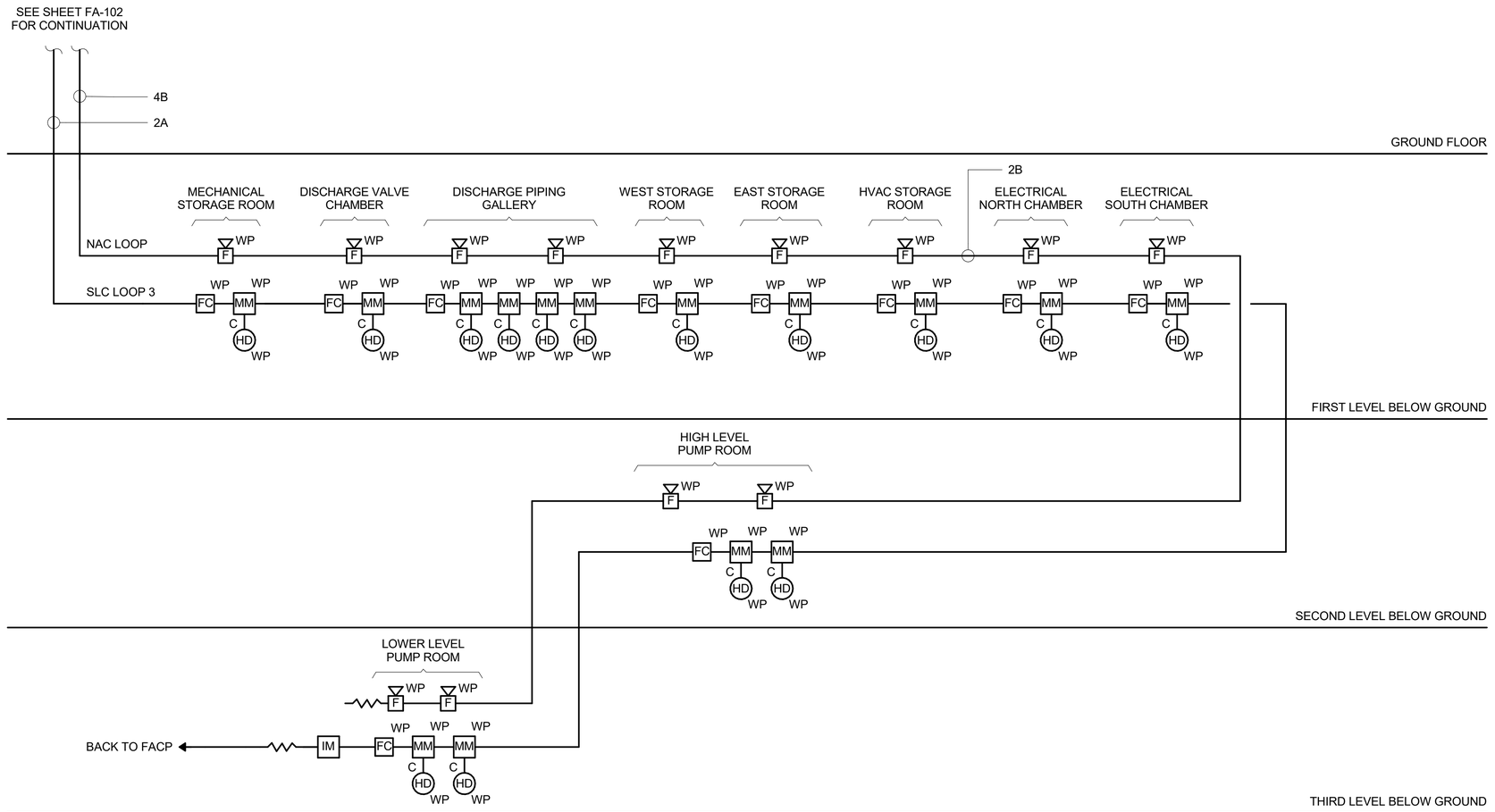

NOTE:

1. REFER TO FA-001 FOR FIRE ALARM SYMBOLS, LEGEND, ABBREVIATIONS AND GENERAL NOTES.
2. FACP, ATS AND TRANSFORMER ASSOCIATED WITHT THE FIRE ALARM SYSTEM SHALL BE LOCATED AT THE GROUND FLOOR SOUTH CORRIOR, AS INDICATED ON SHEET FA-105.00.

FIRE ALARM WIRE LEGEND:

A. SLC, ADDRESSABLE LOOP, CLASS A, 1 SHIELDED TWISTED PAIR #14, NEW YORK CITY CERTIFIED FPLP.

B. NOTIFICATION APPLIANCE (HORNS & STROBES) CLASS B, 1 TWISTED PAIR #12, NEW YORK CITY CERTIFIED FPLP (1 PAIR FOR HORNS, 1 PAIR FOR STROBES).

C. 24VDC POWER, 1 TWISTED PAIR #12, NEW YORK CITY CERTIFIED FPLP (RUN IN SEPARATE CONDUIT FROM SLC AND NAC CIRCUITS).

D. DATA COMMUNICATION, 1 SHIELDED TWISTED PAIR #16, NEW YORK CITY CERTIFIED FPLP (OR AS RECOMMENDED BY THE MANUFACTURER).

E. CAT 3 TELEPHONE CABLE.

F. ALL WIRING TO BE INSTALLED IN MINIMUM 3/4" PVC COATED RIGID METAL CONDUIT SEE SPECIFICATIONS.

BID SET

SUBMITTAL DATE: OCTOBER 2026

GRAPHIC SCALES CHECK BEFORE USE

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CHECKED BY: E. AMABA, P.E.
DESIGN LEAD: E. JAMES, P.E.
PROJECT MANAGER: AIMEE BOULET, P.E.

DRAWN BY: B. ROY

ELECSYS ENGINEERING GROUP

STATE OF NEW YORK ELDO JAMES 088309 LICENSED PROFESSIONAL ENGINEER

NYC Environmental Protection

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CAPITAL PROJECT WP-269
RECONSTRUCTION OF PAERDEGAT PUMPING STATION
CONTRACT PS-318
FIRE ALARM
FIRE ALARM SYSTEM RISER DIAGRAM
SHEET 2 OF 2

DATE: OCTOBER 2026
SCALE: AS INDICATED
SHEET NO: 183 OF 274
DRAWING NO. FA-102.00

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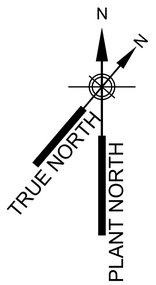
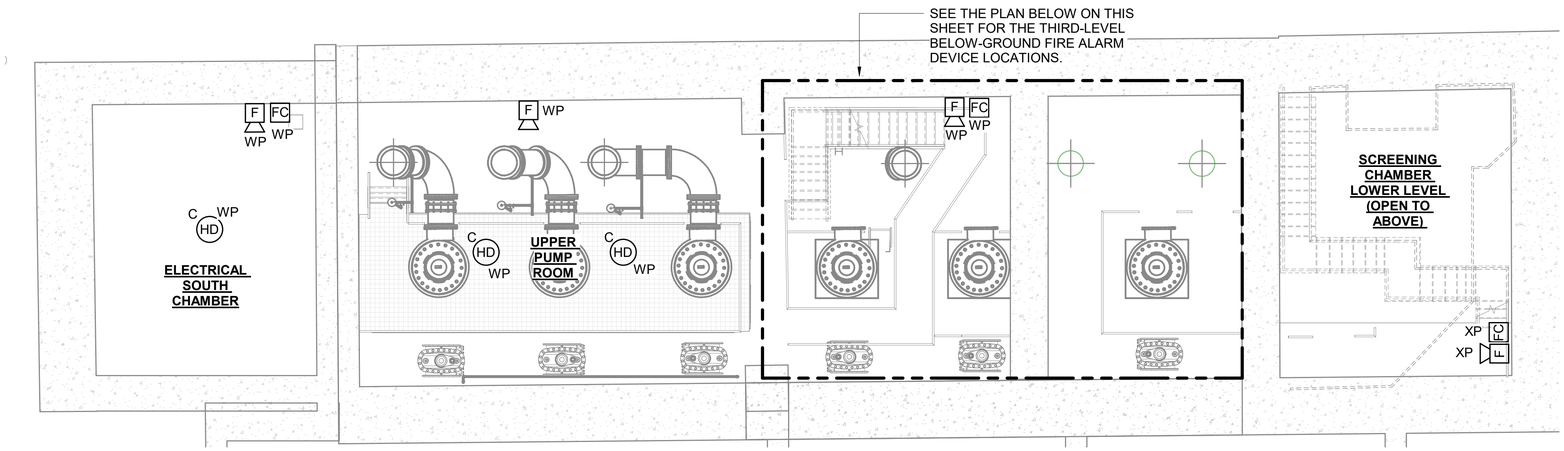
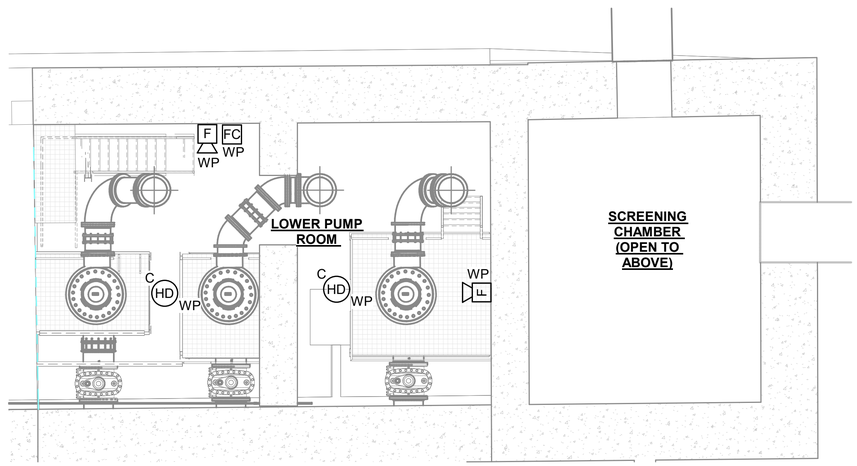




SECOND LEVEL BELOW GROUND FIRE ALARM PLAN

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



THIRD LEVEL BELOW GROUND FIRE ALARM PLAN

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

3/16"=1'-0" 0 5 10 FT.

BID SET

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DRAWN BY: B. ROY

ELECSYS ENGINEERING GROUP

STATE OF NEW YORK ELDO JAMES 088309 LICENSED PROFESSIONAL ENGINEER

NYC Environmental Protection

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CAPITAL PROJECT WP-269
RECONSTRUCTION OF PAERDEGAT PUMPING STATION
CONTRACT PS-318
FIRE ALARM
SECOND AND THIRD LEVEL BELOW GROUND - FIRE ALARM SYSTEM PLAN

DATE: OCTOBER 2026
SCALE: AS INDICATED
SHEET NO: 184 OF 274
DRAWING NO. FA-103.00

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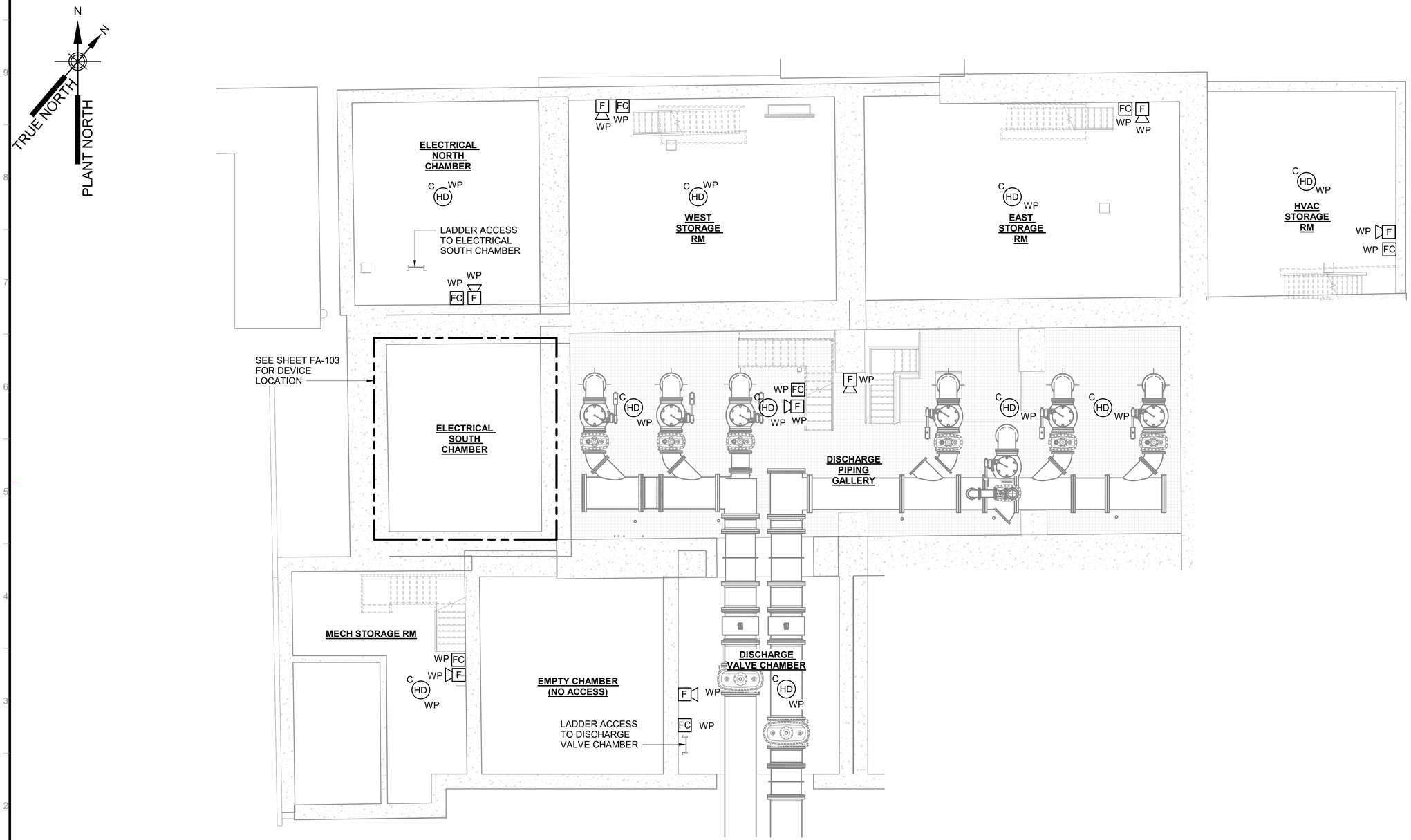

FIRST LEVEL BELOW GROUND FIRE ALARM PLAN

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

0 5 10 FT.
3/16"=1'-0"

BID SET

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ELECSYS ENGINEERING GROUP

STATE OF NEW YORK — EDO JAMES — 089309 — PROFESSIONAL ENGINEER

NYC Environmental Protection

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CAPITAL PROJECT WP-269
RECONSTRUCTION OF
PAERDEGAT PUMPING STATION
CONTRACT PS-318
FIRE ALARM
FIRST LEVEL BELOW GROUND - FIRE ALARM SYSTEM PLAN

DATE: OCTOBER 2026
SCALE: AS INDICATED
SHEET NO: 185 OF 274
DRAWING NO. FA-104.00

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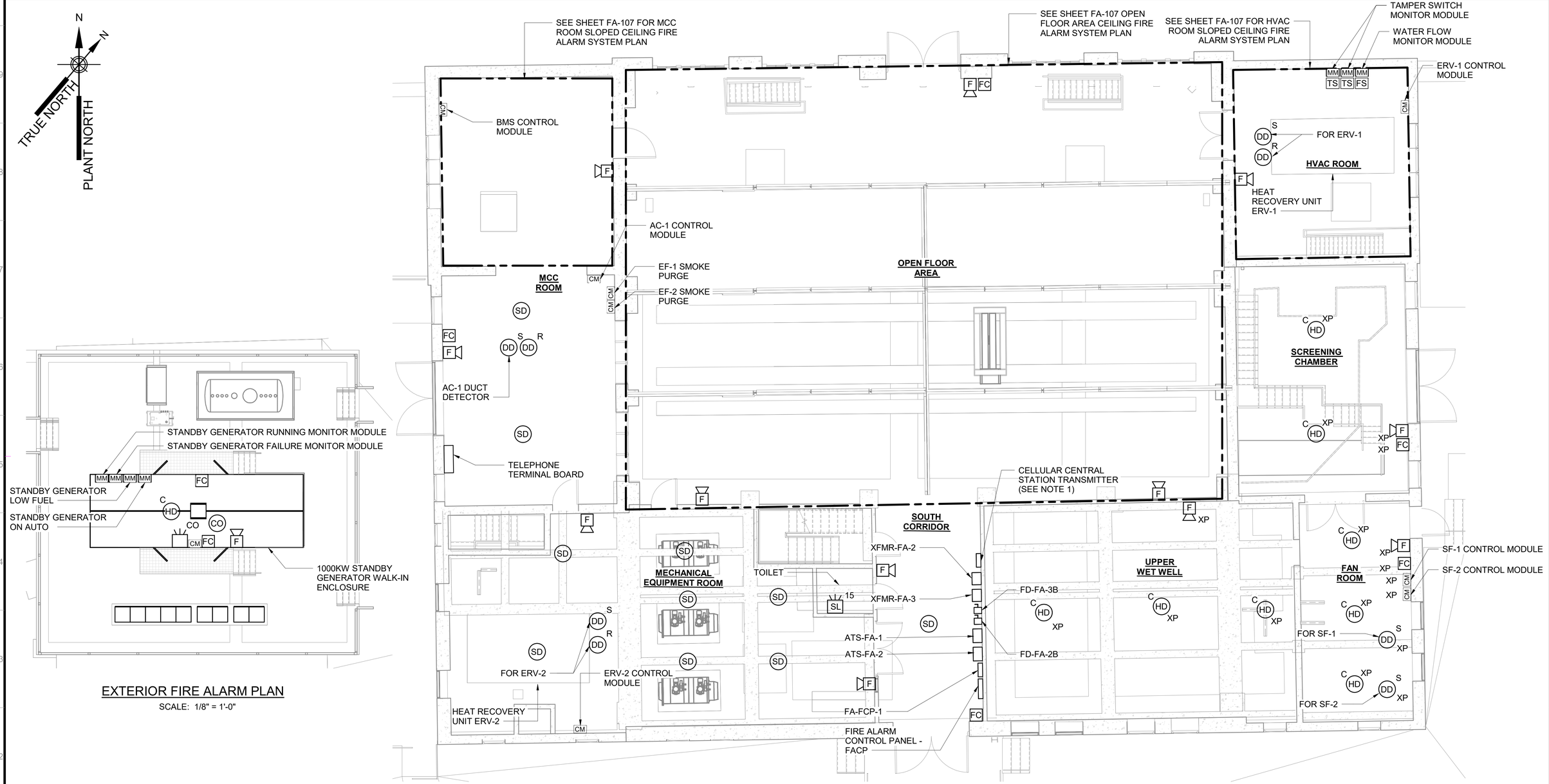

EXTERIOR FIRE ALARM PLAN

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

GROUND FLOOR FIRE ALARM PLAN

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

NOTE 1

1. CELLULAR CENTRAL STATION TRANSMITTER SHOWN AT APPROXIMATE LOCATION. CONTRACTOR SHALL LOCATE PANEL AND ANTENNA WHERE RECEPTION IS ADEQUATE.

1/8"=1'-0" 0 5 10 15 FT.

3/16"=1'-0" 0 5 10 FT.

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STATE OF NEW YORK ELDO JAMES 086309 PROFESSIONAL ENGINEER

NYC Environmental Protection

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CAPITAL PROJECT WP-269
RECONSTRUCTION OF
PAERDEGAT PUMPING STATION
CONTRACT PS-318
FIRE ALARM
EXTERIOR & GROUND FLOOR - FIRE ALARM SYSTEM PLAN

DATE: OCTOBER 2026
SCALE: AS INDICATED
SHEET NO: 186 OF 274
DRAWING NO. FA-105.00

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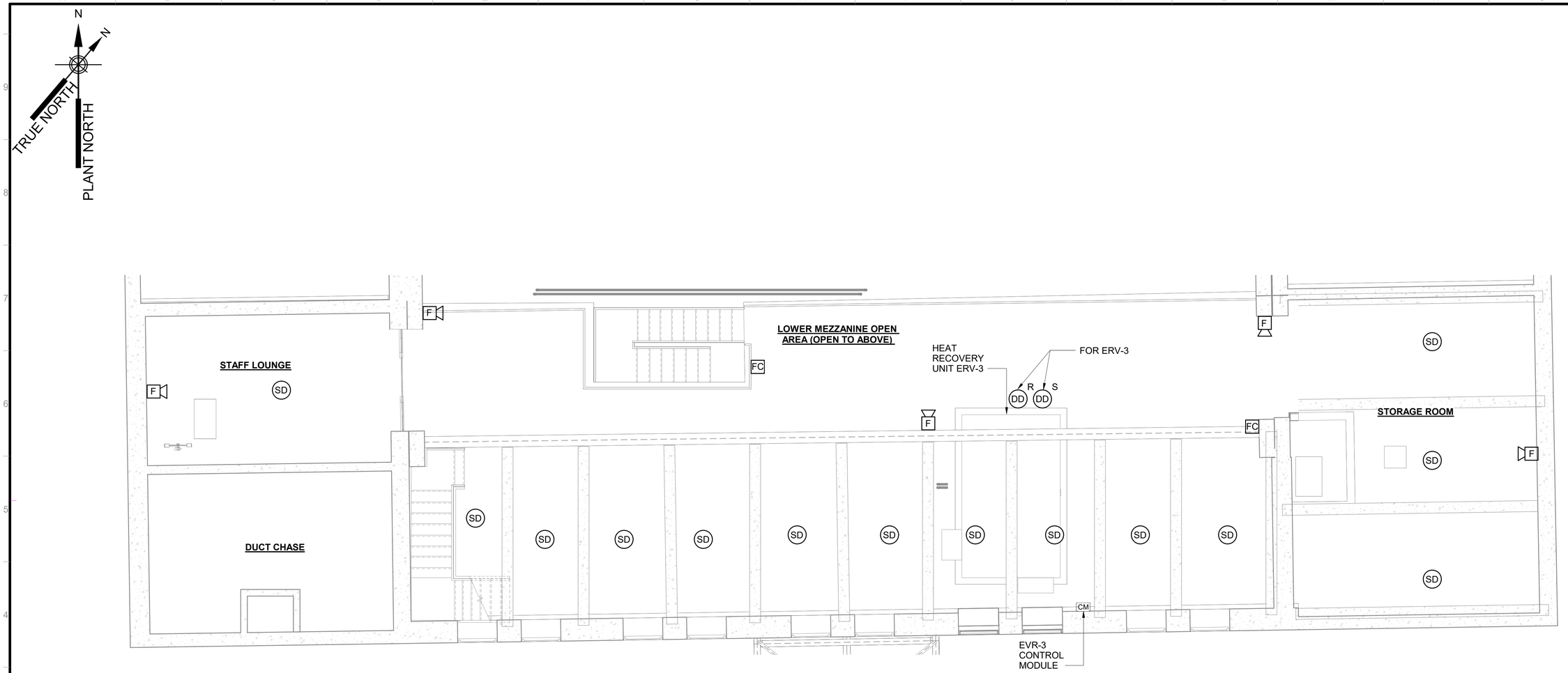

LOWER MEZZANINE FIRE ALARM PLAN

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

0 4 8 FT.
1/4"=1'-0"

BID SET

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STATE OF NEW YORK — DIEGO JAMES — 086309 — LICENSED PROFESSIONAL ENGINEER

Environmental Protection

ACCOUNTABLE MANAGER: JOHN GOULAS, P.E.
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CAPITAL PROJECT WP-269
RECONSTRUCTION OF
PAERDEGAT PUMPING STATION
CONTRACT PS-318
FIRE ALARM
LOWER MEZZANINE - FIRE ALARM SYSTEM PLAN

DATE: OCTOBER 2026
SCALE: AS INDICATED
SHEET NO: 187 OF 274
DRAWING NO. FA-106.00

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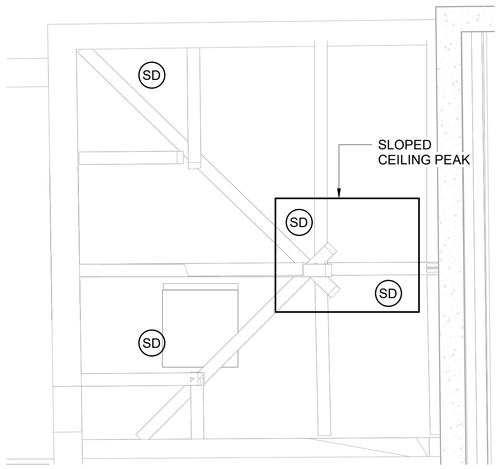
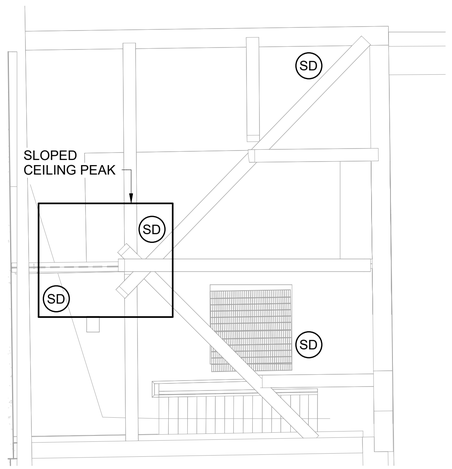


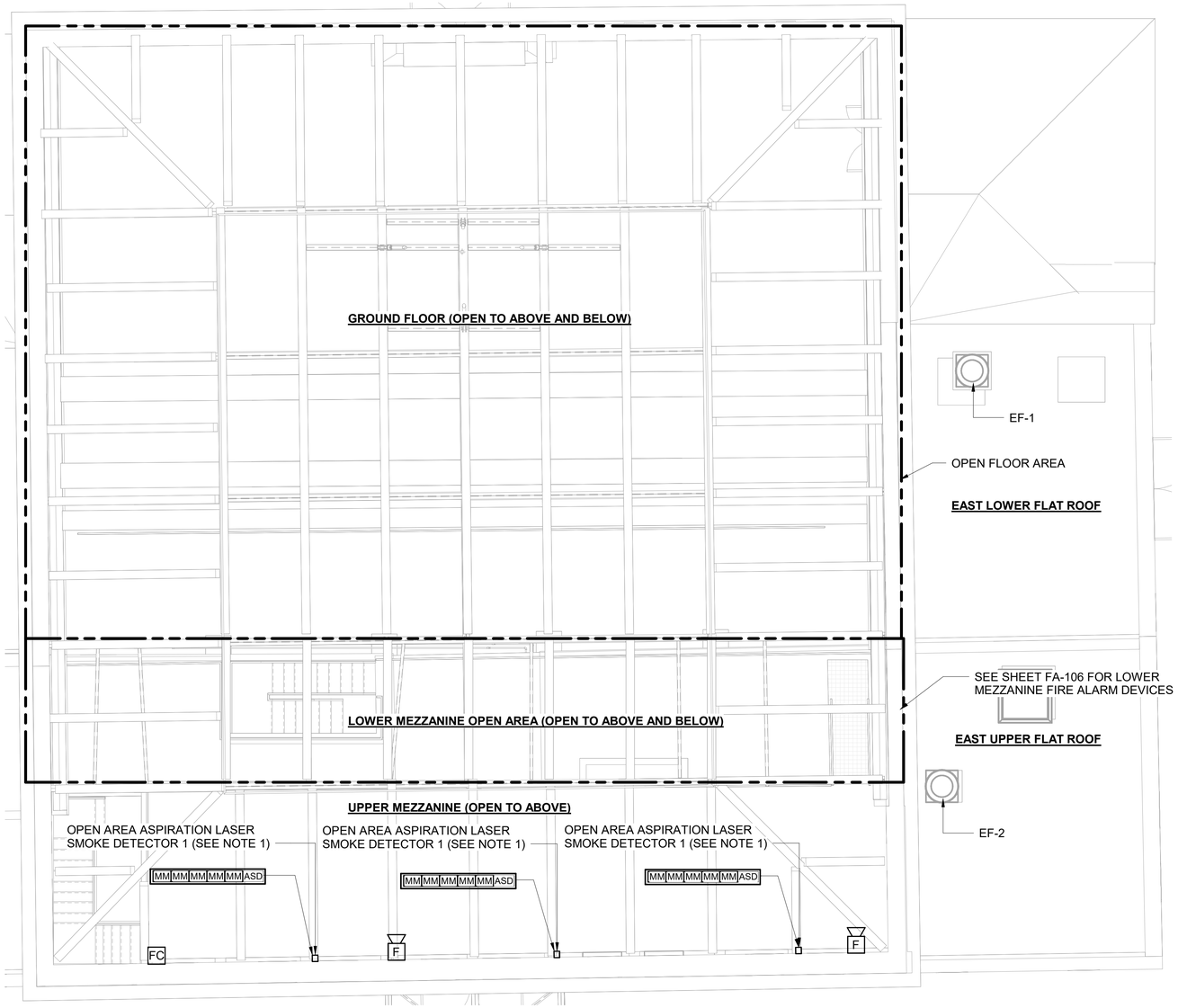
MCC ROOM SLOPED CEILING FIRE ALARM PLAN

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



HVAC ROOM SLOPED CEILING FIRE ALARM PLAN

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



UPPER MEZZANINE FIRE ALARM PLAN

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

NOTES:

1. THE CONTRACTOR SHALL INSTALL THREE ASPIRATION LASER SMOKE DETECTION SYSTEMS TO MONITOR THE ENTIRE CEILING OF THE UPPER LEVEL. THE CONTRACTOR SHALL OBTAIN THE SERVICES OF ASPIRATION DETECTION SYSTEM MANUFACTURER TO DETRMINE LAYOUT OF THE ASSOCIATED CHLORINATED POLYVINYL CHLORIDE PIPING TO PROVIDE COVERAGE IN EVERY BEAM POCKET. PROVIDE PIPING, FITTINGS AND ASSOCIATED SUPPORTS AS REQUIRED FOR A FULL FUNCTIONAL SYSTEM IN ACCORDANCE WITH THE MANUFACTURER AND AS PER NEW YORK CITY BUILDING/FIRE CODE.

1/4"=1'-0" 0 4 8 FT.

3/16"=1'-0" 0 5 10 FT.

BID SET

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ELECSYS ENGINEERING GROUP

STATE OF NEW YORK EDDO JAMES 089309 LICENSED PROFESSIONAL ENGINEER

NYC Environmental Protection

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CAPITAL PROJECT WP-269
RECONSTRUCTION OF
PAERDEGAT PUMPING STATION
CONTRACT PS-318
FIRE ALARM
UPPER MEZZANINE & OPEN FLOOR AREA - FIRE ALARM SYSTEM PLAN

DATE: OCTOBER 2026
SCALE: AS INDICATED
SHEET NO: 188 OF 274
DRAWING NO. FA-107.00

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NOTE:

1. CARBON MONOXIDE SOURCES ARE NOT PRESENT IN THE PUMPING STATION, ONLY IN WALK-IN GENERATOR ENCLOSURE.

		REMOTE CENTRAL STATION MONITORING				FIRE ALARM CONTROL PANEL						NAC CIRCUITS		CONTROL FUNCTIONS AND OTHER FIELD DEVICES
		TRANSMIT ALARM SIGNALS TO REMOTE CENTRAL MONITORING STATION	TRANSMIT TROUBLE SIGNAL TO BMS	TRANSMIT FIRE ALARM SIGNAL TO BMS	TRANSMIT SUPERVISORY SIGNAL TO BMS	LOG INCIDENT, DISPLAY INDICATION AT FACP	ACTUATE VISUAL ALARM SIGNAL AT FACP	ACTUATE AUDIBLE ALARM SIGNAL AT FACP	ACTUATE VISUAL TROUBLE SIGNAL AT FACP	ACTUATE AUDIBLE TROUBLE SIGNAL AT FACP	ACTUATE SUPERVISORY SIGNAL AT FACP	ACTUATE NOTIFICATION DEVICES	ACTIVATE A TEMPORAL 4 SIGNAL ON ACTIVATED CO SOUNDER BASE	SHUTDOWN HVAC SYSTEM
	FIRE ALARM SYSTEM INPUTS	A	B	C	D	E	F	G	H	I	J	K	L	M
	PAERDEGAT PUMPING STATION													
1	MANUAL FIRE ALARM PULL STATIONS	X	X	X	-	X	X	X	-	-	-	X	-	X
2	SMOKE/HEAT DETECTORS	X	X	X	-	X	X	X	-	-	-	X	-	X
3	DUCT DETECTORS	X	X	X	-	X	X	X	-	-	-	X	-	X
4	OPEN CIRCUIT	-	X	-	-	X	-	-	X	X	-	-	-	-
5	GROUND FAULT	-	X	-	-	X	-	-	X	X	-	-	-	-
6	STANDBY GENERATOR RUNNING	-	-	-	X	X	X	-	-	-	X	-	-	-
7	STANDBY GENERATOR FAILURE	-	X	-	-	X	X	-	X	-	X	-	-	-
8	STANDBY GENERATOR ON AUTO	-	X	-	X	X	X	-	X	X	X	-	-	-
9	STANDBY GENERATOR - LOW FUEL	-	X	-	X	X	X	-	X	X	X	-	-	-
10	SPRINKLER SYSTEM - WATER FLOW ALARM	X	-	X	-	X	X	X	-	-	-	X	-	X
11	SPRINKLER SYSTEM - TAMPER SWITCH	-	-	-	X	X	X	-	-	-	X	-	-	-
12	FIRE ALARM SYSTEM LOW BATTERY	-	-	-	X	X	-	-	-	-	X	-	-	-
13	FIRE ALARM AC POWER FAILURE	-	X	-	-	X	-	-	X	X	-	-	-	-
14	DACT-C COMMUNICATION FAILURE	-	X	-	-	X	-	-	X	X	-	-	-	-
15	5G SIGNAL PRIMARY/SECONDARY BELOW THRESHOLD	-	-	-	X	X	-	-	-	-	X	-	-	-
16	CARBON MONOXIDE DETECTOR (STANDBY GENERATOR)	X	X	-	X	X	X	X	-	-	-	-	X	-
		A	B	C	D	E	F	G	H	I	J	K	L	M

TEMPORAL 3 SYSTEM WITH MANUAL, WATER FLOW, SMOKE, HEAT AND CARBON MONOXIDE DETECTION.

BID SET

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CAPITAL PROJECT WP-269
RECONSTRUCTION OF
PAERDEGAT PUMPING STATION
CONTRACT PS-318
FIRE ALARM
FIRE ALARM SYSTEM INPUT/OUTPUT MATRIX

DATE: OCTOBER 2026
SCALE: AS INDICATED
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DIAGRAMS

52 / 1200 — MEDIUM VOLTAGE DRAWOUT POWER CIRCUIT BREAKER NUMBER INDICATES CURRENT RATING

GTD — GTD DENOTES: GROUND AND TEST DEVICE

DISCONNECT SWITCH WITH FUSING WHERE NOTED

100 / 30 — MOLDED CASE CIRCUIT BREAKER

100 / 30 — (FRAME SIZE) (TRIP SIZE) 3 POLE THERMAL-MAGNETIC MOLDED CASE CIRCUIT BREAKER 2P DENOTES 2 POLE

SST — 800 / 800 — (FRAME SIZE) (~~SENSOR RATING~~)
EO — (600P) — DENOTES PLUG RATING WHEN LESS THAN SENSOR RATING IS REQUIRED
DRAWOUT POWER CIRCUIT BREAKER WITH RMS TYPE SOLID STATE TRIP PROGRAMMER EO DENOTES ELECTRICALLY OPERATED

SST — 800 600 — FIXED MOUNTED POWER OR MOLDED CASE CIRCUIT BREAKER WITH RMS TYPE SOLID STATE TRIP PROGRAMMER
(400P)

7A / MCP — AC COMBINATION FULL VOLTAGE NON-REVERSING STARTER
(CONTINUOUS AMP RATING) (MOTOR CIRCUIT PROTECTOR) — MAGNETIC BREAKER
MAGNETIC MOTOR STARTER
OVERLOAD RELAY

7A / MCP — AC COMBINATION FULL VOLTAGE NON-REVERSING TWO SPEED TWO WINDING STARTER
F S

7A / MCP — AC COMBINATION FULL VOLTAGE REVERSING STARTER
F R

7A / MCP — AC COMBINATION REDUCED VOLTAGE NON-REVERSING STARTER
1S R — AUTO-TRANSFORMER TYPE STARTER — 2S
RVSS-B — ELECTRONIC REDUCED VOLTAGE SOLID STATE STARTER -RVSS -B DENOTES WITH FULL SPEED BYPASS

1200/5 MR C400 / 3 — CURRENT TRANSFORMER, RATIO AND QUANTITY DENOTED. MR DENOTES MULTIPLE RATIO. SET A RATIO SHOWN UNLESS NOTED OTHERWISE. C400 DENOTES RELAY CLASS

GROUND SENSOR CURRENT TRANSFORMER ACCURACY IOL40

POTENTIAL TRANSFORMER

TRANSFORMER - SIZE AS NOTED ON THE DRAWINGS

SHIELDED ISOLATION TRANSFORMER

DELTA/WYE TRANSFORMER CONNECTION W/GROUND

R — GROUNDING RESISTOR

LA — LIGHTNING ARRESTOR

CL / 2 — FUSE - VOLTAGE AS REQUIRED AND SIZE NOTED ON THE DRAWINGS. CL DENOTES CURRENT LIMITING TYPE. NUMBER INDICATES QUANTITY WHEN LESS THAN 3.

PFD — PFD DENOTES PULL FUSE DISCONNECT TYPE

CABLE TERMINATOR

MMD — MICROPROCESSOR BASED METERING DEVICE WITH DISPLAY FOR THE FOLLOWING
V - VOLTS
A - AMPS
W- WATTS PLUS DEMAND & ENERGY
VAR - VOLT-AMP REACTIVE PLUS DEMAND & ENERGY
VA - VOLT-AMP PLUS DEMAND & ENERGY
PF - POWER FACTOR
HZ - FREQUENCY
H - HARMONIC - INDIVIDUAL & THD - VOLTAGE & CURRENT

KEY INTERLOCKING - LOCK WITH KEY REMOVED DURING NORMAL OPERATION

KEY INTERLOCKING - LOCK WITH KEY CAPTIVE DURING NORMAL OPERATION

VFD-B — VARIABLE FREQUENCY DRIVE - VFD -B WHEN INDICATED DENOTES WITH STARTING AND FULL SPEED BYPASS

SUBMERSIBLE CABLES BY VENDOR

ST — SHUNT TRIP

OD — OVERLOAD DEVICE

EO — ECLECTICALLY OPERATED

SOLID STATE ELECTRONIC TRIP UNIT, CHARACTERS BELOW INDICATES:
ET / LSIG
L LONG TIME PICKUP
S SHORT TIME PICKUP
I INSTANTANEOUS
G GROUND FAULT

OT — OVER-TEMPERATURE DEVICE

PUSH-BUTTON STATION

PUSH-BUTTON STATION WITH LOCK - OUT FEATURE

SELECTOR SWITCH

INDICATING LIGHT

CS — CONTROL STATION

L O R — LOCAL-OFF-REMOTE SELECTOR SWITCH CONTROL STATION

VCS — CONTROL STATION FURNISHED BY EQUIPMENT VENDOR

EL — ELECTRIC INTERLOCK

OPEN TRANSITION AUTOMATIC TRANSFER SWITCH - ATS, WITH SOLID STATE CONTROLS AND ACCESSORIES. -BI WHEN INDICATED DENOTES WITH BYPASS-ISOLATION SWITCH

F / 60/40 — DISCONNECT SWITCH - 480V 3 POLE UNFUSED OR FUSED
F DENOTES FUSING, ONLY WHERE INDICATED FIRST NUMBER DENOTES SWITCH AMP RATING SECOND NUMBER DENOTES FUSE SIZE WHEN PROVIDED.

J OR (J) — JUNCTION BOX; SIZE AS REQUIRED BY N.E.C

T OR (T) — TERMINAL BOX; SIZE AS REQUIRED BY N.E.C. AND TO ACCOMMODATE ALL TERMINATIONS ON TERMINAL BLOCKS. TERMINATIONS TO INCLUDE SPARE WIRING.

PB OR (PB) — PULL BOX; SIZE AS REQUIRED BY N.E.C.

K1 — LOCK FOR RESPECTIVE KEY INTERLOCK WITH KEY CAPTIVE IN LOCK

L1 — LOCK FOR RESPECTIVE KEY INTERLOCK

M / RV — MOTOR STARTER/CONTROLLER FULL VOLTAGE NON REVERSING (NON-COMBINATION - COMBINATION - MANUAL) RV DENOTES REDUCED VOLTAGE LOCAL CONTROL PANEL WITH CONTROLLERS FURNISHED BY EQUIPMENT VENDOR.

(M) 5 — ELECTRIC MOTOR (NUMBER INDICATES HORSEPOWER).

30 — POWER RECPT. WITH DISCONNECT-600V, 3 PHASE, 4 WIRE NUMBER DENOTES AMPERE RATING

30 — POWER RECPT. 600V, 3 PHASE, 4 WIRE

S S S — POWER ON-OFF SNAP SWITCH, 1PH, 120V AC, 20A S2-DENOTES, 2 POLE, 240 VOLTS, 20A

MS — 20A TWO OR THREE POLE MANUAL STARTER

MV — MOTORIZED VALVE WITH CONTROLLER BY VENDOR

MOV OR (MV) — MOTORIZED VALVE

SV OR (SV) — SOLENOID VALVE

SPD — SURGE SUPPRESION DEVICE

PHASING RECEPTIACLE- 4 PIN, 3 PHASE WITH GROUND

BUS DUCT

DEMOLITION

GROUNDING SWITCH

CAPACITOR

700 — ROUND ROTOR MOTOR

SLR — SLR INDICATES SLIP LOSS RECOVERY DRIVE

INSTRUMENTS

PS 123 — INSTRUMENT DEVICE: LETTERS IDENTIFY DEVICE FUNCTION, NUMBERS WHERE INDICATED DENOTE LOOP NUMBER
PC — PRESSURE CONTROLLER
PS — PRESSURE SWITCH (PSH DENOTES PRESSURE SWITCH HIGH AND PSL DENOTES PRESSURE LOW)
dPSH — DIFFERENTIAL PRESSURE SWITCH (dPSH DENOTES PRESSURE SWITCH HIGH AND dPSL DENOTES PRESSURE SWITCH LOW)
CSH — DIAPHRAGM LEAK DETECTOR
CV — CONTROL VALVE
FS — FLOW SWITCH (FSH DENOTES FLOW SWITCH HIGH AND FSL DENOTES FLOW SWITCH LOW)
ZS — LIMIT SWITCH
ZSO — LIMIT SWITCH OPEN
ZSC — LIMIT SWITCH CLOSED
PIT — PRESSURE TRANSMITTER (I DENOTES INDICATING TYPE AND PE DENOTES PRESSURE ELEMENT)
LIT — LEVEL TRANSMITTER (LE DENOTES LEVEL ELEMENT)
FIT — FLOW TRANSMITTER (FE DENOTES FLOW ELEMENT)
AIT — ANALYSIS TRANSMITTER (AE DENOTES ANALYSIS ELEMENT)
TIT — TEMPERATURE TRANSMITTER (TE DENOTES TEMPERATURE ELEMENT)
TS — TEMPERATURE SWITCH (TSH DENOTES TEMPERATURE SWITCH HIGH AND TSL DENOTES TEMPERATURE SWITCH LOW)
LS — LEVEL SWITCH (LSH DENOTES LEVEL SWITCH HIGH AND LSL DENOTES LEVEL SWITCH LOW. LE DENOTES LEVEL ELEMENT)
VLV — MANUAL OPERATED VALVE WITH POSITION CONTROLS
ACV — AIR OPERATED CONTROL VALVE
VS — VIBRATION SWITCH (VE INDICATES VIBRATION ELEMENT)
MV — MOTORIZED VALVE
SV — SOLENOID VALVE
MS — MOISTURE SENSOR
WS — TORQUE SWITCH
ZC — STROKE POSITIONER
ST — SPEED TRANSMITTER (1 DENOTES INDICATOR)
SL — STROBE LIGHT
SP — SHEAR PIN
H — HORN
AV — STROBE/HORN COMBINATION
MB — MOTOR BEARING DETECTOR P= PUMP BEARING
MV — MOTOR VIBRATION DETECTOR P= PUMP VIBRATION

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ELECSYS ENGINEERING GROUP

STATE OF NEW YORK EDDO JAMES 086309 LICENSED PROFESSIONAL ENGINEER

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CAPITAL PROJECT WP-269
RECONSTRUCTION OF PAERDEGAT PUMPING STATION
CONTRACT PS-318
ELECTRICAL
SYMBOLS AND LEGEND SHEET 1

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PLANS

1-3 / a — FLUORESCENT LIGHTING FIXTURE - SURFACE OR PENDANT MOUNTED. FIRST NUMERAL DENOTES LIGHTING PANEL (LP1), SECOND NUMBER DENOTES BRANCH CIRCUIT NUMBER. LOWER CASE LETTER DENOTES SWITCHED CIRCUIT.

EM — FLUORESCENT LIGHTING FIXTURE WITH BATTERY PACK SURFACE OR PENDANT.

PENDANT OR CEILING MOUNTED LIGHTING FIXTURE.

PENDANT OR CEILING MOUNTED LIGHTING FIXTURE WITH AUXILIARY QUARTZ LAMP.

PENDANT OR CEILING MOUNTED LIGHTING FIXTURE WITH AUXILIARY EMERGENCY LAMP POWERED FROM EMERGENCY INVERTER SYSTEM.

WALL MOUNTED LIGHTING FIXTURE.

POLE OR STANCHION MOUNTED LIGHTING FIXTURE.

TWO (2) POLE OR STANCHION MOUNTED LIGHTING FIXTURES.

GF — POLE MOUNTED FIXTURE WITH GF RECEPTACLE

EM — 2 LAMP SELF CONTAINED DC EMERGENCY LIGHTING UNIT. LETTER DENOTES FIXTURE TYPE.

EXIT SIGN WALL MOUNTED (SINGLE FACE WITH INDICATING ARROWS) WITH BATTERY PACK ARROW INDICATES DIRECTION OF EXIT DOOR

EXIT SIGN PENDANT MOUNTED (DOUBLE FACE WITH INDICATING ARROWS) WITH BATTERY PACK ARROWS INDICATE DIRECTION OF EXIT DOOR

D / 150 / 10'-0" AFF — FIXTURE DESIGNATION SYMBOL. SEE LIGHTING FIXTURE SCHEDULE FOR DESCRIPTION AND TYPE. ALL FIXTURES SHOWN IN A ROOM WITH THIS SYMBOL SHALL BE OF TYPE INDICATED BY LETTER; NUMBER IN SYMBOL INDICATES LAMP WATTAGE AND NUMBER OF LAMPS WHERE MORE THAN ONE (UNLESS OTHERWISE NOTED). NUMBER BELOW SYMBOL INDICATES MOUNTING HEIGHT ABOVE FINISHED FLOOR OR AS NOTED.

I-2 / GFI/SS — DUPLEX CONVENIENCE RECEPTACLE, 2 POLE, 3 WIRE, 120 VOLTS AC. 20 AMP RECEPTACLE DESIGNATIONS, FIRST NUMBER DENOTES PANEL, SECOND NUMBER DENOTES CIRCUIT NUMBER. GFI-DENOTES GROUND FAULT TYPE. SS-DENOTES SURGE SUPPRESSION TYPE WP-DENOTES WEATHERPROOF ENCLOSURE SINGLE CONVENIENCE RECEPTACLE, 2 POLE, 3 WIRE; 120 VOLTS AC. 20 AMP UNLESS NOTED OTHERWISE ON DRAWINGS.

SINGLE CONVENIENCE RECEPTACLE, 2 POLE, 3 WIRE; 120 VOLTS AC. 20 AMP UNLESS NOTED OTHERWISE ON DRAWINGS.

POWER RECEPTACLE, 2 POLE, 3 WIRE 250 VOLTS AC. 20 AMP UNLESS NOTED OTHERWISE ON DRAWINGS.

PU — PAGING UNIT

LS — PAGING UNIT SPEAKER

S a — SINGLE POLE SWITCH - LOWER CASE LETTER DENOTES SWITCHING.

S 2 — TWO POLE SWITCH

S 3 — THREE-WAY SWITCH

S 4 — FOUR-WAY SWITCH

S a T — 24V DC MOMENTARY CONTACT SWITCH - LOWER CASE DENOTES SWITCHING

S a D — DIMMING SWITCH - LOWER CASE DENOTES SWITCHING

S M2 — MAUNAL MOTOR STARTER-NUMBER DENOTES NUMBER OF POLES WHEN MORE THAN ONE.

S V — VARIABLE SPEED FAN SWITCH

LP1-2 — BRANCH CIRCUIT HOME RUN TO PANELBOARD LETTERS AND NUMERALS INDICATE PANEL AND CIRCUIT NUMBER. AT A MINIMUM, ALL WIRING SHALL BE 3#12 AWG IN 3/4" CONDUIT. #10 AWG WIRE SHALL BE USED FOR RUNS BETWEEN PANEL AND FIRST LIGHTING FIXTURE OR RECEPTACLE EXCEEDING 50 FEET, UNLESS OTHERWISE NOTED ON DRAWING.

LP1-2 / J / 10 — LETTERS AND NUMBERS INDICATE PANEL AND CIRCUIT NUMBER (LP1-2). CROSS LINES INDICATE NUMBER OF CONDUCTORS. HALF HASH MARKS INDICATES NEUTRAL. NUMBER (10) DENOTES WIRE SIZE WHEN NOT #12 AWG. CONTINUE CONDUIT AND WIRE RUN FROM BOX TO DEVICE IN ROOM OR AREA AS NOTED BY BRANCH CIRCUIT NUMBER. #10 AWG WIRING SHALL BE USED FOR RUNS BETWEEN PANEL AND FIRST LIGHTING FIXTURE OR RECEPTACLE EXCEEDING 50 FEET, UNLESS OTHERWISE NOTED ON DRAWING.

INDICATES GROUND CONDUCTOR

C12 — INDICATES HOMERUN AND CONDUIT TAG

LIGHTING, APPLIANCE OR INSTRUMENT PANELBOARD

POWER PANELBOARD

CP — CP- CONTROL PANEL

T — THERMOSTAT

MD — MOTORIZED DAMPER

LM — LOUVER MOTOR

M M UH OR 1-24 1-24 1-24 — MOTOR, UNIT HEATER-NUMERAL DENOTES LIGHTING PANEL AND BRANCH CIRCUIT NUMBER. MOTOR SYMBOL SHOWN DASHED DENOTES EQUIPMENT LOCATED ON ROOF.

INDICATES NEW EQUIPMENT/EXPOSED CONDUIT

CONDUIT TURNING DOWN

CONDUIT TURNING UP

CONDUIT CAPPED

INDICATES EXISTING EQUIPMENT/CONDUIT

INDICATES CONDUIT OR CONDUITS UNDERGROUND OR CONCEALED IN SEILING, WALLS, BELOW OR IN FLOOR SLAB.

CONDUIT TAG OR DESCRIPTION — INDICATES CONDUIT OR CONDUITS UNDERGROUND OR CONCEALED IN CEILING, WALLS, BELOW OR IN FLOOR SLAB. ALL UNDERGROUND CONDUITS SHALL BE IN ACCORDANCE WITH THE INDIVIDUAL UNDERGROUND CONDUIT RUN REQUIREMENTS SPECIFIED.

INDICATES CONDUIT UNDERGROUND OR CONCEALED IN CEILING, WALLS, BELOW OR IN FLOOR SLAB.

EMH — ELECTRICAL MANHOLE

EHH — ELECTRICAL HANDHOLE

TMH — TELEPHONE MANHOLE

THH — TELEPHONE HANDHOLE

IMH — INSTRUMENTATION MANHOLE

IHH — INSTRUMENTATION HANDHOLE

CRAC — COMPUTER ROOM AIR CONDITIONER

GROUND TEST POINT

GROUND ROD

GROUND GRID CABLE CONNECTION

GROUND

#4/0 GROUND CABLE BURIED 2'-6" BELOW GRADE UNLESS OTHERWISE NOTED

CLASS I COPPER LIGHTNING CONDUCTOR UNLESS OTHERWISENOTED

PC — PHOTOCELL

DEMOLITION HATCHING

CONTROLS

DEVICE LOCATED IN FIELD AT OR NEAR MOTOR DEVICE LOCATED IN CONTROL PANEL

IL / PT — INDICATING LIGHT, PT-DENOTES PUSH TO TEST TYPE LETTER INDICATES LENS COLOR
W-WHITE G-GREEN A-AMBER
R-RED B-BLUE C-CLEAR

SWITCH - TOGGLE OPEN

MOMENTARY CONTACT PUSH BUTTON NORMALLY OPEN

MOMENTARY CONTACT PUSH BUTTON NORMALLY CLOSED

LO STOP — MOMENTARY LOCKOUT STOP PUSHBUTTON

SWITCH-TEMPERATURE NORMALLY CLOSED. OPENS ON RISING TEMPERATURE

SWITCH-TEMPERATURE NORMALLY CLOSED. CLOSES ON RISING TEMPERATURE

SWITCH-FLOW NORMALLY CLOSED

SWITCH-FLOW NORMALLY OPEN

SWITCH-LIMIT NORMALLY OPEN

SWITCH-LIMIT NORMALLY CLOSED

SWITCH-LIMIT HELD CLOSED

SWITCH-LIMIT HELD OPEN

SWITCH-LIQUID LEVEL NORMALLY OPEN. CLOSES ON RISING LEVEL

SWITCH-LIQUID LEVEL NORMALLY CLOSED. OPENS ON RISING LEVEL

SWITCH-PRESSURE NORMALLY CLOSED. OPENS ON RISING PRESSURE

SWITCH-PRESSURE NORMALLY OPEN. CLOSES ON RISING PRESSURE

VALVE LIMIT SWITCH (OPEN)

VALVE LIMIT SWITCH (CLOSED)

TORQUE SWITCH, OPENS ON RISING TORQUE

TORQUE SWITCH, CLOSES ON RISING TORQUE

NORMALLY OPEN CONTACT, NUMBER INDICATES RELAY.

NORMALLY CLOSED CONTACT

THERMALLY ACTUATED MOTOR OVERLOAD RELAY, LATCHES CLOSED ON OVERLOAD.

THERMALLY ACTUATED MOTOR OVERLOAD RELAY, LATCHES OPEN ON OVERLOAD.

NOTC — NORMALLY OPENED CONTACT -TIMED CLOSED TIME DELAY AFTER COIL ENERGIZED

NCTO — NORMALLY CLOSED CONTACT -TIMED OPEN TIME DELAY AFTER COIL ENERGIZED

NOTO — NORMALLY OPEN CONTACT -TIMED OPEN TIME DELAY AFTER COIL DE-ENERGIZED

NCTC — NORMALLY CLOSED CONTACT -TIMED CLOSED TIME DELAY AFTER COIL DE-ENERGIZED

SOLENOID VALVE

M — MOTOR STARTER CONTACTOR COIL COIL DESIGNATION: M-COIL

S — MOTOR STARTER CONTACTOR COIL COIL DESIGNATION: S-SLOW

FT — MOTOR STARTER CONTACTOR COIL COIL DESIGNATION: FT-FAST

F — MOTOR STARTER CONTACTOR COIL COIL DESIGNATION: F-FOREWARD

R — MOTOR STARTER CONTACTOR COIL R-REVERSE COIL DESIGNATION:

1S — MOTOR STARTER CONTACTOR COIL 1S-REDUCED VOLTAGE CONTACTOR COIL #1 COIL DESIGNATION:

2S — MOTOR STARTER CONTACTOR COIL COIL DESIGNATION: 2S-REDUCED VOLTAGE CONTACTOR COIL #2

RUN — MOTOR STARTER CONTACTOR COIL COIL DESIGNATION: R-RUN

CR — CONTROL RELAY COIL DESIGNATION:
CR-CONTROL RELAY
MX-AUXILIARY RELAY
TR-TIMING RELAY
AR-ALARM RELAY
RR-READY RELAY

(X,O) — SELECTOR SWITCH, 2 POSITION MAINTAINED CONTACT

(O,X) — (O,X) DENOTES CONTACT BLOCK CONFIGURATION X INDICATES CONTACT CLOSED, O DENOTES CONTACT OPEN.

SELECTOR SWITCH, 3 POSITION MAINTAINED CONTACT

MAINTAINED CONTACT PUSH BUTTON W/MECHANICAL INTERLOCK

ELECTRIC SPACE HEATER ELEMENT — ETM — ELAPSED TIME METER

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CAPITAL PROJECT WP-269
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SYMBOLS AND LEGEND SHEET 2

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AUXILIARY SYSTEM

- DC — DOOR CONTACT
- GD — GLASS-BREAK DETECTOR
- MS — MOTION SENSOR
- CR — CARD READER
- IACP — INTRUSION ALARM CONTROL PANEL
- ACP — ALARM CONTROL PANEL
- FOPP — FIBER OPTIC PATCH PANEL
- CAMERA OR CCTV
- R — ALARM BEACON, LETTER INDICATES COLOR
- X — SPEAKER/HORN
  - H = HORN
  - PS = PAGING SPEAKER
- © — CEILING MOUNTED SPEAKER
- X1234 EXISTING EXTENSION NUMBER
  COMMUNICATION / TELEPHONE
  D = DESK HANDSET AND SYSTEM OUTLET JACK
  W = WALL HANDSET AND SYSTEM OUTLET JACK
  EX = EXPLOSIONPROOF
  WP = WEATHERPROOF
  (K) = KEYSET
  (I) = INTERCOM
- DATA OUTLET
- FLOOR MOUNTED DATA OUTLET
- TB — SOUND POWERED TELEPHONE
- TELEPHONE PUNCH DOWN BLOCK
- COMMUNICATIONS DISTRIBUTION PANEL
- PBX — PRIVATE BRANCH EXCHANGE
- EPN — EXTERNAL PORT NODE
- F/C — FIBER CONVERTER
- LE — LINE EXTENDER
- PCC — PAGING CONTROL CABINET
- MUX — MULTIPLEXOR
- XCR — TRANSCEIVER
- MONITOR
- UPS — UNINTERRUPTIBLE POWER SUPPLY
- T1 DEMARCATION
- S — DATA SWITCH
- H — DATA HUB
- B — ALARM BEACON WITH BLUE LENS
- WS — WAN SWITCH

ABBREVIATIONS

A	AMPERES
AA/FA	AMBIENT AIR / FORCED AIR COOLED RATING
A/I	ANALOG INPUT
A/O	ANALOG OUTPUT
A/C	AIR CONDITIONING
AC	ALTERNATING CURRENT
ACB	AIR CIRCUIT BREAKER
ACC	AIR COOLED CONDENSER
AFC	ABOVE FINISHED CONCRETE
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AIC	AMPERE INTERRUPTING CAPACITY
AL	ALUMINUM
ANNUNC	ANNUNCIATOR
ATC	AUTOMATIC TEMPERATURE CONTROL
ATS	AUTO TRANSFER SWITCH
AUX	AUXILIARY AUTO AUTOMATIC
AWG	AMERICAN WIRE GAUGE
BD	BOARD
BKR	BREAKER
BLDG	BUILDING
C OR CND	CONDUIT OR CONTROL CONDUIT
CAB	CABINET
CBV	CABLE BY VENDOR. INSTALLED BY CONTRACTOR.
CB	CIRCUIT BREAKER
CKT	CIRCUIT
CL2	CHLORINE
CLG	CEILING
CO	CONDUIT ONLY
COMPT	COMPARTMENT
COND	CONDUCTOR(S)
CNTRL	CONTROL
CONDTD	CONTINUED
CP-1	CONTROL PANEL, NUMBER AS NOTED
CPT	CONTROL POWER TRANSFORMER
CS	CONTROL STATION
CU	COPPER
CPFT	CONTROL PROCESSOR FAULT TOLERANT
D/I	DISCRETE INPUT
D/O	DISCRETE OUTPUT
DA	DATA MODULE
DB	DECIBELS
DC	DIRECT CURRENT
DCS	DISTRIBUTED CONTROL SYSTEM
DIAG	DIAGRAM
DISC	DISCONNECT
DM	DIGITAL METER
DN	DOWN
DPDT	DOUBLE POLE DOUBLE THROW
DP	DISTRIBUTION PANEL
DPL	DISTRIBUTION PANEL LOW
DPH	DISTRIBUTION PANEL HIGH
DS	DISCONNECT SWITCH
DWG	DRAWING
EC	EMPTY CONDUIT
ECC	EASTVIEW CONNECTION CHAMBER
EDB	ELECTRICAL DUCTBANK
EF	EXHAUST FAN
EHH	ELECTRICAL HANDHOLE
EL,ELEV	ELEVATION
EMH	ELECTRICAL MANHOLE
EMT	ELECTRICAL METALLIC TUBING CONDUIT
EO	ELECTRICALLY OPERATED
EP,EXP	EXPLOSION PROOF
EXIST	EXISTING
ETM	ELAPSED TIME METER
FCO	FUSE CUT OUT
FIN	FINISHED
FDR	FEEDER
FIXT	FIXTURE
FLEX	FLEXIBLE
FOS	FAST/OFF/SLOW STATION
FP	FEED PUMP
FS	FLOW SWITCH
FT	FEET OR FOOT
FUT	FUTURE
FVNR	FULL VOLTAGE NON REVERSING
GALV	GALVANIZED
GFCT	GROUND FAULT CURRENT TRANSMITTER
GFI	GROUND FAULT INTERRUPTOR
GND	GROUND
H/A	HAND/AUTO
HDG	HOT DIPPED GALVANIZED
HH-1	HANDHOLE, AS NUMBERED
HOA	HAND /OFF /AUTO
HTR	HEATER
HZ	HERTZ
IC	INTERRUPTING CURRENT
ID	INTERIOR DIMENSION
IMT	INTERMEDIATE METAL GALVANIZED STEEL CONDUIT
IN OR "	INCHES OR INCH
IND	INDICATING
INSTANT	INSTANTANEOUS
INSTR	INSTRUMENT
INTLK	INTERLOCK
IRRCP	INTERIM REGULATING RESERVOIR CONTROL PANEL
ITB	INSTRUMENT TERMINAL BOX
JB OR J	JUNCTION BOX, CONDULET, FITTING AS REQUIRED BY NEC, UNLESS NOTED OTHERWISE
KAIC	THOUSAND AMPERE INTERRUPTING CAPACITY (SYMMETRICAL)
KCMIL	THOUSAND OR MCM CIRCULAR MILS
KVA	KILOVOLT AMPERES
KW	KILOWATTS
KW-HR	KILOWATT HOURS
KWHM	KILOWATT HOUR METER
KWM	KILOWATT METER
KV	KILOVOLT
LEV	LEVEL
LIM	LIMIT
LA	LIGHTNING ARRESTOR
LBS	LOAD BREAK SWITCH
LCP	LOCAL CONTROL PANEL
L-R	LOCAL-REMOTE
LS	LEVEL SWITCH
LSIG	LONG TIME, SHORT TIME, INSTANTANEOUS, AND GROUND
LT	LIGHT
LTG	LIGHTING
LV	LOW VOLTAGE
MA	MILLIAMPERE
MAINT	MAINTAINED
MAN	MANUAL
MC	MAINTAINED CONTACT
MCC	MOTOR CONTROL CENTER
MTS	MANUAL TRANSFER SWITCH
MCP	MOTOR CIRCUIT PROTECTOR
MFR	MANUFACTURER
MH-1	MANHOLE, NUMBER AS NOTED
MIN	MINIMUM
MINT	MINUTE
MOV	MOTOR OPERATED VALVE OR GATE
MPM	MOTOR PROTECTION MODULE
MTG	MOUNTING
MOT	MOTOR
MSP	MAIN SEWAGE PUMP
MV	MEDIUM VOLTAGE
NA	NON-AUTOMATIC
N/A	NOT APPLICABLE
NAC	NOTIFICATION APPLIANCE CIRCUIT
NC	NORMALLY CLOSED
NCTC	NORMALLY CLOSED TIME CLOSE
NCTO	NORMALLY CLOSED TIME OPEN
NEC	NATIONAL ELECTRIC CODE
NG	NATURAL GAS
NIC	NOT IN CONTACT
NO.OR #	NUMBER
NO	NORMALLY OPEN
NOTC	NORMALLY OPEN TIMED CLOSE
NOTO	NORMALLY OPEN TIMED OPEN
NP	NAMEPLATE
NTS	NOT TO SCALE
OCA	OPEN/CLOSE/AUTO SWITCH
OL	OVERLOAD RELAY
OLP	OUTDOOR LIGHTING PHOTOCELL
OL(MA)	OVERLOAD RELAY MAINTAINED
P	POWER CONDUIT
PB	PUSHBUTTON
P/B	PULLBOX
PCP	PROCESS CONTROL PANEL
PDS	PRESSURE DIFFERENTIAL SWITCH
PFC	POWER FACTOR CORRECTION
PFD	CAPACITORS PULL FUSE
PH	PHASE
PM	POWER METER
PNL	PANEL
POS	POSITION
PR	PAIR
PRI	PRIMARY
PS	PRESSURE SWITCH
PV	PLUG VALVE
PT	POTENTIAL TRANSFORMER
PTZ	PAN-TILT-ZOOM
PVC	POLYVINYL CHLORIDE
REC	RECOMMENDATION
RECEP	RECEPTACLE
REQ	REQUIRED
RGS	REGID GALVANIZED STEEL CONDUIT
RVNR	REDUCED VOLTAGE NON-REVERSING
SEC	SECONDARY
SEL	SELECTOR
SF	SUPPLY FAN
SP	SPARE
SPEC	SPECIFICATION
SS	SELECTOR SWITCH
SST	STAINLESS STEEL
S/S	STOP/START STATION
SPC	SPARE CONDUIT
SPCS	SLUDGE PUMP CONTROL STATION
SPD	SURGE SUPPRESSION DEVICE
SPDT	SINGLE POLE DOUBLE THROW
SPST	SINGLE POLE SINGLE THROW
SLC	SIGNALING LINE CIRCUIT
ST	SPEED TACHOMETER
STA	STATION
STL	STEEL
STR	STARTER
SV	SOLENOID VALVE
SW	SWITCH
SWBD	SWITCHBOARD
SWGR	SWITCHGEAR
(S),(SH)	SHIELDED CABLE
T	TRIP
TB	TERMINAL BOX
TCOND	TEE CONDUIT
TDAE	TIME DELAY AFTER ENERGIZATION (ON DELAY)
TDAD	TIME DELAY AFTER DEENERGIZATION (OFF DELAY)
TDR	TIME DELAY RELAY
TEL	COMMERCIAL TELEPHONE
TEMP	TEMPERATURE
TERM	TERMINAL
TEW	THERMOCOUPLE EXTENSION WIRE
TLV	TRANSFORMER LOW VOLTAGE
TS	TEMPERATURE SWITCH
TWSH	TWISTED SHIELDED PAIR
TYP	TYPICAL
TPR	THREE PAIR
TRANSF	TRANSFER
UON	UNLESS OTHERWISE NOTED
UNGND	UNDERGROUND
UPS	UNINTERRUPTIBLE POWER SUPPLY
USE	UNDERGROUND SERVICE ENTRANCE CABLE
USS	UNIT SUBSTATION
V	VOLTS
VAC	VOLTS ALTERNATING CURRENT
VDC	VOLT DIRECT CURRENT
VIB	VIBRATING
VFD	VARIABLE FREQUENCY DRIVE
W	WATTS
W/	WITH
W/O	WITHOUT
WM	WATTMETER
WT	WINDING TEMPERATURE
WP	RELAY WEATHERPROOF
XDER	TRANSDUCER
XFMR	TRANSFORMER
XP	EXPLOSION PROOF
XR	EXISTING TO REMAIN
XS	LIMIT SWITCH
1PH	SINGLE PHASE
3PH	3 PHASE
3W	THREE WIRE
4W	FOUR WIRE

BID SET

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DESIGNED BY: E. JAMES, P.E.
DRAWN BY: B. ROY
CHECKED BY: E. AMABA, P.E.
DESIGN LEAD: E. JAMES, P.E.
PROJECT MANAGER: AIMEE BOULET, P.E.

ELECSYS ENGINEERING GROUP

STATE OF NEW YORK ELDO JAMES 090135 PROFESSIONAL ENGINEER

NYC Environmental Protection

ACCOUNTABLE MANAGER: JOHN GOULAS, P.E.
PORTFOLIO MANAGER: KEVIN ELLENWOOD, P.E.
EXECUTIVE DIRECTOR: NAYANKUMAR SHAH, P.E.

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CAPITAL PROJECT WP-269
RECONSTRUCTION OF
PAERDEGAT PUMPING STATION
CONTRACT PS-318
ELECTRICAL
SYMBOLS AND LEGEND SHEET 3

DATE: OCTOBER 2026
SCALE: AS INDICATED
SHEET NO: 192 OF 274
DRAWING NO. EG-003.00

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GENERAL NOTES:

1. ALL CONDUIT AND EQUIPMENT SHALL BE INSTALLED AND GROUNDED IN ACCORDANCE WITH THE LATEST RULES AND REGULATIONS OF THE NATIONAL ELECTRICAL CODE, APPLICABLE LOCAL CODES, AND UTILITY COMPANY.

2. CONDUIT RUNS ARE SHOWN DIAGRAMMATICALLY ONLY AND SHALL BE INSTALLED IN A MANNER TO PREVENT CONFLICTS WITH EQUIPMENT AND STRUCTURAL CONDITIONS. EXPOSED CONDUITS SHALL BE INSTALLED PARALLEL TO BEAMS AND WALLS.

3. CONDUITS SHALL BE TERMINATED SO AS TO PERMIT NEAT CONNECTIONS TO MOTORS AND OTHER EQUIPMENT.

4. NO CONDUIT SMALLER THEN 3/4" PIPE SIZE NOR WIRE SMALLER THAN N0.12 A.W.G. SHALL BE USED UNLESS OTHERWISE NOTED.

5. THE WIRING DIAGRAMS, QUANTITY AND SIZE OF WIRES AND CONDUIT REPRESENT A SUGGESTED ARRANGEMENT BASED UPON SELECTED STANDARD COMPONENTS OF ELECTRICAL EQUIPMENT. MODIFICATIONS ACCEPTABLE TO THE ENGINEER MAY BE MADE BY THE CONTRACTOR TO ACCOMMODATE EQUIPMENT ACTUALLY PURCHASED. THE BASIC SEQUENCE AND METHOD OF CONTROL MUST BE MAINTAINED AS INDICATED ON THE DRAWINGS AND/OR SPECIFICATIONS.

6. ALL SURFACE MOUNTED PANELS AND PANELBOARDS ON THE INSIDE OF THE EXTERIOR WALLS ABOVE GRADE, OR IN OTHER LOCATIONS CONSIDERED AS DAMP, SHALL BE MOUNTED SO AS TO MAINTAIN A 1/4" AIR SPACE BETWEEN THE ENCLOSURE AND THE WALL.

7. ALL PANELBOARDS, PANELS, DISCONNECT SWITCHES AND STARTERS SHALL BE MOUNTED SO THAT THE DISTANCE FROM THE TOP CIRCUIT BREAKER / SWITCH OPERATING HANDLE IN THE HIGHEST POSITION TO THE FLOOR SHALL NOT EXCEED 6'-6".

8. OUTLETS, SWITCHES, JUNCTION, PULL AND TERMINAL BOXES SHALL HAVE NEMA RATINGS AS INDICATED IN THE SPECIFICATIONS AND AS SHOWN ON THE DRAWINGS.

9. ALL CONDUIT RUNS CROSSING EXPANSION JOINTS SHALL HAVE EXPANSION OR EXPANSION AND DEFLECTION TYPE FITTINGS AS REQUIRED. FOR EXACT LOCATIONS OF EXPANSION JOINTS SEE STRUCTURAL DRAWINGS.

10. SWITCHGEAR AND MCC COMPARTMENT DESIGNATIONS AS INDICATED BELOW:

    BLANK - NOT INTENDED FOR USE-PLATE ONLY ("UNUSED").

    SPACE - CONTAINS NECESSARY BUS AND HARDWARE FOR FUTURE ADDITION OF BREAKERS OR STARTERS WITHIN SIZE RANGE SHOWN (SAME AS "FUTURE").

    SPARE - CONTAINS A COMPLETE BREAKER OR STARTER INSTALLED, SIZE AS INDICATED, AVAILABLE FOR FUTURE USE.

11. ALL MOTOR STARTER CONTROL TRANSFORMERS SHALL BE SIZED TO PROVIDE SUFFICIENT VOLT-AMPERE CAPACITY FOR OPERATING ALL ELECTRICAL DEVICES ASSOCIATED WITH CONTROL OF THE MOTOR; IN ADDITION TO THE STARTER COIL, IT SHALL INCLUDE RELAYS, TIMERS, MOTOR HEATERS, INDICATING LIGHTS, ETC.

12. HEAVY OR DARK LINES DENOTE NEW DEVICES OR WIRING. LIGHT OR FINE LINES DENOTE EXISTING EQUIPMENT OR WIRING. IN GENERAL, HASH LINES DENOTE ITEMS FOR DEMOLITION. FOR CLARITY, NOTES FOR DEMOLITION MAY BE USED IN LIEU OF HASH LINES.

13. CONTRACTOR SHALL PROVIDE A CONDUIT SYSTEM FOR ALL EQUIPMENT BEING FED FROM LIGHTING/DISTRIBUTION/POWER/DC PANELBOARDS, REGARDLESS IF CONDUIT AND CABLE ARE SHOWN IN CONDUIT AND CABLE SCHEDULE. FOR ALL EQUIPMENT SHOWN ON PANEL SCHEDULE AS BEING FED FROM 1-POLE OR 2-POLE BREAKER, CONTRACTOR SHALL PROVIDE A MINIMUM OF 3/4" CONDUIT SYSTEM WITH MINIMUM 3#12 CABLES FROM PANELBOARD TO EQUIPMENT, UNLESS OTHERWISE INDICATED. FOR ALL EQUIPMENT SHOWN ON PANELBOARD SCHEDULE AS BEING FED FROM A 3-POLE BREAKER, CONTRACTOR SHALL PROVIDE A MINIMUM OF 3/4" CONDUIT SYSTEM WITH MINIMUM 4#12 CABLES FROM PANELBOARD TO EQUIPMENT, UNLESS OTHERWISE INDICATED. CONTRACTOR SHALL ACCOUNT FOR VOLTAGE DROP WHEN PROVIDING CIRCUITS WHICH ARE NOT EXPLICITLY LISTED IN THE CONDUIT AND CABLE SCHEDULE. MAXIMUM VOLTAGE DROP SHALL BE 3 PERCENT. CONTRACTOR SHOULD ALSO ACCOUNT FOR ANY CORRESPONDING INCREASES IN CONDUIT AND CABLE SIZE AND PROVIDE CONDUIT AND CABLE SYSTEMS MEETING REQUIREMENTS OF NEC.

AREAS CLASSIFICATION AND EQUIPMENT ENCLOSURE SCHEDULE		
ROOM OR AREA	AREA CLASSIFICATION	ENCLOSURE RATING
ELECTRICAL ROOM	DUSTY	NEMA 12
WET WELL, SCREEN CHAMBER	CLASS I DIV 1	NEMA 7
FIRST, SECOND AND THIRD LEVELS BELOW GROUND	WET AND CORROSIVE	NEMA 4X
ALL OTHER OUTDOOR LOCATIONS	WET AND CORROSIVE	NEMA 4X

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DESIGN LEAD: E. JAMES, P.E.
PROJECT MANAGER: AIMEE BOULET, P.E.

ELECSYS ENGINEERING GROUP

STATE OF NEW YORK ELDO JAMES OBEDON 095309 PROFESSIONAL ENGINEER

Environmental Protection

ACCOUNTABLE MANAGER: JOHN GOULAS, P.E.
PORTFOLIO MANAGER: KEVIN ELLENWOOD, P.E.
EXECUTIVE DIRECTOR: NAYANKUMAR SHAH, P.E.

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CAPITAL PROJECT WP-269
RECONSTRUCTION OF
PAERDEGAT PUMPING STATION
CONTRACT PS-318
ELECTRICAL
GENERAL NOTES

DATE: OCTOBER 2026
SCALE: AS INDICATED
SHEET NO: 193 OF 274
DRAWING NO. EG-004.00

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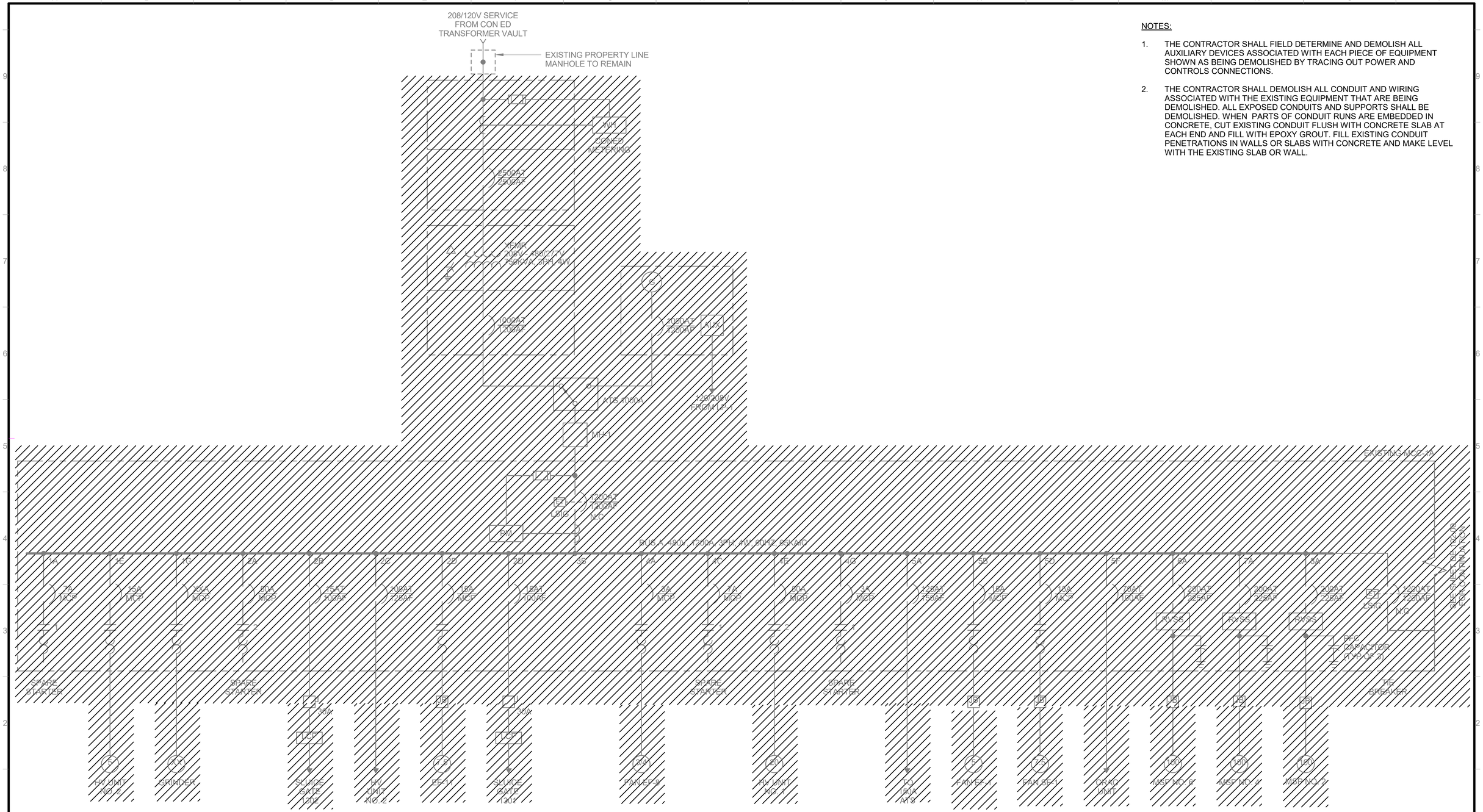

NOTES:

1. THE CONTRACTOR SHALL FIELD DETERMINE AND DEMOLISH ALL AUXILIARY DEVICES ASSOCIATED WITH EACH PIECE OF EQUIPMENT SHOWN AS BEING DEMOLISHED BY TRACING OUT POWER AND CONTROLS CONNECTIONS.

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PROJECT MANAGER: AIMEE BOULET, P.E.

DRAWN BY: B. ROY

ELECSYS ENGINEERING GROUP

STATE OF NEW YORK · ELDO JAMES · 088309 · REGISTERED PROFESSIONAL ENGINEER

NYC Environmental Protection

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CAPITAL PROJECT WP-269
RECONSTRUCTION OF
PAERDEGAT PUMPING STATION
CONTRACT PS-318
ELECTRICAL
EXISTING ONE LINE DIAGRAM DEMOLITION
SHEET 1

DATE: OCTOBER 2026
SCALE: AS INDICATED
SHEET NO: 194 OF 274
DRAWING NO. DE-101.00

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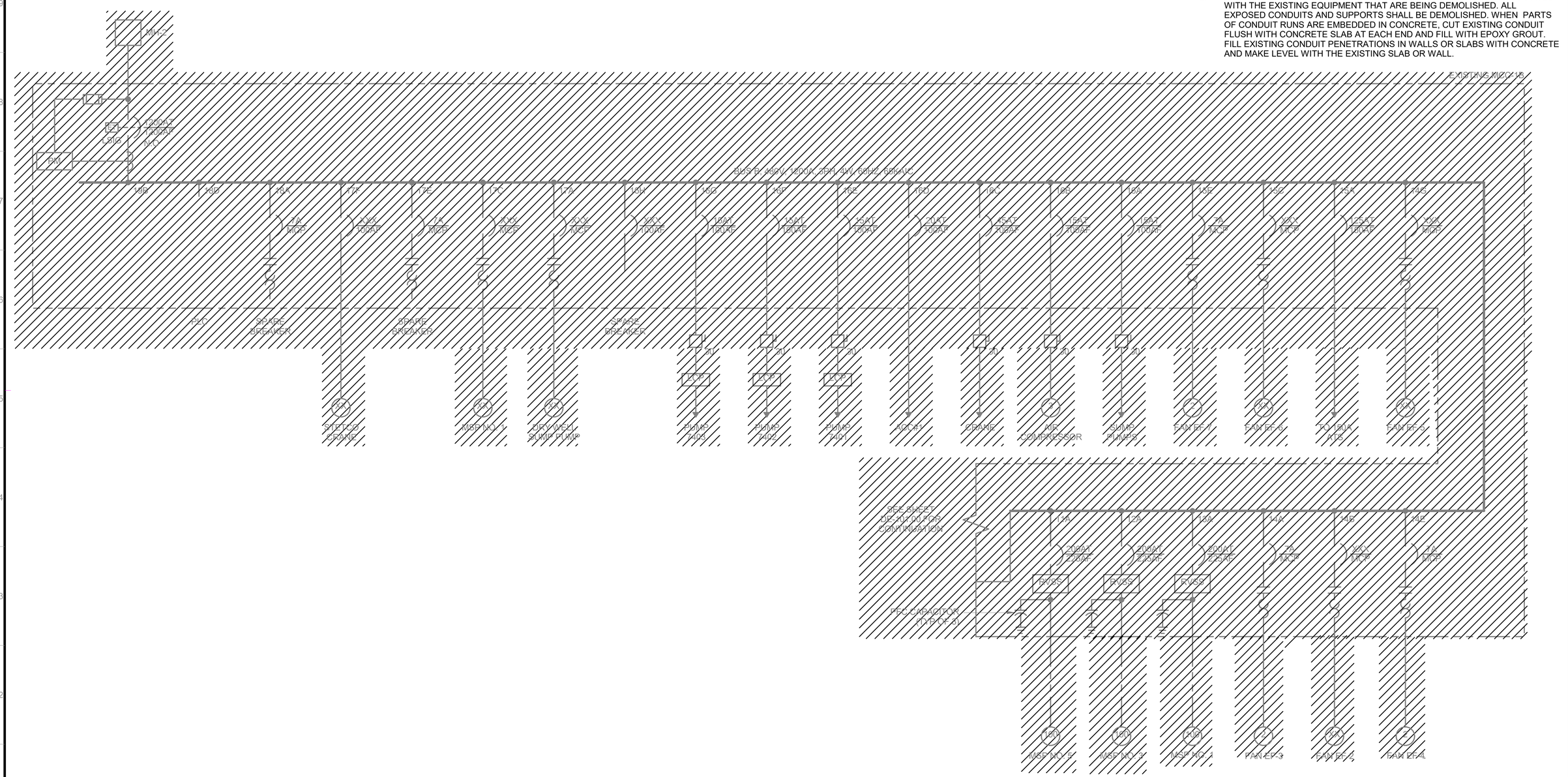

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ELECSYS ENGINEERING GROUP

STATE OF NEW YORK — EDO JAMES — 088309 — PROFESSIONAL ENGINEER

Environmental Protection

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CAPITAL PROJECT WP-269
RECONSTRUCTION OF
PAERDEGAT PUMPING STATION
CONTRACT PS-318
ELECTRICAL
EXISTING ONE LINE DIAGRAM DEMOLITION
SHEET 2

DATE: OCTOBER 2026
SCALE: AS INDICATED
SHEET NO: 195 OF 274
DRAWING NO. DE-102.00

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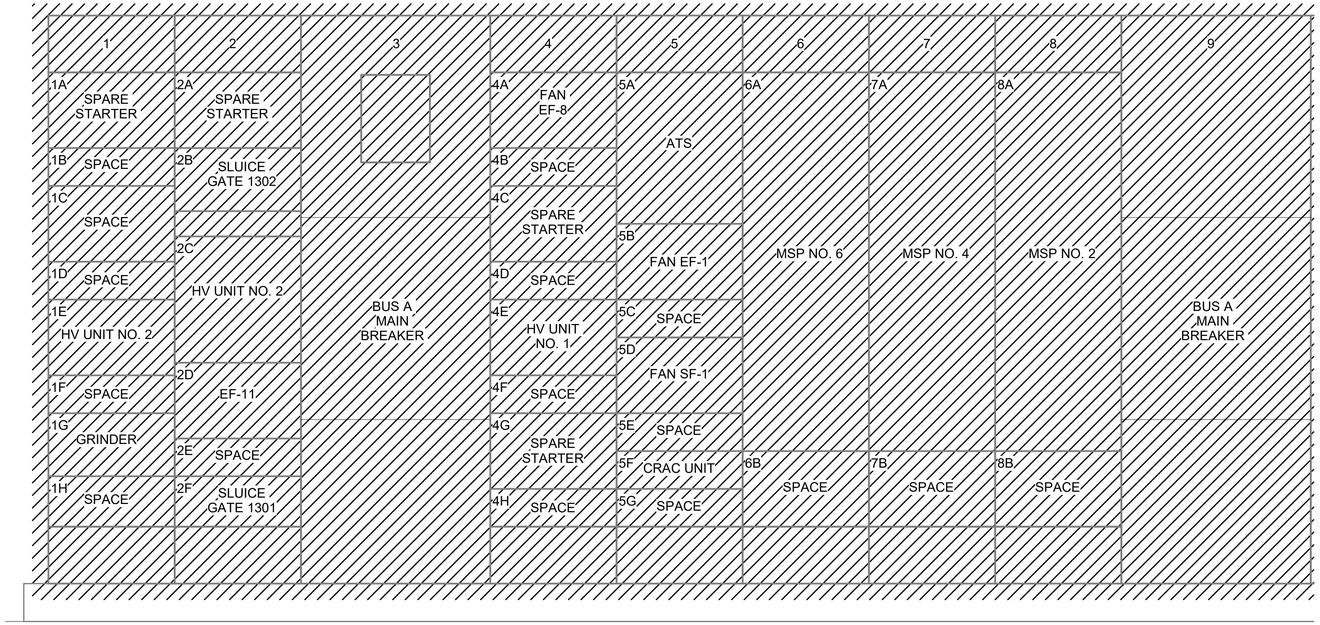
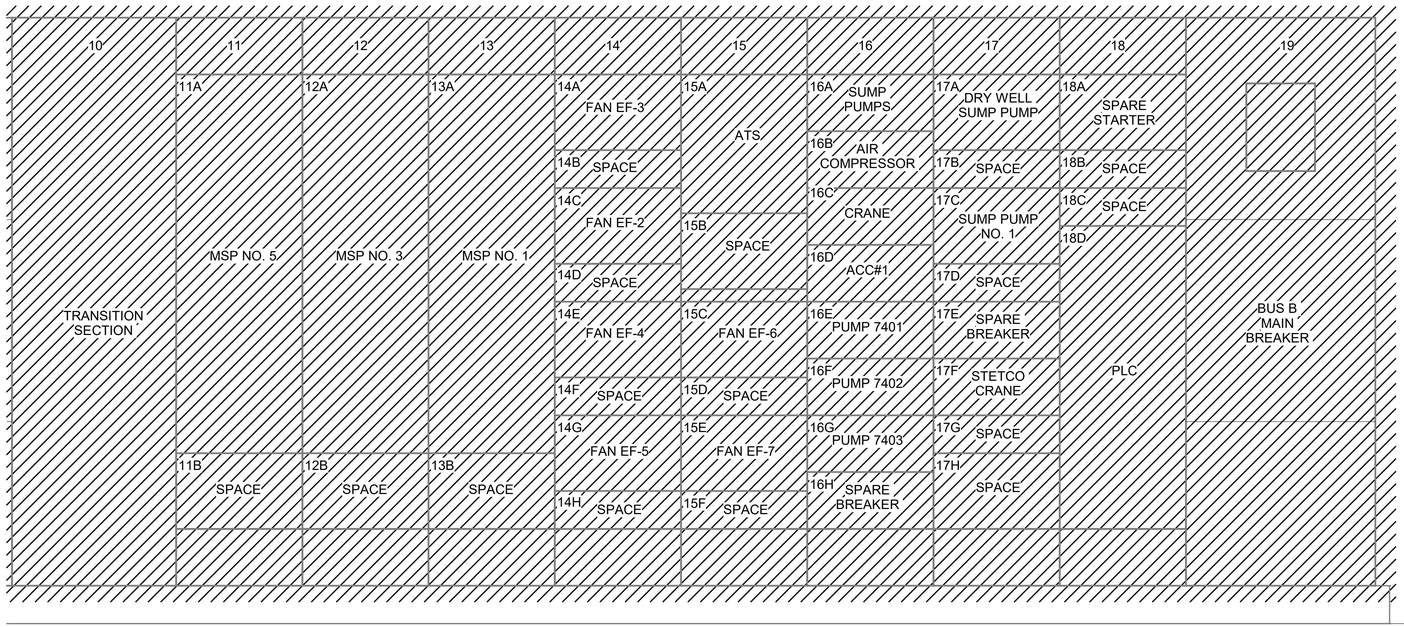


EXISTING MCC-1A FRONT VIEW

SCALE: 1" = 1'-0"



EXISTING MCC-1B FRONT VIEW

SCALE: 1" = 1'-0"

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DRAWN BY: B. ROY

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RECONSTRUCTION OF
PAERDEGAT PUMPING STATION
CONTRACT PS-318
ELECTRICAL
EXISTING MCC FRONT VIEW DEMOLITION

DATE: OCTOBER 2026
SCALE: AS INDICATED
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DRAWING NO. DE-103.00

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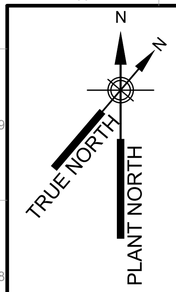

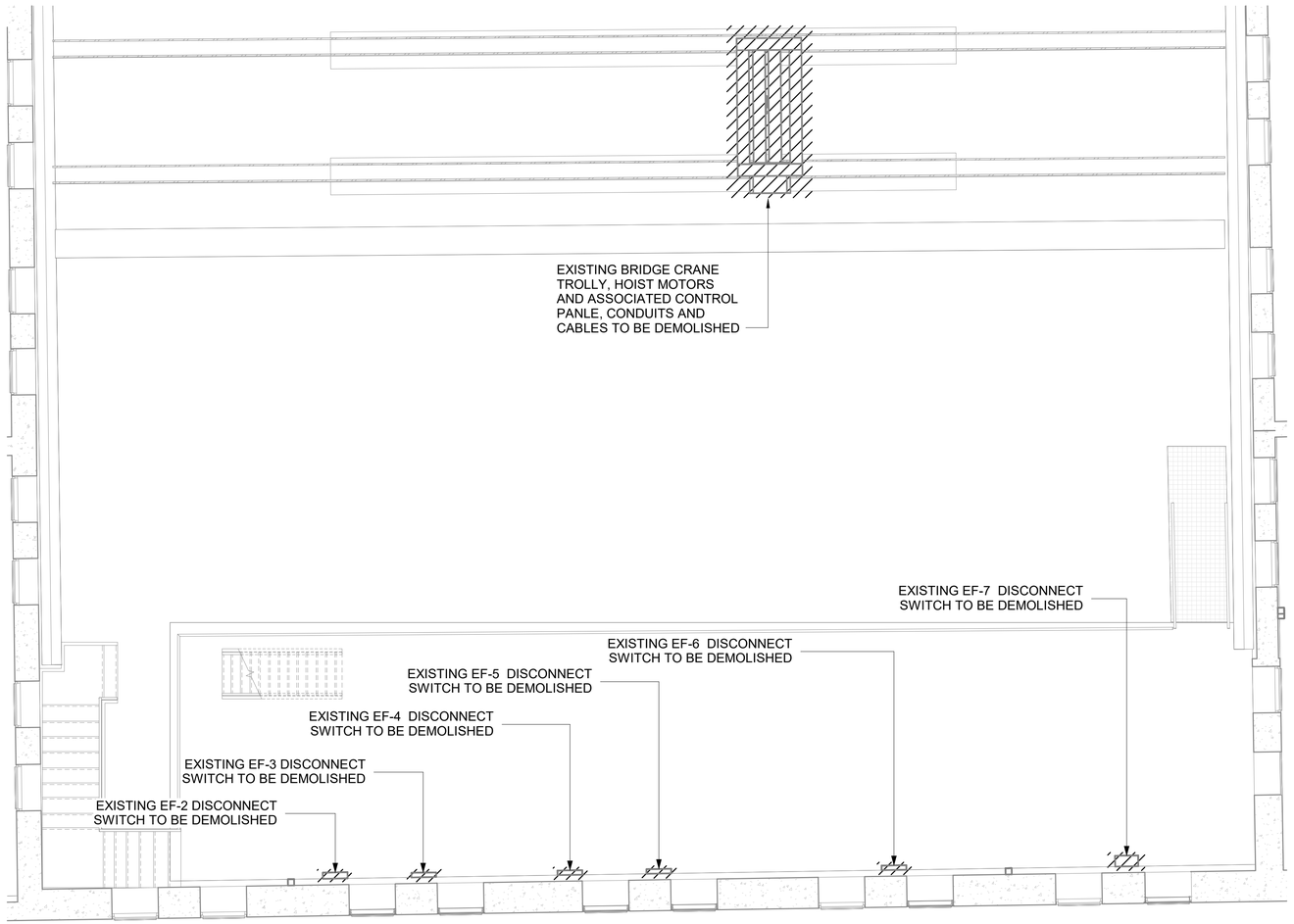

UPPER MEZZANINE DEMOLITION PLAN

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

NOTES:

1. NOT ALL DISCONNECT SWITCHES, CONTROL STATIONS, JUNCTION BOXED AND INSTRUMENTS ASSOCIATED WITH EXISTING EQUIPMENT THAT ARE BEING DEMOLISHED ARE SHOWN. THE CONTRACTOR SHALL FIELD DETERMINE AND DEMOLISH ALL AUXILIARY DEVICES ASSOCIATED WITH EACH PIECE OF EQUIPMENT SHOWN AS BEING DEMOLISHED BY TRACING OUT POWER AND CONTROLS CONNECTIONS.
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0 4 8 FT.
1/4"=1'-0"

BID SET

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PAERDEGAT PUMPING STATION
CONTRACT PS-318
ELECTRICAL
UPPER MEZZANINE - DEMOLITION PLAN

DATE: OCTOBER 2026
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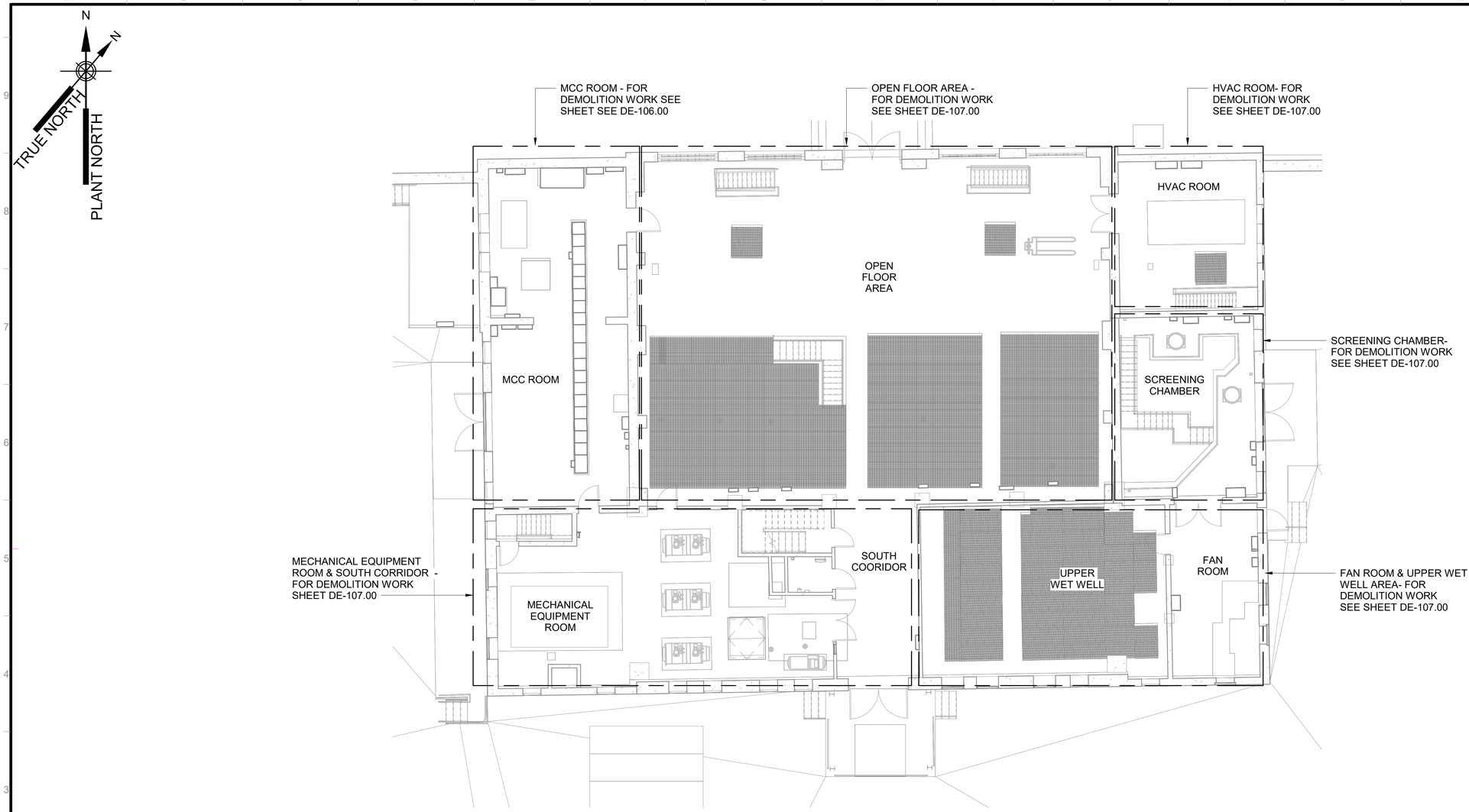

EXISTING GROUND FLOOR PLAN

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

0 5 10 15 FT.
1/8"=1'-0"

BID SET

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DESIGNED BY: E. JAMES, P.E.
DRAWN BY: B. ROY
CHECKED BY: E. AMABA, P.E.
DESIGN LEAD: E. JAMES, P.E.
PROJECT MANAGER: AIMEE BOULET, P.E.

ELECSYS ENGINEERING GROUP

STATE OF NEW YORK ELDO JAMES 086309 PROFESSIONAL ENGINEER

Environmental Protection

ACCOUNTABLE MANAGER: JOHN GOULAS, P.E.
PORTFOLIO MANAGER: KEVIN ELLENWOOD, P.E.
EXECUTIVE DIRECTOR: NAYANKUMAR SHAH, P.E.

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CAPITAL PROJECT WP-269
RECONSTRUCTION OF
PAERDEGAT PUMPING STATION
CONTRACT PS-318
ELECTRICAL
EXISTING GROUND FLOOR PLAN

DATE: OCTOBER 2026
SCALE: AS INDICATED
SHEET NO: 198 OF 274
DRAWING NO. DE-105.00

All inquiries regarding this drawing(s) or project should be made to NYC Environmental Protection, Bureau of Engineering Design and Construction.

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NOTES:

1. NOT ALL DISCONNECT SWITCHES, CONTROL STATIONS, JUNCTION BOXED AND INSTRUMENTS ASSOCIATED WITH EXISTING EQUIPMENT THAT ARE BEING DEMOLISHED ARE SHOWN. THE CONTRACTOR SHALL FIELD DETERMINE AND DEMOLISH ALL AUXILIARY DEVICES ASSOCIATED WITH EACH PIECE OF EQUIPMENT SHOWN AS BEING DEMOLISHED BY TRACING OUT POWER AND CONTROLS CONNECTIONS.

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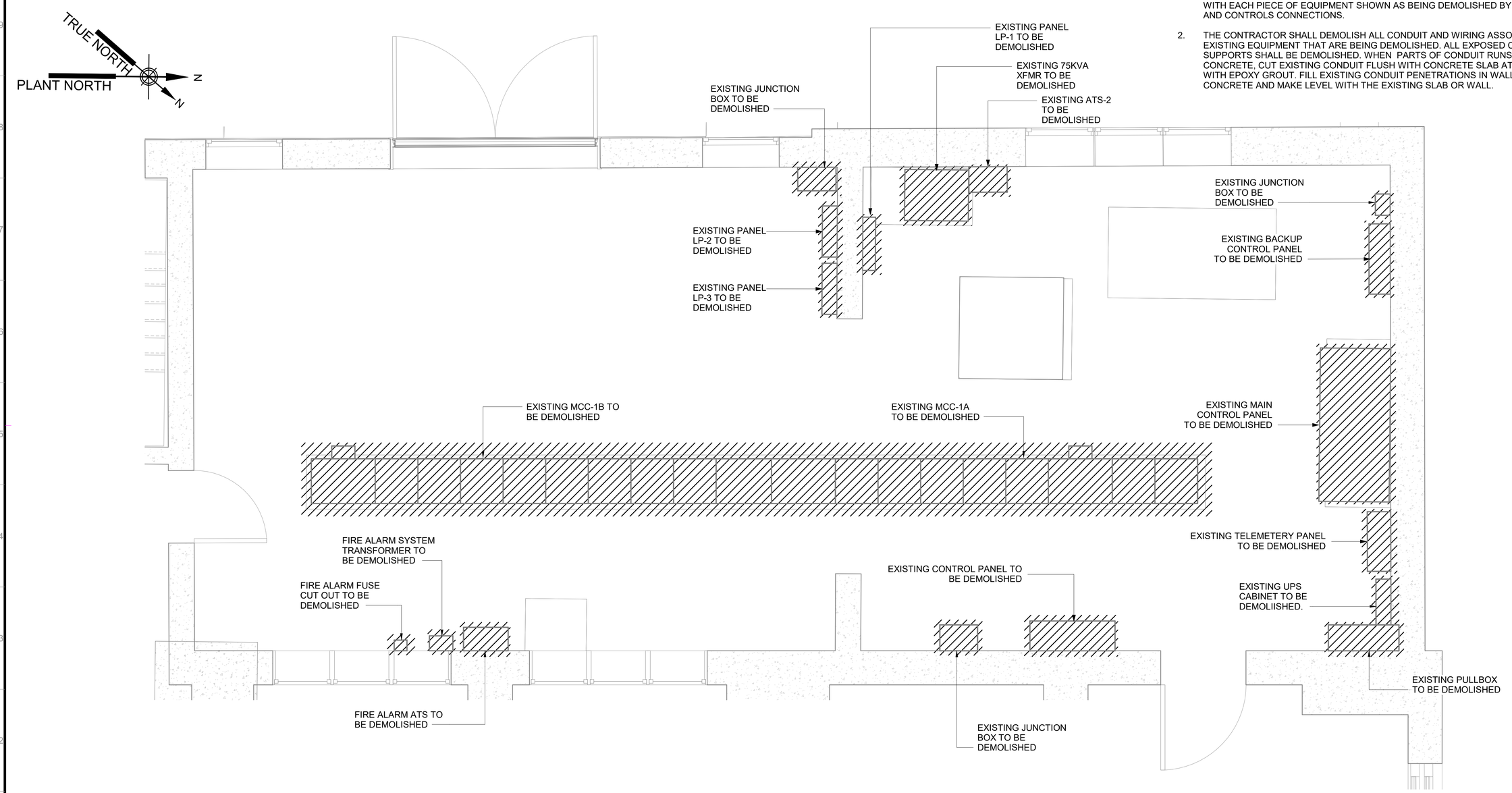

MCC ROOM POWER DEMOLITION PLAN

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

0 1 2 4 FT.
1/2"=1'-0"

BID SET

SUBMITTAL DATE: OCTOBER 2026

GRAPHIC SCALES CHECK BEFORE USE

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ELECSYS ENGINEERING GROUP

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EXECUTIVE DIRECTOR: NAYANKUMAR SHAH, P.E.

Environmental Protection

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CAPITAL PROJECT WP-269
RECONSTRUCTION OF
PAERDEGAT PUMPING STATION
CONTRACT PS-318
ELECTRICAL
MCC ROOM DEMOLITION PLAN

DATE: OCTOBER 2026
SCALE: AS INDICATED
SHEET NO: 199 OF 274
DRAWING NO. DE-106.00

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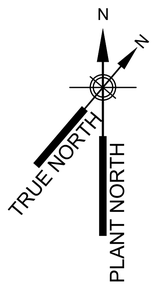
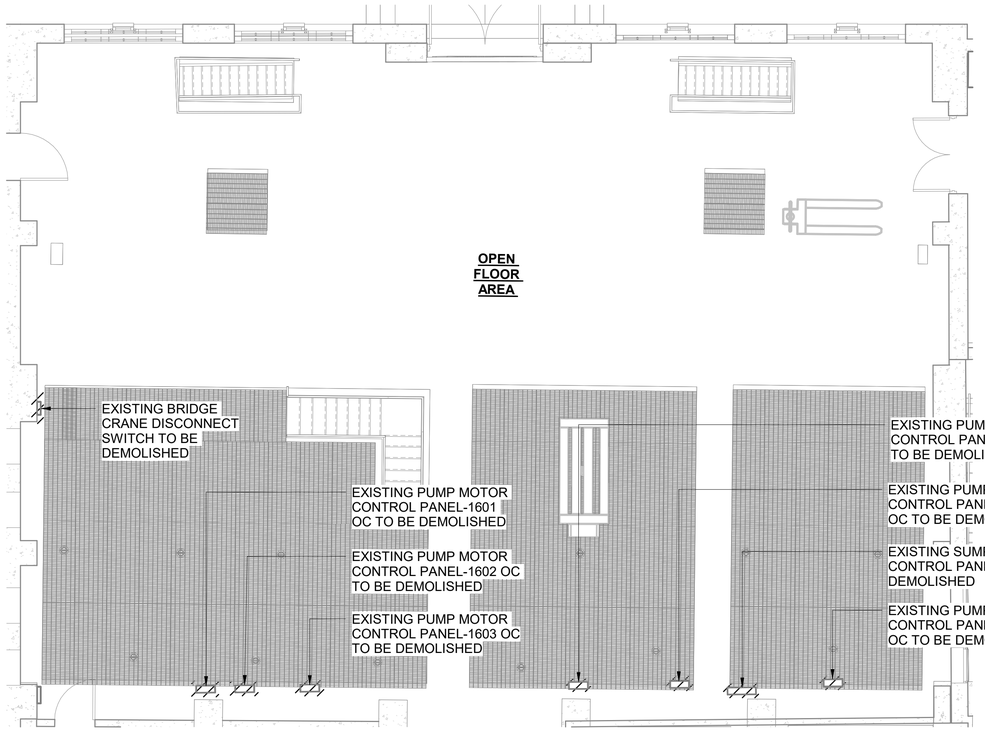
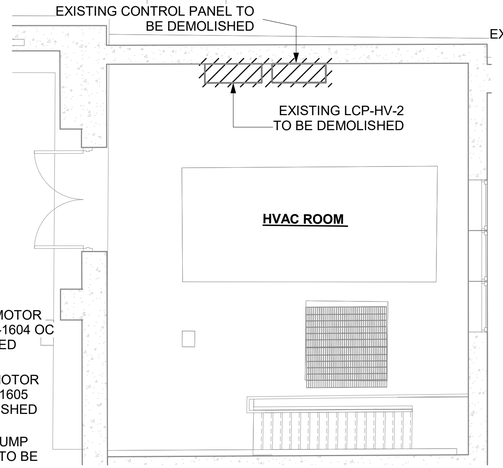




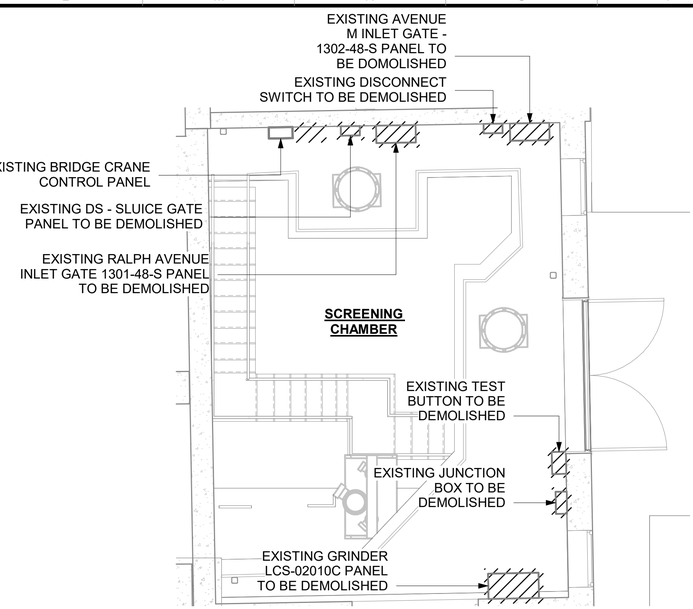
OPEN FLOOR AREA DEMOLITION PLAN

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



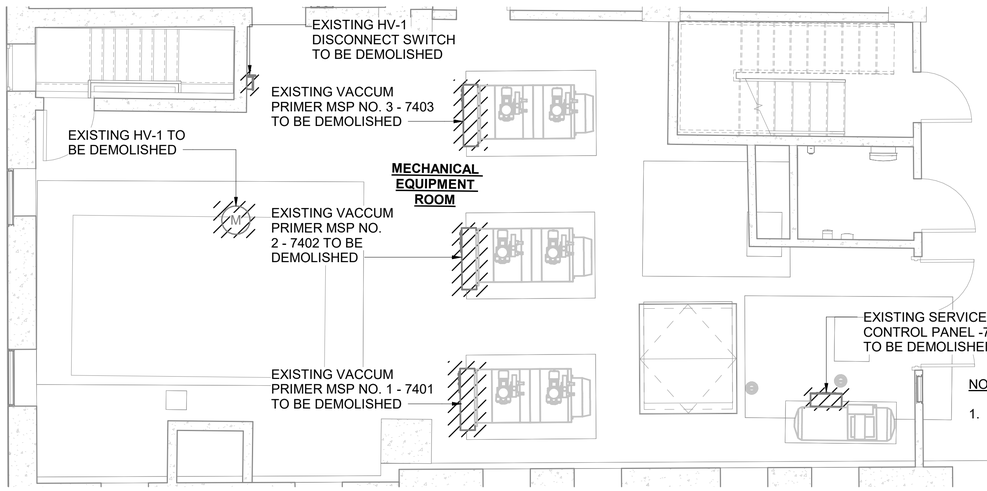
HVAC ROOM POWER DEMOLITION PLAN

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



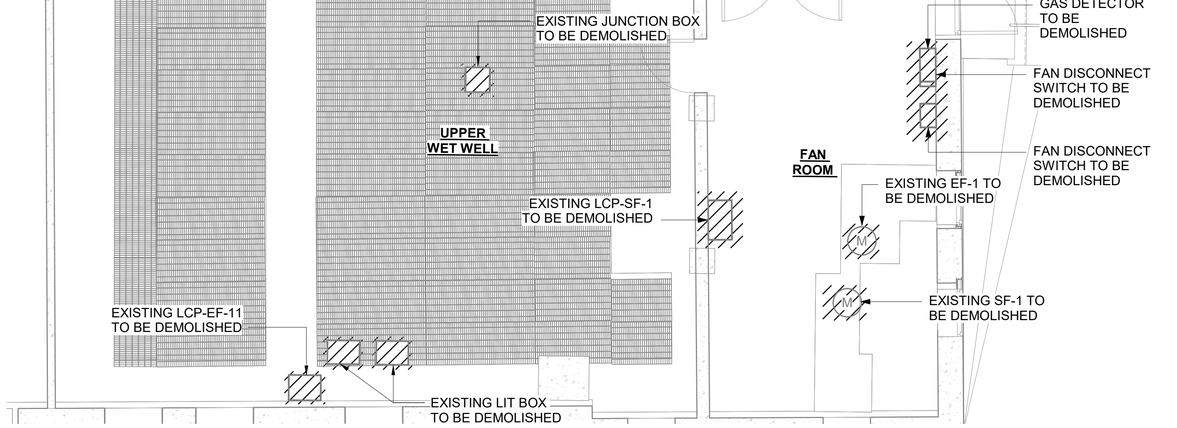
SCREENING CHAMBER DEMOLITION PLAN

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



MECHANICAL EQUIPMENT ROOM DEMOLITION PLAN

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



FAN ROOM & UPPER WET WELL AREA DEMOLITION PLAN

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

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1/4"=1'-0" 0 4 8 FT.

3/16"=1'-0" 0 5 10 FT.

BID SET

SUBMITTAL DATE: OCTOBER 2026

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PROJECT MANAGER: AIMEE BOULET, P.E.

ELECSYS ENGINEERING GROUP

STATE OF NEW YORK EDDO JAMES 086309 PROFESSIONAL ENGINEER

NYC Environmental Protection

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PORTFOLIO MANAGER	KEVIN ELLENWOOD, P.E.
EXECUTIVE DIRECTOR	NAYANKUMAR SHAH, P.E.

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CAPITAL PROJECT WP-269
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PAERDEGAT PUMPING STATION
CONTRACT PS-318
ELECTRICAL
GROUND FLOOR - DEMOLITION PLANS

DATE: OCTOBER 2026
SCALE: AS INDICATED
SHEET NO: 200 OF 274
DRAWING NO. DE-107.00

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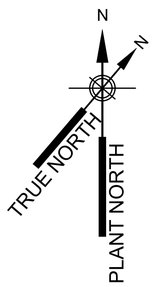

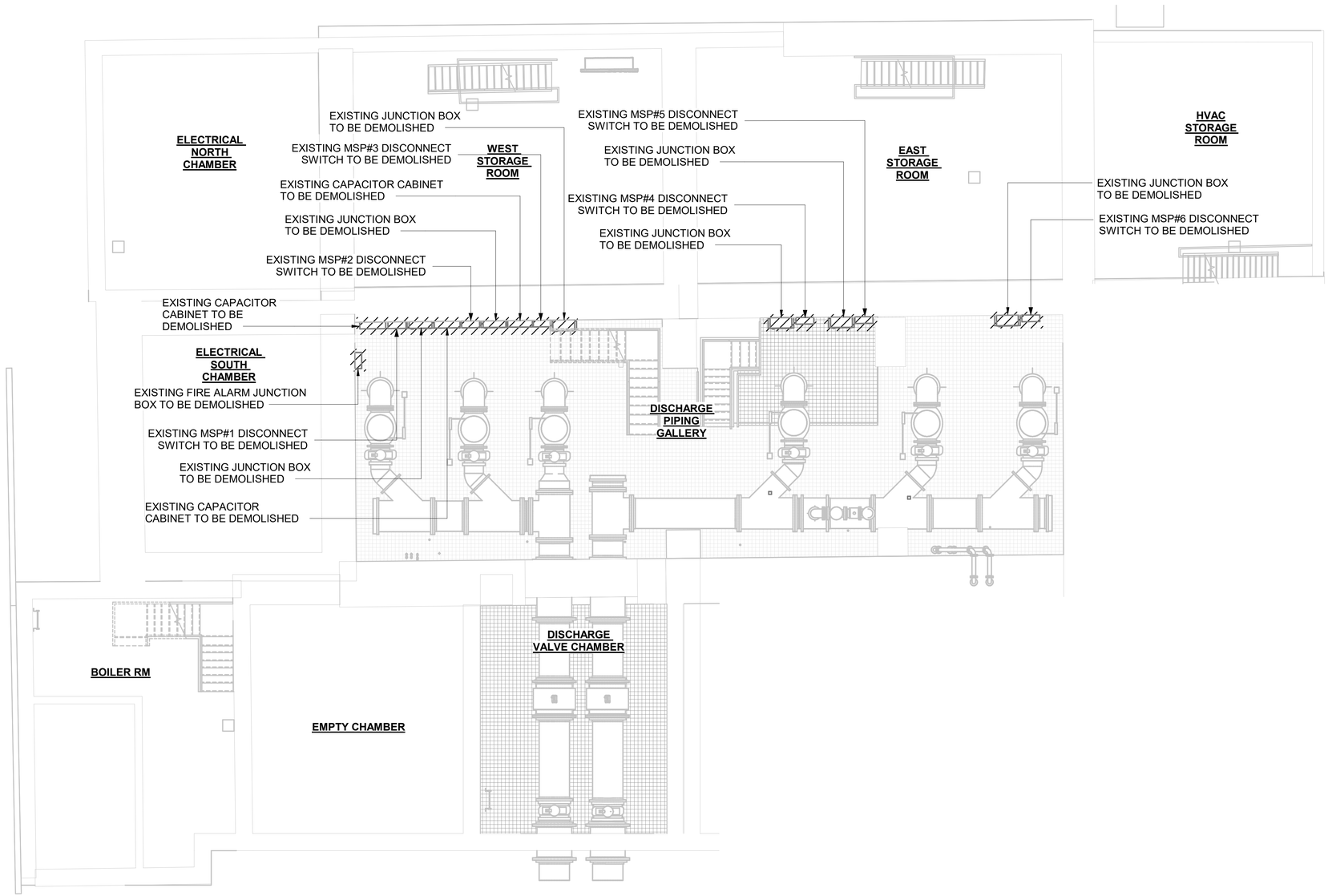

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FIRST LEVEL BELOW GROUND DEMOLITION PLAN

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

0 5 10 FT.
3/16"=1'-0"

BID SET

SUBMITTAL DATE: OCTOBER 2026

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PROJECT MANAGER: AIMEE BOULET, P.E.

ELECSYS ENGINEERING GROUP

STATE OF NEW YORK — ELDO JAMES — 088309 — LICENSED PROFESSIONAL ENGINEER

Environmental Protection

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CONTRACT PS-318
ELECTRICAL
FIRST LEVEL BELOW GROUND - DEMOLITION PLAN

DATE: OCTOBER 2026
SCALE: AS INDICATED
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DRAWING NO. DE-108.00

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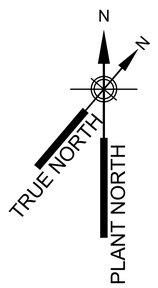

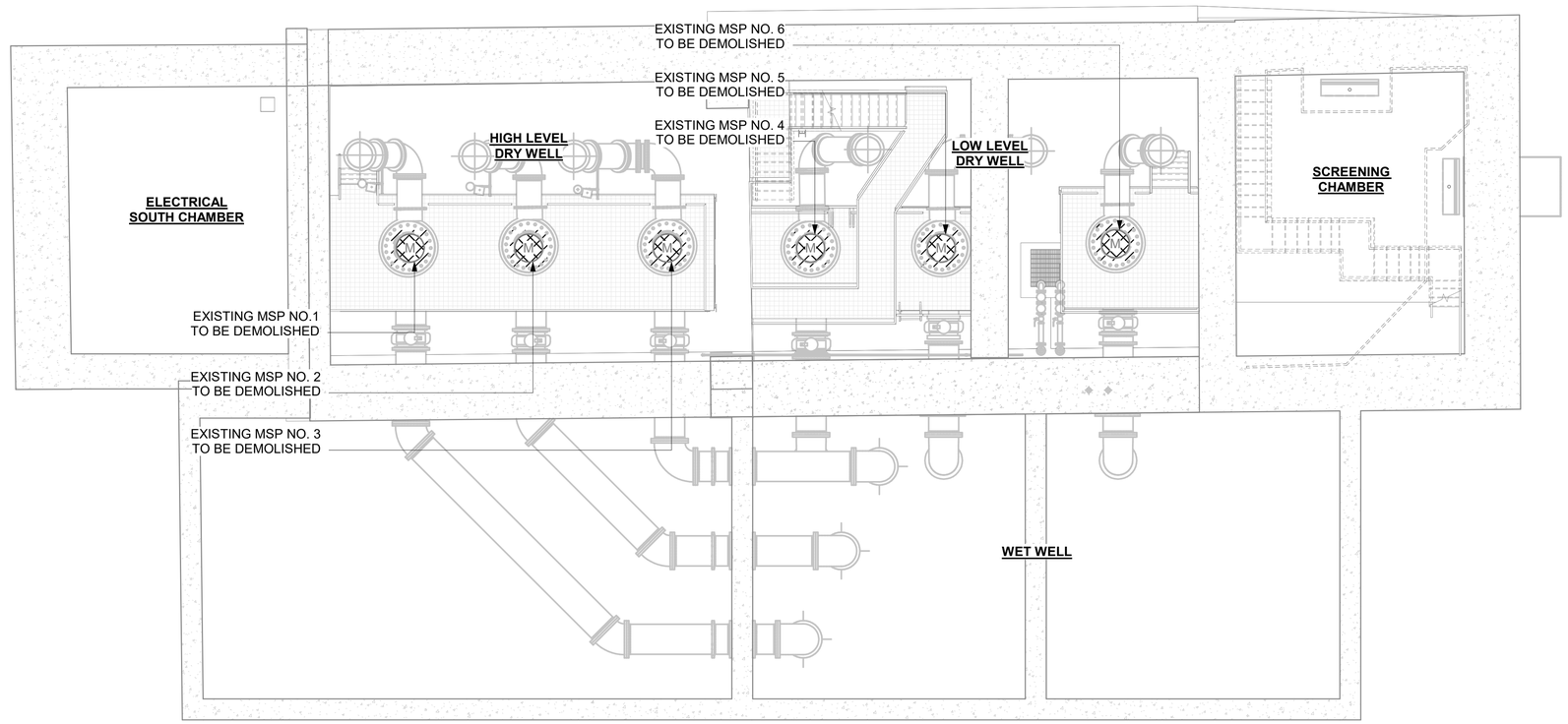

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SECOND AND THIRD LEVEL BELOW GROUND DEMOLITION PLAN

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

0 5 10 FT.
3/16"=1'-0"

BID SET

SUBMITTAL DATE: OCTOBER 2026

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STATE OF NEW YORK EDDO JAMES 086309 PROFESSIONAL ENGINEER

NYC Environmental Protection

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CAPITAL PROJECT WP-269
RECONSTRUCTION OF
PAERDEGAT PUMPING STATION
CONTRACT PS-318
ELECTRICAL
SECOND AND THIRD LEVEL BELOW GROUND - DEMOLITION PLAN

DATE: OCTOBER 2026
SCALE: AS INDICATED
SHEET NO: 202 OF 274
DRAWING NO. DE-109.00

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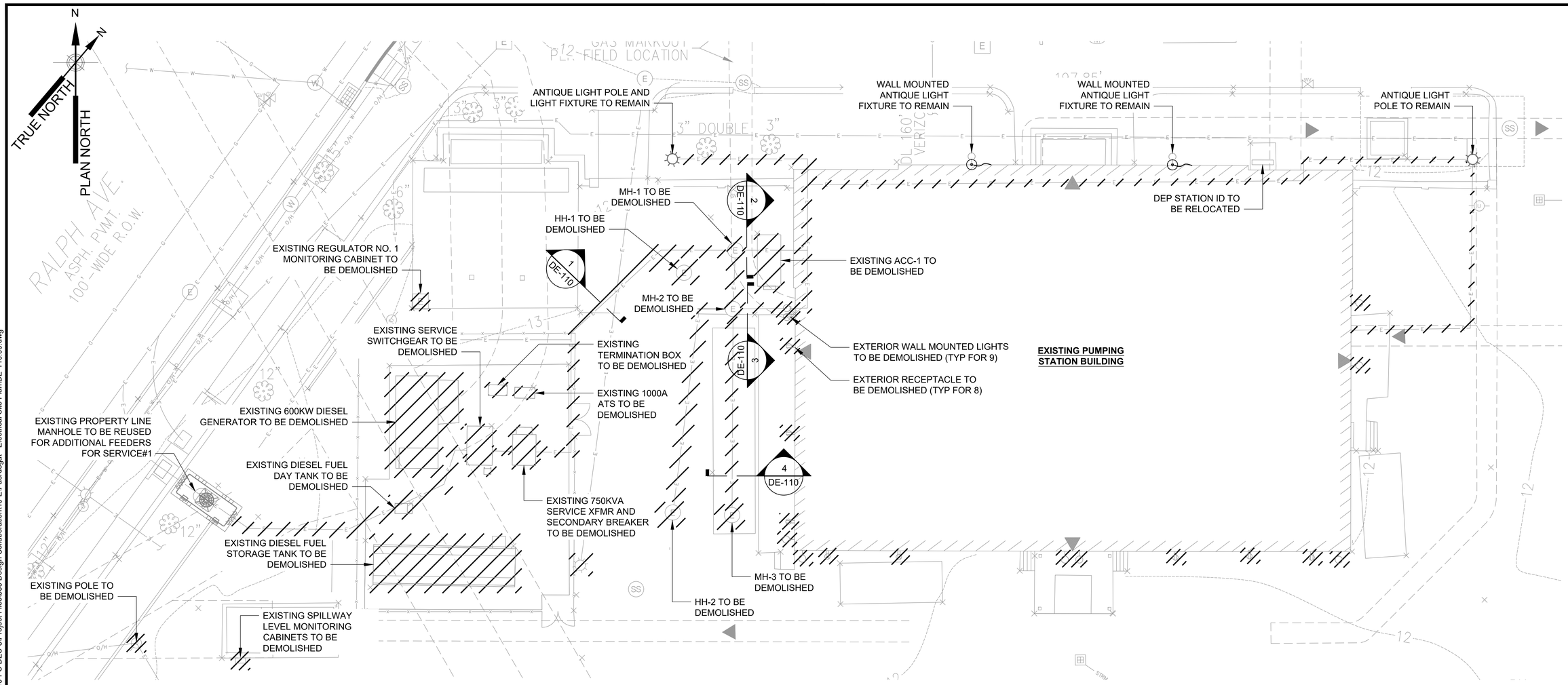
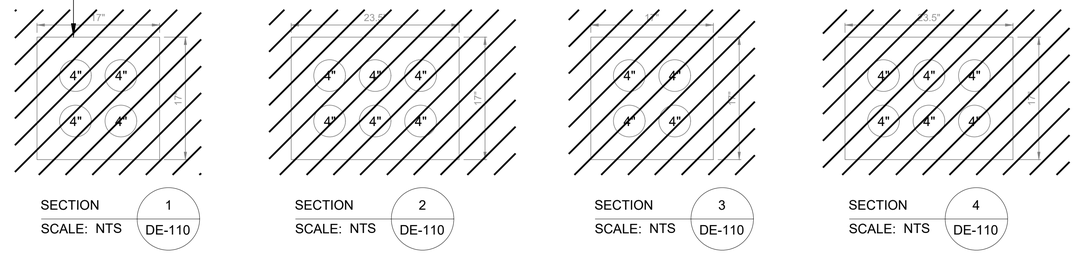


PAERDEGAT EXISTING ELECTRICAL SITE PLAN

SCALE: 1"=10'

EXISTING
DUCTBANKS TO BE
DEMOLISHED (TYP.)



SECTION 1 SCALE: NTS — DE-110

SECTION 2 SCALE: NTS — DE-110

SECTION 3 SCALE: NTS — DE-110

SECTION 4 SCALE: NTS — DE-110

NOTES:

1. CONTRACTOR SHALL DEMOLISH ALL EXISTING OUTDOOR ELECTRICAL EQUIPMENT, CONDUITS, CABLES, DUCT BANKS, AND MANHOLES ASSOCIATED WITH THE EXISTING CON EDISON SERVICE, AS INDICATED ON THIS SHEET.
2. CONTRACTOR SHALL DEMOLISH ALL EXISTING EXTERIOR BUILDING LIGHT FIXTURES, RECEPTACLES, AND ASSOCIATED WIRING AND CONDUITS, UNLESS OTHERWISE INDICATED.

1"=10' 0 10 20 FT.

BID SET

SUBMITTAL DATE: OCTOBER 2026

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PROJECT MANAGER: AIMEE BOULET, P.E.
DRAWN BY: B. ROY

ELECSYS ENGINEERING GROUP

STATE OF NEW YORK — ELIGIO JAMES — 086309 — LICENSED PROFESSIONAL ENGINEER

NYC Environmental Protection

ACCOUNTABLE MANAGER: JOHN, GOULAS, P.E.
PORTFOLIO MANAGER: KEVIN ELLENWOOD, P.E.
DIRECTOR, IN HOUSE DESIGN: NAYANKUMAR SHAH, P.E.

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PAERDEGAT PUMPING STATION
CONTRACT PS-318
ELECTRICAL
EXISTING SITE PLAN

DATE: OCTOBER 2026
SCALE: 1" = 10'
SHEET NO: 203 OF 274
DRAWING NO. **DE–110.00**

Last Saved By: Broy
Paper Size Printed/Plotted: ANSI full bleed D (22.00 x 34.00 Inches)
Drawing File Name & Drive Location: C:\Users\BasilRoy\DC\ACCDocs\AECOM\C-AMER (USA) 60619010-PS-DES-5\Project Files\900 Design Collaboration\16-E\Paerdegat - Electrical Site Plan\DE-110.00.dwg
Last Date Saved: 12/9/2026 3:33 PM
Date & Time Plotted: 12/14/2021 5:08 PM
Plot Scale:1:1
Plot Style Table: DEP_BEDC_22x34_ByWeight.ctb

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NOTES:

1. LOCATIONS OF ALL EXISTING EMERGENCY LIGHT FIXTURES, EXIT SIGNS, LIGHT SWITCHES AND RECEPTACLES ARE NOT SHOWN. CONTRACTOR SHALL FIELD LOCATE AND DEMOLISH ALL EXISTING EMERGENCY LIGHT FIXTURES, EXIT SIGNS, LIGHT SWITCHES AND RECEPTACLES.

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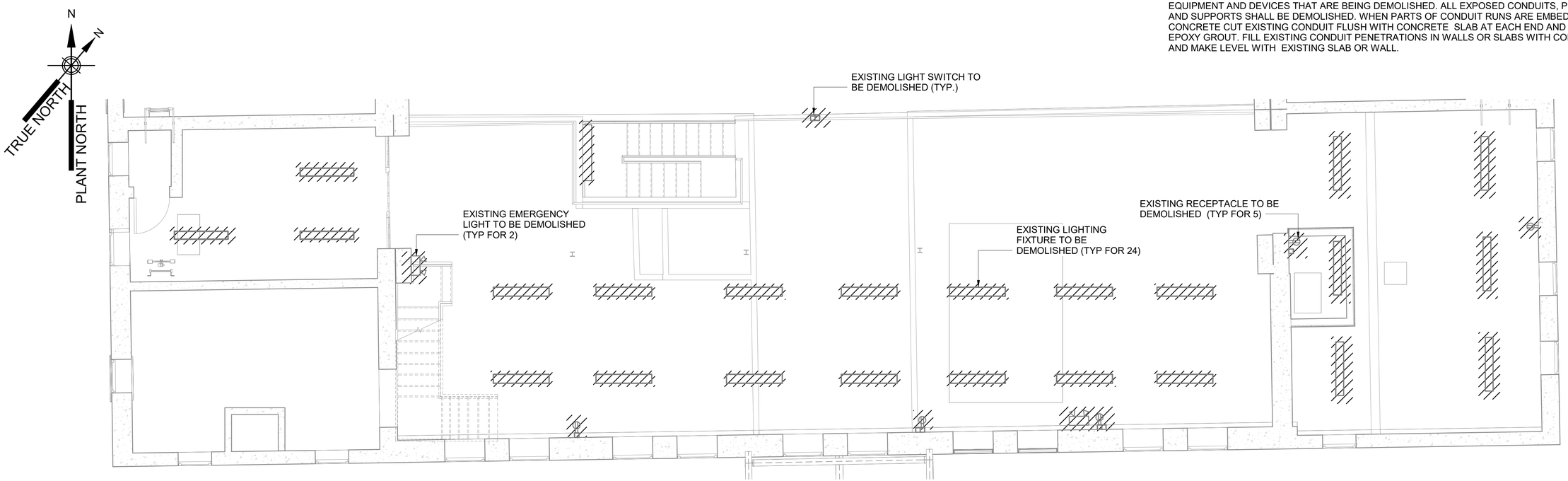
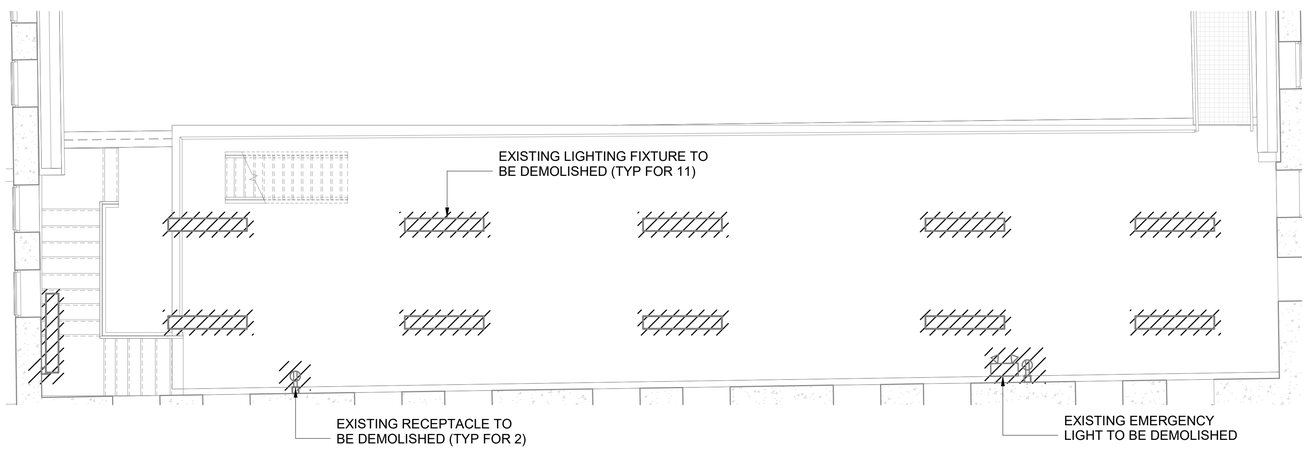


LOWER MEZZANINE LIGHTING DEMOLITION PLAN

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



UPPER MEZZANINE LIGHTING DEMOLITION PLAN

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

0 4 8 FT.

1/4"=1'-0"

BID SET

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PROJECT MANAGER: AIMEE BOULET, P.E.

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ELECSYS ENGINEERING GROUP

STATE OF NEW YORK ELDO JAMES 088309 LICENSED PROFESSIONAL ENGINEER

NYC Environmental Protection

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CONTRACT PS-318
ELECTRICAL
UPPER AND LOWER MEZZANINE - LIGHTING DEMOLITION PLAN

DATE: OCTOBER 2026
SCALE: AS INDICATED
SHEET NO: 204 OF 274
DRAWING NO. DE-111.00

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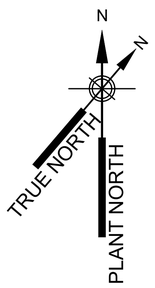
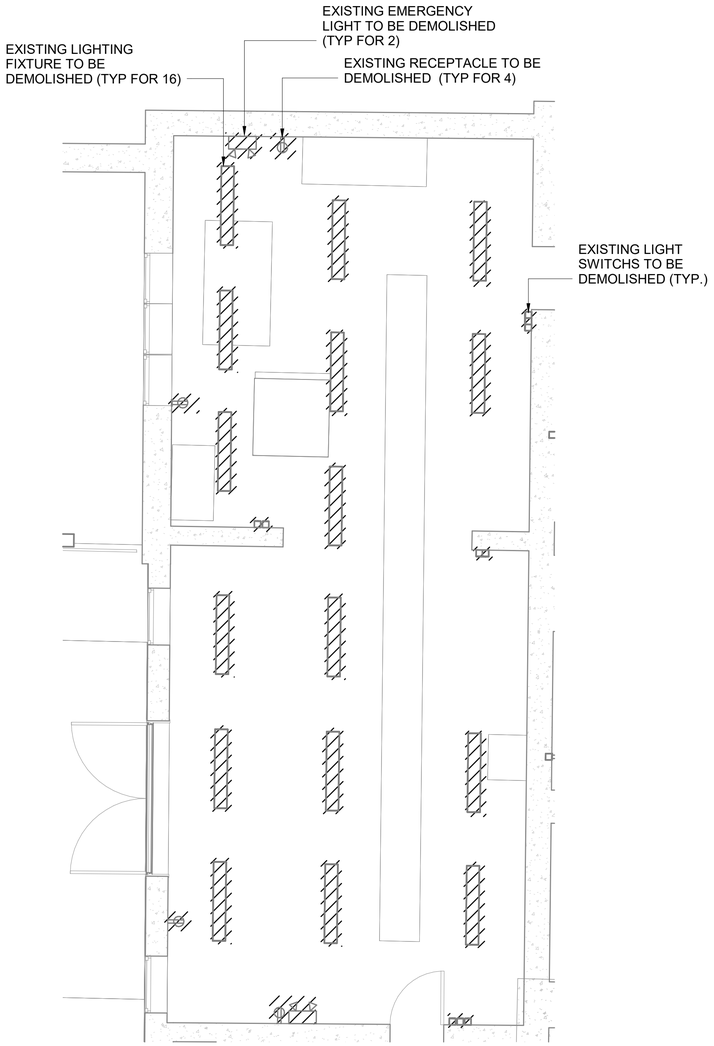
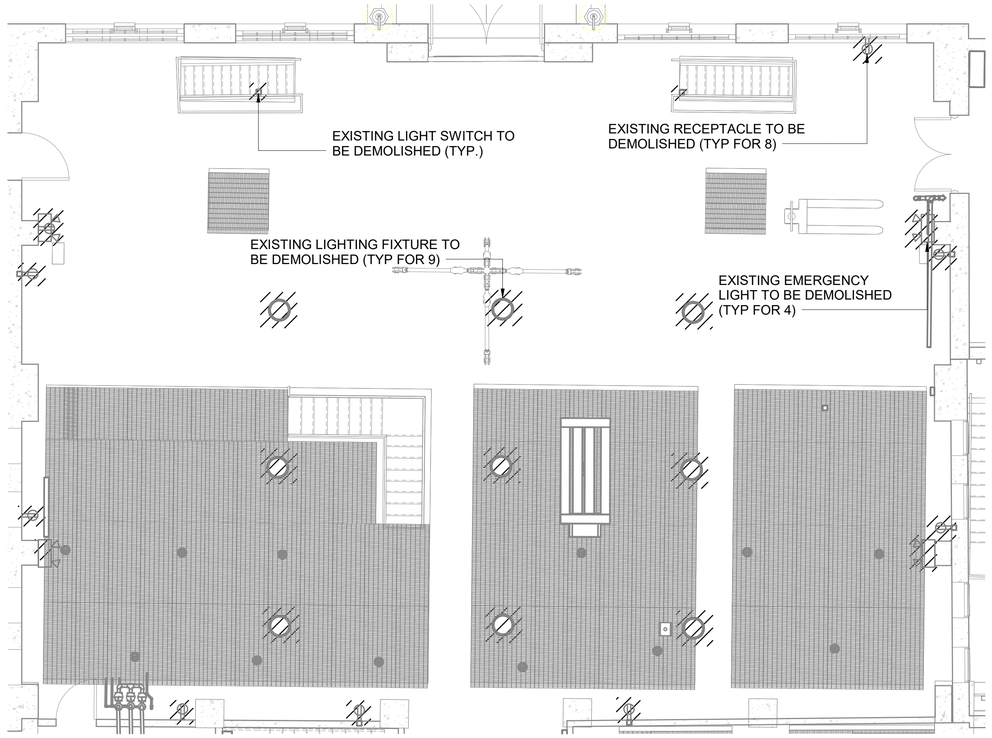




MCC ROOM LIGHTING DEMOLITION PLAN

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



OPEN FLOOR AREA LIGHTING DEMOLITION PLAN

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

NOTES:

1. LOCATIONS OF ALL EXISTING EMERGENCY LIGHT FIXTURES, EXIT SIGNS, LIGHT SWITCHES AND RECEPTACLES ARE NOT SHOWN. CONTRACTOR SHALL FIELD LOCATE AND DEMOLISH ALL EXISTING EMERGENCY LIGHT FIXTURES, EXIT SIGNS, LIGHT SWITCHES AND RECEPTACLES.

2. CONTRACTOR SHALL DEMOLISH ALL CONDUIT AND WIRING ASSOCIATED WITH EXISTING EQUIPMENT AND DEVICES THAT ARE BEING DEMOLISHED. ALL EXPOSED CONDUITS, PULL BOXES AND SUPPORTS SHALL BE DEMOLISHED. WHEN PARTS OF CONDUIT RUNS ARE EMBEDDED IN CONCRETE CUT EXISTING CONDUIT FLUSH WITH CONCRETE SLAB AT EACH END AND FILL WITH EPOXY GROUT. FILL EXISTING CONDUIT PENETRATIONS IN WALLS OR SLABS WITH CONCRETE AND MAKE LEVEL WITH EXISTING SLAB OR WALL.

0 4 8 FT.
1/4"=1'-0"

0 5 10 FT.
3/16"=1'-0"

BID SET

SUBMITTAL DATE: OCTOBER 2026

GRAPHIC SCALES CHECK BEFORE USE

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DRAWN BY: B. ROY
CHECKED BY: E. AMABA, P.E.
DESIGN LEAD: E. JAMES, P.E.
PROJECT MANAGER: AIMEE BOULET, P.E.

ELECSYS ENGINEERING GROUP

STATE OF NEW YORK ELDO JAMES 086309 PROFESSIONAL ENGINEER

NYC Environmental Protection

ACCOUNTABLE MANAGER
JOHN GOULAS, P.E.
PORTFOLIO MANAGER
KEVIN ELLENWOOD, P.E.
EXECUTIVE DIRECTOR
NAYANKUMAR SHAH, P.E.

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CAPITAL PROJECT WP-269
RECONSTRUCTION OF
PAERDEGAT PUMPING STATION
CONTRACT PS-318
ELECTRICAL
GROUND FLOOR - LIGHTING DEMOLITION PLAN
SHEET 1

DATE: OCTOBER 2026
SCALE: AS INDICATED
SHEET NO: 205 OF 274
DRAWING NO. DE-112.00

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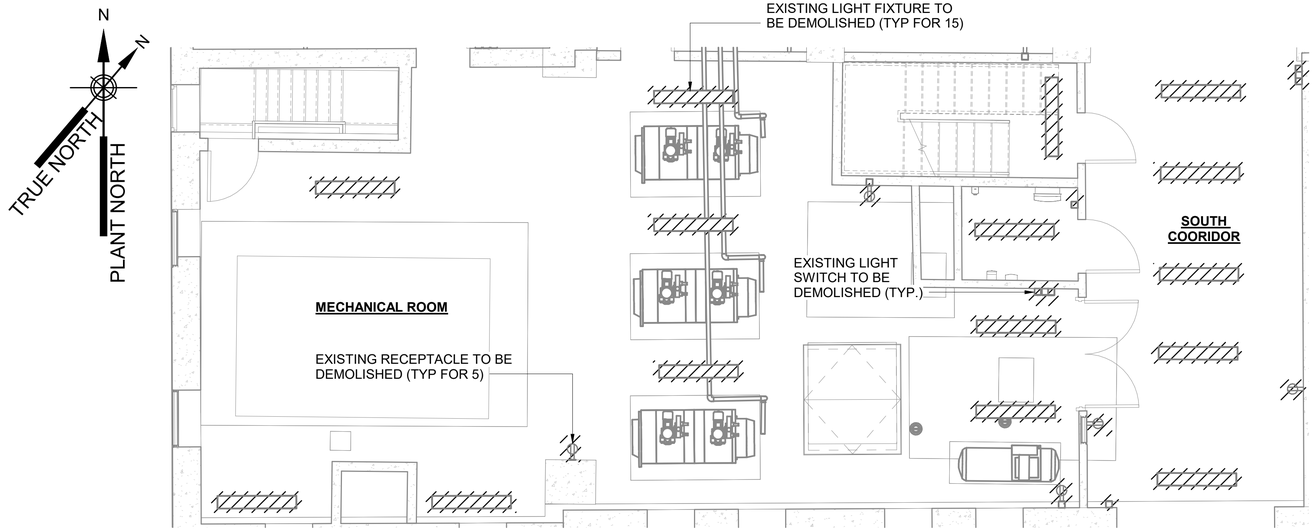
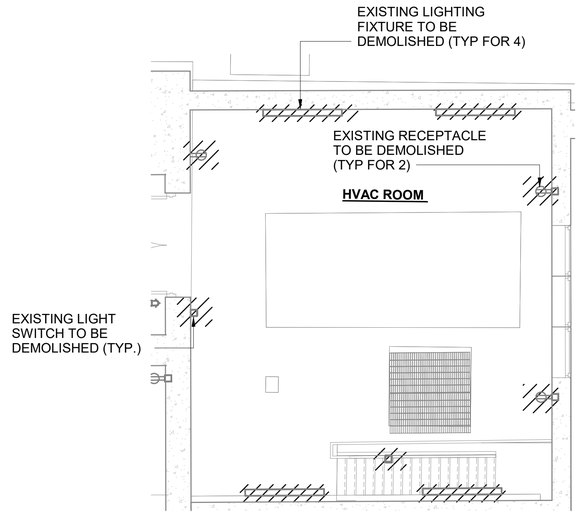


MECHANICAL ROOM & SOUTH CORRIDOR LIGHTING DEMOLITION PLAN

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



HVAC ROOM LIGHTING DEMOLITION PLAN

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

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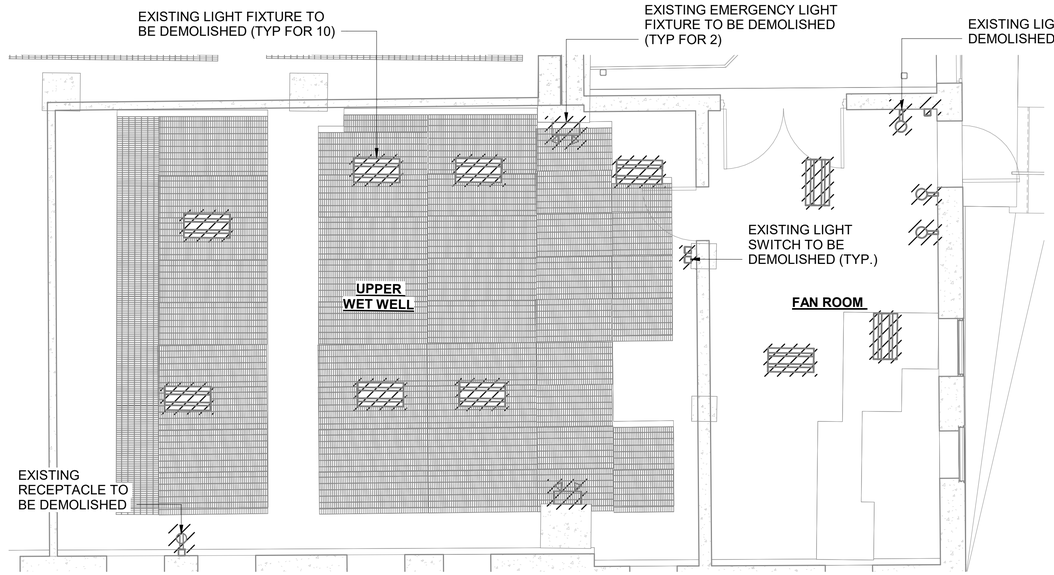
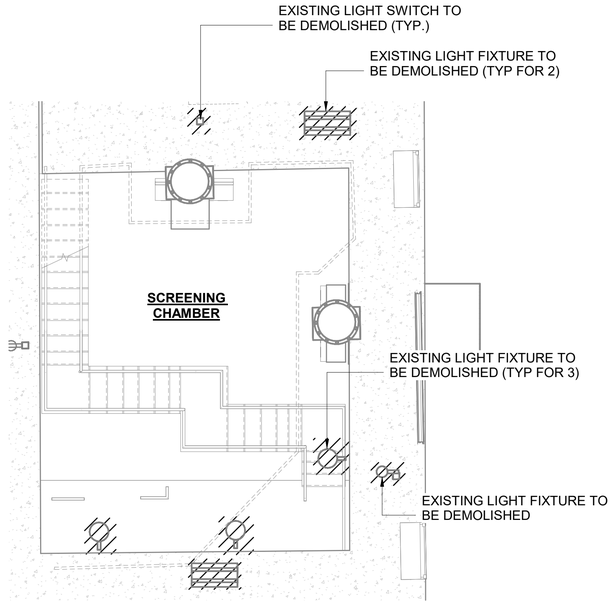


FAN ROOM & UPPER WET WELL AREA LIGHTING DEMOLITION PLAN

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



SCREENING CHAMBER LIGHTING DEMOLITION PLAN

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

0 4 8 FT.
1/4"=1'-0"

BID SET

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ELECSYS ENGINEERING GROUP

STATE OF NEW YORK ELDO JAMES 085309 PROFESSIONAL ENGINEER

Environmental Protection

ACCOUNTABLE MANAGER: JOHN GOULAS, P.E.
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EXECUTIVE DIRECTOR: NAYANKUMAR SHAH, P.E.

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CAPITAL PROJECT WP-269
RECONSTRUCTION OF
PAERDEGAT PUMPING STATION
CONTRACT PS-318
ELECTRICAL
GROUND FLOOR - LIGHTING DEMOLITION PLAN
SHEET 2

DATE: OCTOBER 2026
SCALE: AS INDICATED
SHEET NO: 206 OF 274
DRAWING NO. DE-113.00

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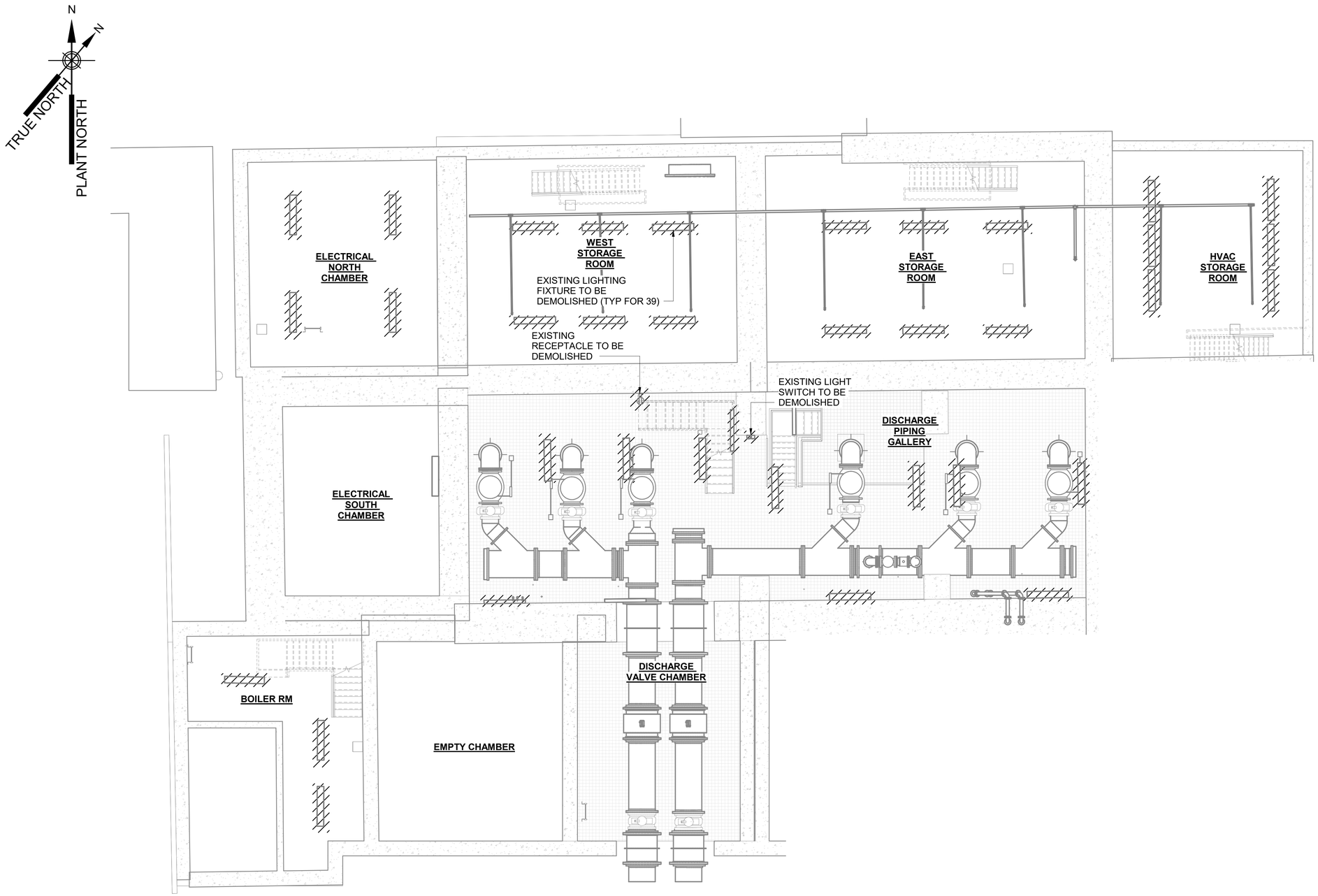

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FIRST LEVEL BELOW GROUND LIGHTING DEMOLITION PLAN

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

0 5 10 FT.
3/16"=1'-0"

BID SET

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STATE OF NEW YORK EDDO JAMES 086309 PROFESSIONAL ENGINEER

NYC Environmental Protection

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ELECTRICAL
FIRST LEVEL BELOW GROUND - LIGHTING DEMOLITION PLAN

DATE: OCTOBER 2026
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DRAWING NO. DE-114.00

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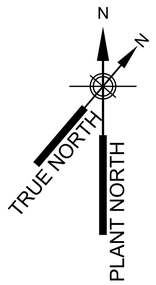

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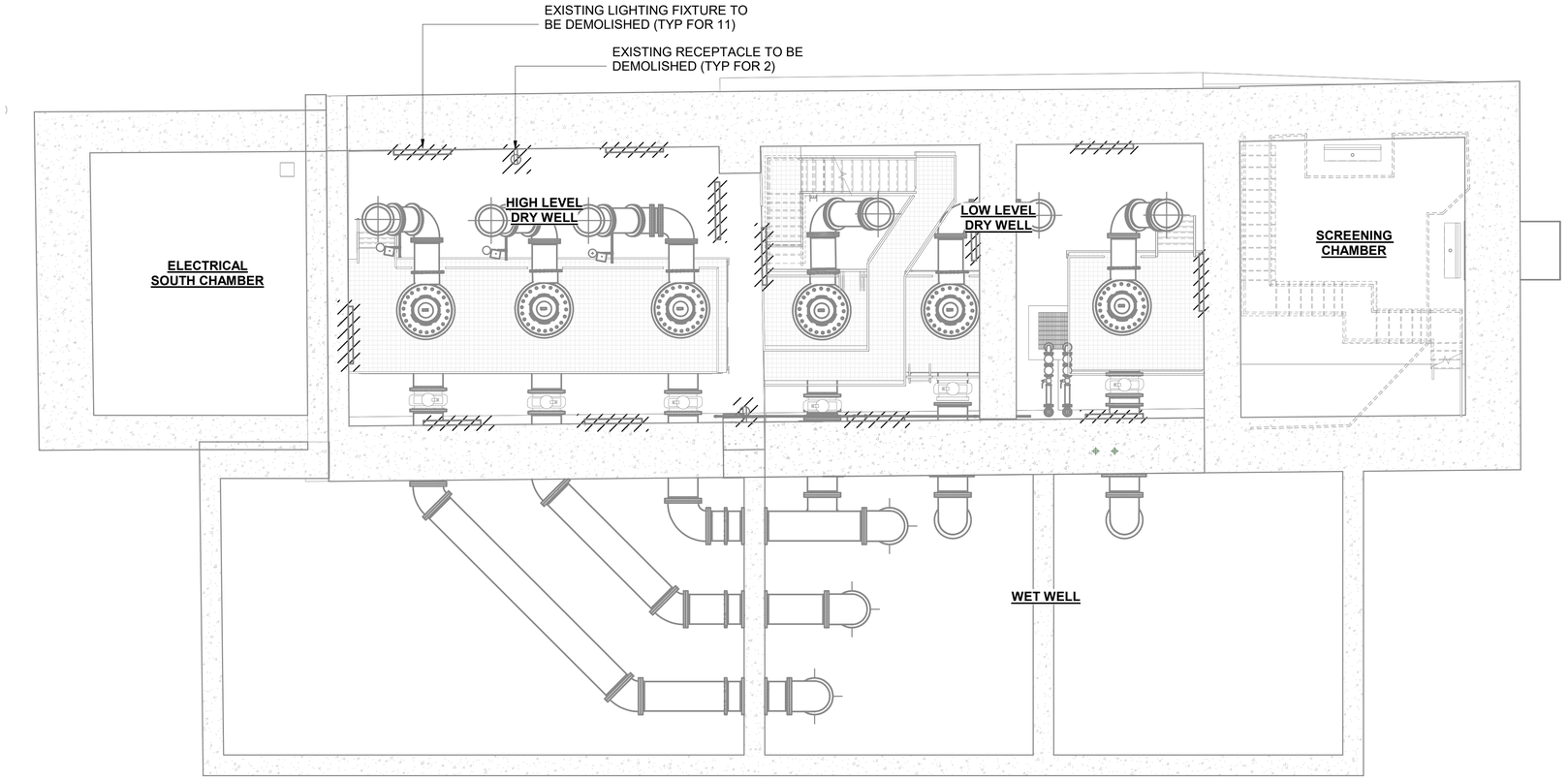

SECOND AND THIRD LEVEL BELOW GROUND LIGHTING DEMOLITION PLAN

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

3/16"=1'-0" 0 5 10 FT.

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STATE OF NEW YORK — DIEGO JAMES — 089309 — PROFESSIONAL ENGINEER

Environmental Protection

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CAPITAL PROJECT WP-269
RECONSTRUCTION OF
PAERDEGAT PUMPING STATION
CONTRACT PS-318
ELECTRICAL
SECOND AND THIRD LEVEL BELOW GROUND - LIGHTING DEMOLITION PLAN

DATE: OCTOBER 2026
SCALE: AS INDICATED
SHEET NO: 208 OF 274
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CKT NO	TRIP AMPS	DESCRIPTION OF LOAD	LOAD KVA	KVA PHASE A	KVA PHASE B	KVA PHASE C	LOAD KVA	DESCRIPTION OF LOAD	TRIP AMPS	CKT NO
1	15	MAIN FLOOR RECEPTACLES						GROUND STORAGE LIGHTING	15	2
3	15	STORAGE SUMP PUMP						STORAGE RECEPTACLES	15	4
5	15	STAIRWAY LIGHTING						STORAGE LIGHTING	15	6
7	15	VAULT SUMP PUMP						SCREEN LIGHTING		8
9	15	LCP 1630						SCREEN LIGHTING	15	10
11	15	MAG METER PIT SUMP PUMP						SCREEN AND HVAC RECEPT	15	12
13	15	STORAGE LIGHTING						WET WELL GROUND FLOOR LIGHTING	15	14
15	15	STORAGE LIGHTING						SHOP, CORRIDOR AND HVAC RECEPTACLE	15	16
17	15	STORAGE RECEPTACLE						WET WELL FLOODLIGHTS	15	18
19	15	STORAGE SUMP PUMP						CORRIDOR LIGHTING	15	20
21	15	LCP 1630 COMUTER						SHOP LIGHTING BOILER ROOM	15	22
23	15	PUMP AREA RECEPTACLE						SHOP LIGHTING BATHROOM & BOILER ROOM	15	24
25	15	PUMP AREA LIGHTING						LIGHTING - MECHANICAL	15	26
27	15	PUMP AREA LIGHTING						FITS & PITS	15	28
28	15	BASEMENT LIGHTING						A/C	15	30
31	15	BASEMENT LIGHTING						A/C	15	32
33	15	BASEMENT RECEPTACLE						STORAGE SUMP PUMP 2	15	34
35	15	STORAGE LIGHTING						STORAGE SUMP PUMP 3	30	36
37								LCP 1641 - SUMP PUMP	30	38
39	100	FEED TO LP-2						GENERATOR	60	40
41										42
PANEL NAME: EXISTING LP-1 LOCATION: MCC ROOM			TOTAL KVA:				SERVICE CHARACTERISTICS: 208/120V - 3 PHASE - 3 WIRE 300AF/300AT MAIN BREAKER			
			TOTAL AMPS:							

CKT NO	TRIP AMPS	DESCRIPTION OF LOAD	LOAD KVA	KVA PHASE A	KVA PHASE B	KVA PHASE C	LOAD KVA	DESCRIPTION OF LOAD	TRIP AMPS	CKT NO
1	15	ROOF SITE LIGHTING						MAIN FLOOR LIGHTING	15	2
3	15	ROOF SITE LIGHTING						MAIN FLOOR LIGHTING	15	4
5	15	ROOF & UPPER CAMERA MEZZANINE RECPT BOX						MAIN FLOOR LIGHTING	15	6
7	15	OUTDOOR RECEPTACLES						ANTIQUE FIXTURES AND DEP SIGN	15	8
9	15	WATER COOLER						VACCUM PRIMER #3 PLC	15	10
11	15	OUTDOOR RECEPTACLE						VACCUM PRIMER #2 PLC	15	12
13	15	FAN EF-10 & EMERGENCY LTG #3						VACCUM PRIMER #1 PLC	15	14
15	15	HV-1 CONTROL PANEL						OURTDOOR SIGN LIGHT	15	16
17	15	HV-2 CONTROL PANEL A						OUTDOOR RECEPTACLE	15	18
19	15	HV-2 CONTROL PANEL B						MEZZANINE LIGHTING	15	20
21	15	SF-1/EF-1 CONTROL PANEL						MEZZANINE LIGHTING	15	22
23	15	EF-11 CONTROL PANLE						MEZZANINE RECEPTACLES	15	24
25	15	OUTDOOR RECEPTACLE						MEZZANINE LIGHTING	15	26
27	15	LIGHT-1 (MCC ROOM)						MEZZANINE RECEPTACLES	15	28
29	15	LIGHT-3 (MCC ROOM)						UPPER MEZZANINE LIGHTING	15	30
31	15	LIGHT-5 (MCC ROOM)						HOT WATER HEATER	15	32
33	15	STORAGE RECEPTACLES						SPARE	30	34
35								SPARE	30	36
37	30	OUTDOOR RECEPTACLE						SPARE	60	38
39										40
41	60	OUTDOOR RECEPTACLE						SPARE	15	42
PANEL NAME: EXISTING LP-2 LOCATION: MCC ROOM			TOTAL KVA:				SERVICE CHARACTERISTICS: 208/120V - 3 PHASE - 3 WIRE 200AF/200AT MAIN BREAKER			
			TOTAL AMPS:							

CKT NO	TRIP AMPS	DESCRIPTION OF LOAD	LOAD KVA	KVA PHASE A	KVA PHASE B	KVA PHASE C	LOAD KVA	DESCRIPTION OF LOAD	TRIP AMPS	CKT NO
1	20	POLE LIGHTS								
3	20	UNKNOWN						GENERATOR RECEPTACLE	60	2
5	20	UNKNOWN						UNKNOWN	20	4
7	20	UNKNOWN						UNKNOWN	20	6
9	20	UNKNOWN						UNKNOWN	20	8
11	20	UNKNOWN						UNKNOWN	20	10
13	20	UNKNOWN						UNKNOWN	20	12
15	20	UNKNOWN						UNKNOWN	20	14
17	20	UNKNOWN						UNKNOWN	20	16
19	20	UNKNOWN						UNKNOWN	20	18
21	20	UNKNOWN						UNKNOWN	20	20
23	20	UNKNOWN						UNKNOWN	20	22
25	20	UNKNOWN						UNKNOWN	20	24
27	20	UNKNOWN						UNKNOWN	20	26
29	20	UNKNOWN						UNKNOWN	60	28
31	20	UNKNOWN								30
PANEL NAME: EXISTING LP-3 LOCATION: MCC ROOM			TOTAL KVA:				SERVICE CHARACTERISTICS: 208/120V - 3 PHASE - 3 WIRE 100AF/100AT MAIN BREAKER			
			TOTAL AMPS:							

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CAPITAL PROJECT WP-269
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ELECTRICAL
EXISTING PANEL SCHEDULE

DATE: OCTOBER 2026
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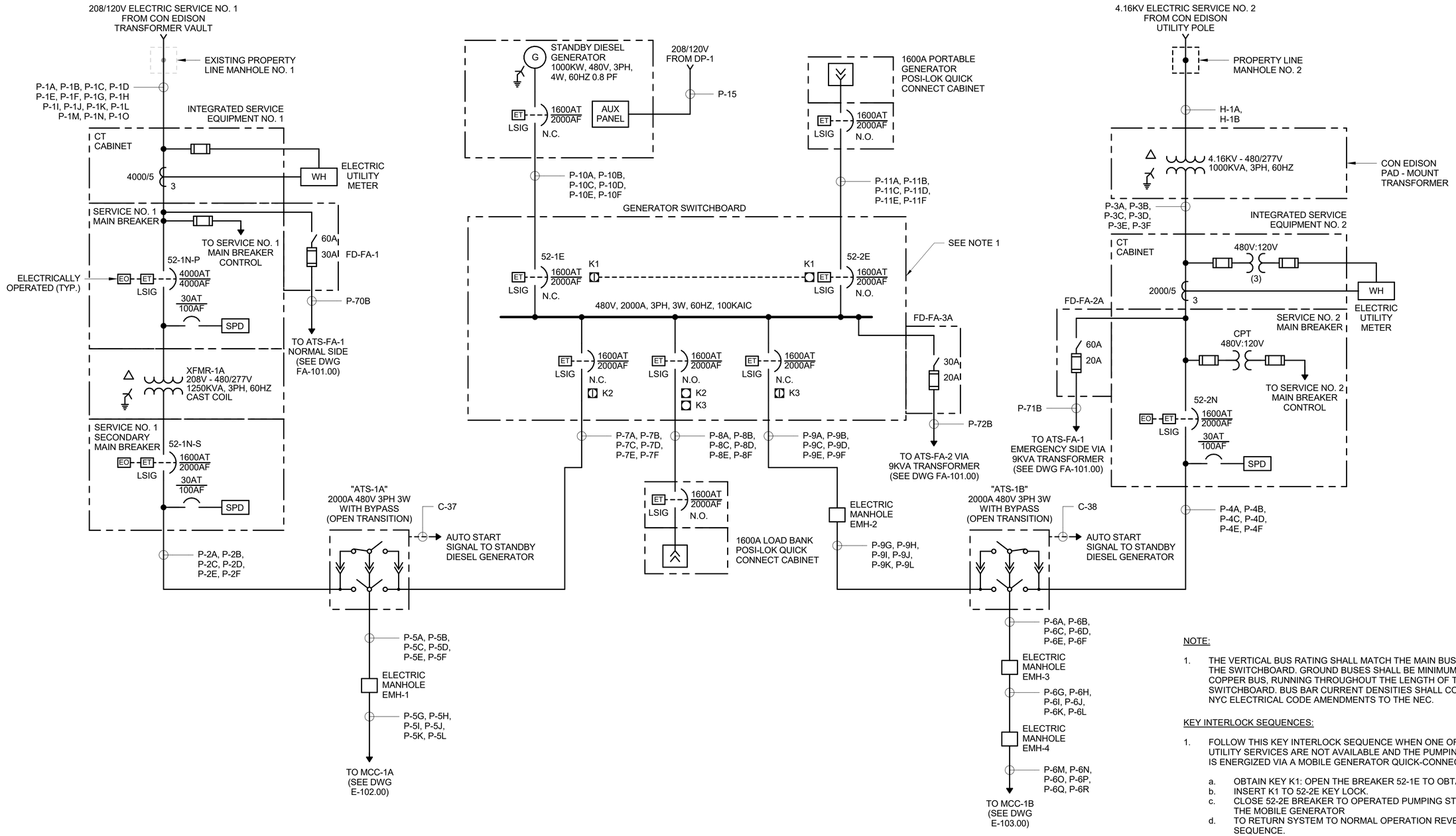

NOTE:

1. THE VERTICAL BUS RATING SHALL MATCH THE MAIN BUS RATING OF THE SWITCHBOARD. GROUND BUSES SHALL BE MINIMUM 1/4" X 2" COPPER BUS, RUNNING THROUGHOUT THE LENGTH OF THE SWITCHBOARD. BUS BAR CURRENT DENSITIES SHALL COMPLY WITH NYC ELECTRICAL CODE AMENDMENTS TO THE NEC.

KEY INTERLOCK SEQUENCES:

1. FOLLOW THIS KEY INTERLOCK SEQUENCE WHEN ONE OR BOTH UTILITY SERVICES ARE NOT AVAILABLE AND THE PUMPING STATION IS ENERGIZED VIA A MOBILE GENERATOR QUICK-CONNECT CABINET.
   a. OBTAIN KEY K1: OPEN THE BREAKER 52-1E TO OBTAIN KEY K1
   b. INSERT K1 TO 52-2E KEY LOCK.
   c. CLOSE 52-2E BREAKER TO OPERATED PUMPING STATION VIA THE MOBILE GENERATOR
   d. TO RETURN SYSTEM TO NORMAL OPERATION REVERSE THE SEQUENCE.

BID SET

SUBMITTAL DATE: OCTOBER 2026

GRAPHIC SCALES CHECK BEFORE USE

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DESIGNED BY: E. JAMES, P.E.
DRAWN BY: B. ROY
CHECKED BY: E. AMABA, P.E.
DESIGN LEAD: E. JAMES, P.E.
PROJECT MANAGER: AIMEE BOULET, P.E.

ELECSYS ENGINEERING GROUP

STATE OF NEW YORK · EDO JAMES · 086309 · PROFESSIONAL ENGINEER

Environmental Protection

ACCOUNTABLE MANAGER: JOHN GOULAS, P.E.
PORTFOLIO MANAGER: KEVIN ELLENWOOD, P.E.
EXECUTIVE DIRECTOR: NAYANKUMAR SHAH, P.E.

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CAPITAL PROJECT WP-269
RECONSTRUCTION OF
PAERDEGAT PUMPING STATION
CONTRACT PS-318
ELECTRICAL
MAIN DISTRIBUTION ONE LINE DIAGRAM

DATE: OCTOBER 2026
SCALE: AS INDICATED
SHEET NO: 210 OF 274
DRAWING NO. E-101.00

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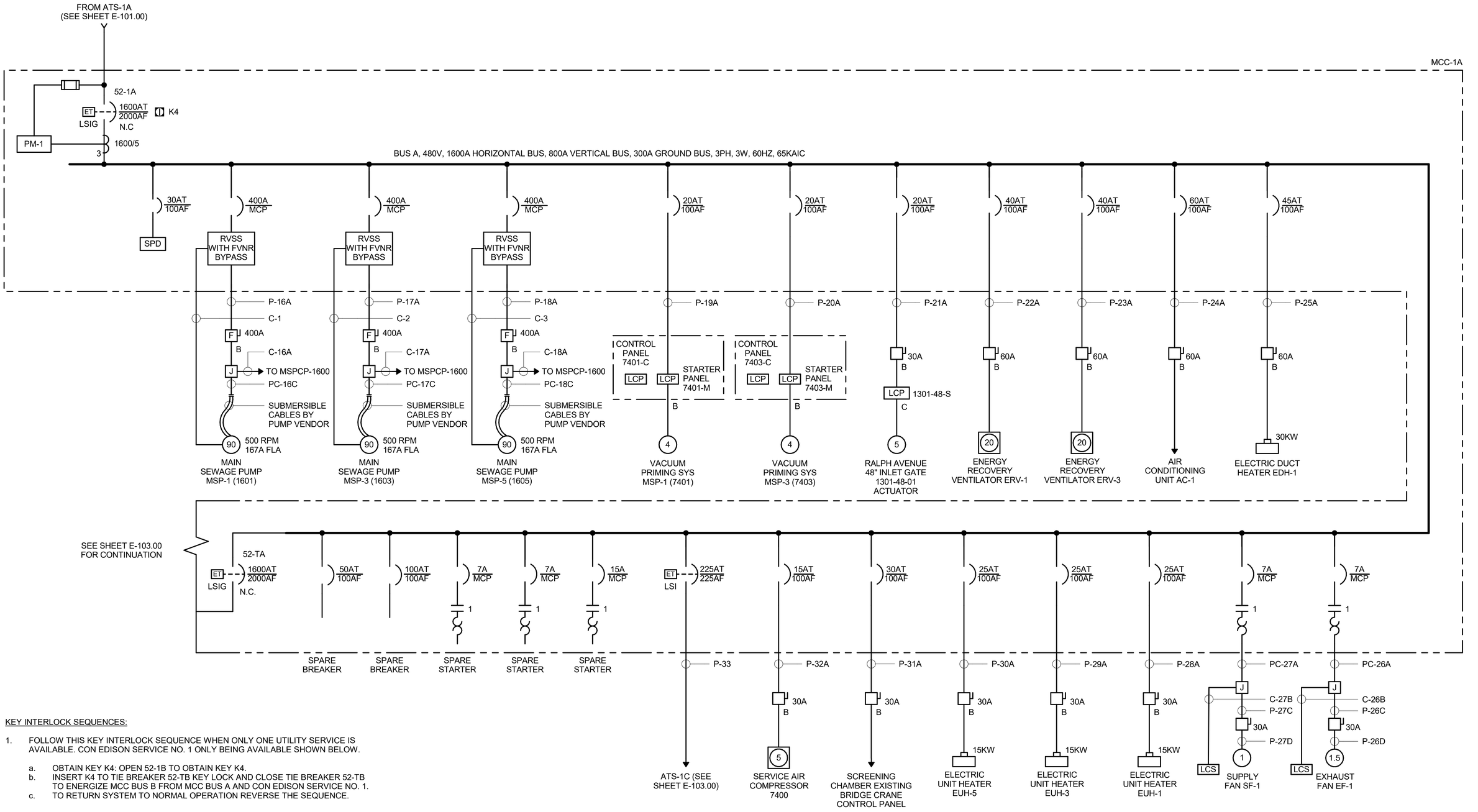

KEY INTERLOCK SEQUENCES:

1. FOLLOW THIS KEY INTERLOCK SEQUENCE WHEN ONLY ONE UTILITY SERVICE IS AVAILABLE. CON EDISON SERVICE NO. 1 ONLY BEING AVAILABLE SHOWN BELOW.

   a. OBTAIN KEY K4: OPEN 52-1B TO OBTAIN KEY K4.
   b. INSERT K4 TO TIE BREAKER 52-TB KEY LOCK AND CLOSE TIE BREAKER 52-TB TO ENERGIZE MCC BUS B FROM MCC BUS A AND CON EDISON SERVICE NO. 1.
   c. TO RETURN SYSTEM TO NORMAL OPERATION REVERSE THE SEQUENCE.

BID SET

SUBMITTAL DATE: OCTOBER 2026

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PROJECT MANAGER: AIMEE BOULET, P.E.

ELECSYS ENGINEERING GROUP

STATE OF NEW YORK — EDO JAMES — 089309 — PROFESSIONAL ENGINEER

NYC Environmental Protection

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PORTFOLIO MANAGER: KEVIN ELLENWOOD, P.E.
EXECUTIVE DIRECTOR: NAYANKUMAR SHAH, P.E.

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CAPITAL PROJECT WP-269
RECONSTRUCTION OF
PAERDEGAT PUMPING STATION
CONTRACT PS-318
ELECTRICAL
NEW MCC-1A ONE LINE DIAGRAM

DATE: OCTOBER 2026
SCALE: AS INDICATED
SHEET NO: 211 OF 274
DRAWING NO. E-102.00

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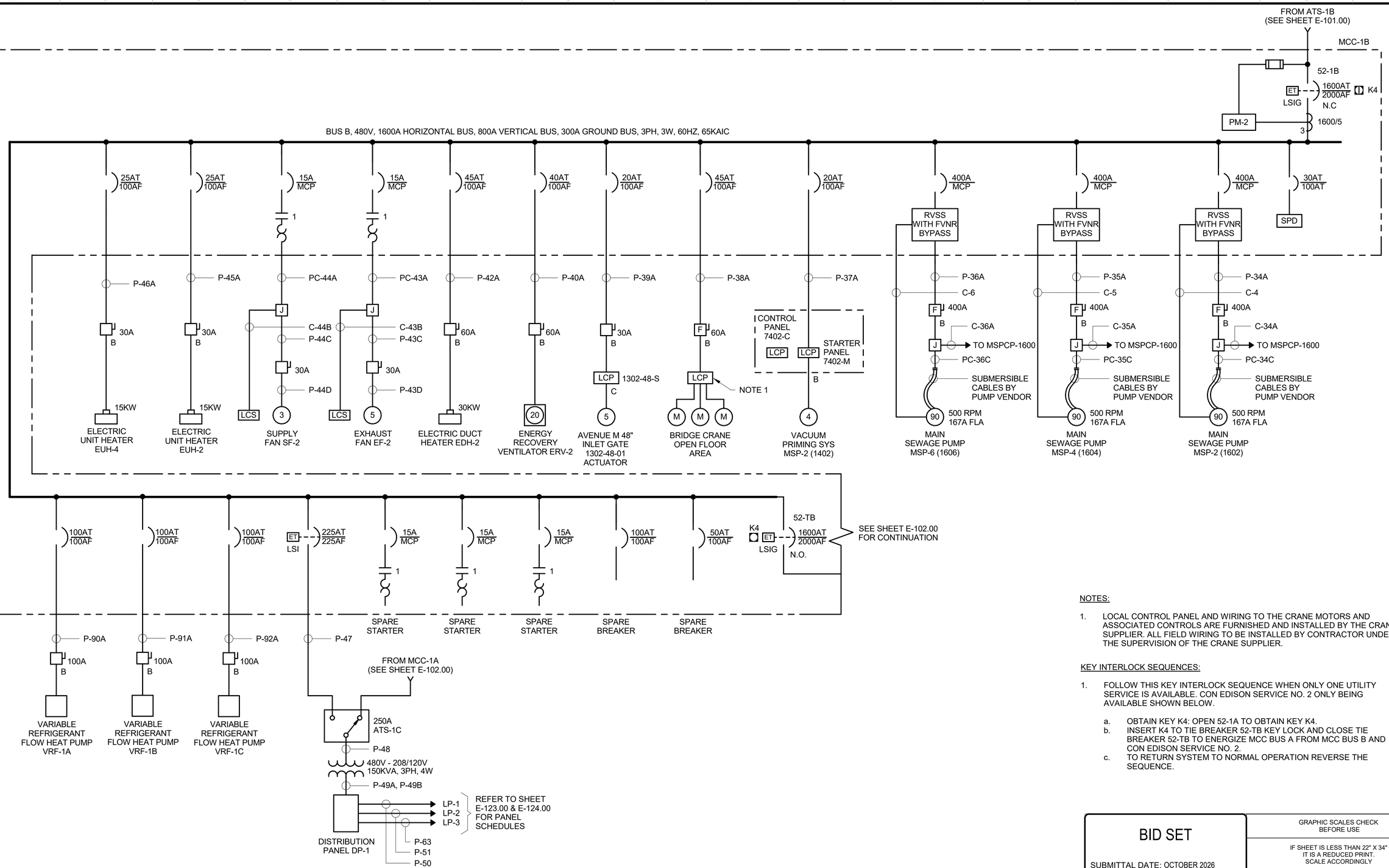

NOTES:

1. LOCAL CONTROL PANEL AND WIRING TO THE CRANE MOTORS AND ASSOCIATED CONTROLS ARE FURNISHED AND INSTALLED BY THE CRANE SUPPLIER. ALL FIELD WIRING TO BE INSTALLED BY CONTRACTOR UNDER THE SUPERVISION OF THE CRANE SUPPLIER.

KEY INTERLOCK SEQUENCES:

1. FOLLOW THIS KEY INTERLOCK SEQUENCE WHEN ONLY ONE UTILITY SERVICE IS AVAILABLE. CON EDISON SERVICE NO. 2 ONLY BEING AVAILABLE SHOWN BELOW.
   a. OBTAIN KEY K4: OPEN 52-1A TO OBTAIN KEY K4.
   b. INSERT K4 TO TIE BREAKER 52-TB KEY LOCK AND CLOSE TIE BREAKER 52-TB TO ENERGIZE MCC BUS A FROM MCC BUS B AND CON EDISON SERVICE NO. 2.
   c. TO RETURN SYSTEM TO NORMAL OPERATION REVERSE THE SEQUENCE.

BID SET

SUBMITTAL DATE: OCTOBER 2026

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DESIGN LEAD: E. JAMES, P.E.
PROJECT MANAGER: AIMEE BOULET, P.E.

ELECSYS ENGINEERING GROUP

STATE OF NEW YORK · EDO JAMES · 086309 · PROFESSIONAL ENGINEER

Environmental Protection

ACCOUNTABLE MANAGER: JOHN GOULAS, P.E.
PORTFOLIO MANAGER: KEVIN ELLENWOOD, P.E.
EXECUTIVE DIRECTOR: NAYANKUMAR SHAH, P.E.

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CAPITAL PROJECT WP-269
RECONSTRUCTION OF
PAERDEGAT PUMPING STATION
CONTRACT PS-318
ELECTRICAL
NEW MCC-1B ONE LINE DIAGRAM

DATE: OCTOBER 2026
SCALE: AS INDICATED
SHEET NO: 212 OF 274
DRAWING NO. E-103.00

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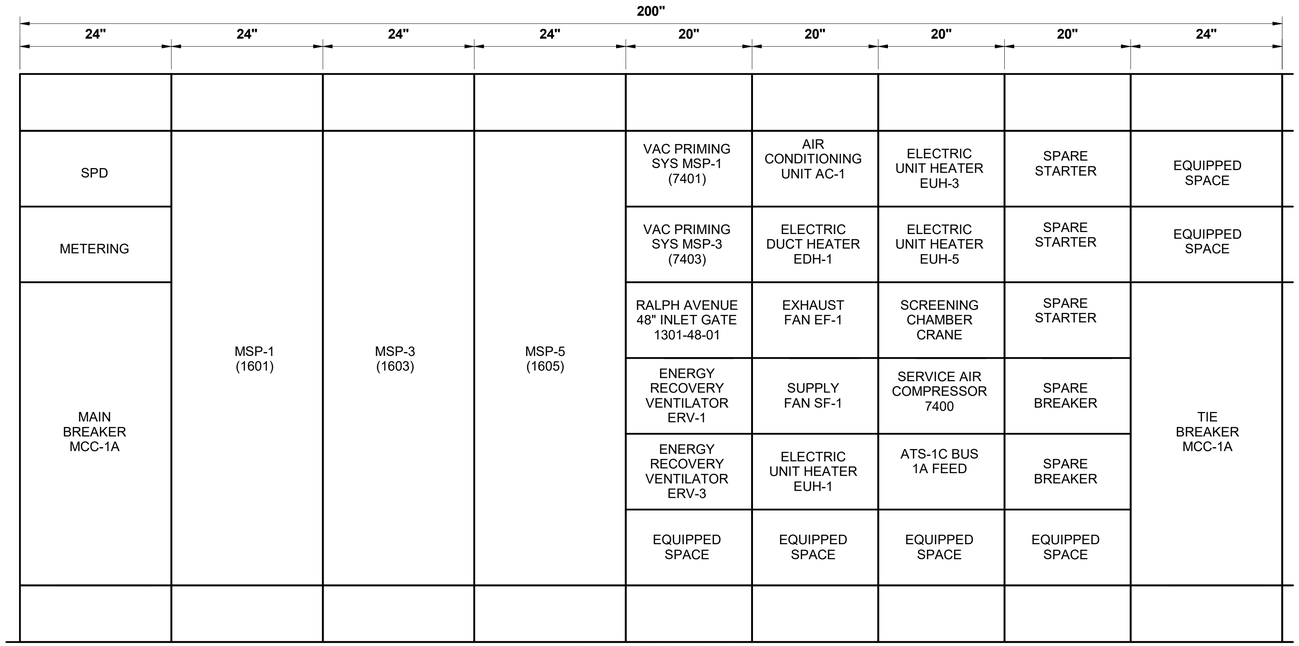
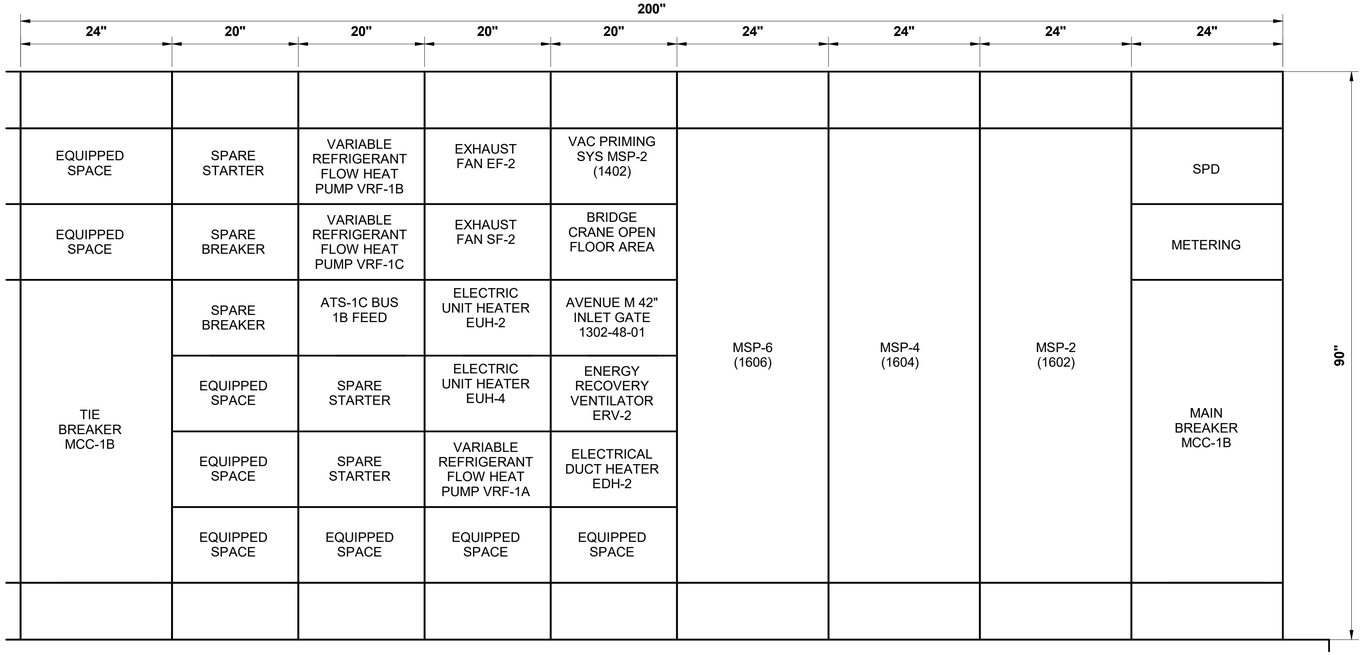


MCC-1A FRONT VIEW

SCALE: 1" = 1'-0"



MCC-1B FRONT VIEW

SCALE: 1" = 1'-0"

0 1 2 FT.

1"=1'-0"

BID SET

SUBMITTAL DATE: OCTOBER 2026

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DESIGN LEAD: E. JAMES, P.E.
PROJECT MANAGER: AIMEE BOULET, P.E.

ELECSYS ENGINEERING GROUP

STATE OF NEW YORK · EDO JANEZIC · 090201 · PROFESSIONAL ENGINEER

Environmental Protection

ACCOUNTABLE MANAGER
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PORTFOLIO MANAGER
KEVIN ELLENWOOD, P.E.
EXECUTIVE DIRECTOR
NAYANKUMAR SHAH, P.E.

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CAPITAL PROJECT WP-269
RECONSTRUCTION OF
PAERDEGAT PUMPING STATION
CONTRACT PS-318
ELECTRICAL
NEW MCC FRONT VIEW

DATE: OCTOBER 2026
SCALE: AS INDICATED
SHEET NO: 213 OF 274
DRAWING NO. E-104.00

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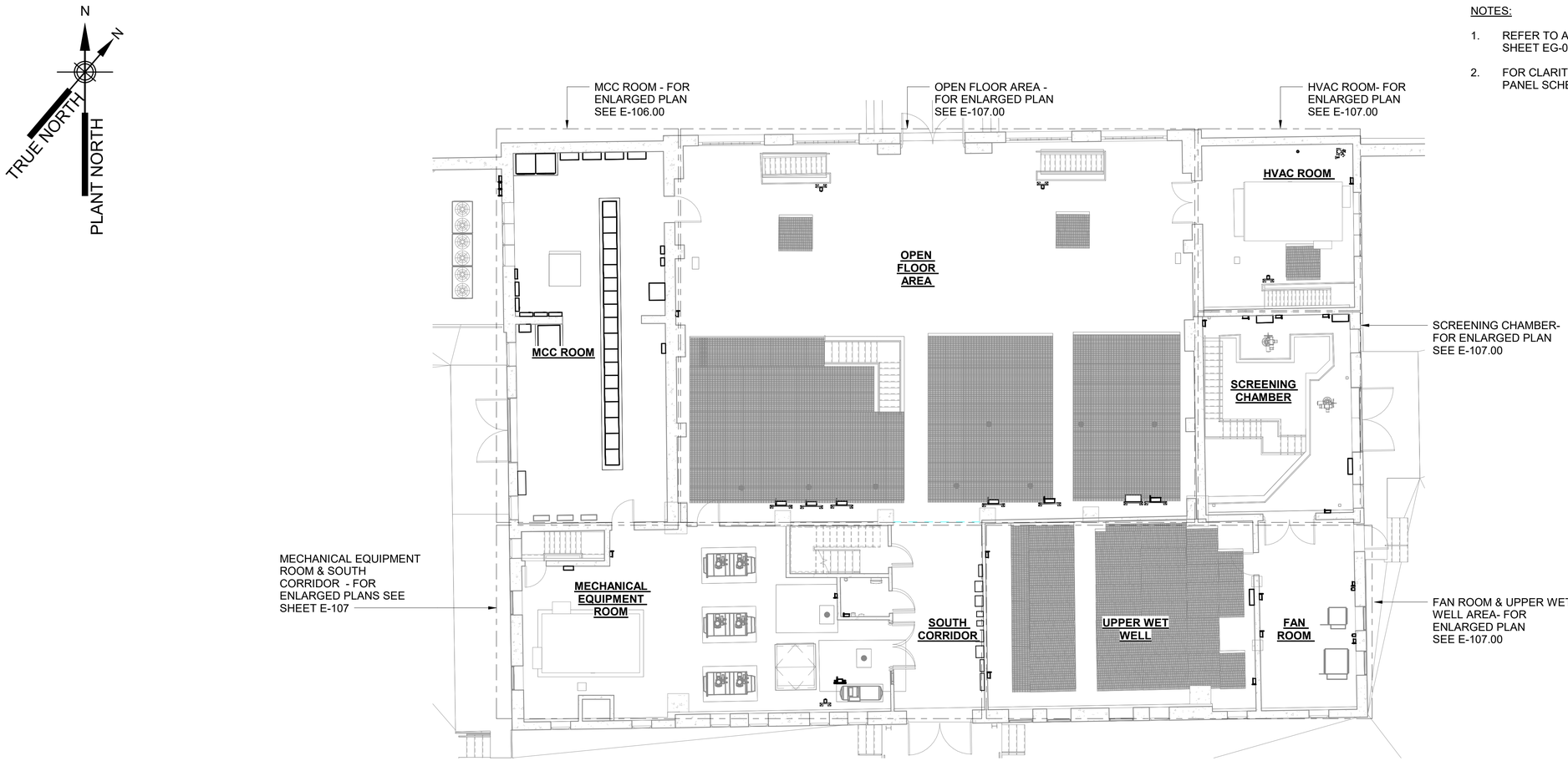
NOTES:

1. REFER TO AREA CLASSIFICATION AND EQUIPMENT ENCLOSURE SCHEDULE ON SHEET EG-004 GENERAL NOTES.
2. FOR CLARITY, NOT ALL CONDUIT RUNS ARE SHOWN. REFER TO ONE LINE DIAGRAMS, PANEL SCHEDULES AND BLOCK DIAGRAMS FOR CONDUIT AND CABLE REQUIREMENT.



GROUND FLOOR OVERALL PLAN

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

0 5 10 15 FT.

1/8"=1'-0"

BID SET

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DRAWN BY: B. ROY

ELECSYS ENGINEERING GROUP

STATE OF NEW YORK ELDO JAMES 088309 REGISTERED PROFESSIONAL ENGINEER

NYC Environmental Protection

ACCOUNTABLE MANAGER: JOHN GOULAS, P.E.
PORTFOLIO MANAGER: KEVIN ELLENWOOD, P.E.
EXECUTIVE DIRECTOR: NAYANKUMAR SHAH, P.E.

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CAPITAL PROJECT WP-269
RECONSTRUCTION OF PAERDEGAT PUMPING STATION
CONTRACT PS-318
ELECTRICAL
OVERALL GROUND FLOOR PLAN

DATE: OCTOBER 2026
SCALE: AS INDICATED
SHEET NO: 214 OF 274
DRAWING NO. E-105.00

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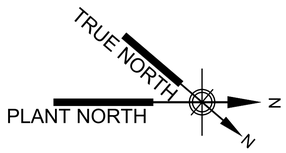
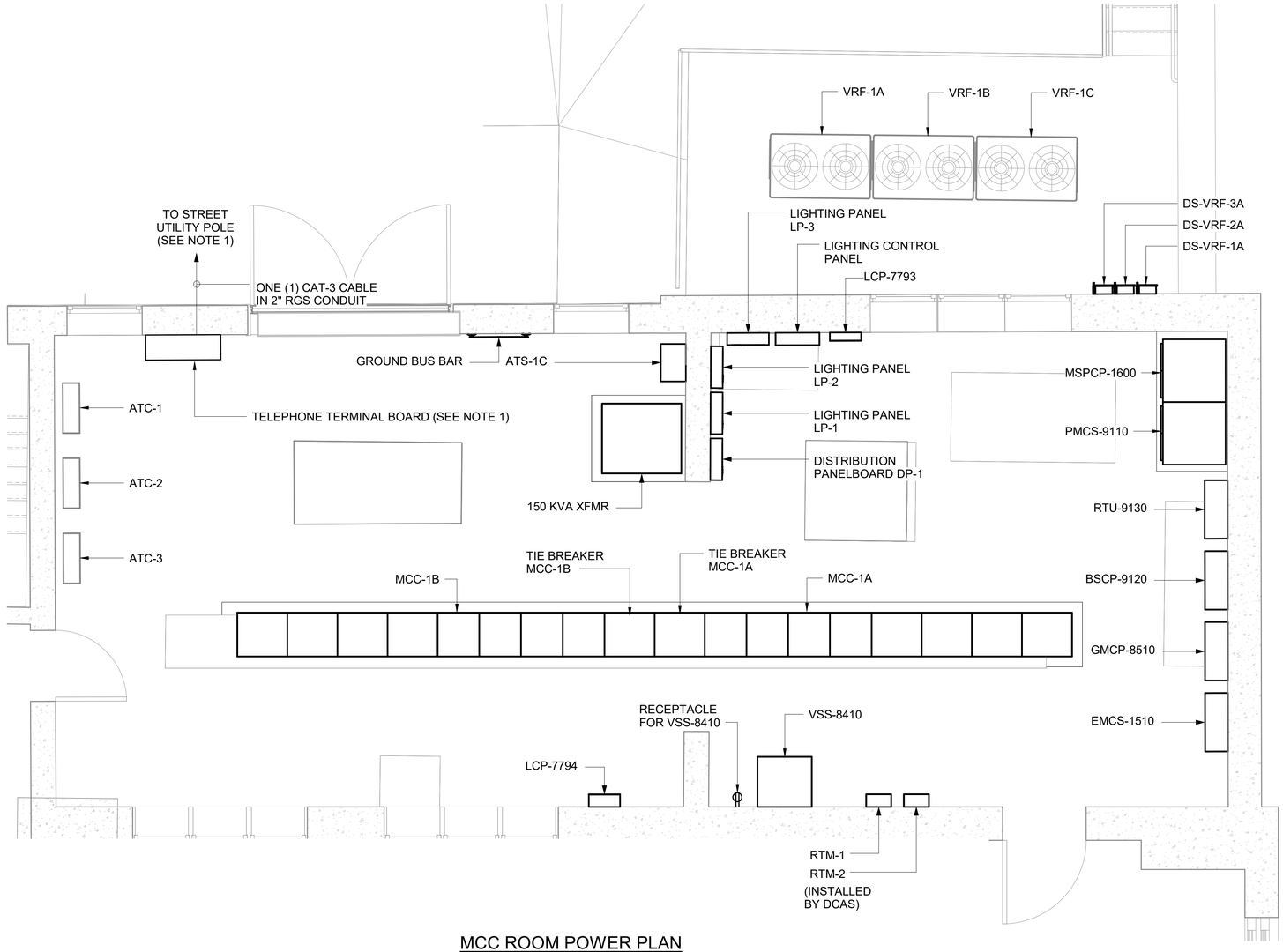


NOTE:

1. CONTRACTOR SHALL COORDINATE WITH THE TELEPHONE SERVICE PROVIDER TO INSTALL A NEW PHONE LINE FOR THE FIRE ALARM SYSTEM AT THE PUMPING STATION. THE LOCATION OF THE TELEPHONE TERMINAL BOARD AND UTILITY POLE SHALL ALSO BE COORDINATED WITH THE SERVICE PROVIDER.
2. REFER TO AREA CLASSIFICATION AND EQUIPMENT ENCLOSURE SCHEDULE ON SHEET EG-004 GENERAL NOTES.
3. FOR CLARITY, NOT ALL CONDUIT RUNS ARE SHOWN. REFER TO ONE LINE DIAGRAMS, PANEL SCHEDULES AND BLOCK DIAGRAMS FOR CONDUIT AND CABLE REQUIREMENT.



MCC ROOM POWER PLAN

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

3/8"=1'-0" 0 1 2 3 5 FT.

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SUBMITTAL DATE: OCTOBER 2026

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CHECKED BY: E. AMABA, P.E.
DESIGN LEAD: E. JAMES, P.E.
PROJECT MANAGER: AIMEE BOULET, P.E.
DRAWN BY: B. ROY

ELECSYS ENGINEERING GROUP

STATE OF NEW YORK ELDO JAMES 088309 LICENSED PROFESSIONAL ENGINEER

Environmental Protection

ACCOUNTABLE MANAGER: JOHN GOULAS, P.E.
PORTFOLIO MANAGER: KEVIN ELLENWOOD, P.E.
EXECUTIVE DIRECTOR: NAYANKUMAR SHAH, P.E.

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CAPITAL PROJECT WP-269
RECONSTRUCTION OF PAERDEGAT PUMPING STATION
CONTRACT PS-318
ELECTRICAL
MCC ROOM POWER PLAN

DATE: OCTOBER 2026
SCALE: AS INDICATED
SHEET NO: 215 OF 274
DRAWING NO. E-106.00

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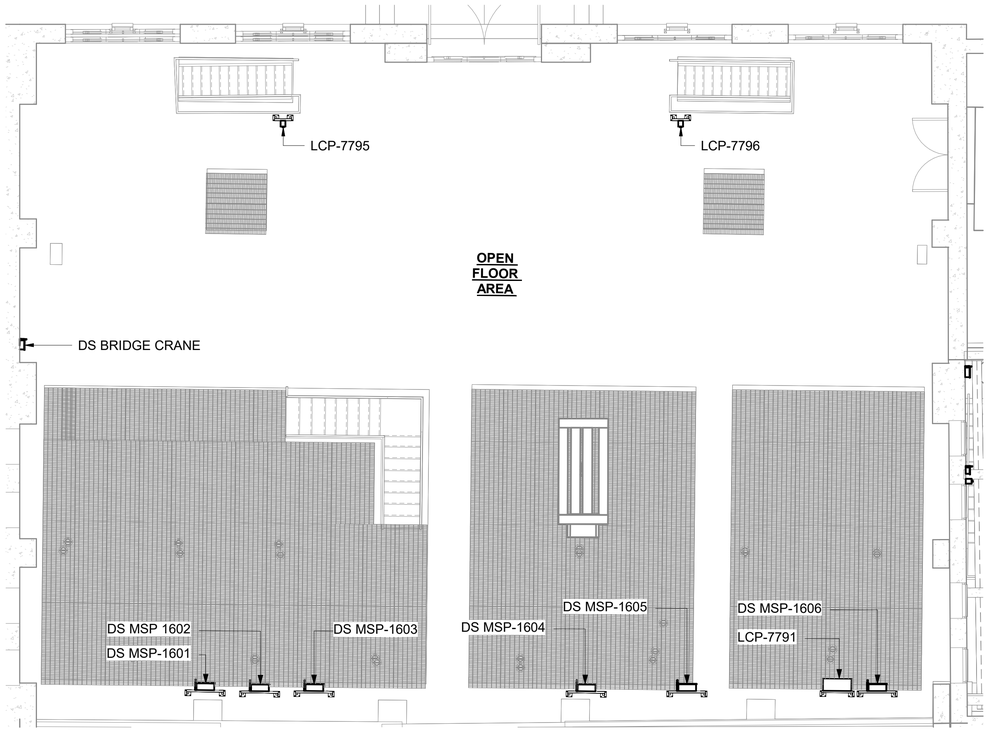
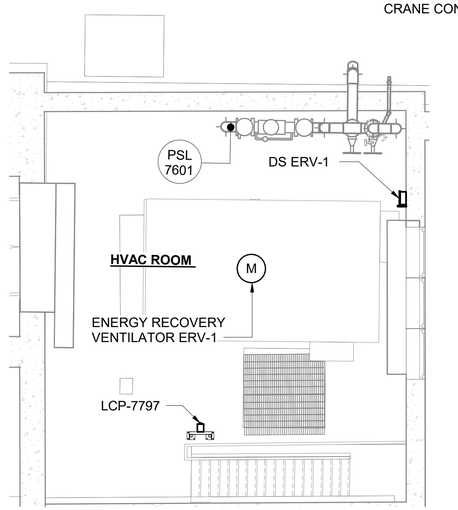


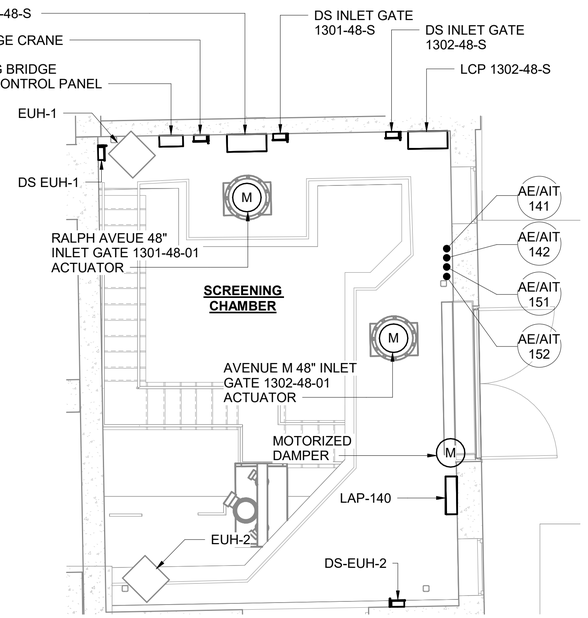
OPEN FLOOR AREA POWER PLAN

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



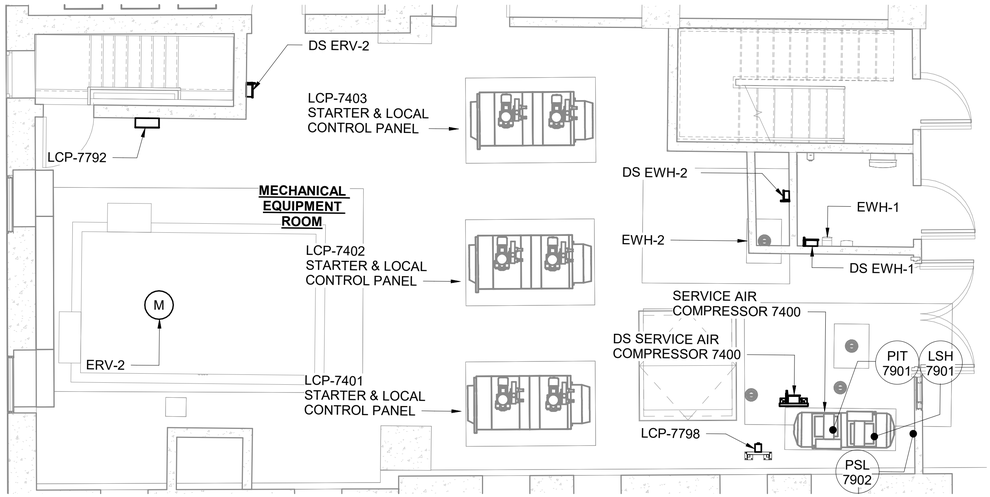
HVAC ROOM POWER PLAN

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



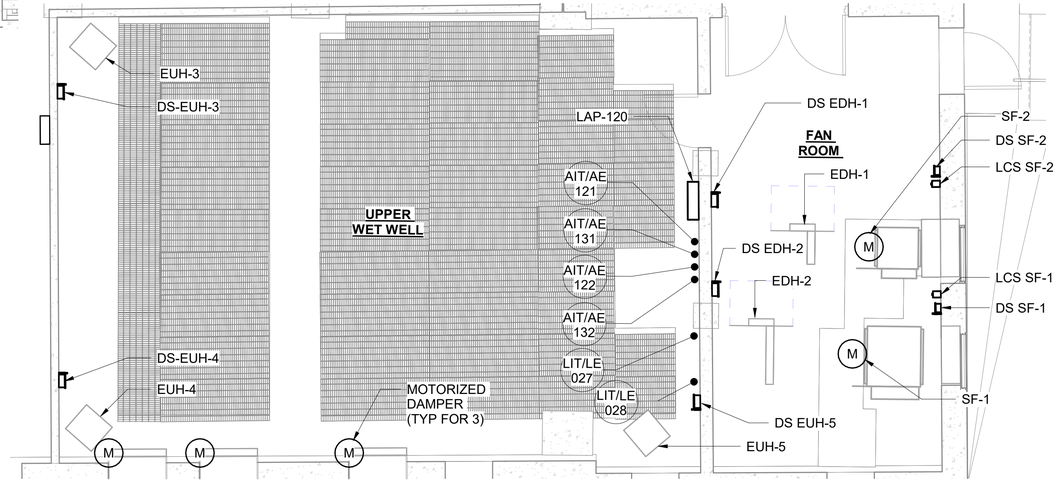
SCREENING CHAMBER POWER PLAN

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



MECHANICAL EQUIPMENT ROOM POWER PLAN

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



FAN ROOM & UPPER WET WELL AREA POWER PLAN

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

NOTES:

1. REFER TO AREA CLASSIFICATION AND EQUIPMENT ENCLOSURE SCHEDULE ON SHEET EG-004 GENERAL NOTES.
2. FOR CLARITY, NOT ALL CONDUIT RUNS ARE SHOWN. REFER TO ONE LINE DIAGRAMS, PANEL SCHEDULES AND BLOCK DIAGRAMS FOR CONDUIT AND CABLE REQUIREMENT.

1/4"=1'-0" 0 4 8 FT.

3/16"=1'-0" 0 5 10 FT.

BID SET

SUBMITTAL DATE: OCTOBER 2026

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CHECKED BY: E. AMABA, P.E.
DESIGN LEAD: E. JAMES, P.E.
PROJECT MANAGER: AIMEE BOULET, P.E.

ELECSYS ENGINEERING GROUP

STATE OF NEW YORK ELDO JAMES 090135 LICENSED PROFESSIONAL ENGINEER OREGON

NYC Environmental Protection

ACCOUNTABLE MANAGER	JOHN GOULAS, P.E.
PORTFOLIO MANAGER	KEVIN ELLENWOOD, P.E.
EXECUTIVE DIRECTOR	NAYANKUMAR SHAH, P.E.

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CAPITAL PROJECT WP-269
RECONSTRUCTION OF
PAERDEGAT PUMPING STATION
CONTRACT PS-318
ELECTRICAL
GROUND FLOOR - POWER PLAN

DATE: OCTOBER 2026
SCALE: AS INDICATED
SHEET NO: 216 OF 274
DRAWING NO. E-107.00

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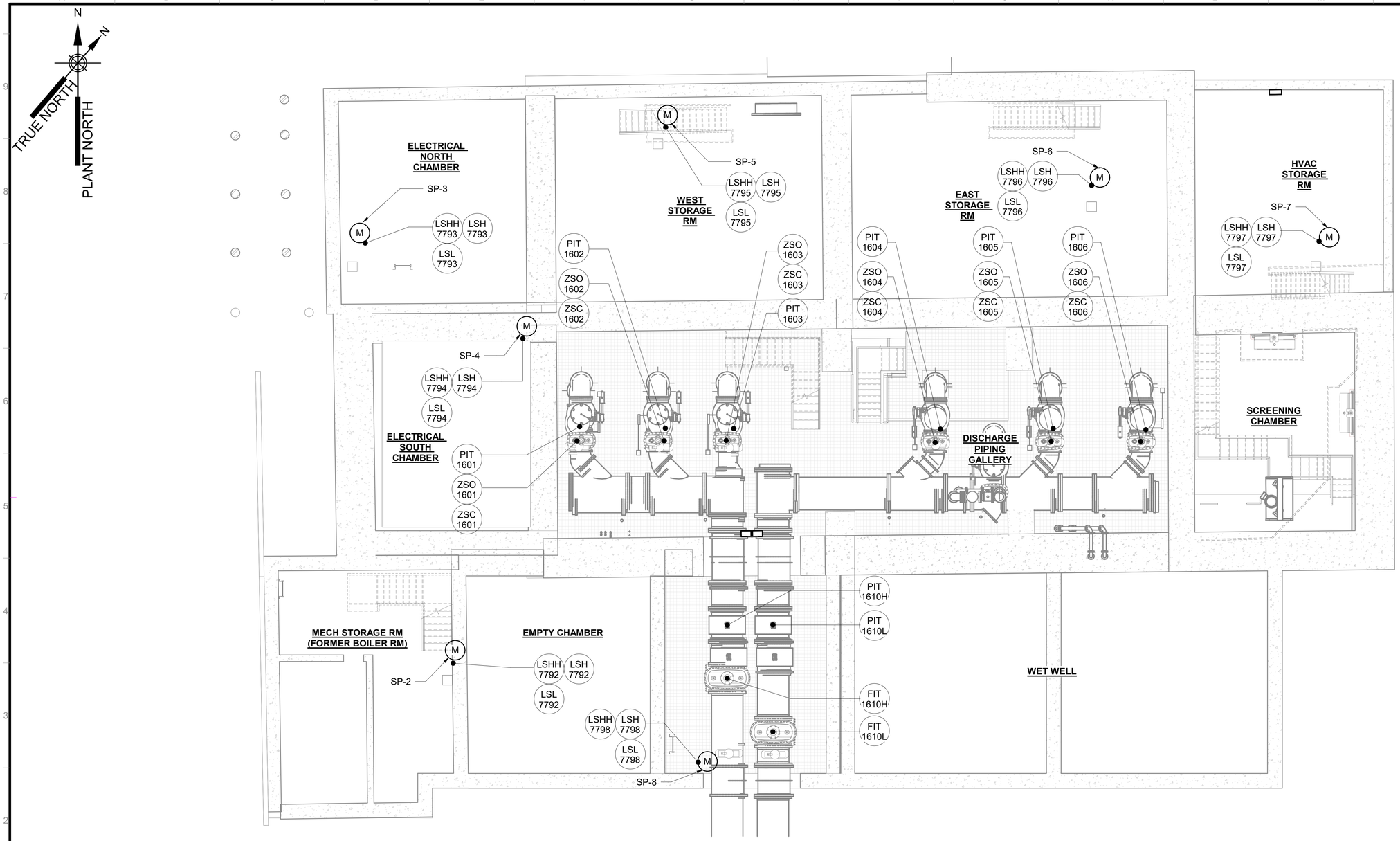

FIRST LEVEL BELOW GROUND POWER PLAN

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

NOTES:

1. REFER TO AREA CLASSIFICATION AND EQUIPMENT ENCLOSURE SCHEDULE ON SHEET EG-004 GENERAL NOTES.
2. FOR CLARITY, NOT ALL CONDUIT RUNS ARE SHOWN. REFER TO ONE LINE DIAGRAMS, PANEL SCHEDULES AND BLOCK DIAGRAMS FOR CONDUIT AND CABLE REQUIREMENT.

0 5 10 FT.

3/16"=1'-0"

BID SET

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STATE OF NEW YORK ELDO JAMES 089309 PROFESSIONAL ENGINEER

NYC Environmental Protection

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CAPITAL PROJECT WP-269
RECONSTRUCTION OF
PAERDEGAT PUMPING STATION
CONTRACT PS-318
ELECTRICAL
FIRST LEVEL BELOW GROUND - POWER PLAN

DATE: OCTOBER 2026
SCALE: AS INDICATED
SHEET NO: 217 OF 274
DRAWING NO. E-108.00

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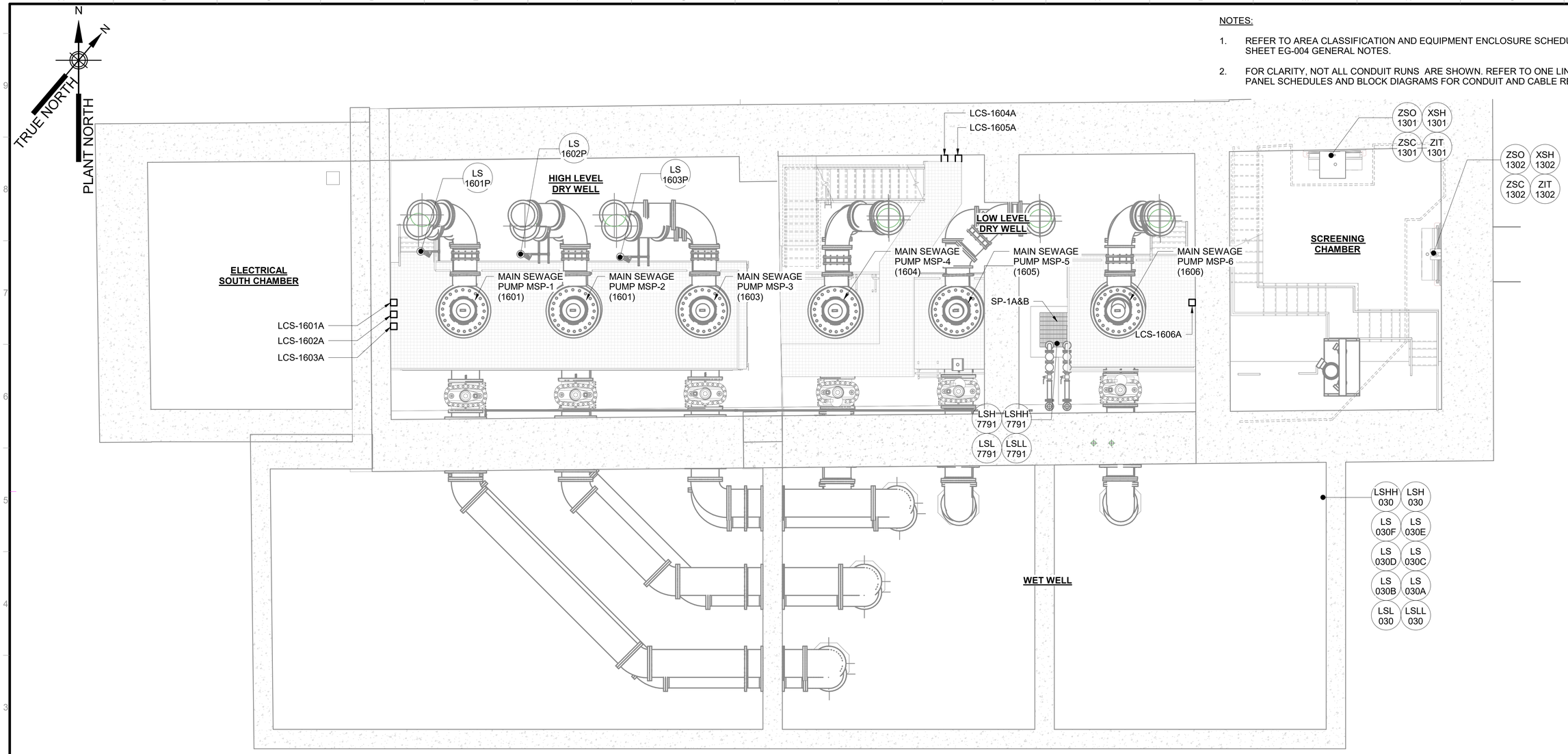

SECOND AND THIRD LEVEL BELOW GROUND POWER PLAN

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

0 4 8 FT.
1/4"=1'-0"

BID SET

SUBMITTAL DATE: OCTOBER 2026

GRAPHIC SCALES CHECK BEFORE USE

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NO.	DATE	REVISIONS/DESCRIPTION	APPR'D.

DESIGNED BY: E. JAMES, P.E.
DRAWN BY: B. ROY
CHECKED BY: E. AMABA, P.E.
DESIGN LEAD: E. JAMES, P.E.
PROJECT MANAGER: AIMEE BOULET, P.E.

ELECSYS ENGINEERING GROUP

Environmental Protection

ACCOUNTABLE MANAGER: JOHN GOULAS, P.E.
PORTFOLIO MANAGER: KEVIN ELLENWOOD, P.E.
EXECUTIVE DIRECTOR: NAYANKUMAR SHAH, P.E.

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96-05 HORACE HARDING EXPRESSWAY 5th FLOOR
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www.nyc.gov/dep

CAPITAL PROJECT WP-269
RECONSTRUCTION OF
PAERDEGAT PUMPING STATION
CONTRACT PS-318
ELECTRICAL
SECOND AND THIRD LEVEL BELOW GROUND - POWER PLAN

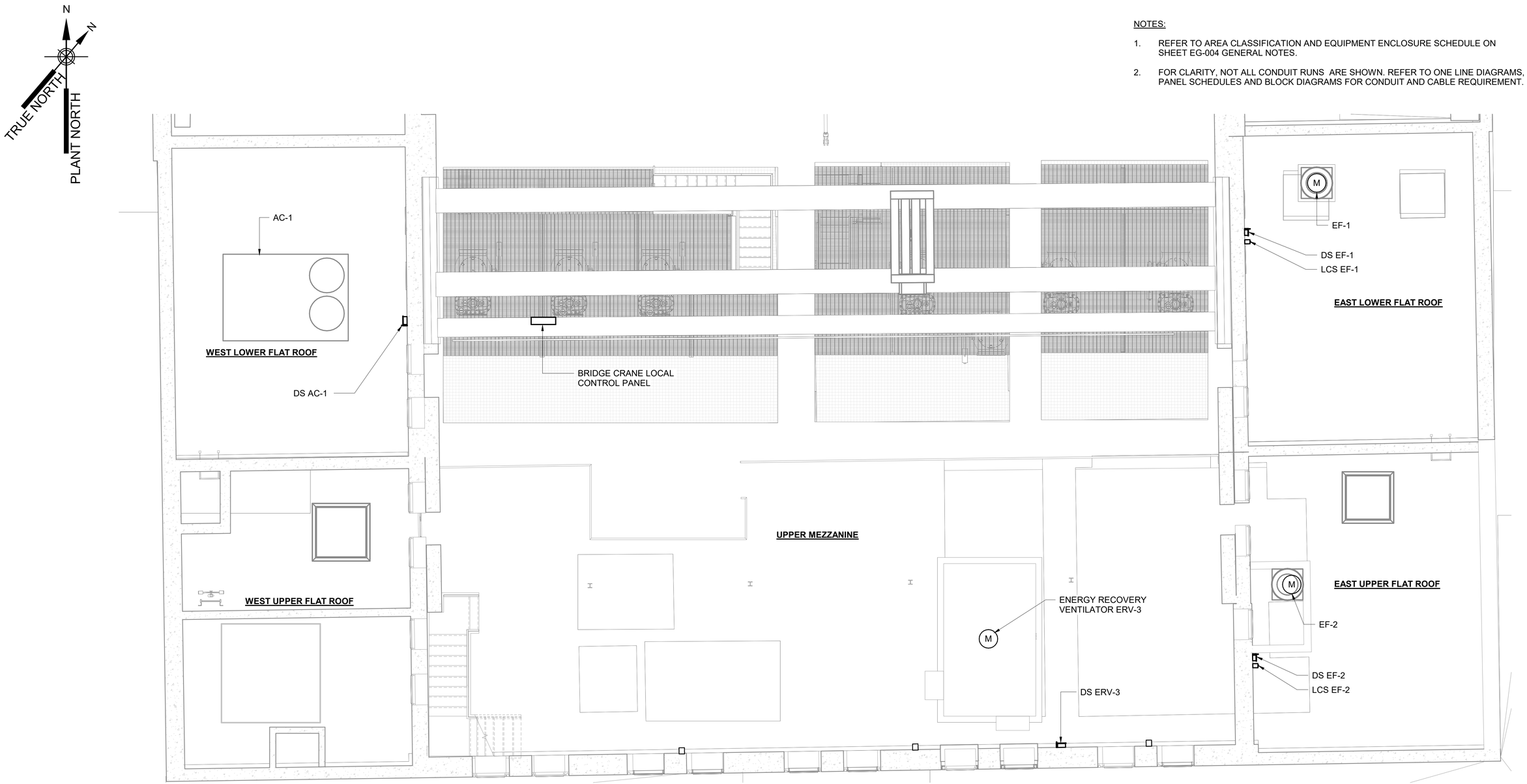
DATE: OCTOBER 2026
SCALE: AS INDICATED
SHEET NO: 218 OF 274
DRAWING NO. E-109.00

All inquiries regarding this drawing(s) or project should be made to NYC Environmental Protection, Bureau of Engineering Design and Construction.

Autodesk Docs://CI-AMER (USA) 60619010-PS-DES-5/PAER-E-MODEL_AECOM.rvt
10/9/2026 1:58:46 PM

NOTES:

1. REFER TO AREA CLASSIFICATION AND EQUIPMENT ENCLOSURE SCHEDULE ON SHEET EG-004 GENERAL NOTES.
2. FOR CLARITY, NOT ALL CONDUIT RUNS ARE SHOWN. REFER TO ONE LINE DIAGRAMS, PANEL SCHEDULES AND BLOCK DIAGRAMS FOR CONDUIT AND CABLE REQUIREMENT.



EAST AND WEST FLAT ROOF AND UPPER MEZZANINE POWER PLAN

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

1/4"=1'-0" 0 4 8 FT.

BID SET

SUBMITTAL DATE: OCTOBER 2026

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NO.	DATE	REVISIONS/DESCRIPTION	APPR'D.

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DESIGN LEAD: E. JAMES, P.E.
PROJECT MANAGER: AIMEE BOULET, P.E.

ELECSYS ENGINEERING GROUP

STATE OF NEW YORK — DIEGO JAMES — 089309 — PROFESSIONAL ENGINEER

Environmental Protection

ACCOUNTABLE MANAGER: JOHN GOULAS, P.E.
PORTFOLIO MANAGER: KEVIN ELLENWOOD, P.E.
EXECUTIVE DIRECTOR: NAYANKUMAR SHAH, P.E.

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CAPITAL PROJECT WP-269
RECONSTRUCTION OF
PAERDEGAT PUMPING STATION
CONTRACT PS-318
ELECTRICAL
EAST AND WEST FLAT ROOF AND UPPER MEZZANINE POWER PLAN

DATE: OCTOBER 2026
SCALE: AS INDICATED
SHEET NO: 219 OF 274
DRAWING NO. E-110.00

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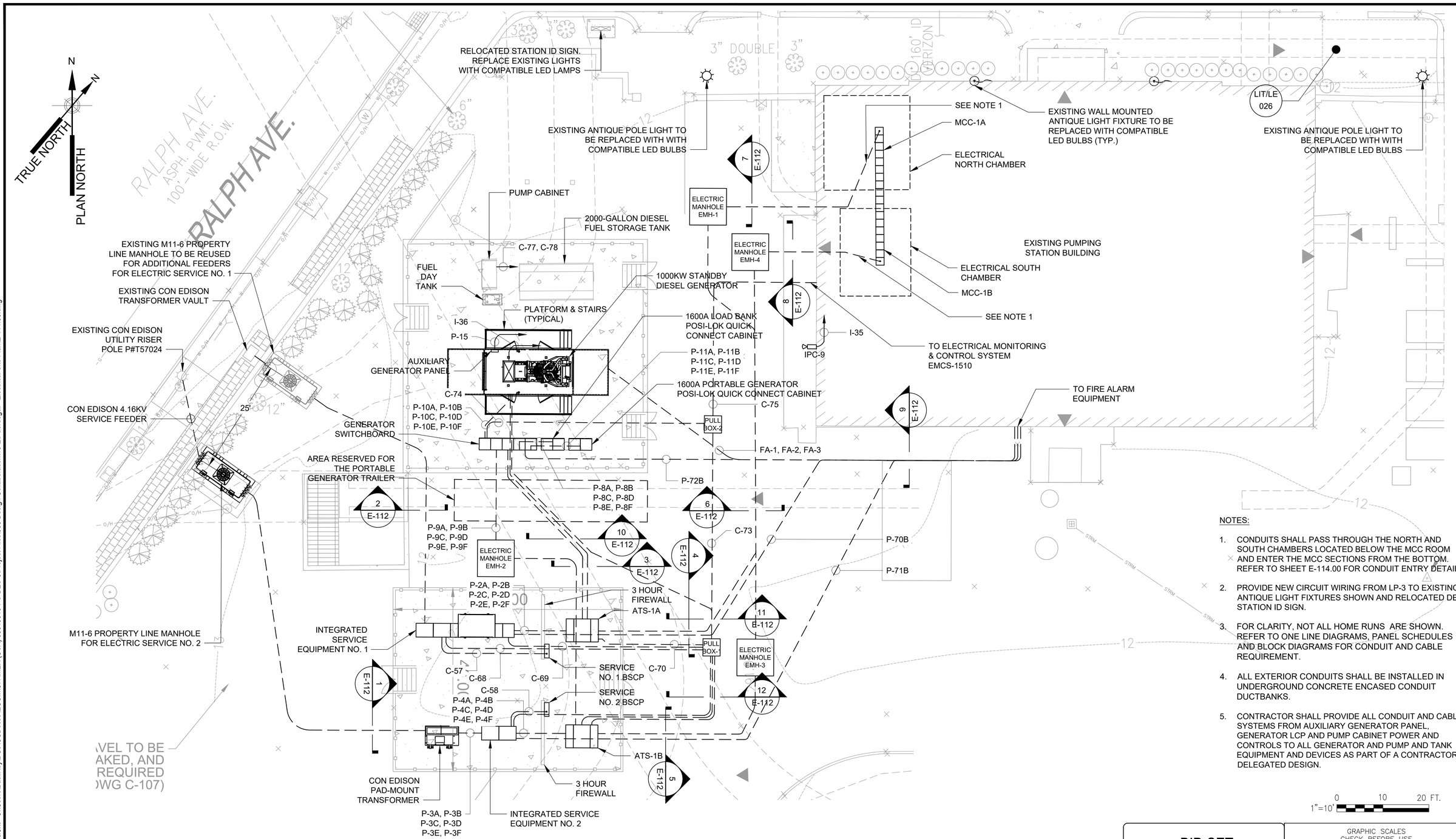

NOTES:

1. CONDUITS SHALL PASS THROUGH THE NORTH AND SOUTH CHAMBERS LOCATED BELOW THE MCC ROOM AND ENTER THE MCC SECTIONS FROM THE BOTTOM. REFER TO SHEET E-114.00 FOR CONDUIT ENTRY DETAILS.
2. PROVIDE NEW CIRCUIT WIRING FROM LP-3 TO EXISTING ANTIQUE LIGHT FIXTURES SHOWN AND RELOCATED DEP STATION ID SIGN.
3. FOR CLARITY, NOT ALL HOME RUNS ARE SHOWN. REFER TO ONE LINE DIAGRAMS, PANEL SCHEDULES AND BLOCK DIAGRAMS FOR CONDUIT AND CABLE REQUIREMENT.
4. ALL EXTERIOR CONDUITS SHALL BE INSTALLED IN UNDERGROUND CONCRETE ENCASED CONDUIT DUCTBANKS.
5. CONTRACTOR SHALL PROVIDE ALL CONDUIT AND CABLE SYSTEMS FROM AUXILIARY GENERATOR PANEL, GENERATOR LCP AND PUMP CABINET POWER AND CONTROLS TO ALL GENERATOR AND PUMP AND TANK EQUIPMENT AND DEVICES AS PART OF A CONTRACTOR DELEGATED DESIGN.

0 10 20 FT.
1"=10'

PAERDEGAT ELECTRICAL SITE PLAN

SCALE: 1"=10'

BID SET

SUBMITTAL DATE: OCTOBER 2026

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DESIGN LEAD: E. JAMES P.E.
PROJECT MANAGER: AIMEE BOULET, P.E.

ELECSYS ENGINEERING GROUP

ACCOUNTABLE MANAGER: JOHN, GOULAS, P.E.
PORTFOLIO MANAGER: KEVIN ELLENWOOD, P.E.
DIRECTOR, IN HOUSE DESIGN: NAYANKUMAR SHAH, P.E.

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CAPITAL PROJECT WP-269
RECONSTRUCTION OF
PAERDEGAT PUMPING STATION
CONTRACT PS-318
ELECTRICAL
SITE PLAN

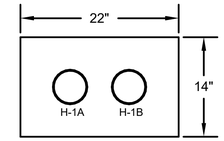
DATE: OCTOBER 2026
SCALE: 1" = 10'
SHEET NO: 220 OF 274
DRAWING NO. E–111.00

All inquiries regarding this drawing(s) or project should be made to NYC Environmental Protection, Bureau of Engineering Design and Construction.

Last Saved By: Broy
Paper Size Printed/Plotted: ANSI full bleed D (22.00 x 34.00 Inches)
Drawing File Name & Drive Location: C:\Users\BasilRoy\DCACCDocs\AECOM\CI-AMER (USA) 60619010-PS-DES-5\Project Files\900 Design Collaboration\16-E\Paerdegat - Electrical Site Plan\E-111.00.dwg
Date & Time Plotted: 12/14/2021 5:08 PM
Plot Style Table: DEP_BEDC_22x34_ByWeight.ctb
Plot Scale:1:1
Last Date Saved: 30/09/2026 2:08 PM

NOTE:

1. REFER TO SHEET E-905.00 FOR DUCT BANK SECTION DETAILS.



1 E-112 DUCTBANK SECTION 1
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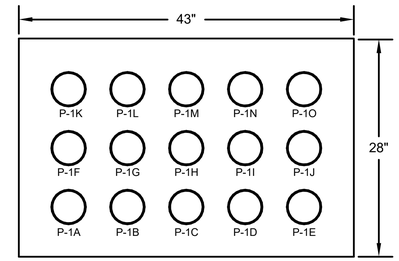
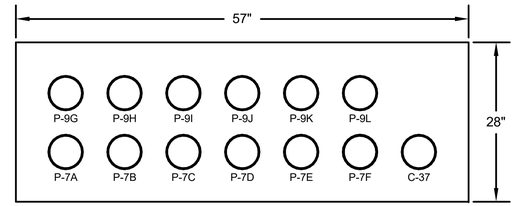
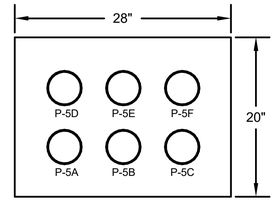


2 E-112 DUCTBANK SECTION 2
NOT TO SCALE



3 E-112 DUCTBANK SECTION 3
NOT TO SCALE



4 E-112 DUCTBANK SECTION 4
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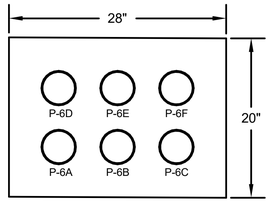
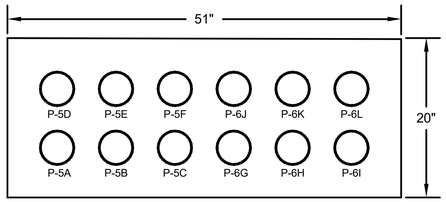
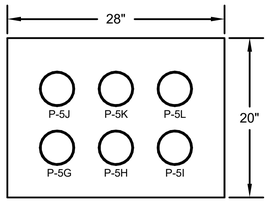


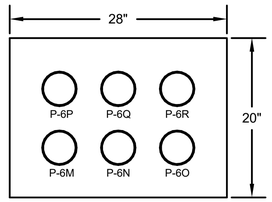
5 E-112 DUCTBANK SECTION 5
NOT TO SCALE



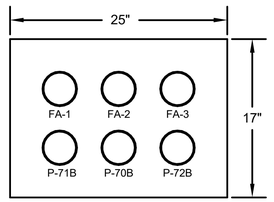
6 E-112 DUCTBANK SECTION 6
NOT TO SCALE



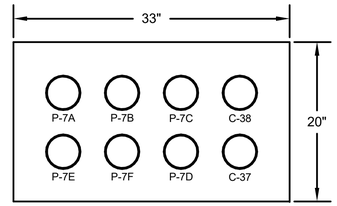
7 E-112 DUCTBANK SECTION 7
NOT TO SCALE



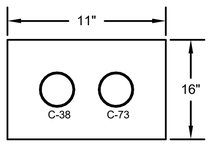
8 E-112 DUCTBANK SECTION 8
NOT TO SCALE



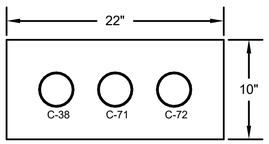
9 E-112 DUCTBANK SECTION 9
NOT TO SCALE



10 E-112 DUCTBANK SECTION 10
NOT TO SCALE



11 E-112 DUCTBANK SECTION 11
NOT TO SCALE



12 E-112 DUCTBANK SECTION 12
NOT TO SCALE

BID SET

SUBMITTAL DATE: OCTOBER 2026

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DESIGN LEAD: E. JAMES, P.E.
PROJECT MANAGER: AIMEE BOULET, P.E.

ELECSYS ENGINEERING GROUP

STATE OF NEW YORK ELDO JAMES 095201 PROFESSIONAL ENGINEER

Environmental Protection

ACCOUNTABLE MANAGER: JOHN GOULAS, P.E.
PORTFOLIO MANAGER: KEVIN ELLENWOOD, P.E.
EXECUTIVE DIRECTOR: NAYANKUMAR SHAH, P.E.

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CAPITAL PROJECT WP-269
RECONSTRUCTION OF
PAERDEGAT PUMPING STATION
CONTRACT PS-318
ELECTRICAL
DUCTBANK DETAILS

DATE: OCTOBER 2026
SCALE: AS INDICATED
SHEET NO: 221 OF 274
DRAWING NO. E-112.00

All inquiries regarding this drawing(s) or project should be made to NYC Environmental Protection, Bureau of Engineering Design and Construction.

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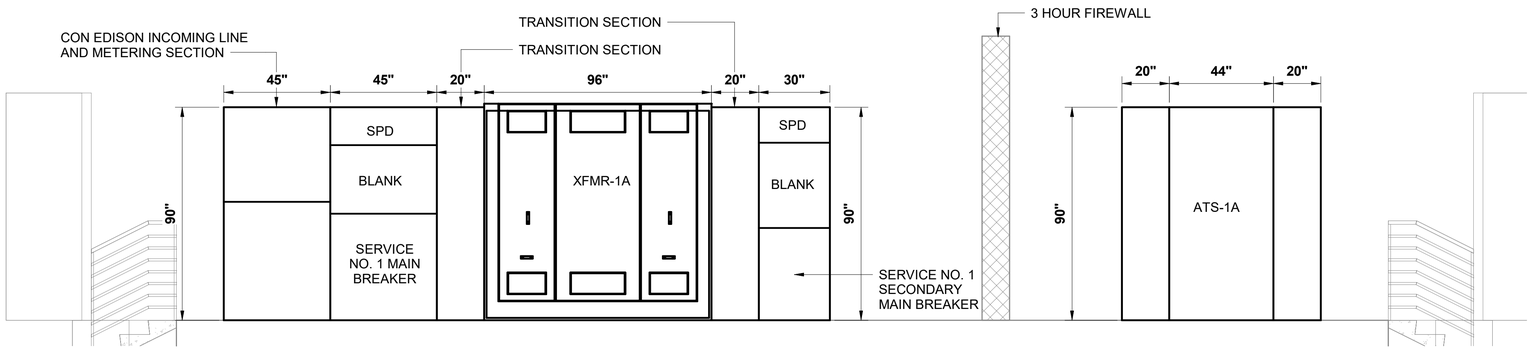
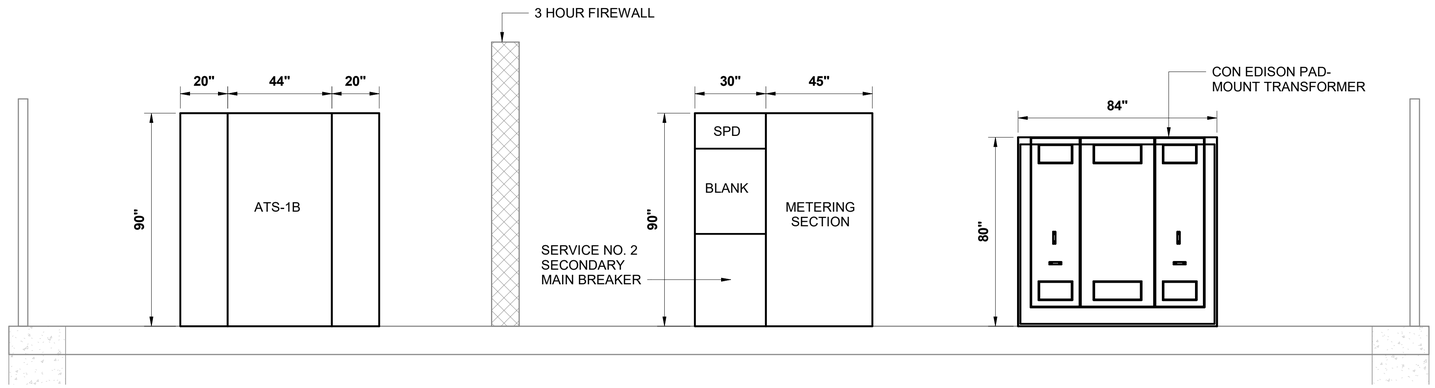


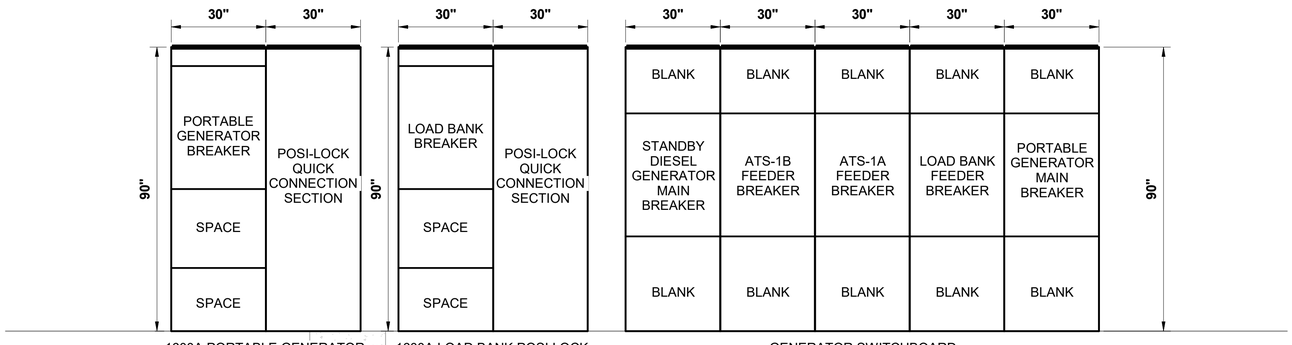
SERVICE NO. 1 DISTRIBUTION EQUIPMENT FRONT VIEW

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



SERVICE NO. 2 DISTRIBUTION EQUIPMENT FRONT VIEW

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



1600A PORTABLE GENERATOR POSI LOCK QUICK CONNECTION CABINET

1600A LOAD BANK POSI LOCK QUICK CONNECTION CABINET

GENERATOR SWITCHBOARD

STANDBY POWER DISTRIBUTION EQUIPMENT FRONT VIEW

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

1/2"=1'-0" 0 1 2 4 FT.

3/8"=1'-0" 0 1 2 3 5 FT.

BID SET

SUBMITTAL DATE: OCTOBER 2026

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PROJECT MANAGER: AIMEE BOULET, P.E.

ELECSYS ENGINEERING GROUP

STATE OF NEW YORK · EDDO JAMES · 086309 · PROFESSIONAL ENGINEER

Environmental Protection

ACCOUNTABLE MANAGER: JOHN GOULAS, P.E.
PORTFOLIO MANAGER: KEVIN ELLENWOOD, P.E.
EXECUTIVE DIRECTOR: NAYANKUMAR SHAH, P.E.

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CAPITAL PROJECT WP-269
RECONSTRUCTION OF
PAERDEGAT PUMPING STATION
CONTRACT PS-318
ELECTRICAL
EXTERIOR ELECTRICAL EQUIPMENT FRONT VIEWS

DATE: OCTOBER 2026
SCALE: AS INDICATED
SHEET NO: 222 OF 274
DRAWING NO. E-113.00

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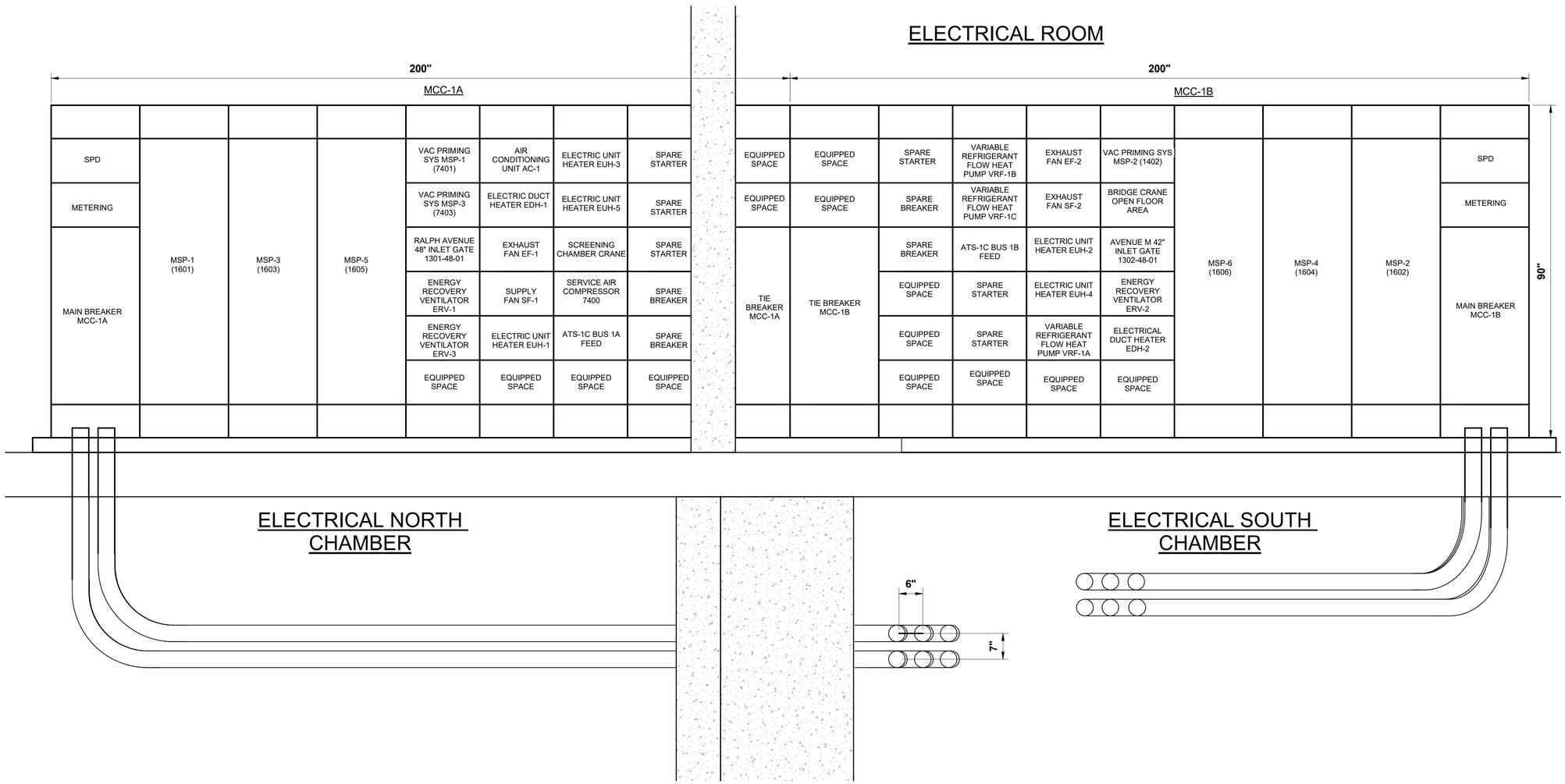

MCC 1A AND MCC-1B FRONT VIEW AND CONDUIT ROUTING DETAILS

SCALE: 3/4" = 1'-0"

3/16"=1'-0" 0 5 10 FT.

BID SET

SUBMITTAL DATE: OCTOBER 2026

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PROJECT MANAGER: AIMEE BOULET, P.E.

DRAWN BY: B. ROY

ELECSYS ENGINEERING GROUP

STATE OF NEW YORK ELDO JAMES 088309 LICENSED PROFESSIONAL ENGINEER

NYC Environmental Protection

ACCOUNTABLE MANAGER: JOHN GOULAS, P.E.
PORTFOLIO MANAGER: KEVIN ELLENWOOD, P.E.
EXECUTIVE DIRECTOR: NAYANKUMAR SHAH, P.E.

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CONTRACT PS-318
ELECTRICAL
MCC-1 FRONT VIEW AND CONDUIT ENTRY DETAILS

DATE: OCTOBER 2026
SCALE: AS INDICATED
SHEET NO: 223 OF 274
DRAWING NO. E-114.00

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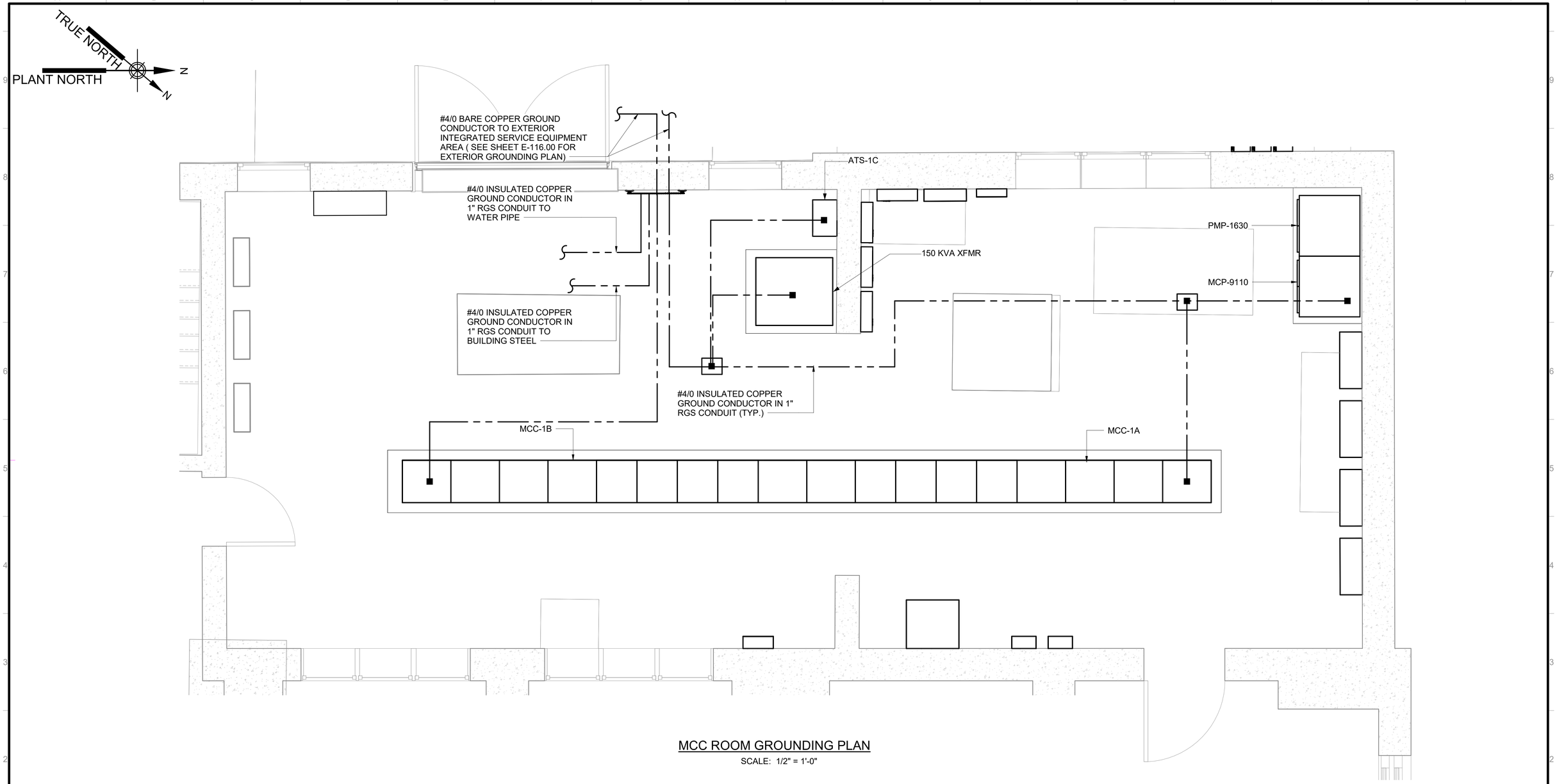

MCC ROOM GROUNDING PLAN

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

0 1 2 4 FT.
1/2"=1'-0"

100% DESIGN SUBMITTAL
NOT FOR ISSUE
SUBMITTAL DATE: OCTOBER 2026

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PROJECT MANAGER: AIMEE BOULET, P.E.

ELECSYS ENGINEERING GROUP

STATE OF NEW YORK — HUGO JAMES — 085309 — LICENSED PROFESSIONAL ENGINEER

Environmental Protection

ACCOUNTABLE MANAGER: JOHN GOULAS, P.E.
PORTFOLIO MANAGER: LAUREN D'ATTILE, P.E.
EXECUTIVE DIRECTOR: NAYANKUMAR SHAH, P.E.

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CAPITAL PROJECT WP-269
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PAERDEGAT PUMPING STATION
CONTRACT PS-318
ELECTRICAL
MCC ROOM GROUNDING PLAN

DATE: OCTOBER 2026
SCALE: 1/2" = 1'-0"
SHEET NO: 224 OF 274
DRAWING NO. E-115.00

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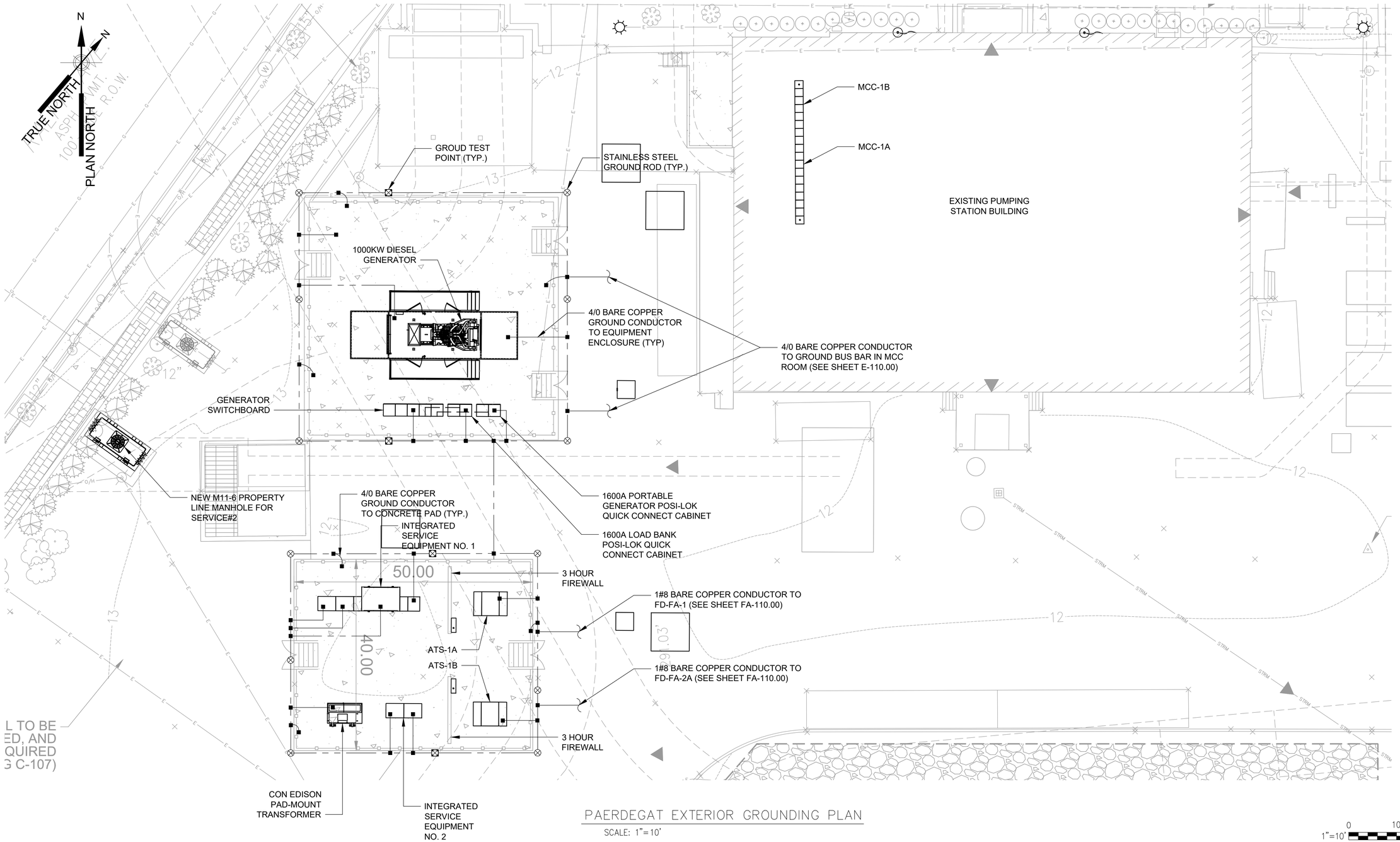

PAERDEGAT EXTERIOR GROUNDING PLAN

SCALE: 1"=10'

0 10 20 FT.
1"=10'

BID SET

SUBMITTAL DATE: OCTOBER 2026

GRAPHIC SCALES CHECK BEFORE USE

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NO.	DATE	REVISIONS/DESCRIPTION	APPR'D.
			APPR'D.
			APPR'D.

DESIGNED BY: E. JAMES, P.E.
CHECKED BY: E. AMABA, P.E.
DESIGN LEAD: E. JAMES P.E.
PROJECT MANAGER: AIMEE BOULET, P.E.

DRAWN BY: B. ROY

ELECSYS ENGINEERING GROUP

NYC Environmental Protection

ACCOUNTABLE MANAGER: JOHN, GOULAS, P.E.
PORTFOLIO MANAGER: KEVIN ELLENWOOD, P.E.
DIRECTOR, IN HOUSE DESIGN: NAYANKUMAR SHAH, P.E.

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CAPITAL PROJECT WP-269
RECONSTRUCTION OF PAERDEGAT PUMPING STATION
CONTRACT PS-318
ELECTRICAL
EXTERIOR GROUNDING PLAN

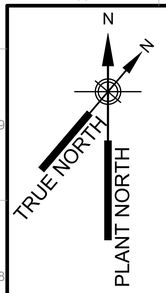
DATE: OCTOBER 2026
SCALE: 1" = 10'
SHEET NO: 225 OF 274
DRAWING NO. E–116.00

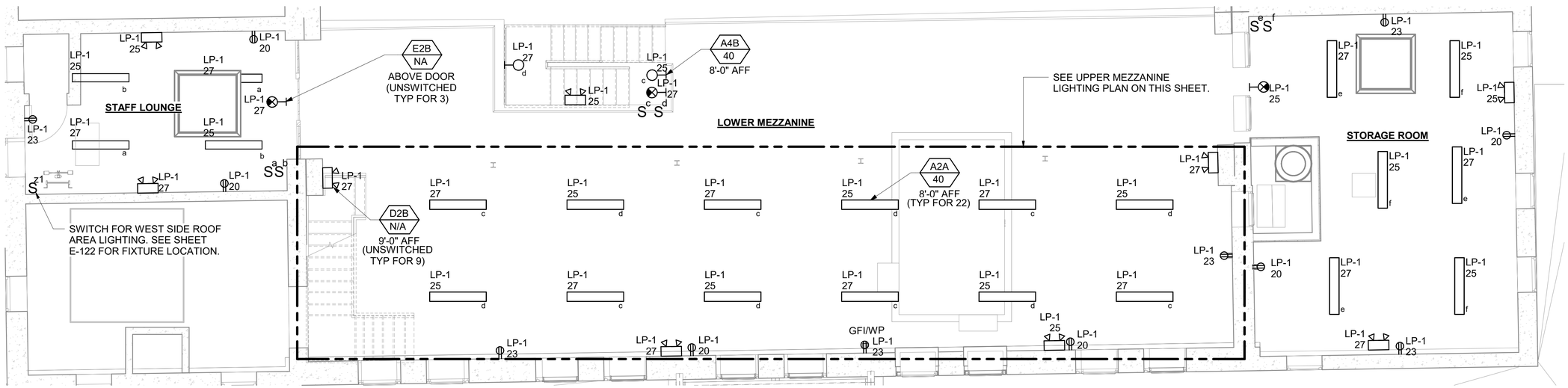
All inquiries regarding this drawing(s) or project should be made to NYC Environmental Protection, Bureau of Engineering Design and Construction.

Last Saved By: Broy Last Date Saved: 12/14/2026 6:28 PM Date & Time Plotted: 12/14/2021 5:08 PM
Paper Size Printed/Plotted: ANSI full bleed D (22.00 x 34.00 Inches) Plot Scale:1:1 Plot Style Table: DEP_BEDC_22x34_ByWeight.ctb
Drawing File Name & Drive Location: C:\Users\BasilRoy\DC\ACCDocs\AECOM\CI-AMER (USA) 60619010-PS-DES-5\Project Files\900 Design Collaboration\16-E\Paerdegat - Electrical Site Plan\E-116.00.dwg

NOTES:

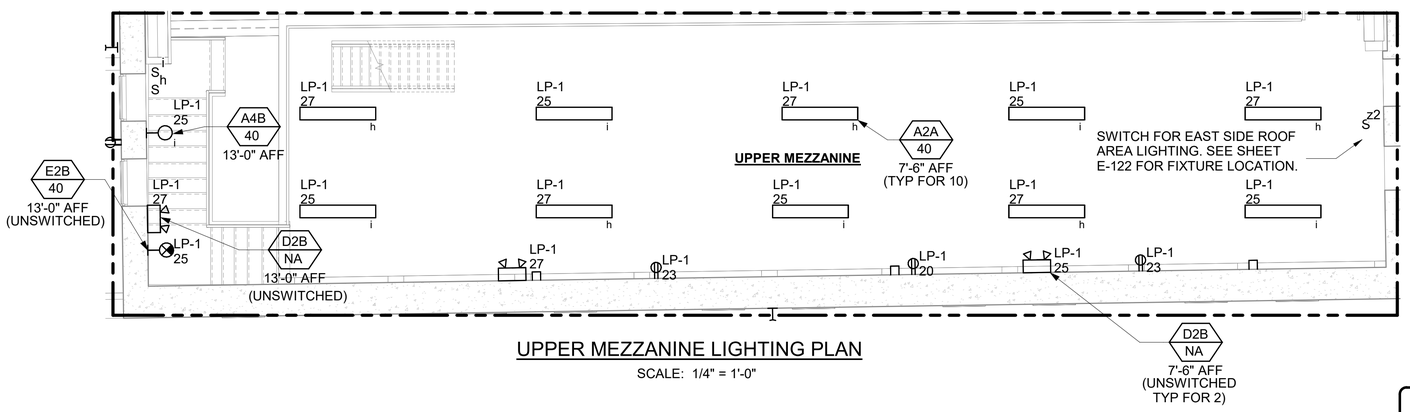
1. STAFF LOUNGE, LOWER AND UPPER MEZZANINE, STORAGE ROOM ARE WET AND CORROSIVE. ALL MATERIALS, EQUIPMENT, INCIDENTALS, ETC. SHALL CONFORM TO THE REQUIREMENTS OF THE AREA'S CLASSIFICATION.
2. FOR CLARITY, NOT ALL HOME RUNS ARE SHOWN. REFER TO ONE LINE DIAGRAMS, PANEL SCHEDULES AND BLOCK DIAGRAMS FOR CONDUIT AND CABLE REQUIREMENT.





LOWER MEZZANINE LIGHTING PLAN

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



UPPER MEZZANINE LIGHTING PLAN

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

0 4 8 FT.

1/4"=1'-0"

BID SET

SUBMITTAL DATE: OCTOBER 2026

GRAPHIC SCALES CHECK BEFORE USE

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NO.	DATE	REVISIONS/DESCRIPTION	APPR'D.

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CHECKED BY: E. AMABA, P.E.
DESIGN LEAD: E. JAMES, P.E.
PROJECT MANAGER: AIMEE BOULET, P.E.

DRAWN BY: R. SAN JUAN

ELECSYS ENGINEERING GROUP

STATE OF NEW YORK ELDO JAMES 088309 REGISTERED PROFESSIONAL ENGINEER

NYC Environmental Protection

ACCOUNTABLE MANAGER: JOHN GOULAS, P.E.
PORTFOLIO MANAGER: KEVIN ELLENWOOD, P.E.
EXECUTIVE DIRECTOR: NAYANKUMAR SHAH, P.E.

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CAPITAL PROJECT WP-269
RECONSTRUCTION OF
PAERDEGAT PUMPING STATION
CONTRACT PS-318
ELECTRICAL
UPPER AND LOWER MEZZANINE - LIGHTING PLAN

DATE: OCTOBER 2026
SCALE: AS INDICATED
SHEET NO: 226 OF 274
DRAWING NO. E-117.00

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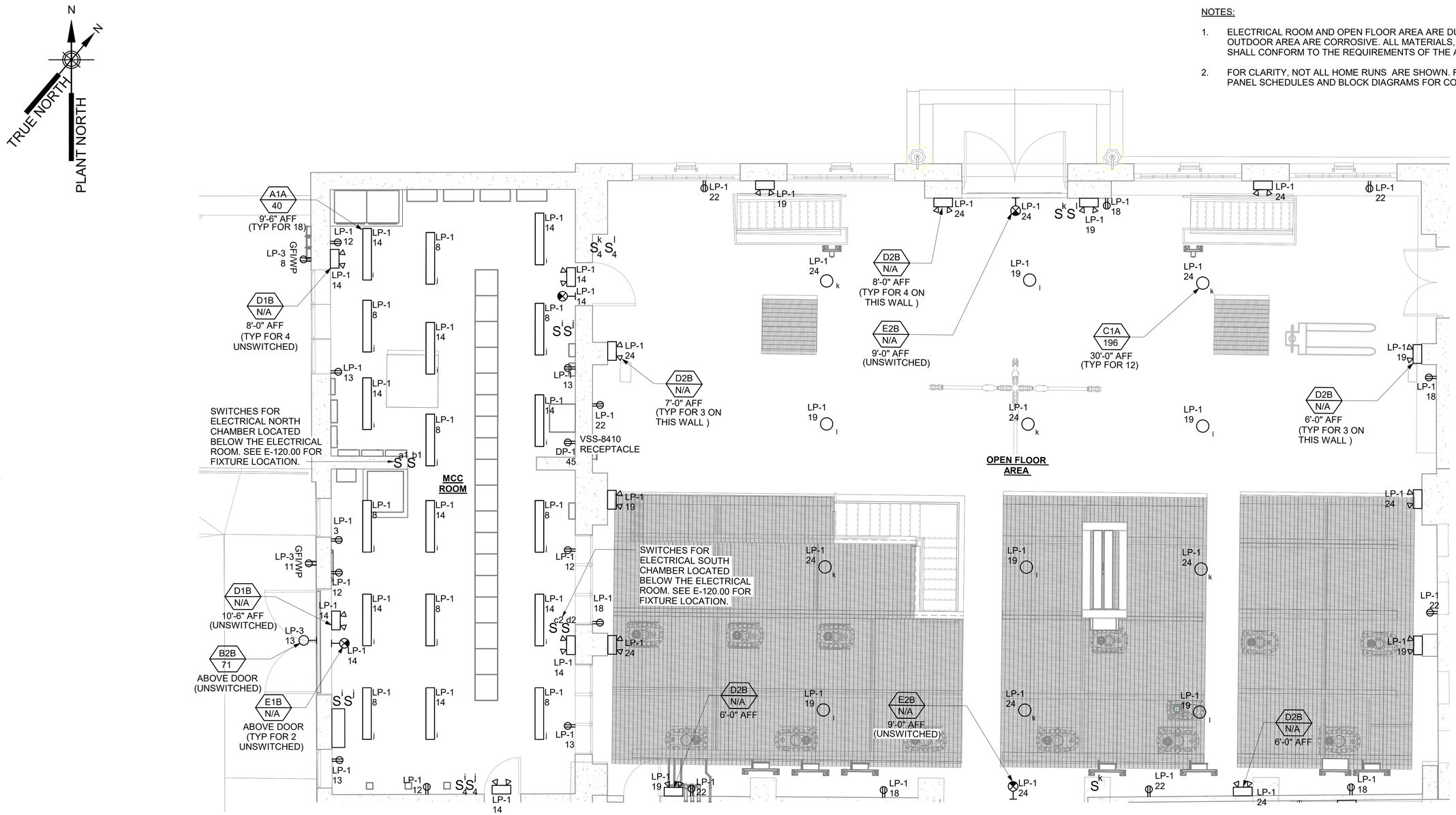
10/9/2026 1:58:55 PM

NOTES:

1. ELECTRICAL ROOM AND OPEN FLOOR AREA ARE DUSTY LOCATIONS, AND ALL OUTDOOR AREA ARE CORROSIVE. ALL MATERIALS, EQUIPMENT, INCIDENTALS, ETC. SHALL CONFORM TO THE REQUIREMENTS OF THE AREA'S CLASSIFICATION.
2. FOR CLARITY, NOT ALL HOME RUNS ARE SHOWN. REFER TO ONE LINE DIAGRAMS, PANEL SCHEDULES AND BLOCK DIAGRAMS FOR CONDUIT AND CABLE REQUIREMENT.



MCC ROOM AND OPEN FLOOR AREA LIGHTING PLAN

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

0 4 8 FT.
1/4"=1'-0"

BID SET

SUBMITTAL DATE: OCTOBER 2026

GRAPHIC SCALES CHECK BEFORE USE

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NO.	DATE	REVISIONS/DESCRIPTION	APPR'D.

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CHECKED BY: E. AMABA, P.E.
DESIGN LEAD: E. JAMES, P.E.
PROJECT MANAGER: AIMEE BOULET, P.E.

DRAWN BY: R. SAN JUAN

ELECSYS ENGINEERING GROUP

NYC Environmental Protection

ACCOUNTABLE MANAGER: JOHN GOULAS, P.E.
PORTFOLIO MANAGER: KEVIN ELLENWOOD, P.E.
EXECUTIVE DIRECTOR: NAYANKUMAR SHAH, P.E.

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CAPITAL PROJECT WP-269
RECONSTRUCTION OF
PAERDEGAT PUMPING STATION
CONTRACT PS-318
ELECTRICAL
GROUND FLOOR - LIGHTING PLAN SHEET 1

DATE: OCTOBER 2026
SCALE: AS INDICATED
SHEET NO: 227 OF 274
DRAWING NO. E-118.00

All inquiries regarding this drawing(s) or project should be made to NYC Environmental Protection, Bureau of Engineering Design and Construction.

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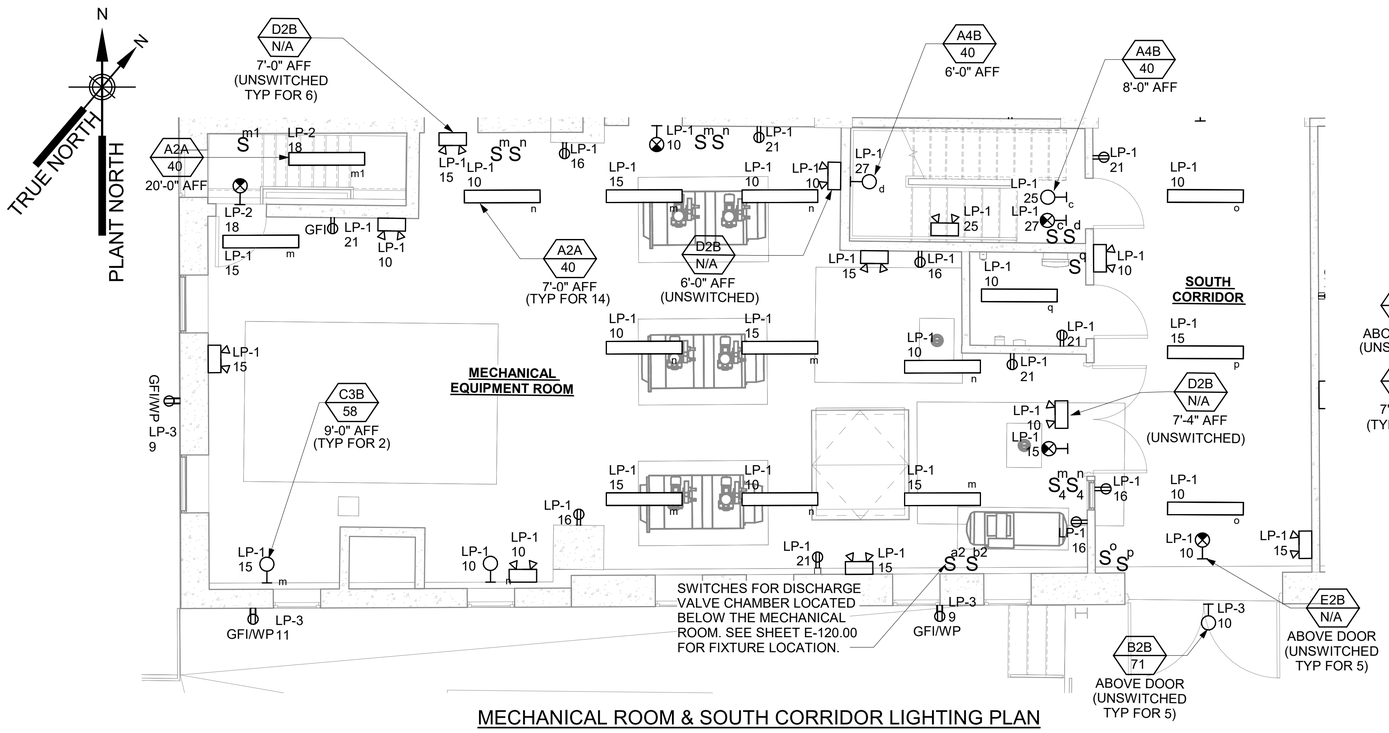
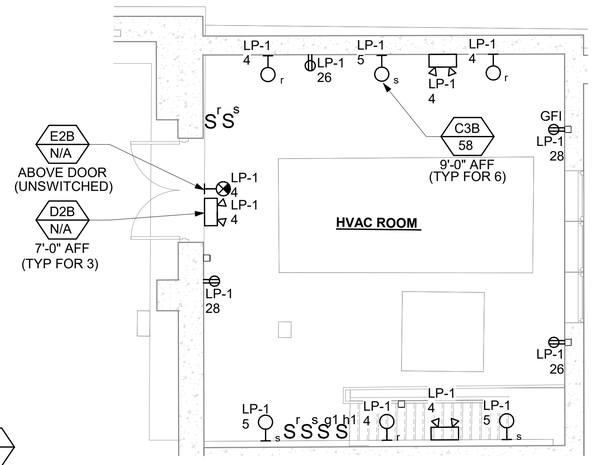
NOTES:

1. MECHANICAL ROOM AND SOUTH CORRIDOR ARE DUSTY LOCATIONS AND HVAC ROOM ARE WET AND CORROSIVE. UPPER WET WELL AREA, FAN ROOM, AND SCREENING CHAMBER ARE HAZARDOUS. ALL MATERIALS, EQUIPMENT, INCIDENTALS, ETC. SHALL CONFORM TO THE REQUIREMENTS OF THE AREA'S CLASSIFICATION.
2. FOR CLARITY, NOT ALL HOME RUNS ARE SHOWN. REFER TO ONE LINE DIAGRAMS, PANEL SCHEDULES AND BLOCK DIAGRAMS FOR CONDUIT AND CABLE REQUIREMENT.



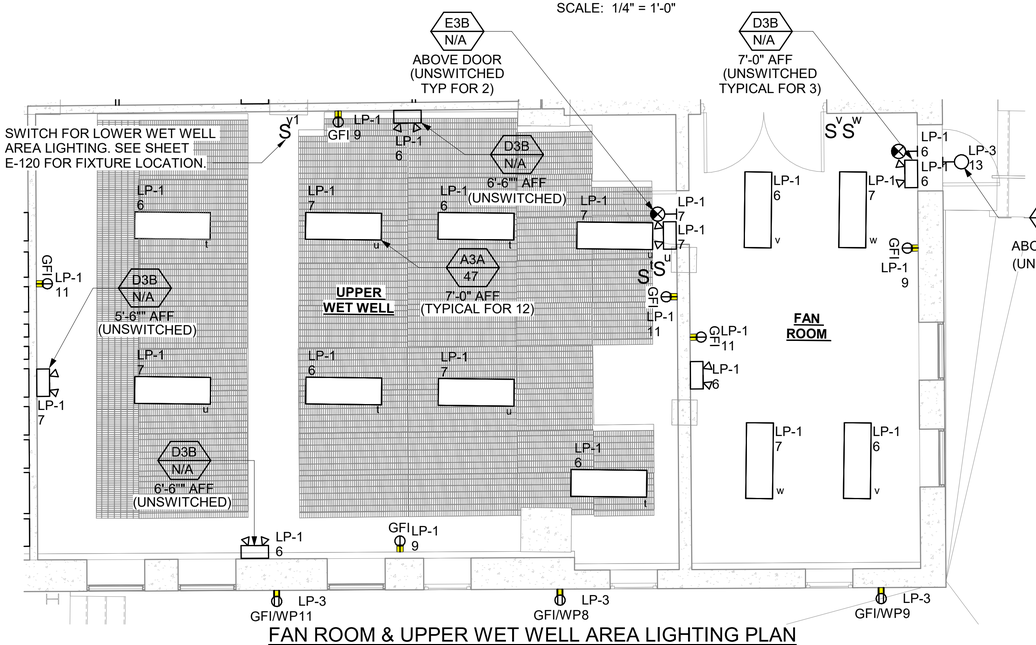
MECHANICAL ROOM & SOUTH CORRIDOR LIGHTING PLAN

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



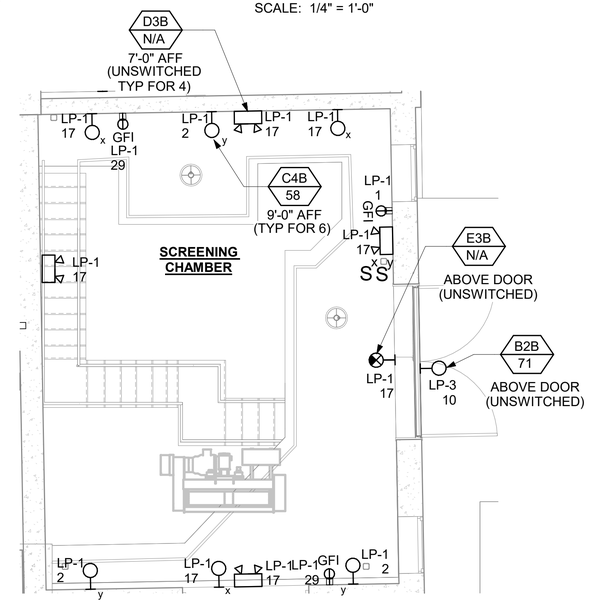
HVAC ROOM LIGHTING PLAN

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



FAN ROOM & UPPER WET WELL AREA LIGHTING PLAN

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



SCREENING CHAMBER LIGHTING PLAN

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

1/4"=1'-0" 0 4 8 FT.

BID SET

SUBMITTAL DATE: OCTOBER 2026

GRAPHIC SCALES CHECK BEFORE USE

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CHECKED BY: E. AMABA, P.E.
DESIGN LEAD: E. JAMES, P.E.
PROJECT MANAGER: AIMEE BOULET, P.E.

DRAWN BY: R. SAN JUAN

ELECSYS ENGINEERING GROUP

STATE OF NEW YORK ELDO JAMES 088309 LICENSED PROFESSIONAL ENGINEER

NYC Environmental Protection

ACCOUNTABLE MANAGER: JOHN GOULAS, P.E.
PORTFOLIO MANAGER: KEVIN ELLENWOOD, P.E.
EXECUTIVE DIRECTOR: NAYANKUMAR SHAH, P.E.

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CAPITAL PROJECT WP-269
RECONSTRUCTION OF
PAERDEGAT PUMPING STATION
CONTRACT PS-318
ELECTRICAL
GROUND FLOOR - LIGHTING PLAN SHEET 2

DATE: OCTOBER 2026
SCALE: AS INDICATED
SHEET NO: 228 OF 274
DRAWING NO. E-119.00

All inquiries regarding this drawing(s) or project should be made to NYC Environmental Protection, Bureau of Engineering Design and Construction.

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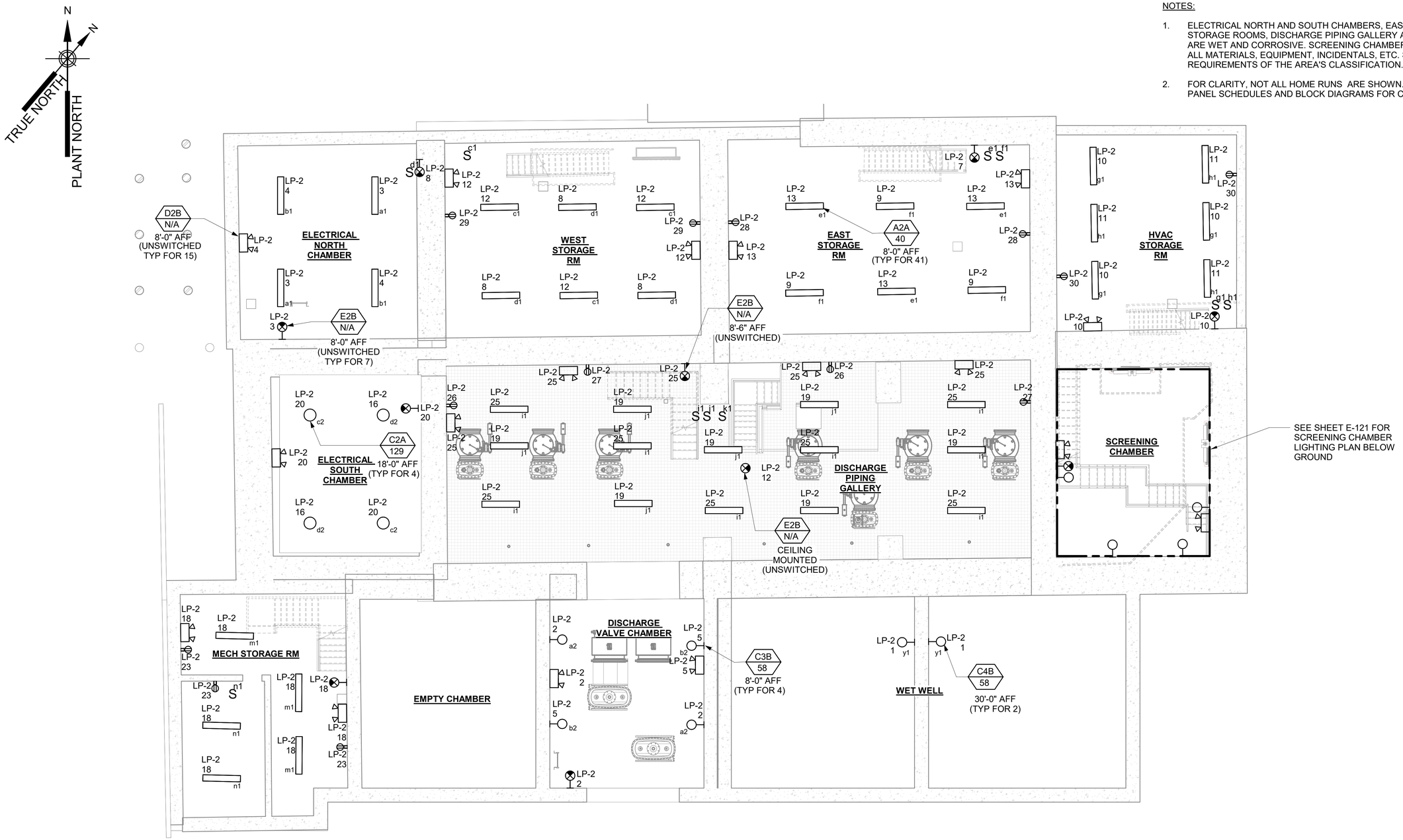
NOTES:

1. ELECTRICAL NORTH AND SOUTH CHAMBERS, EAST, WEST, HVAC AND MECHANICAL STORAGE ROOMS, DISCHARGE PIPING GALLERY AND DISCHARGE VALVE CHAMBER ARE WET AND CORROSIVE. SCREENING CHAMBER AND WET WELL ARE HAZARDOUS. ALL MATERIALS, EQUIPMENT, INCIDENTALS, ETC. SHALL CONFORM TO THE REQUIREMENTS OF THE AREA'S CLASSIFICATION.

2. FOR CLARITY, NOT ALL HOME RUNS ARE SHOWN. REFER TO ONE LINE DIAGRAMS, PANEL SCHEDULES AND BLOCK DIAGRAMS FOR CONDUIT AND CABLE REQUIREMENT.



FIRST LEVEL BELOW GROUND LIGHTING PLAN

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

3/16"=1'-0" 0 5 10 FT.

BID SET

SUBMITTAL DATE: OCTOBER 2026

GRAPHIC SCALES CHECK BEFORE USE

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NO.	DATE	REVISIONS/DESCRIPTION	APPR'D.

DESIGNED BY: E. JAMES, P.E.
DRAWN BY: R. SAN JUAN
CHECKED BY: E. AMABA, P.E.
DESIGN LEAD: E. JAMES, P.E.
PROJECT MANAGER: AIMEE BOULET, P.E.

ELECSYS ENGINEERING GROUP

STATE OF NEW YORK EDO JAMES 089309 LICENSED PROFESSIONAL ENGINEER

Environmental Protection

ACCOUNTABLE MANAGER: JOHN GOULAS, P.E.
PORTFOLIO MANAGER: KEVIN ELLENWOOD, P.E.
EXECUTIVE DIRECTOR: NAYANKUMAR SHAH, P.E.

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CAPITAL PROJECT WP-269
RECONSTRUCTION OF
PAERDEGAT PUMPING STATION
CONTRACT PS-318
ELECTRICAL
FIRST LEVEL BELOW GROUND - LIGHTING PLAN

DATE: OCTOBER 2026
SCALE: AS INDICATED
SHEET NO: 229 OF 274
DRAWING NO. E-120.00

All inquiries regarding this drawing(s) or project should be made to NYC Environmental Protection, Bureau of Engineering Design and Construction.

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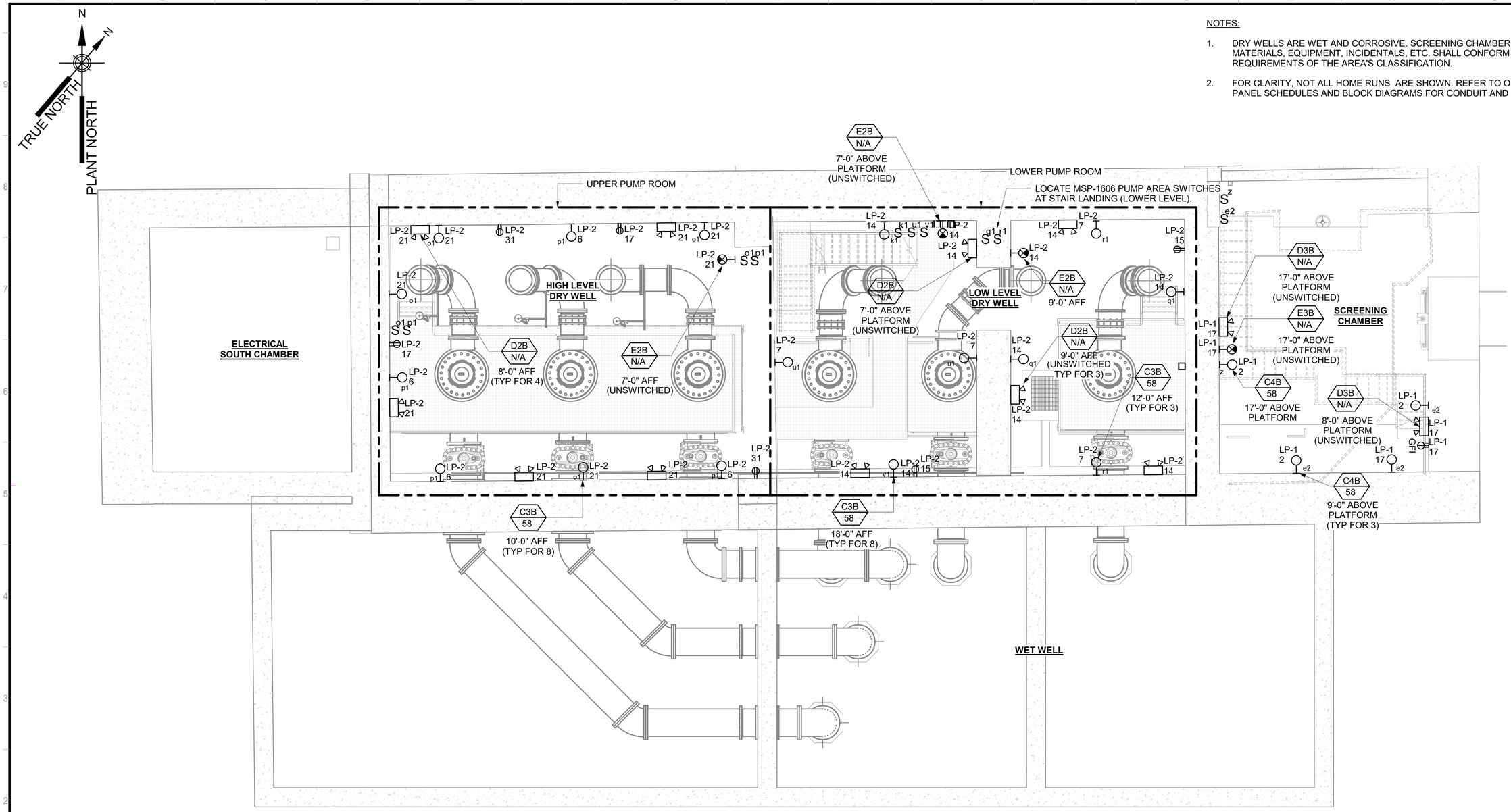
NOTES:

1. DRY WELLS ARE WET AND CORROSIVE. SCREENING CHAMBER IS HAZARDOUS. ALL MATERIALS, EQUIPMENT, INCIDENTALS, ETC. SHALL CONFORM TO THE REQUIREMENTS OF THE AREA'S CLASSIFICATION.
2. FOR CLARITY, NOT ALL HOME RUNS ARE SHOWN. REFER TO ONE LINE DIAGRAMS, PANEL SCHEDULES AND BLOCK DIAGRAMS FOR CONDUIT AND CABLE REQUIREMENT.



SECOND AND THIRD LEVEL BELOW GROUND LIGHTING PLAN

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

0 4 8 FT.
1/4"=1'-0"

BID SET

SUBMITTAL DATE: OCTOBER 2026

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DRAWN BY: R. SAN JUAN
CHECKED BY: E. AMABA, P.E.
DESIGN LEAD: E. JAMES, P.E.
PROJECT MANAGER: AIMEE BOULET, P.E.

ELECSYS ENGINEERING GROUP

STATE OF NEW YORK — EDO JAMES — 089309 — PROFESSIONAL ENGINEER

Environmental Protection

ACCOUNTABLE MANAGER: JOHN GOULAS, P.E.
PORTFOLIO MANAGER: KEVIN ELLENWOOD, P.E.
EXECUTIVE DIRECTOR: NAYANKUMAR SHAH, P.E.

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CAPITAL PROJECT WP-269
RECONSTRUCTION OF
PAERDEGAT PUMPING STATION
CONTRACT PS-318
ELECTRICAL
SECOND AND THIRD LEVEL BELOW GROUND - LIGHTING PLAN

DATE: OCTOBER 2026
SCALE: AS INDICATED
SHEET NO: 230 OF 274
DRAWING NO. E-121.00

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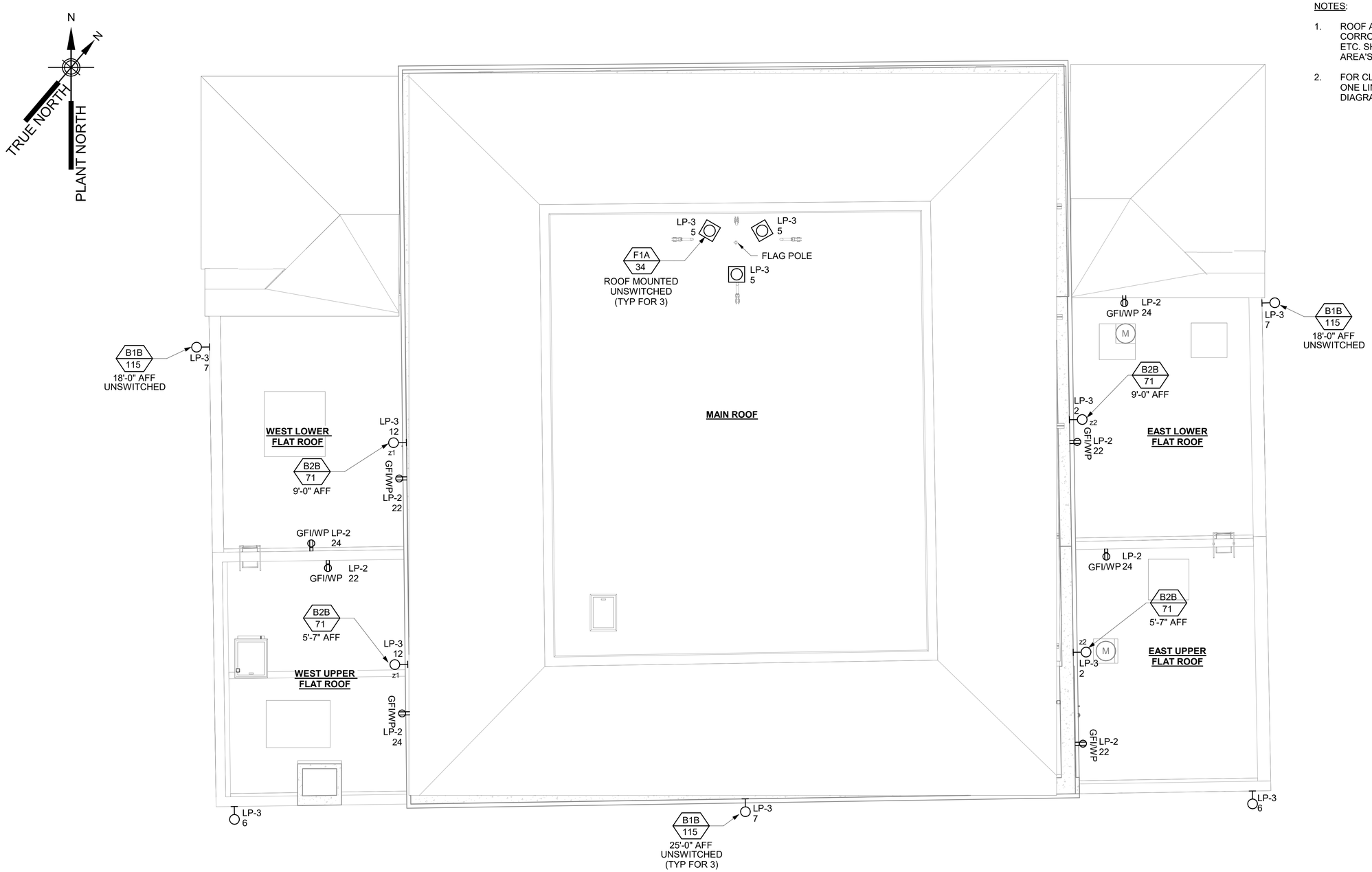

ROOF LIGHTING PLAN

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

NOTES:

1. ROOF AND ALL OUTDOOR AREAS ARE WET AND CORROSIVE.. ALL MATERIALS, EQUIPMENT, INCIDENTALS, ETC. SHALL CONFORM TO THE REQUIREMENTS OF THE AREA'S CLASSIFICATION.
2. FOR CLARITY, NOT ALL HOME RUNS ARE SHOWN. REFER TO ONE LINE DIAGRAMS, PANEL SCHEDULES AND BLOCK DIAGRAMS FOR CONDUIT AND CABLE REQUIREMENT.

3/16"=1'-0" 0 5 10 FT.

BID SET

SUBMITTAL DATE: OCTOBER 2026

GRAPHIC SCALES CHECK BEFORE USE

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NO.	DATE	REVISIONS/DESCRIPTION	APPR'D.

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DRAWN BY: R. SAN JUAN
CHECKED BY: E. JAMES, P.E.
DESIGN LEAD: E. JAMES, P.E.
PROJECT MANAGER: AIMEE BOULET, P.E.

ELECSYS ENGINEERING GROUP

STATE OF NEW YORK — DIEGO JAMES — 089309 — LICENSED PROFESSIONAL ENGINEER

NYC Environmental Protection

ACCOUNTABLE MANAGER: JOHN GOULAS, P.E.
PORTFOLIO MANAGER: KEVIN ELLENWOOD, P.E.
EXECUTIVE DIRECTOR: NAYANKUMAR SHAH, P.E.

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CAPITAL PROJECT WP-269
RECONSTRUCTION OF
PAERDEGAT PUMPING STATION
CONTRACT PS-318
ELECTRICAL
ROOF - LIGHTING PLAN

DATE: OCTOBER 2026
SCALE: AS INDICATED
SHEET NO: 231 OF 274
DRAWING NO. E-122.00

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Autodesk Docs://CI-AMER (USA) 60619010-PS-DES-S/PAER-E-MODEL_AECOM.rvt

10/9/2026 1:59:10 PM

PANEL NAME: DP-1

LOCATION: ELECTRICAL ROOM
SUPPLY FROM: TRANSFORMER
MOUNTING: SURFACE
ENCLOSURE: NEMA 12

VOLTS: 208/120
PHASES: 3
WIRES: 4

A.I.C. RATING: 65KAIC
MAINS TYPE: MCB
MAINS RATING: 600 A
MCB RATING: 600 A (LSIG)

CKT NO.	TRIP AMPS	DESCRIPTION OF LOAD	LOAD KVA	A	B	C	LOAD KVA	DESCRIPTION OF LOAD	TRIP AMPS	CKT NO.
1	20 A	BSCP-9120	500 VA	500 VA / 1000...			1000 VA	EMCS-1510	20 A	2
3	20 A	GMCP-8510	1000 VA		1000 VA / 108...					4
5	20 A	LAP-120	1000 VA			1000 VA / 108...	3188 VA	LP-3	100 A	6
7	35 A	EWH-1	5500 VA	2750 VA / 101...						8
9					2750 VA / 565...					10
11	20 A	SUMP PUMP SP-7 RECEPTACLE	1000 VA			1000 VA / 423...	14346 VA	LP-1	100 A	12
13	20 A	SUMP PUMP SP-5 RECEPTACLE	1000 VA	1000 VA / 447...						14
15	100 A	LP-2	11619 VA		3596 VA / 100...		1000 VA	SUMP PUMP SP-6 RECEPTACLE	20 A	16
17						4377 VA / 100...	1000 VA	SUMP PUMP SP-4 RECEPTACLE	20 A	18
19				3650 VA / 100...			1000 VA	SUMP PUMP SP-2 RECEPTACLE	20 A	20
21	20 A	SUMP PUMP SP-3 RECEPTACLE	1000 VA		1000 VA / 100...		1000 VA	RTU-9130	20 A	22
23	20 A	SUMP PUMP SP-1A & B RECEPTACLE	1000 VA			1000 VA / 500...	500 VA	ATC-1	20 A	24
25	20 A	ATC-2	500 VA	500 VA / 500 VA			500 VA	ATC-3	20 A	26
27	20 A	SCREENING CHAMBER MD	300 VA		300 VA / 900 VA		900 VA	UPPER WET WELL MD'S	20 A	28
29	20 A	SUMP PUMP SP-8 RECEPTACLE	1000 VA			1000 VA / 333...				30
31	20 A	LAP-140	1000 VA	1000 VA / 333...			1000 VA	GENERATOR AUXILARY PANEL	100 A	32
33					2000 VA / 333...					34
35	25 A	EWH-2	6000 VA			2000 VA / 500...	500 VA	LCP-7901	20 A	36
37				2000 VA / 500...			500 VA	LCP-7791	20 A	38
39	20 A	LCP-7401-C	500 VA		500 VA / 500 VA		500 VA	LCP-7792	20 A	40
41	20 A	LCP-7402-C	500 VA			500 VA / 500 VA	500 VA	LCP-7403-C	20 A	42
43	20 A	LIGHTING CONTROL PANEL	500 VA	500 VA / 500 VA			500 VA	LCP-7793	20 A	44
45	20 A	VSS-8410 RECEPTACLE	500 VA		500 VA / 500 VA		500 VA	LCP-7794	20 A	46
47	20 A	LCP-7796	500 VA			500 VA / 500 VA	500 VA	LCP-7795	20 A	48
49	20 A	LCP-7797	500 VA	500 VA / 500 VA			500 VA	LCP-7798	20 A	50
51	20 A	MSPCP-1600	500 VA		500 VA / 500 VA		500 VA	PMCS-9110	20 A	52
53	20 A	AIT-141,151,142,152	500 VA			500 VA / 500 VA	500 VA	FIT-1610H	20 A	54
55	20 A	AIT-121,131,122,132	500 VA	500 VA / 500 VA			500 VA	FIT-1610L	20 A	56
57	20 A	SPARE	0 VA		0 VA / 0 VA		0 VA	SPARE	20 A	58
59	20 A	SPARE	0 VA			0 VA / 0 VA	0 VA	SPARE	20 A	60
		TOTAL LOAD:		23217 VA	23576 VA	20999 VA				
		TOTAL AMPS:		196 A	199 A	175 A				

LEGEND:

PANEL NAME: LP-1

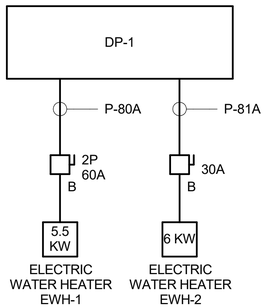
LOCATION: ELECTRICAL ROOM
SUPPLY FROM: DP-1
MOUNTING: SURFACE
ENCLOSURE: NEMA 12

VOLTS: 208/120
PHASES: 3
WIRES: 4

A.I.C. RATING: 22KAIC
MAINS TYPE: MCB
MAINS RATING: 100 A
MCB RATING: 100 A

CKT NO.	TRIP AMPS	DESCRIPTION OF LOAD	LOAD KVA	A	B	C	LOAD KVA	DESCRIPTION OF LOAD	TRIP AMPS	CKT NO.
1	20 A	RECEPTACLES - SCREENING CHAMBER	180 VA	180 VA / 382 VA			382 VA	LIGHTING - SCREENING CHAMBER	20 A	2
3	20 A	RTM-1 & RTM-2 POWER (DCAS DEVICES)	0 VA		0 VA / 404 VA		404 VA	LIGHTING - HVAC ROOM	20 A	4
5	20 A	LIGHTING - HVAC ROOM	216 VA			216 VA / 612 VA	612 VA	LIGHTING - FAN ROOM / UPPER WET WELL	20 A	6
7	20 A	LIGHTING - FAN ROOM / UPPER WET WELL	520 VA	520 VA / 576 VA			576 VA	LIGHTING - MCC ROOM	20 A	8
9	20 A	RECEP- FAN ROOM / UPPER WET WELL	540 VA		540 VA / 901 VA		901 VA	LTG - MECH ROOM / SOUTH CORRIDOR	20 A	10
11	20 A	RECEP - FAN ROOM / UPPER WET WELL	540 VA			540 VA / 0 VA	0 VA	RECEPTACLES - MCC ROOM	20 A	12
13	20 A	RECEPTACLES - MCC ROOM	0 VA	0 VA / 894 VA			894 VA	LIGHTING - MCC ROOM	20 A	14
15	20 A	LTG - MECH ROOM / SOUTH CORRIDOR	728 VA		728 VA / 0 VA		0 VA	RECEP - MECH ROOM / SOUTH CORRIDOR	20 A	16
17	20 A	LIGHTING - SCREENING CHAMBER	819 VA			819 VA / 0 VA	0 VA	RECEPTACLES - OPEN FLOOR AREA	20 A	18
19	20 A	LIGHTING - OPEN FLOOR AREA	1482 VA	1482 VA / 180...			180 VA	RECEP - UPPER/LOWER MEZZANINE	20 A	20
21	20 A	RECEP - MECH ROOM / SOUTH CORRIDOR	180 VA		180 VA / 0 VA		0 VA	RECEPTACLES - OPEN FLOOR AREA	20 A	22
23	20 A	RECEP - UPPER/LOWER MEZZANINE	360 VA			360 VA / 1576...	1576 VA	LIGHTING - OPEN FLOOR AREA	20 A	24
25	20 A	LIGHTING - UPPER/LOWER MEZZANINE	1481 VA	1481 VA / 0 VA			0 VA	RECEPTACLES - HVAC ROOM	20 A	26
27	20 A	LIGHTING - UPPER/LOWER MEZZANINE	1502 VA		1502 VA / 0 VA		0 VA	RECEPTACLES - HVAC ROOM	20 A	28
29	20 A	RECEPTACLES - SCREENING CHAMBER	360 VA			360 VA / 0 VA	0 VA	SPARE	20 A	30
31	20 A	SPARE	0 VA	0 VA / 0 VA			0 VA	SPARE	20 A	32
33	20 A	SPARE	0 VA		0 VA / 0 VA		0 VA	SPARE	20 A	34
35	20 A	SPARE	0 VA			0 VA / 0 VA	0 VA	SPARE	20 A	36
37	20 A	SPARE	0 VA	0 VA / 0 VA			0 VA	SPARE	20 A	38
39	20 A	SPARE	0 VA		0 VA / 0 VA		0 VA	SPARE	20 A	40
41	20 A	SPARE	0 VA			0 VA / 0 VA	0 VA	SPARE	20 A	42
43	--	BLANK	0 VA	0 VA / 0 VA			0 VA	BLANK	--	44
45	--	BLANK	0 VA		0 VA / 0 VA		0 VA	BLANK	--	46
47	--	BLANK	0 VA			0 VA / 0 VA	0 VA	BLANK	--	48
49	--	BLANK	0 VA	0 VA / 0 VA			0 VA	BLANK	--	50
51	--	BLANK	0 VA		0 VA / 0 VA		0 VA	BLANK	--	52
53	--	BLANK	0 VA			0 VA / 0 VA	0 VA	BLANK	--	54
55	--	BLANK	0 VA	0 VA / 0 VA			0 VA	BLANK	--	56
57	--	BLANK	0 VA		0 VA / 0 VA		0 VA	BLANK	--	58
59	--	BLANK	0 VA			0 VA / 0 VA	0 VA	BLANK	--	60
		TOTAL LOAD:		5656 VA	4239 VA	4472 VA				
		TOTAL AMPS:		47 A	35 A	38 A				

LEGEND:



NOTE:

1. CONTRACTOR SHALL PROVIDE A CONDUIT SYSTEM FOR ALL EQUIPMENT BEING FED FROM LIGHTING PANELBOARD, REGARDLESS IF CONDUIT AND CABLE ARE SHOWN IN CONDUIT AND CABLE SCHEDULE. FOR ALL EQUIPMENT SHOWN ON PANEL SCHEDULE AS BEING FED FROM 1-POLE OR 2-POLE BREAKER, CONTRACTOR SHALL PROVIDE A MINIMUM OF 3/4" CONDUIT SYSTEM WITH MINIMUM 3#12 CABLES FROM PANELBOARD TO EQUIPMENT, UNLESS OTHERWISE INDICATED. FOR ALL EQUIPMENT SHOWN ON PANELBOARD SCHEDULE AS BEING FED FROM A 3-POLE BREAKER, CONTRACTOR SHALL PROVIDE A MINIMUM OF 3/4" CONDUIT SYSTEM WITH MINIMUM 4#12 CABLES FROM PANELBOARD TO EQUIPMENT, UNLESS OTHERWISE INDICATED. CONTRACTOR SHALL ACCOUNT FOR VOLTAGE DROP WHEN PROVIDING CIRCUITS WHICH ARE NOT EXPLICITLY LISTED IN THE CONDUIT AND CABLE SCHEDULE. MAXIMUM VOLTAGE DROP SHALL BE 3 PERCENT. CONTRACTOR SHOULD ALSO ACCOUNT FOR ANY CORRESPONDING INCREASES IN CONDUIT AND CABLE SIZE AND PROVIDE CONDUIT AND CABLE SYSTEMS MEETING REQUIREMENTS OF NEC.

BID SET

SUBMITTAL DATE: OCTOBER 2026

GRAPHIC SCALES CHECK BEFORE USE

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NO.	DATE	REVISIONS/DESCRIPTION	APPR'D.

DESIGNED BY: E. JAMES, P.E.
DRAWN BY: R. SAN JUAN
CHECKED BY: E. AMABA, P.E.
DESIGN LEAD: E. JAMES, P.E.
PROJECT MANAGER: AIMEE BOULET, P.E.

ELECSYS ENGINEERING GROUP

STATE OF NEW YORK — DEO JAMES — 088309 — PROFESSIONAL ENGINEER

Environmental Protection

ACCOUNTABLE MANAGER: JOHN GOULAS, P.E.
PORTFOLIO MANAGER: KEVIN ELLENWOOD, P.E.
EXECUTIVE DIRECTOR: NAYANKUMAR SHAH, P.E.

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CAPITAL PROJECT WP-269
RECONSTRUCTION OF
PAERDEGAT PUMPING STATION
CONTRACT PS-318
ELECTRICAL
PANELBOARD SCHEDULE SHEET 1

DATE: OCTOBER 2026
SCALE: AS INDICATED
SHEET NO: 232 OF 274
DRAWING NO. E-123.00

All inquiries regarding this drawing(s) or project should be made to NYC Environmental Protection, Bureau of Engineering Design and Construction.

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PANEL NAME: LP-2

LOCATION: ELECTRICAL ROOM
SUPPLY FROM: DP-1
MOUNTING: SURFACE
ENCLOSURE: NEMA 12

VOLTS: 208/120
PHASES: 3
WIRES: 4

A.I.C. RATING: 22KAIC
MAINS TYPE: MCB
MAINS RATING: 100 A
MCB RATING: 100 A

CKT NO.	TRIP AMPS	DESCRIPTION OF LOAD	LOAD KVA	A	B	C	LOAD KVA	DESCRIPTION OF LOAD	TRIP AMPS	CKT NO.
1	20 A	LIGHTING - LOWER WET WELL	94 VA	94 VA / 150 VA			150 VA	LIGHTING - DISCHARGE VALVE CHAMBER	20 A	2
3	20 A	LIGHTING - ELEC NORTH CHAMBER	137 VA		137 VA / 173 VA		173 VA	LIGHTING - ELEC NORTH CHAMBER	20 A	4
5	20 A	LIGHTING - DISCHARGE VALVE CHAMBER	141 VA			141 VA / 188 VA	188 VA	LIGHTING - 2ND FLOOR BELOW GRADE	20 A	6
7	20 A	LIGHTING - 2ND FLOOR BELOW GRADE	188 VA	188 VA / 201 VA			201 VA	LIGHTING - WEST STORAGE RM	20 A	8
9	20 A	LIGHTING - EAST STORAGE RM	192 VA		192 VA / 246 VA		246 VA	LIGHTING - HVAC STORAGE RM	20 A	10
11	20 A	LIGHTING - HVAC STORAGE RM	192 VA			192 VA / 283 VA	283 VA	LIGHTING - WEST STORAGE RM	20 A	12
13	20 A	LIGHTING - EAST STORAGE RM	292 VA	292 VA / 441 VA			441 VA	LIGHTING - 2ND FLOOR BELOW GRADE	20 A	14
15	20 A	RECEP - 2ND FLOOR BELOW GRADE	180 VA		180 VA / 400 VA		400 VA	LIGHTING - ELEC SOUTH CHAMBER	20 A	16
17	20 A	RECEP - 2ND FLOOR BELOW GRADE	360 VA			360 VA / 529 VA	529 VA	LIGHTING - MECH STORAGE RM	20 A	18
19	20 A	LIGHTING - PIPING GALLERY	448 VA	448 VA / 456 VA			456 VA	LIGHTING - ELEC SOUTH CHAMBER	20 A	20
21	20 A	LIGHTING - 2ND FLOOR BELOW GRADE	432 VA		432 VA / 1920...		1920 VA	EXTERIOR RECEPTACLE - ROOF	20 A	22
23	20 A	RECEPTACLES - MECH STORAGE RM	540 VA			540 VA / 720 VA	720 VA	EXTERIOR RECEPTACLE - ROOF	20 A	24
25	20 A	LIGHTING - HVAC STORAGE RM	638 VA	638 VA / 360 VA			360 VA	RECEPTACLES - PIPING GALLERY	20 A	26
27	20 A	RECEPTACLES - PIPING GALLERY	360 VA		360 VA / 360 VA		360 VA	RECEPTACLES - EAST STORAGE RM	20 A	28
29	20 A	RECEPTACLES - WEST STORAGE RM	360 VA			360 VA / 360 VA	360 VA	RECEPTACLES - HVAC STORAGE RM	20 A	30
31	20 A	RECEP - 2ND FLOOR BELOW GRADE	360 VA	360 VA / 0 VA			0 VA	SPARE	20 A	32
33	--	BLANK	0 VA		0 VA / 0 VA		0 VA	SPARE	20 A	34
35	20 A	SPARE	0 VA			0 VA / 0 VA	0 VA	SPARE	20 A	36
37	20 A	SPARE	0 VA	0 VA / 0 VA			0 VA	SPARE	20 A	38
39	20 A	SPARE	0 VA		0 VA / 0 VA		0 VA	SPARE	20 A	40
41	20 A	SPARE	0 VA			0 VA / 0 VA	0 VA	SPARE	20 A	42
43	--	BLANK	0 VA	0 VA / 0 VA			0 VA	BLANK	--	44
45	--	BLANK	0 VA		0 VA / 0 VA		0 VA	BLANK	--	46
47	--	BLANK	0 VA			0 VA / 0 VA	0 VA	BLANK	--	48
49	--	BLANK	0 VA	0 VA / 0 VA			0 VA	BLANK	--	50
51	--	BLANK	0 VA		0 VA / 0 VA		0 VA	BLANK	--	52
53	--	BLANK	0 VA			0 VA / 0 VA	0 VA	BLANK	--	54
55	--	BLANK	0 VA	0 VA / 0 VA			0 VA	BLANK	--	56
57	--	BLANK	0 VA		0 VA / 0 VA		0 VA	BLANK	--	58
59	--	BLANK	0 VA			0 VA / 0 VA	0 VA	BLANK	--	60
		TOTAL LOAD:		3596 VA	4377 VA	3650 VA				
		TOTAL AMPS:		30 A	37 A	30 A				

LEGEND:

PANEL NAME: LP-3

LOCATION: ELECTRICAL ROOM
SUPPLY FROM: DP-1
MOUNTING: SURFACE
ENCLOSURE: NEMA 12

VOLTS: 208/120
PHASES: 3
WIRES: 4

A.I.C. RATING: 22KAIC
MAINS TYPE: MCB
MAINS RATING: 100 A
MCB RATING: 100 A

CKT NO.	TRIP AMPS	DESCRIPTION OF LOAD	LOAD KVA	A	B	C	LOAD KVA	DESCRIPTION OF LOAD	TRIP AMPS	CKT NO.
1	20 A	EXTERIOR LTG - DEP STATION ID SIGN	100 VA	100 VA / 142 VA			142 VA	EXTERIOR LIGHTING	20 A	2
3	20 A	EXTERIOR LIGHTING - ANTIQUE	200 VA		200 VA / 200 VA		200 VA	EXTERIOR LIGHTING - ANTIQUE	20 A	4
5	20 A	EXTERIOR LIGHTING - FLAG POLE	105 VA			105 VA / 230 VA	230 VA	EXTERIOR LIGHTING	20 A	6
7	20 A	EXTERIOR LIGHTING	345 VA	345 VA / 360 VA			360 VA	EXTERIOR RECEPTACLE	20 A	8
9	20 A	EXTERIOR RECEPTACLE	540 VA		540 VA / 142 VA		142 VA	EXTERIOR LIGHTING	20 A	10
11	20 A	EXTERIOR RECEPTACLE	540 VA			540 VA / 142 VA	142 VA	EXTERIOR LIGHTING	20 A	12
13	20 A	EXTERIOR LIGHTING	142 VA	142 VA / 0 VA			0 VA	SPARE	20 A	14
15	20 A	SPARE	0 VA		0 VA / 0 VA		0 VA	SPARE	20 A	16
17	20 A	SPARE	0 VA			0 VA / 0 VA	0 VA	SPARE	20 A	18
19	20 A	SPARE	0 VA	0 VA / 0 VA			0 VA	SPARE	20 A	20
21	20 A	SPARE	0 VA		0 VA / 0 VA		0 VA	SPARE	20 A	22
23	--	BLANK	0 VA			0 VA / 0 VA	0 VA	BLANK	--	24
25	--	BLANK	0 VA	0 VA / 0 VA			0 VA	BLANK	--	26
27	--	BLANK	0 VA		0 VA / 0 VA		0 VA	BLANK	--	28
29	--	BLANK	0 VA			0 VA / 0 VA	0 VA	BLANK	--	30
		TOTAL LOAD:		1089 VA	1082 VA	1017 VA				
		TOTAL AMPS:		9 A	9 A	8 A				

LEGEND:

NOTE:

1. CONTRACTOR SHALL PROVIDE A CONDUIT SYSTEM FOR ALL EQUIPMENT BEING FED FROM LIGHTING PANELBOARD, REGARDLESS IF CONDUIT AND CABLE ARE SHOWN IN CONDUIT AND CABLE SCHEDULE. FOR ALL EQUIPMENT SHOWN ON PANEL SCHEDULE AS BEING FED FROM 1-POLE OR 2-POLE BREAKER, CONTRACTOR SHALL PROVIDE A MINIMUM OF 3/4" CONDUIT SYSTEM WITH MINIMUM 3#12 CABLES FROM PANELBOARD TO EQUIPMENT, UNLESS OTHERWISE INDICATED. FOR ALL EQUIPMENT SHOWN ON PANELBOARD SCHEDULE AS BEING FED FROM A 3-POLE BREAKER, CONTRACTOR SHALL PROVIDE A MINIMUM OF 3/4" CONDUIT SYSTEM WITH MINIMUM 4#12 CABLES FROM PANELBOARD TO EQUIPMENT, UNLESS OTHERWISE INDICATED. CONTRACTOR SHALL ACCOUNT FOR VOLTAGE DROP WHEN PROVIDING CIRCUITS WHICH ARE NOT EXPLICITLY LISTED IN THE CONDUIT AND CABLE SCHEDULE. MAXIMUM VOLTAGE DROP SHALL BE 3 PERCENT. CONTRACTOR SHOULD ALSO ACCOUNT FOR ANY CORRESPONDING INCREASES IN CONDUIT AND CABLE SIZE AND PROVIDE CONDUIT AND CABLE SYSTEMS MEETING REQUIREMENTS OF NEC.

BID SET

SUBMITTAL DATE: OCTOBER 2026

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DRAWN BY: R. SAN JUAN
CHECKED BY: E. AMABA, P.E.
DESIGN LEAD: E. JAMES, P.E.
PROJECT MANAGER: AIMEE BOULET, P.E.

ELECSYS ENGINEERING GROUP

STATE OF NEW YORK EDO JAMES 089309 PROFESSIONAL ENGINEER

Environmental Protection

ACCOUNTABLE MANAGER: JOHN GOULAS, P.E.
PORTFOLIO MANAGER: KEVIN ELLENWOOD, P.E.
EXECUTIVE DIRECTOR: NAYANKUMAR SHAH, P.E.

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CAPITAL PROJECT WP-269
RECONSTRUCTION OF
PAERDEGAT PUMPING STATION
CONTRACT PS-318
ELECTRICAL
PANELBOARD SCHEDULE SHEET 2

DATE: OCTOBER 2026
SCALE: AS INDICATED
SHEET NO: 233 OF 274
DRAWING NO. E-124.00

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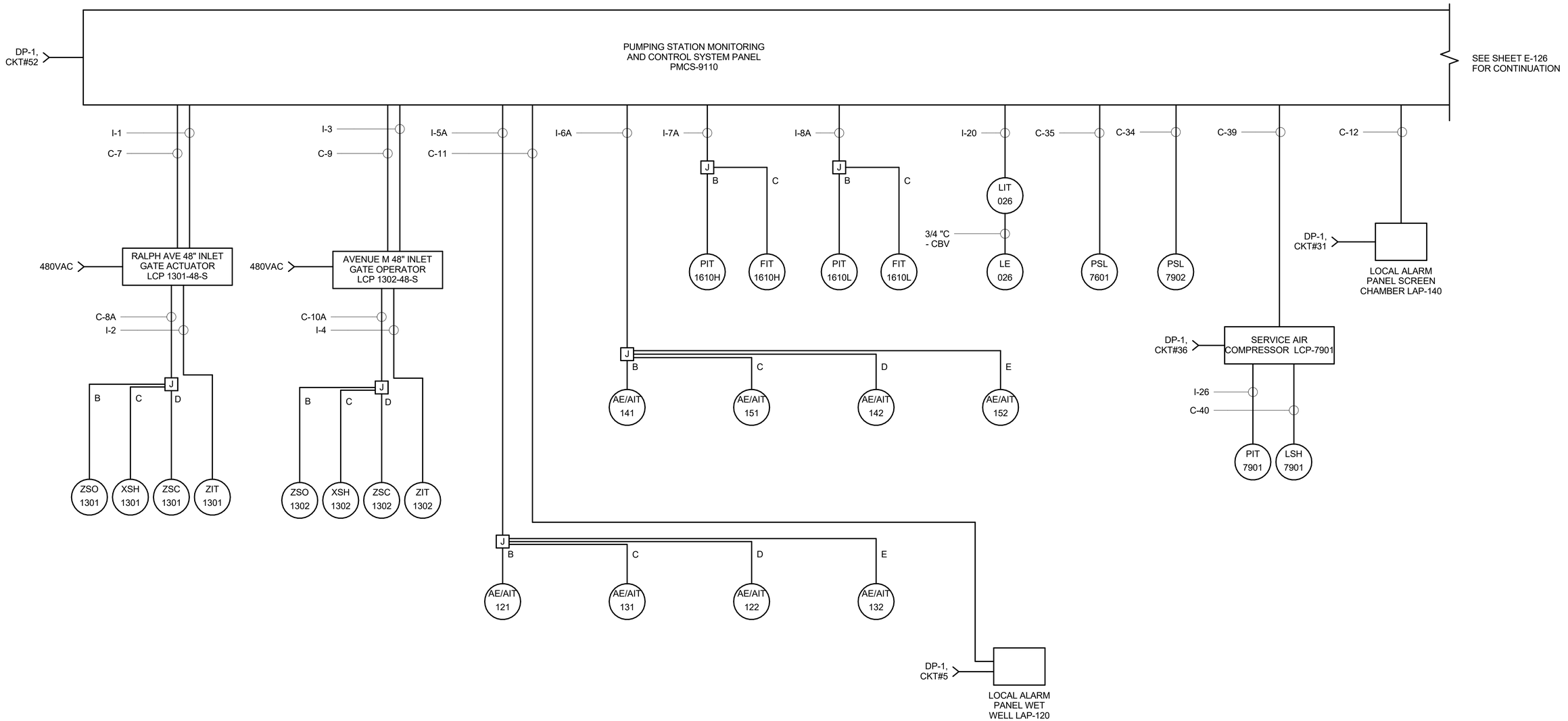

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ELECSYS ENGINEERING GROUP

STATE OF NEW YORK EDDO JAMES 086309 PROFESSIONAL ENGINEER

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CAPITAL PROJECT WP-269
RECONSTRUCTION OF
PAERDEGAT PUMPING STATION
CONTRACT PS-318
ELECTRICAL
BLOCK WIRING DIAGRAM SHEET 1

DATE: OCTOBER 2026
SCALE: AS INDICATED
SHEET NO: 234 OF 274
DRAWING NO. E-125.00

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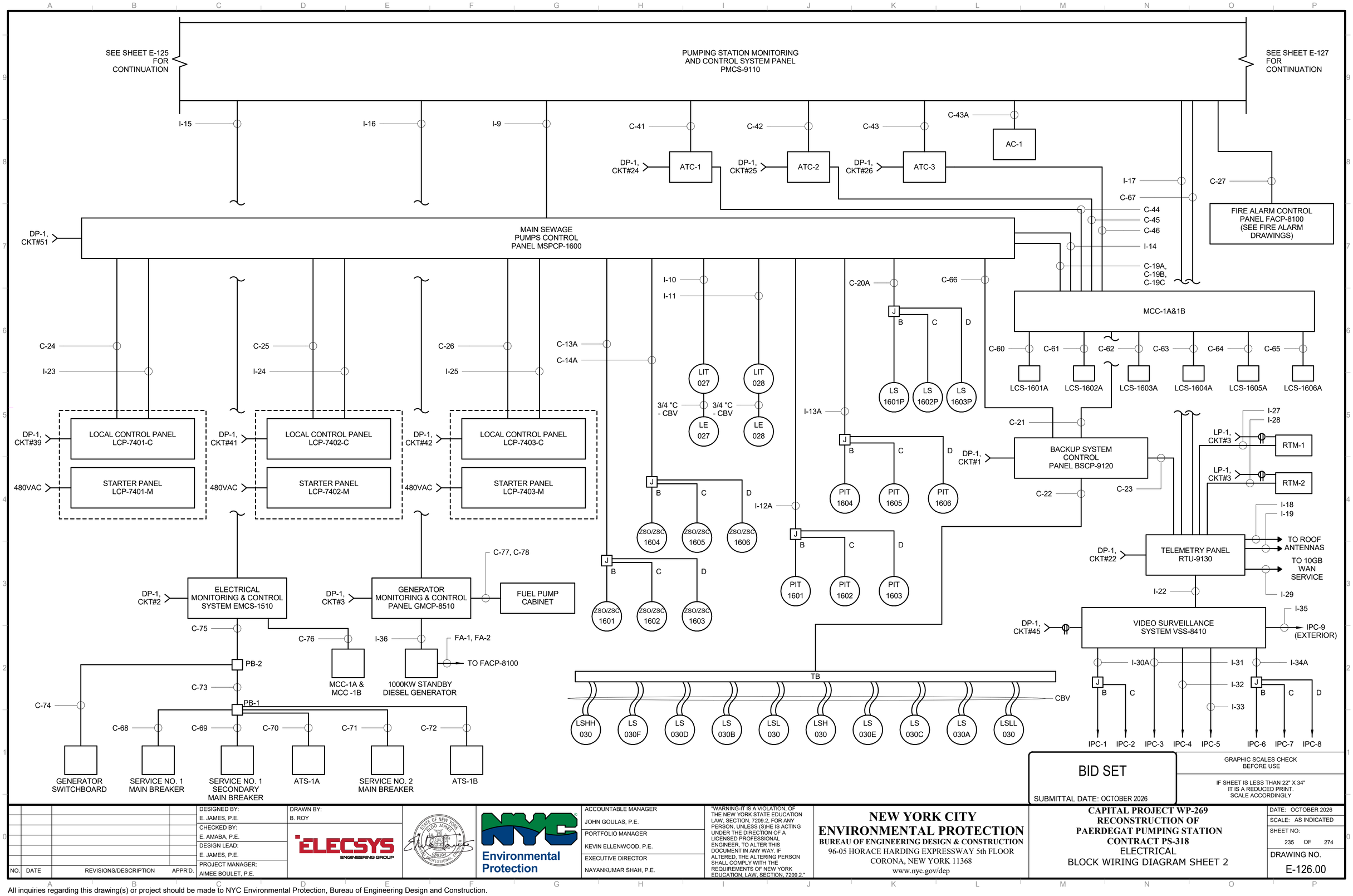

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CAPITAL PROJECT WP-269
RECONSTRUCTION OF PAERDEGAT PUMPING STATION
CONTRACT PS-318
ELECTRICAL
BLOCK WIRING DIAGRAM SHEET 2

DATE: OCTOBER 2026
SCALE: AS INDICATED
SHEET NO: 235 OF 274
DRAWING NO. E-126.00

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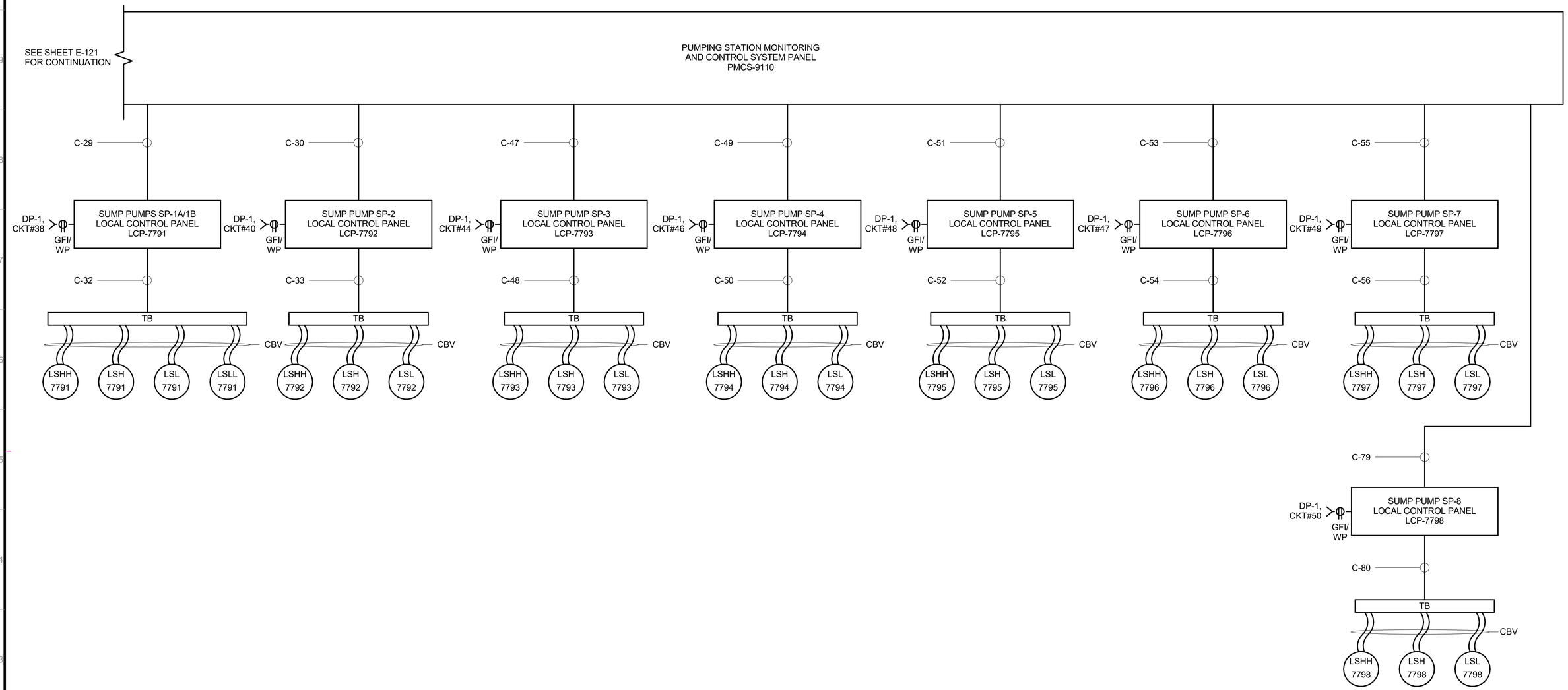

NOTES:

1. LOCATE RECEPTACLES FOR EACH SUMP PUMP LCP IN CLOSE PROXIMITY TO EACH LCP.

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SUBMITTAL DATE: OCTOBER 2026

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STATE OF NEW YORK ELDO JAMES 086309 PROFESSIONAL ENGINEER

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CAPITAL PROJECT WP-269
RECONSTRUCTION OF
PAERDEGAT PUMPING STATION
CONTRACT PS-318
ELECTRICAL
BLOCK WIRING DIAGRAM SHEET 3

DATE: OCTOBER 2026
SCALE: AS INDICATED
SHEET NO: 236 OF 274
DRAWING NO. E-127.00

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CONDUIT AND CABLE SCHEDULE

CONDUIT NO	CONDUIT SIZE	CABLE QTY	CABLE SIZE	FROM	TO	REMARKS
H-1A	5"	3-1/C 1-1/C	4/0 4	PROPERTY LINE MANHOLE NO. 2	CON EDISON PAD-MOUNT TRANSFORMER	POWER (5KV) GROUND
H-1B	5"	-	-	PROPERTY LINE MANHOLE NO. 2	CON EDISON PAD-MOUNT TRANSFORMER	SPARE CONDUIT
P-1A	4"	4-1/C 1-1/C	500KCMIL 4/0	EXISTING PROPERTY LINE MANHOLE NO. 1	SERVICE NO. 1 MAIN BREAKER	POWER & NEUTRAL GROUND
P-1B	4"	4-1/C 1-1/C	500KCMIL 4/0	EXISTING PROPERTY LINE MANHOLE NO. 1	SERVICE NO. 1 MAIN BREAKER	POWER & NEUTRAL GROUND
P-1C	4"	4-1/C 1-1/C	500KCMIL 4/0	EXISTING PROPERTY LINE MANHOLE NO. 1	SERVICE NO. 1 MAIN BREAKER	POWER & NEUTRAL GROUND
P-1D	4"	4-1/C 1-1/C	500KCMIL 4/0	EXISTING PROPERTY LINE MANHOLE NO. 1	SERVICE NO. 1 MAIN BREAKER	POWER & NEUTRAL GROUND
P-1E	4"	4-1/C 1-1/C	500KCMIL 4/0	EXISTING PROPERTY LINE MANHOLE NO. 1	SERVICE NO. 1 MAIN BREAKER	POWER & NEUTRAL GROUND
P-1F	4"	4-1/C 1-1/C	500KCMIL 4/0	EXISTING PROPERTY LINE MANHOLE NO. 1	SERVICE NO. 1 MAIN BREAKER	POWER & NEUTRAL GROUND
P-1G	4"	4-1/C 1-1/C	500KCMIL 4/0	EXISTING PROPERTY LINE MANHOLE NO. 1	SERVICE NO. 1 MAIN BREAKER	POWER & NEUTRAL GROUND
P-1H	4"	4-1/C 1-1/C	500KCMIL 4/0	EXISTING PROPERTY LINE MANHOLE NO. 1	SERVICE NO. 1 MAIN BREAKER	POWER & NEUTRAL GROUND
P-1I	4"	4-1/C 1-1/C	500KCMIL 4/0	EXISTING PROPERTY LINE MANHOLE NO. 1	SERVICE NO. 1 MAIN BREAKER	POWER & NEUTRAL GROUND
P-1J	4"	4-1/C 1-1/C	500KCMIL 4/0	EXISTING PROPERTY LINE MANHOLE NO. 1	SERVICE NO. 1 MAIN BREAKER	POWER & NEUTRAL GROUND
P-1K	4"	4-1/C 1-1/C	500KCMIL 4/0	EXISTING PROPERTY LINE MANHOLE NO. 1	SERVICE NO. 1 MAIN BREAKER	POWER & NEUTRAL GROUND
P-1L	4"	4-1/C 1-1/C	500KCMIL 4/0	EXISTING PROPERTY LINE MANHOLE NO. 1	SERVICE NO. 1 MAIN BREAKER	POWER & NEUTRAL GROUND
P-1M	4"	-	-	EXISTING PROPERTY LINE MANHOLE NO. 1	SERVICE NO. 1 MAIN BREAKER	SPARE CONDUIT
P-1N	4"	-	-	EXISTING PROPERTY LINE MANHOLE NO. 1	SERVICE NO. 1 MAIN BREAKER	SPARE CONDUIT
P-1O	4"	-	-	EXISTING PROPERTY LINE MANHOLE NO. 1	SERVICE NO. 1 MAIN BREAKER	SPARE CONDUIT
P-2A	4"	3-1/C 1-1/C	500KCMIL 4/0	SERVICE NO. 1 SECONDARY MAIN BREAKER	ATS-1A	POWER GROUND
P-2B	4"	3-1/C 1-1/C	500KCMIL 4/0	SERVICE NO. 1 SECONDARY MAIN BREAKER	ATS-1A	POWER GROUND
P-2C	4"	3-1/C 1-1/C	500KCMIL 4/0	SERVICE NO. 1 SECONDARY MAIN BREAKER	ATS-1A	POWER GROUND
P-2D	4"	3-1/C 1-1/C	500KCMIL 4/0	SERVICE NO. 1 SECONDARY MAIN BREAKER	ATS-1A	POWER GROUND
P-2E	4"	3-1/C 1-1/C	500KCMIL 4/0	SERVICE NO. 1 SECONDARY MAIN BREAKER	ATS-1A	POWER GROUND
P-2F	4"	-	-	SERVICE NO. 1 SECONDARY MAIN BREAKER	ATS-1A	SPARE CONDUIT
P-3A	4"	3-1/C 1-1/C	500KCMIL 4/0	CON EDISON PAD-MOUNT TRANSFORMER	SERVICE NO. 2 MAIN BREAKER	POWER GROUND
P-3B	4"	3-1/C 1-1/C	500KCMIL 4/0	CON EDISON PAD-MOUNT TRANSFORMER	SERVICE NO. 2 MAIN BREAKER	POWER GROUND
P-3C	4"	3-1/C 1-1/C	500KCMIL 4/0	CON EDISON PAD-MOUNT TRANSFORMER	SERVICE NO. 2 MAIN BREAKER	POWER GROUND
P-3D	4"	3-1/C 1-1/C	500KCMIL 4/0	CON EDISON PAD-MOUNT TRANSFORMER	SERVICE NO. 2 MAIN BREAKER	POWER GROUND
P-3E	4"	3-1/C 1-1/C	500KCMIL 4/0	CON EDISON PAD-MOUNT TRANSFORMER	SERVICE NO. 2 MAIN BREAKER	POWER GROUND
P-3F	4"	-	-	CON EDISON PAD-MOUNT TRANSFORMER	SERVICE NO. 2 MAIN BREAKER	SPARE CONDUIT

CONDUIT AND CABLE SCHEDULE

CONDUIT NO	CONDUIT SIZE	CABLE QTY	CABLE SIZE	FROM	TO	REMARKS
P-4A	4"	3-1/C 1-1/C	500KCMIL 4/0	SERVICE NO. 2 MAIN BREAKER	ATS-1B	POWER GROUND
P-4B	4"	3-1/C 1-1/C	500KCMIL 4/0	SERVICE NO. 2 MAIN BREAKER	ATS-1B	POWER GROUND
P-4C	4"	3-1/C 1-1/C	500KCMIL 4/0	SERVICE NO. 2 MAIN BREAKER	ATS-1B	POWER GROUND
P-4D	4"	3-1/C 1-1/C	500KCMIL 4/0	SERVICE NO. 2 MAIN BREAKER	ATS-1B	POWER GROUND
P-4E	4"	3-1/C 1-1/C	500KCMIL 4/0	SERVICE NO. 2 MAIN BREAKER	ATS-1B	POWER GROUND
P-4F	4"	-	-	SERVICE NO. 2 MAIN BREAKER	ATS-1B	SPARE CONDUIT
P-5A	4"	3-1/C 1-1/C	500KCMIL 4/0	ATS-1A	EMH-1	POWER GROUND
P-5B	4"	3-1/C 1-1/C	500KCMIL 4/0	ATS-1A	EMH-1	POWER GROUND
P-5C	4"	3-1/C 1-1/C	500KCMIL 4/0	ATS-1A	EMH-1	POWER GROUND
P-5D	4"	3-1/C 1-1/C	500KCMIL 4/0	ATS-1A	EMH-1	POWER GROUND
P-5E	4"	3-1/C 1-1/C	500KCMIL 4/0	ATS-1A	EMH-1	POWER GROUND
P-5F	4"	-	-	ATS-1A	EMH-1	SPARE CONDUIT
P-5G	4"	3-1/C 1-1/C	500KCMIL 4/0	EMH-1	MCC-1A	POWER GROUND
P-5H	4"	3-1/C 1-1/C	500KCMIL 4/0	EMH-1	MCC-1A	POWER GROUND
P-5I	4"	3-1/C 1-1/C	500KCMIL 4/0	EMH-1	MCC-1A	POWER GROUND
P-5J	4"	3-1/C 1-1/C	500KCMIL 4/0	EMH-1	MCC-1A	POWER GROUND
P-5K	4"	3-1/C 1-1/C	500KCMIL 4/0	EMH-1	MCC-1A	POWER GROUND
P-5L	4"	-	-	EMH-1	MCC-1A	SPARE CONDUIT
P-6A	4"	3-1/C 1-1/C	500KCMIL 4/0	ATS-1B	EMH-3	POWER GROUND
P-6B	4"	3-1/C 1-1/C	500KCMIL 4/0	ATS-1B	EMH-3	POWER GROUND
P-6C	4"	3-1/C 1-1/C	500KCMIL 4/0	ATS-1B	EMH-3	POWER GROUND
P-6D	4"	3-1/C 1-1/C	500KCMIL 4/0	ATS-1B	EMH-3	POWER GROUND
P-6E	4"	3-1/C 1-1/C	500KCMIL 4/0	ATS-1B	EMH-3	POWER GROUND
P-6F	4"	-	-	ATS-1B	EMH-3	SPARE CONDUIT
P-6G	4"	3-1/C 1-1/C	500KCMIL 4/0	EMH-3	EMH-4	POWER GROUND
P-6H	4"	3-1/C 1-1/C	500KCMIL 4/0	EMH-3	EMH-4	POWER GROUND
P-6I	4"	3-1/C 1-1/C	500KCMIL 4/0	EMH-3	EMH-4	POWER GROUND
P-6J	4"	3-1/C 1-1/C	500KCMIL 4/0	EMH-3	EMH-4	POWER GROUND
P-6K	4"	3-1/C 1-1/C	500KCMIL 4/0	EMH-3	EMH-4	POWER GROUND

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DESIGN LEAD: E. JAMES, P.E.
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ELECSYS ENGINEERING GROUP

STATE OF NEW YORK ELDO JAMES 086309 PROFESSIONAL ENGINEER

NYC Environmental Protection

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CAPITAL PROJECT WP-269
RECONSTRUCTION OF
PAERDEGAT PUMPING STATION
CONTRACT PS-318
ELECTRICAL
CONDUIT AND CABLE SCHEDULE SHEET 1

DATE: OCTOBER 2026
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CONDUIT AND CABLE SCHEDULE

CONDUIT NO	CONDUIT SIZE	CABLE QTY	CABLE SIZE	FROM	TO	REMARKS
P-6L	4"	-	-	EMH-3	EMH-4	SPARE CONDUIT
P-6M	4"	3-1/C 1-1/C	500KCMIL 4/0	EMH-4	MCC-1B	POWER GROUND
P-6N	4"	3-1/C 1-1/C	500KCMIL 4/0	EMH-4	MCC-1B	POWER GROUND
P-6O	4"	3-1/C 1-1/C	500KCMIL 4/0	EMH-4	MCC-1B	POWER GROUND
P-6P	4"	3-1/C 1-1/C	500KCMIL 4/0	EMH-4	MCC-1B	POWER GROUND
P-6Q	4"	3-1/C 1-1/C	500KCMIL 4/0	EMH-4	MCC-1B	POWER GROUND
P-6R	4"	-	-	EMH-4	MCC-1B	SPARE CONDUIT
P-7A	4"	3-1/C 1-1/C	500KCMIL 4/0	GENERATOR SWITCHBOARD	ATS-1A	POWER GROUND
P-7B	4"	3-1/C 1-1/C	500KCMIL 4/0	GENERATOR SWITCHBOARD	ATS-1A	POWER GROUND
P-7C	4"	3-1/C 1-1/C	500KCMIL 4/0	GENERATOR SWITCHBOARD	ATS-1A	POWER GROUND
P-7D	4"	3-1/C 1-1/C	500KCMIL 4/0	GENERATOR SWITCHBOARD	ATS-1A	POWER GROUND
P-7E	4"	3-1/C 1-1/C	500KCMIL 4/0	GENERATOR SWITCHBOARD	ATS-1A	POWER GROUND
P-7F	4"	-	-	GENERATOR SWITCHBOARD	ATS-1A	SPARE CONDUIT
P-8A	4"	3-1/C 1-1/C	500KCMIL 4/0	GENERATOR SWITCHBOARD	LOAD BANK CONNECTION CABINET	POWER GROUND
P-8B	4"	3-1/C 1-1/C	500KCMIL 4/0	GENERATOR SWITCHBOARD	LOAD BANK CONNECTION CABINET	POWER GROUND
P-8C	4"	3-1/C 1-1/C	500KCMIL 4/0	GENERATOR SWITCHBOARD	LOAD BANK CONNECTION CABINET	POWER GROUND
P-8D	4"	3-1/C 1-1/C	500KCMIL 4/0	GENERATOR SWITCHBOARD	LOAD BANK CONNECTION CABINET	POWER GROUND
P-8E	4"	3-1/C 1-1/C	500KCMIL 4/0	GENERATOR SWITCHBOARD	LOAD BANK CONNECTION CABINET	POWER GROUND
P-8F	4"	-	-	GENERATOR SWITCHBOARD	LOAD BANK CONNECTION CABINET	SPARE CONDUIT
P-9A	4"	3-1/C 1-1/C	500KCMIL 4/0	GENERATOR SWITCHBOARD	EMH-2	POWER GROUND
P-9B	4"	3-1/C 1-1/C	500KCMIL 4/0	GENERATOR SWITCHBOARD	EMH-2	POWER GROUND
P-9C	4"	3-1/C 1-1/C	500KCMIL 4/0	GENERATOR SWITCHBOARD	EMH-2	POWER GROUND
P-9D	4"	3-1/C 1-1/C	500KCMIL 4/0	GENERATOR SWITCHBOARD	EMH-2	POWER GROUND
P-9E	4"	3-1/C 1-1/C	500KCMIL 4/0	GENERATOR SWITCHBOARD	EMH-2	POWER GROUND
P-9F	4"	-	-	GENERATOR SWITCHBOARD	EMH-2	SPARE CONDUIT
P-9G	4"	3-1/C 1-1/C	500KCMIL 4/0	EMH-2	ATS-1B	POWER GROUND
P-9H	4"	3-1/C 1-1/C	500KCMIL 4/0	EMH-2	ATS-1B	POWER GROUND
P-9I	4"	3-1/C 1-1/C	500KCMIL 4/0	EMH-2	ATS-1B	POWER GROUND
P-9J	4"	3-1/C 1-1/C	500KCMIL 4/0	EMH-2	ATS-1B	POWER GROUND

CONDUIT AND CABLE SCHEDULE

CONDUIT NO	CONDUIT SIZE	CABLE QTY	CABLE SIZE	FROM	TO	REMARKS
P-9K	4"	3-1/C 1-1/C	500KCMIL 4/0	EMH-2	ATS-1B	POWER GROUND
P-9L	4"	-	-	EMH-2	ATS-1B	SPARE CONDUIT
P-10A	4"	3-1/C 1-1/C	500KCMIL 4/0	1000KW STANDBY GENERATOR	GENERATOR SWITCHBOARD	POWER GROUND
P-10B	4"	3-1/C 1-1/C	500KCMIL 4/0	1000KW STANDBY GENERATOR	GENERATOR SWITCHBOARD	POWER GROUND
P-10C	4"	3-1/C 1-1/C	500KCMIL 4/0	1000KW STANDBY GENERATOR	GENERATOR SWITCHBOARD	POWER GROUND
P-10D	4"	3-1/C 1-1/C	500KCMIL 4/0	1000KW STANDBY GENERATOR	GENERATOR SWITCHBOARD	POWER GROUND
P-10E	4"	3-1/C 1-1/C	500KCMIL 4/0	1000KW STANDBY GENERATOR	GENERATOR SWITCHBOARD	POWER GROUND
P-10F	4"			1000KW STANDBY GENERATOR	GENERATOR SWITCHBOARD	SPARE CONDUIT
P-11A	4"	3-1/C 1-1/C	500KCMIL 4/0	PORTABLE GENERATOR CONNECTION CABINET	GENERATOR SWITCHBOARD	POWER GROUND
P-11B	4"	3-1/C 1-1/C	500KCMIL 4/0	PORTABLE GENERATOR CONNECTION CABINET	GENERATOR SWITCHBOARD	POWER GROUND
P-11C	4"	3-1/C 1-1/C	500KCMIL 4/0	PORTABLE GENERATOR CONNECTION CABINET	GENERATOR SWITCHBOARD	POWER GROUND
P-11D	4"	3-1/C 1-1/C	500KCMIL 4/0	PORTABLE GENERATOR CONNECTION CABINET	GENERATOR SWITCHBOARD	POWER GROUND
P-11E	4"	3-1/C 1-1/C	500KCMIL 4/0	PORTABLE GENERATOR CONNECTION CABINET	GENERATOR SWITCHBOARD	POWER GROUND
P-11F	4"	-	-	PORTABLE GENERATOR CONNECTION CABINET	GENERATOR SWITCHBOARD	SPARE CONDUIT
P-15	2"	4-1/C 1-1/C	1 8	DP-1	AUX PANEL - DIESEL ENGINE GENERATOR	POWER & NEUTRAL GROUND
P-16A	3"	3-1/C 1-1/C	4/0 3	MCC-1A	MSP-1601 DISCONNECT SWITCH	POWER GROUND
P-16B	3"	SUBCAB CABLE		MSP-1601 DISCONNECT SWITCH	MSP-1601 JUNCTION BOX	SEE NOTE 1
PC-16C	3"	SUBCAB CABLE		MSP-1601 JUNCTION BOX	MAIN SEWAGE PUMP MSP-1601	SEE NOTE 1
C-16A	3"	SUBCAB CABLE		MSPCP-1600	MSP-1601 JUNCTION BOX	SEE NOTE 1
P-17A	3"	3-1/C 1-1/C	4/0 3	MCC-1A	MSP-1603 DISCONNECT SWITCH	POWER GROUND
P-17B	3"	SUBCAB CABLE		MSP-1603 DISCONNECT SWITCH	MSP-1603 JUNCTION BOX	SEE NOTE 1
PC-17C	3"	SUBCAB CABLE		MSP-1603 JUNCTION BOX	MAIN SEWAGE PUMP MSP-1603	SEE NOTE 1
C-17A	3"	SUBCAB CABLE		MSPCP-1600	MSP-1603 JUNCTION BOX	SEE NOTE 1
P-18A	3"	3-1/C 1-1/C	4/0 3	MCC-1A	MSP-1605 DISCONNECT SWITCH	POWER GROUND
P-18B	3"	SUBCAB CABLE		MSP-1605 DISCONNECT SWITCH	MSP-1605 JUNCTION BOX	SEE NOTE 1
PC-18C	3"	SUBCAB CABLE		MSP-1605 JUNCTION BOX	MAIN SEWAGE PUMP MSP-1605	SEE NOTE 1
C-18A	3"	SUBCAB CABLE		MSPCP-1600	MSP-1605 JUNCTION BOX	SEE NOTE 1
P-19A	3/4"	3-1/C 1-1/C	12 12	MCC-1A	LCP-7401-M STARTER PANEL	POWER GROUND

NOTES:

1. REFER TO CONTROL SCHEMATIC SHOWN ON E-135 AND E-136 FOR SUBCAB CABLE CONNECTIONS. COORDINATE WITH PUMP VENDOR AND PROVIDE REQUIRED SUBCAB CABLE FOR PUMP MOTOR UNIT SELECTED.

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CAPITAL PROJECT WP-269
RECONSTRUCTION OF
PAERDEGAT PUMPING STATION
CONTRACT PS-318
ELECTRICAL
CONDUIT AND CABLE SCHEDULE SHEET 2

DATE: OCTOBER 2026
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CONDUIT AND CABLE SCHEDULE

CONDUIT		CABLE		FROM	TO	REMARKS
NO	SIZE	QTY	SIZE			
P-19B	3/4"	3-1/C 1-1/C	12 12	LCP-7401-M STARTER PANEL	VACCUM PRIMING PUMP-7401	POWER GROUND
P-20A	3/4"	3-1/C 1-1/C	12 12	MCC-1A	LCP-7403-M STARTER PANEL	POWER GROUND
P-20B	3/4"	3-1/C 1-1/C	12 12	LCP-7403-M STARTER PANEL	DUPLEX VACCUM PRIMING PUMP-7403	POWER GROUND
P-21A	3/4"	3-1/C 1-1/C	12 12	MCC-1A	RALPH AVE INLET GATE 1301-48-01 DISCONNECT SWITCH	POWER GROUND
P-21B	3/4"	3-1/C 1-1/C	12 12	RALPH AVE INLET GATE 1301-48-01 DISCONNECT SWITCH	RALPH AVE INLET GATE LCP-1301-48-S	POWER GROUND
P-21C	3/4"	3-1/C 1-1/C	12 12	RALPH AVE INLET GATE LCP-1301-48-S	RALPH AVE INLET GATE 1301-48-01	POWER GROUND
P-22A	1 1/4"	3-1/C 1-1/C	8 10	MCC-1A	EVR-1 DISCONNECT SWITCH	POWER GROUND
P-22B	1 1/4"	3-1/C 1-1/C	8 10	EVR-1 DISCONNECT SWITCH	HEAT RECOVERY UNIT ERV-1	POWER GROUND
P-23A	1 1/4"	3-1/C 1-1/C	8 10	MCC-1A	EVR-3 DISCONNECT SWITCH	POWER GROUND
P-23B	1 1/4"	3-1/C 1-1/C	8 10	EVR-3 DISCONNECT SWITCH	HEAT RECOVERY UNIT ERV-3	POWER GROUND
P-24A	1 1/4"	3-1/C 1-1/C	6 10	MCC-1A	AC-1 DISCONNECT SWITCH	POWER GROUND
P-24B	1 1/4"	3-1/C 1-1/C	6 10	AC-1 DISCONNECT SWITCH	AIR CONDITIONING UNIT AC-1	POWER GROUND
P-25A	1 1/4"	3-1/C 1-1/C	6 10	MCC-1A	EDH-1 DISCONNECT SWITCH	POWER GROUND
P-25B	1 1/4"	3-1/C 1-1/C	6 10	EDH-1 DISCONNECT SWITCH	ELECTRIC DUCT HEATER EDH-1	POWER GROUND
PC-26A	1"	3-1/C 1-1/C 5-1/C	12 12 12	MCC-1A	JUNCTION BOX	POWER GROUND CONTROL
C-26B	3/4"	5-1/C	12	JUNCTION BOX	EF-1 LOCAL CONTROL STATION	CONTROL
P-26C	3/4"	3-1/C 1-1/C	12 12	JUNCTION BOX	EF-1 DISCONNECT SWITCH	POWER GROUND
P-26D	3/4"	3-1/C 1-1/C	12 12	EF-1 DISCONNECT SWITCH	EXHAUST FAN EF-1	POWER GROUND
PC-27A	1"	3-1/C 1-1/C 5-1/C	12 12 12	MCC-1A	JUNCTION BOX	POWER GROUND CONTROL
C-27B	3/4"	5-1/C	12	JUNCTION BOX	SF-1 LOCAL CONTROL STATION	CONTROL
P-27C	3/4"	3-1/C 1-1/C	12 12	JUNCTION BOX	SF-1 DISCONNECT SWITCH	POWER GROUND
P-27D	3/4"	3-1/C 1-1/C	12 12	SF-1 DISCONNECT SWITCH	EXHAUST FAN SF-1	POWER GROUND
P-28A	3/4"	3-1/C 1-1/C	10 10	MCC-1A	EUH-1 DISCONNECT SWITCH	POWER GROUND
P-28B	3/4"	3-1/C 1-1/C	10 10	EUH-1 DISCONNECT SWITCH	ELECTRIC UNIT HEATER EUH-1	POWER GROUND
P-29A	3/4"	3-1/C 1-1/C	10 10	MCC-1A	EUH-3 DISCONNECT SWITCH	POWER GROUND

CONDUIT AND CABLE SCHEDULE

CONDUIT		CABLE		FROM	TO	REMARKS
NO	SIZE	QTY	SIZE			
P-29B	3/4"	3-1/C 1-1/C	10 10	EUH-3 DISCONNECT SWITCH	ELECTRIC UNIT HEATER EUH-3	POWER GROUND
P-30A	3/4"	3-1/C 1-1/C	10 10	MCC-1A	EUH-5 DISCONNECT SWITCH	POWER GROUND
P-30B	3/4"	3-1/C 1-1/C	10 10	EUH-5 DISCONNECT SWITCH	ELECTRIC UNIT HEATER EUH-5	POWER GROUND
P-31A	3/4"	3-1/C 1-1/C	10 10	MCC-1A	BRIDGE CRANE SCREENING CHAMBER DISCONNECT SWITCH	POWER GROUND
P-31B	3/4"	3-1/C 1-1/C	10 10	BRIDGE CRANE SCREENING CHAMBER DISCONNECT SWITCH	BRIDGE CRANE SCREENING CHAMBER CONTROL PANEL	POWER GROUND
P-32A	3/4"	3-1/C 1-1/C	12 12	MCC-1A	AIR COMPRESSOR 7400 DISCONNECT SWITCH	POWER GROUND
P-32B	3/4"	3-1/C 1-1/C	12 12	AIR COMPRESSOR 7400 DISCONNECT SWITCH	SERVICE AIR COMPRESSOR 7400	POWER GROUND
P-33	2"	3-1/C 1-1/C	4/0 4	MCC-1A	ATS-1C	POWER GROUND
P-34A	3"	3-1/C 1-1/C	4/0 3	MCC-1B	MSP-1602 DISCONNECT SWITCH	POWER GROUND
P-34B	3"	SUBCAB CABLE		MSP-1602 DISCONNECT SWITCH	MSP-1602 JUNCTION BOX	SEE NOTE 1
PC-34C	3"	SUBCAB CABLE		MSP-1602 JUNCTION BOX	MAIN SEWAGE PUMP MSP-1602	SEE NOTE 1
C-34A	3"	SUBCAB CABLE		MSPCP-1600	MSP-1602 JUNCTION BOX	SEE NOTE 1
P-35A	3"	3-1/C 1-1/C	4/0 3	MCC-1B	MSP-1604 DISCONNECT SWITCH	POWER GROUND
P-35B	3"	SUBCAB CABLE		MSP-1604 DISCONNECT SWITCH	MSP-1604 JUNCTION BOX	SEE NOTE 1
PC-35C	3"	SUBCAB CABLE		MSP-1604 JUNCTION BOX	MAIN SEWAGE PUMP MSP-1604	SEE NOTE 1
C-35A	3"	SUBCAB CABLE		MSPCP-1600	MSP-1604 JUNCTION BOX	SEE NOTE 1
P-36A	3"	3-1/C 1-1/C	4/0 3	MCC-1B	MSP-1606 DISCONNECT SWITCH	POWER GROUND
P-36B	3"	SUBCAB CABLE		MSP-1606 DISCONNECT SWITCH	MSP-1606 JUNCTION BOX	SEE NOTE 1
PC-36C	3"	SUBCAB CABLE		MSP-1606 JUNCTION BOX	MAIN SEWAGE PUMP MSP-1606	SEE NOTE 1
C-36A	3"	SUBCAB CABLE		MSPCP-1600	MSP-1606 JUNCTION BOX	SEE NOTE 1
P-37A	3/4"	3-1/C 1-1/C	12 12	MCC-1B	LCP-7402-M STARTER PANEL	POWER GROUND
P-37B	3/4"	3-1/C 1-1/C	12 12	LCP-7402-M STARTER PANEL	DUPLEX VACUUM PRIMING PUMP-7402	POWER GROUND
P-38A	1 1/4"	3-1/C 1-1/C	6 10	MCC-1B	BRIDGE CRANE OPEN FLOOR DISCONNECT SWITCH	POWER GROUND
P-38B	1 1/4"	3-1/C 1-1/C	6 10	BRIDGE CRANE OPEN FLOOR DISCONNECT SWITCH	BRIDGE CRANE OPEN FLOOR AREA	POWER GROUND
P-39A	3/4"	3-1/C 1-1/C	12 12	MCC-1B	AVENUE M INLET GATE 1302-48-S DISCONNECT SWITCH	POWER GROUND
P-39B	3/4"	3-1/C 1-1/C	12 12	AVENUE M INLET GATE 1302-48-S DISCONNECT SWITCH	AVENUE M INLET GATE LCP-1302-48-S	POWER GROUND
P-39C	3/4"	3-1/C 1-1/C	12 12	AVENUE M GATE LCP-1302-48-S	AVENUE M INLET GATE 1302-48-01	POWER GROUND

NOTES:

1. REFER TO CONTROL SCHEMATIC SHOWN ON E-135 AND E-136 FOR SUBCAB CABLE CONNECTIONS. COORDINATE WITH PUMP VENDOR AND PROVIDE REQUIRED SUBCAB CABLE FOR PUMP MOTOR UNIT SELECTED.

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ELECSYS ENGINEERING GROUP

STATE OF NEW YORK ELDO JAMES 086309 PROFESSIONAL ENGINEER

NYC Environmental Protection

ACCOUNTABLE MANAGER: JOHN GOULAS, P.E.
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CAPITAL PROJECT WP-269
RECONSTRUCTION OF
PAERDEGAT PUMPING STATION
CONTRACT PS-318
ELECTRICAL
CONDUIT AND CABLE SCHEDULE SHEET 3

DATE: OCTOBER 2026
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SHEET NO: 239 OF 274
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CONDUIT AND CABLE SCHEDULE

CONDUIT		CABLE		FROM	TO	REMARKS
NO	SIZE	QTY	SIZE			
P-40A	1 1/4"	3-1/C 1-1/C	8 10	MCC-1B	ERV-2 DISCONNECT SWITCH	POWER GROUND
P-40B	1 1/4"	3-1/C 1-1/C	8 10	ERV-2 DISCONNECT SWITCH	HEAT RECOVERY UNIT ERV-2	POWER GROUND
P-42A	1 1/4"	3-1/C 1-1/C	6 10	MCC-1B	EDH-2 DISCONNECT SWITCH	POWER GROUND
P-42B	1 1/4"	3-1/C 1-1/C	6 10	EDH-2 DISCONNECT SWITCH	ELECTRIC DUCT HEATER EDH-2	POWER GROUND
PC-43A	1"	3-1/C 1-1/C 5-1/C	12 12 12	MCC-1B	JUNCTION BOX	POWER GROUND CONTROL
C-43B	3/4"	5-1/C	12	JUNCTION BOX	EF-2 LOCAL CONTROL STATION	CONTROL
P-43C	3/4"	3-1/C 1-1/C	12 12	JUNCTION BOX	EF-2 DISCONNECT SWITCH	POWER GROUND
P-43D	3/4"	3-1/C 1-1/C	12 12	EF-2 DISCONNECT SWITCH	EXHAUST FAN EF-2	POWER GROUND
PC-44A	1"	3-1/C 1-1/C 5-1/C	12 12 14	MCC-1B	JUNCTION BOX	POWER GROUND CONTROL
C-44B	3/4"	5-1/C	12	JUNCTION BOX	SF-2 LOCAL CONTROL STATION	CONTROL
P-44C	3/4"	3-1/C 1-1/C	12 12	JUNCTION BOX	SF-2 DISCONNECT SWITCH	POWER GROUND
P-44D	3/4"	3-1/C 1-1/C	12 12	SF-2 DISCONNECT SWITCH	EXHAUST FAN SF-2	POWER GROUND
P-45A	3/4"	3-1/C 1-1/C	10 10	MCC-1B	EUH-2 DISCONNECT SWITCH	POWER GROUND
P-45B	3/4"	3-1/C 1-1/C	10 10	EUH-2 DISCONNECT SWITCH	ELECTRIC UNIT HEATER EUH-2	POWER GROUND
P-46A	3/4"	3-1/C 1-1/C	10 10	MCC-1B	EUH-4 DISCONNECT SWITCH	POWER GROUND
P-46B	3/4"	3-1/C 1-1/C	10 10	EUH-4 DISCONNECT SWITCH	ELECTRIC UNIT HEATER EUH-4	POWER GROUND
P-47	2"	3-1/C 1-1/C	4/0 4	MCC-1B	ATS-1C	POWER GROUND
P-48	2"	3-1/C 1-1/C	4/0 4	ATS-1C	150 KVA TRANSFORMER	POWER GROUND
P-49A	3"	4-1/C 1-1/C	350KCMIL 1	150KVA TRANSFORMER	DP-1	POWER & NEUTRAL GROUND
P-49B	3"	4-1/C 1-1/C	350KCMIL 1	150KVA TRANSFORMER	DP-1	POWER & NEUTRAL GROUND
P-50	1 1/2"	4-1/C 1-1/C	2 8	DP-1	LP-1	POWER & NEUTRAL GROUND
P-51	1 1/2"	4-1/C 1-1/C	2 8	DP-1	LP-2	POWER & NEUTRAL GROUND
P-63	1 1/4"	4-1/C 1-1/C	2 8	DP-1	LP-3	POWER & NEUTRAL GROUND
P-70A	1"	4-1/C	6	SERVICE NO. 1 MAIN BREAKER LINE SIDE TAP	FD-FA-1	POWER & NEUTRAL
P-70B	3/4"	4-1/C 1-1/C	10 10	FD-FA-1	ATS-FA-1	POWER & NEUTRAL GROUND

CONDUIT AND CABLE SCHEDULE

CONDUIT		CABLE		FROM	TO	REMARKS
NO	SIZE	QTY	SIZE			
P-71A	1"	3-1/C	6	SERVICE NO. 2 MAIN BREAKER LINE SIDE TAP	FD-FA-2A	POWER
P-71B	3/4"	3-1/C 1-1/C	10 10	FD-FA-2A	XFMR-FA-2	POWER GROUND
P-72A	1"	3-1/C 1-1/C	6 8	GENERATOR SWITCHBOARD BUS TAP	FD-FA-3A	POWER GROUND
P-72B	3/4"	3-1/C 1-1/C	10 10	FD-FA-3A	XFMR-FA-3	POWER GROUND
P-73A	3/4"	4-1/C 1-1/C	10 10	XFMR-FA-2	FD-FA-2B	POWER & NEUTRAL GROUND
P-73B	3/4"	4-1/C 1-1/C	10 10	FD-FA-2B	ATS-FA-1	POWER & NEUTRAL GROUND
P-74	3/4"	4-1/C 1-1/C	10 10	ATS-FA-1	ATS-FA-2	POWER & NEUTRAL GROUND
P-75A	3/4"	4-1/C 1-1/C	10 10	XFMR-FA-3	FD-FA-3B	POWER & NEUTRAL GROUND
P-75B	3/4"	4-1/C 1-1/C	10 10	FD-FA-3B	ATS-FA-2	POWER & NEUTRAL GROUND
P-76	3/4"	4-1/C 1-1/C	10 10	ATS-FA-2	FA-FCP-1	POWER & NEUTRAL GROUND
P-77	3/4"	2-1/C 1-1/C	12 10	FA-FCP-1	FIRE ALARM CONTROL PANEL	POWER GROUND
P-78	3/4"	2-1/C 1-1/C	12 10	FA-FCP-1	GSM LTE FIRE COMMUNICATOR	POWER GROUND
P-79	3/4"	2-1/C 1-1/C	12 10	FA-FCP-1	CO STROBE CIRCUIT POWER SUPPLY	POWER GROUND
P-80A	3/4"	2-1/C 1-1/C	8 10	DP-1	60A DISCONNECT SWITCH	POWER GROUND
P-80B	3/4"	2-1/C 1-1/C	8 10	60A DISCONNECT SWITCH	ELECTRIC WATER HEATER EWH-1	POWER GROUND
P-81A	3/4"	3-1/C 1-1/C	10 10	DP-1	30A DISCONNECT SWITCH	POWER GROUND
P-81B	3/4"	3-1/C 1-1/C	10 10	30A DISCONNECT SWITCH	ELECTRIC WATER HEATER EWH-2	POWER GROUND
P-90A	1 1/2"	3-1/C 1-1/C	2 8	MCC-1B	VRF-1A DISCONNECT SWITCH	POWER GROUND
P-90B	1 1/2"	3-1/C 1-1/C	2 8	VRF-1A DISCONNECT SWITCH	VRF-1A	POWER GROUND
P-91A	1 1/2"	3-1/C 1-1/C	2 8	MCC-1B	VRF-1B DISCONNECT SWITCH	POWER GROUND
P-91B	1 1/2"	3-1/C 1-1/C	2 8	VRF-1B DISCONNECT SWITCH	VRF-1B	POWER GROUND
P-92A	1 1/2"	3-1/C 1-1/C	2 8	MCC-1B	VRF-1C DISCONNECT SWITCH	POWER GROUND
P-92B	1 1/2"	3-1/C 1-1/C	2 8	VRF-1C DISCONNECT SWITCH	VRF-1C	POWER GROUND
C-1	3/4"	6-1/C	12	RVSS MSP-1601	MAIN SEWAGE PUMP MSP-1601	CONTROL
C-2	3/4"	6-1/C	12	RVSS MSP-1603	MAIN SEWAGE PUMP MSP-1603	CONTROL
C-3	3/4"	6-1/C	12	RVSS MSP-1605	MAIN SEWAGE PUMP MSP-1605	CONTROL
C-4	3/4"	6-1/C	12	RVSS MSP-1602	MAIN SEWAGE PUMP MSP-1602	CONTROL
C-5	3/4"	6-1/C	12	RVSS MSP-1604	MAIN SEWAGE PUMP MSP-1604	CONTROL
C-6	3/4"	6-1/C	12	RVSS MSP-1606	MAIN SEWAGE PUMP MSP-1606	CONTROL

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ELECSYS ENGINEERING GROUP

STATE OF NEW YORK — HEIDO JAMES — 088309 — LICENSED PROFESSIONAL ENGINEER

NYC Environmental Protection

ACCOUNTABLE MANAGER: JOHN GOULAS, P.E.
PORTFOLIO MANAGER: KEVIN ELLENWOOD, P.E.
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CAPITAL PROJECT WP-269
RECONSTRUCTION OF
PAERDEGAT PUMPING STATION
CONTRACT PS-318
ELECTRICAL
CONDUIT AND CABLE SCHEDULE SHEET 4

DATE: OCTOBER 2026
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CONDUIT AND CABLE SCHEDULE

CONDUIT		CABLE		FROM	TO	REMARKS
NO	SIZE	QTY	SIZE			
C-7	1 1/4"	20-1/C	12	PMCS-9110	LCP 1301-48-S	CONTROL
C-8A	3/4"	6-1/C	12	LCP 1301-48-S	JUNCTION BOX	CONTROL
C-8B	3/4"	2-1/C	12	JUNCTION BOX	ZSO-1301	CONTROL
C-8C	3/4"	2-1/C	12	JUNCTION BOX	XSH-1301	CONTROL
C-8D	3/4"	2-1/C	12	JUNCTION BOX	ZSC-1301	CONTROL
C-9	1 1/4"	20-1/C	12	PMCS-9110	LCP 1302-48-S	CONTROL
C-10A	3/4"	6-1/C	12	LCP 1302-48-S	JUNCTION BOX	CONTROL
C-10B	3/4"	2-1/C	12	JUNCTION BOX	ZSO-1302	CONTROL
C-10C	3/4"	2-1/C	12	JUNCTION BOX	XSH-1302	CONTROL
C-10D	3/4"	2-1/C	12	JUNCTION BOX	ZSC-1302	CONTROL
C-11	3/4"	6-1/C	12	PMCS-9110	LAP-120	CONTROL
C-12	3/4"	6-1/C	12	PMCS-9110	LAP-140	CONTROL
C-13A	1"	12-1/C	12	MSPCP-1600	JUNCTION BOX	CONTROL
C-13B	3/4"	4-1/C	12	JUNCTION BOX	ZSO/ZSC-1601	CONTROL
C-13C	3/4"	4-1/C	12	JUNCTION BOX	ZSO/ZSC-1602	CONTROL
C-13D	3/4"	4-1/C	12	JUNCTION BOX	ZSO/ZSC-1603	CONTROL
C-14A	1"	12-1/C	12	MSPCP-1600	JUNCTION BOX	CONTROL
C-14B	3/4"	4-1/C	12	JUNCTION BOX	ZSO/ZSC-1604	CONTROL
C-14C	3/4"	4-1/C	12	JUNCTION BOX	ZSO/ZSC-1605	CONTROL
C-14D	3/4"	4-1/C	12	JUNCTION BOX	ZSO/ZSC-1606	CONTROL
C-19A	3"	120-1/C	12	MSCP-1600	MCC-1A & 1B	CONTROL
C-19B	3"	120-1/C	12	MSCP-1600	MCC-1A & 1B	CONTROL
C-19C	3"	80-1/C	10	MSCP-1600	MCC-1A & 1B	CT/PT WIRING
C-20A	3/4"	6-1/C	12	MSCP-1600	JUNCTION BOX	CONTROL
C-20B	3/4"	2-1/C	12	JUNCTION BOX	LS-1601P	CONTROL
C-20C	3/4"	2-1/C	12	JUNCTION BOX	LS-1602P	CONTROL
C-20D	3/4"	2-1/C	12	JUNCTION BOX	LS-1603P	CONTROL
C-21	1 1/2"	40-1/C	12	MCC-1A&1B	BSCP-9120	CONTROL
C-22	1 1/4"	20-1/C	12	BSCP-9120	TERMINAL BOX	CONTROL
C-23	2"	60-1/C	12	BSCP-1920	TELEMETRY PANEL RTU-9130	CONTROL
C-24	3/4"	8-1/C	12	MPCP-1600	LCP-7401-C	CONTROL
C-25	3/4"	8-1/C	12	MPCP-1600	LCP-7402-C	CONTROL
C-26	3/4"	8-1/C	12	MPCP-1600	LCP-7403-C	CONTROL
C-27	3/4"	10-1/C	12	PMCS-9110	FACP-8100	CONTROL
C-29	3/4"	8-1/C	12	PMCS-9110	LCP-7791	CONTROL
C-30	3/4"	8-1/C	12	PMCS-9110	LCP-7792	CONTROL
C-32	3/4"	12-1/C	12	LCP-7791	TERMINAL BOX	CONTROL
C-33	3/4"	8-1/C	12	LCP-7792	TERMINAL BOX	CONTROL
C-34	3/4"	2-1/C	12	PMCS-9110	PSL-7902	CONTROL
C-35	3/4"	2-1/C	12	PMCS-9110	PSL-7601	CONTROL
C-37	1"	10-1/C	12	ATS-1A	STANDBY DIESEL GENERATOR LCP	CONTROL
C-38	1"	10-1/C	12	ATS-2A	STANDBY DIESEL GENERATOR LCP	CONTROL

CONDUIT AND CABLE SCHEDULE

CONDUIT		CABLE		FROM	TO	REMARKS
NO	SIZE	QTY	SIZE			
C-39	3/4"	4-1/C	12	PMCS-9110	LCP-7901	CONTROL
C-40	3/4"	2-1/C	12	LCP-7901	LSH-7901	CONTROL
C-41	3/4"	4-1/C	12	PMCS-9110	ATC-1	CONTROL
C-42	3/4"	4-1/C	12	PMCS-9110	ATC-2	CONTROL
C-43	3/4"	4-1/C	12	PMCS-9110	ATC-3	CONTROL
C-43A	3/4"	4-1/C	12	PMCS-9110	AC-1	CONTROL
C-44	1 1/2"	24-1/C	12	ATC-1	MCC-1A&1B	CONTROL
C-45	1 1/2"	24-1/C	12	ATC-2	MCC-1A&1B	CONTROL
C-46	1 1/2"	24-1/C	12	ATC-3	MCC-1A&1B	CONTROL
C-47	3/4"	8-1/C	12	PMCS-9110	LCP-7793	CONTROL
C-48	3/4"	8-1/C	12	LCP-7793	TERMINAL BOX	CONTROL
C-49	3/4"	8-1/C	12	PMCS-9110	LCP-7794	CONTROL
C-50	3/4"	8-1/C	12	LCP-7794	TERMINAL BOX	CONTROL
C-51	3/4"	8-1/C	12	PMCS-9110	LCP-7795	CONTROL
C-52	3/4"	8-1/C	12	LCP-7795	TERMINAL BOX	CONTROL
C-53	3/4"	8-1/C	12	PMCS-9110	LCP-7796	CONTROL
C-54	3/4"	8-1/C	12	LCP-7796	TERMINAL BOX	CONTROL
C-55	3/4"	8-1/C	12	PMCS-9110	LCP-7797	CONTROL
C-56	3/4"	8-1/C	12	LCP-7797	TERMINAL BOX	CONTROL
C-57	1"	12-1/C	12	SERVICE NO. 1 MAIN BREAKER	SERVICE NO. 1 BSCP	CONTROL
C-58	1"	12-1/C	12	SERVICE NO. 2 MAIN BREAKER	SERVICE NO. 2 BSCP	CONTROL
C-60	3/4"	12-1/C	12	MCC-1A & 1B	LC-1601A-ES	CONTROL
C-61	3/4"	12-1/C	12	MCC-1A & 1B	LC-1602A-ES	CONTROL
C-62	3/4"	12-1/C	12	MCC-1A & 1B	LC-1603A-ES	CONTROL
C-63	3/4"	12-1/C	12	MCC-1A & 1B	LC-1604A-ES	CONTROL
C-64	3/4"	12-1/C	12	MCC-1A & 1B	LC-1605A-ES	CONTROL
C-65	3/4"	12-1/C	12	MCC-1A & 1B	LC-1606A-ES	CONTROL
C-66	1 1/2"	40-1/C	12	BSCP-9120	MSCP-1600	CONTROL
C-67	3/4"	8-1/C	12	RTU-9130	PMCS-9110	CONTROL
C-68	3/4"	4-1/C	12	SERVICE NO. 1 MAIN BREAKER	PULL BOX-1	CONTROL
C-69	3/4"	4-1/C	12	SERVICE NO. 1 SECONDARY MAIN BREAKER	PULL BOX-1	CONTROL
C-70	3/4"	4-1/C	12	ATS-1A	PULL BOX-1	CONTROL
C-71	3/4"	4-1/C	12	SERVICE NO. 2 MAIN BREAKER	PULL BOX-1	CONTROL
C-72	3/4"	4-1/C	12	ATS-1B	PULL BOX-1	CONTROL
C-73	2"	20-1/C	12	PULL BOX-1	PULL BOX-2	CONTROL
C-74	3/4"	6-1/C	12	GENERATOR SWITCHBOARD	PULL BOX-2	CONTROL
C-75	2"	30-1/C	12	PULL BOX-2	EMCS-1510	CONTROL
C-76	2"	40-1/C	12	MCC1A & 1B	EMCS-1510	CONTROL
C-77	2"	20-1/C	12	FUEL PUMP CABINET	GMCP-8501	CONTROL
C-78	2"	-	-	FUEL PUMP CABINET	GMCP-8501	SPARE CONDUIT
C-79	3/4"	8-1/C	12	PMCS-9110	LCP-7798	CONTROL
C-80	3/4"	8-1/C		LCP-7798	TERMINAL BOX	CONTROL
I-1	3/4"	2-PAIR#16 (SH)		PMCS-9110	LCP 1301-48-S	INSTRUMENTATION
I-2	3/4"	1-PAIR#16 (SH)		LCP 1301-48-S	ZIT-1301	INSTRUMENTATION

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Environmental Protection

ACCOUNTABLE MANAGER: JOHN GOULAS, P.E.
PORTFOLIO MANAGER: KEVIN ELLENWOOD, P.E.
EXECUTIVE DIRECTOR: NAYANKUMAR SHAH, P.E.

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NEW YORK CITY ENVIRONMENTAL PROTECTION
BUREAU OF ENGINEERING DESIGN & CONSTRUCTION
96-05 HORACE HARDING EXPRESSWAY 5th FLOOR
CORONA, NEW YORK 11368
www.nyc.gov/dep

CAPITAL PROJECT WP-269
RECONSTRUCTION OF
PAERDEGAT PUMPING STATION
CONTRACT PS-318
ELECTRICAL
CONDUIT AND CABLE SCHEDULE SHEET 5

DATE: OCTOBER 2026
SCALE: AS INDICATED
SHEET NO: 241 OF 274
DRAWING NO. E-132.00

All inquiries regarding this drawing(s) or project should be made to NYC Environmental Protection, Bureau of Engineering Design and Construction.

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CONDUIT AND CABLE SCHEDULE

CONDUIT NO	CONDUIT SIZE	CABLE QTY	CABLE SIZE	FROM	TO	REMARKS
I-3	3/4"	2-PAIR#16 (SH)		PMCS-9110	LCP 1302-48-S	INSTRUMENTATION
I-4	3/4"	1-PAIR#16 (SH)		LCP 1302-48-S	ZIT-1302	INSTRUMENTATION
I-5A	2"	8-PAIR#16 (SH)		PMCS-9110	JUNCTION BOX	INSTRUMENTATION
I-5B	1"	2-PAIR#16 (SH)		JUNCTION BOX	AIT-121/AE-121	INSTRUMENTATION
I-5C	1"	2-PAIR#16 (SH)		JUNCTION BOX	AIT-131/AE-131	INSTRUMENTATION
I-5D	1"	2-PAIR#16 (SH)		JUNCTION BOX	AIT-122/AE-122	INSTRUMENTATION
I-5E	1"	2-PAIR#16 (SH)		JUNCTION BOX	AIT-132/AE-132	INSTRUMENTATION
I-6A	2"	8-PAIR#16 (SH)		PMCS-9110	JUNCTION BOX	INSTRUMENTATION
I-6B	1"	2-PAIR#16 (SH)		JUNCTION BOX	AIT-141/AE-141	INSTRUMENTATION
I-6C	1"	2-PAIR#16 (SH)		JUNCTION BOX	AIT-151/AE-151	INSTRUMENTATION
I-6D	1"	2-PAIR#16 (SH)		JUNCTION BOX	AIT-142/AE-142	INSTRUMENTATION
I-6E	1"	2-PAIR#16 (SH)		JUNCTION BOX	AIT-152/AE-152	INSTRUMENTATION
I-7A	3/4"	2-PAIR#16 (SH)		PMCS-9110	JUNCTION BOX	INSTRUMENTATION
I-7B	3/4"	1-PAIR#16 (SH)		JUNCTION BOX	PIT-1610H	INSTRUMENTATION
I-7C	3/4"	1-PAIR#16 (SH)		JUNCTION BOX	FIT-1610H	INSTRUMENTATION
I-8A	3/4"	2-PAIR#16 (SH)		PMCS-9110	JUNCTION BOX	INSTRUMENTATION
I-8B	3/4"	1-PAIR#16 (SH)		JUNCTION BOX	PIT-1610L	INSTRUMENTATION
I-8C	3/4"	1-PAIR#16 (SH)		JUNCTION BOX	FIT-1610L	INSTRUMENTATION
I-9	3/4"	1-CAT 6		PMCS-9110	MSPCP-1600	INSTRUMENTATION
I-10	3/4"	1-PAIR#16 (SH)		MSPCP-1600	LIT-027/LE-027	INSTRUMENTATION
I-11	3/4"	1-PAIR#16 (SH)		MSPCP-1600	LIT-028/LE-028	INSTRUMENTATION
I-12A	3/4"	3-PAIR#16 (SH)		MSPCP-1600	JUNCTION BOX	INSTRUMENTATION
I-12B	3/4"	1-PAIR#16 (SH)		JUNCTION BOX	PIT-1601	INSTRUMENTATION
I-12C	3/4"	1-PAIR#16 (SH)		JUNCTION BOX	PIT-1602	INSTRUMENTATION
I-12D	3/4"	1-PAIR#16 (SH)		JUNCTION BOX	PIT-1603	INSTRUMENTATION
I-13A	3/4"	3-PAIR#16 (SH)		MSPCP-1600	JUNCTION BOX	INSTRUMENTATION
I-13B	3/4"	1-PAIR#16 (SH)		JUNCTION BOX	PIT-1604	INSTRUMENTATION
I-13C	3/4"	1-PAIR#16 (SH)		JUNCTION BOX	PIT-1605	INSTRUMENTATION
I-13D	3/4"	1-PAIR#16 (SH)		JUNCTION BOX	PIT-1606	INSTRUMENTATION
I-14	2"	12-PAIR#16 (SH)		MSPCP-1600	MCC-1A&1B	INSTRUMENTATION
I-15	3/4"	1-CAT 6		PMCS-9110	EMCS-1510	INSTRUMENTATION
I-16	3/4"	1-CAT 6		PMCS-9110	GMCP-8510	INSTRUMENTATION
I-17	3/4"	1-CAT 6		PMCS-9110	RTU-9130	INSTRUMENTATION
I-18	3/4"	SMA COAXIAL CABLE		RTU-9130	CELLULAR ANTENNA 1	INSTRUMENTATION
I-19	3/4"	SMA COAXIAL CABLE		RTU-9130	CELLULAR ANTENNA 2	INSTRUMENTATION
I-20	3/4"	1-PAIR#16 (SH)		PMCS-9110	LIT-026/LE-026	INSTRUMENTATION
I-22	3/4"	1-CAT 6		RTU-9130	VSS-8410	INSTRUMENTATION
I-23	3/4"	1-CAT 6		MSPCP-1600	LCP-7401-C	INSTRUMENTATION
I-24	3/4"	1-CAT 6		MSPCP-1600	LCP-7402-C	INSTRUMENTATION

CONDUIT AND CABLE SCHEDULE

CONDUIT NO	CONDUIT SIZE	CABLE QTY	CABLE SIZE	FROM	TO	REMARKS
I-25	3/4"	1-CAT 6		MSPCP-1600	LCP-7403-C	INSTRUMENTATION
I-26	3/4"	1-PAIR#16 (SH)		LCP-7901	PIT-7901	INSTRUMENTATION
I-27	3/4"	1-CAT 6		RTU-9130	RTM-1	INSTRUMENTATION
I-28	3/4"	1-CAT 6		RTU-9130	RTM-2	INSTRUMENTATION
I-29	3/4"	8-STRAND FIBER OPTIC CABLE		RTU-9130	10GB WAN SERVICE	INSTRUMENTATION
I-30A	1"	2-CAT 6		VSS-8410	JUNCTION BOX	INSTRUMENTATION
I-30B	3/4"	1-CAT 6		JUNCTION BOX	IPC-1	INSTRUMENTATION
I-30C	3/4"	1-CAT 6		JUNCTION BOX	IPC-2	INSTRUMENTATION
I-31	3/4"	1-CAT 6		VSS-8410	IPC-3	INSTRUMENTATION
I-32	3/4"	1-CAT 6		VSS-8410	IPC-4	INSTRUMENTATION
I-33	3/4"	1-CAT 6		VSS-8410	IPC-5	INSTRUMENTATION
I-34A	1"	3-CAT 6		VSS-8410	JUNCTION BOX	INSTRUMENTATION
I-34B	3/4"	1-CAT 6		JUNCTION BOX	IPC-6	INSTRUMENTATION
I-34C	3/4"	1-CAT 6		JUNCTION BOX	IPC-7	INSTRUMENTATION
I-34D	3/4"	1-CAT 6		JUNCTION BOX	IPC-8	INSTRUMENTATION
I-35	3/4"	1-CAT 6		VSS-8410	IPC-9	INSTRUMENTATION
I-36	3/4"	1-CAT 6		1000KW STANDBY DIESEL GENERATOR	GMCP-8510	INSTRUMENTATION
FA-1	3"	2-PAIR#14 (SH), CLASS A 2-PAIR#12, CLASS B		1000KW STANDBY GENERATOR ENCLOSURE	FACP-8100	FA SLC LOOP FA CO DETECTOR
FA-2	3"	2-PAIR#12, CLASS B		1000KW STANDBY GENERATOR ENCLOSURE	FACP-8100	FA NAC LOOP
FA-3	3"	8-1/C	12	1000KW STANDBY GENERATOR ENCLOSURE	ATS-FA-2	CONTROL

BID SET

SUBMITTAL DATE: OCTOBER 2026

GRAPHIC SCALES CHECK BEFORE USE

IF SHEET IS LESS THAN 22" X 34" IT IS A REDUCED PRINT. SCALE ACCORDINGLY

NO.	DATE	REVISIONS/DESCRIPTION	APPR'D.

DESIGNED BY: E. JAMES, P.E.
DRAWN BY: B. ROY
CHECKED BY: E. AMABA, P.E.
DESIGN LEAD: E. JAMES, P.E.
PROJECT MANAGER: AIMEE BOULET, P.E.

ELECSYS ENGINEERING GROUP

STATE OF NEW YORK — EDDO JAMES — 086309 — LICENSED PROFESSIONAL ENGINEER

NYC Environmental Protection

ACCOUNTABLE MANAGER: JOHN GOULAS, P.E.
PORTFOLIO MANAGER: KEVIN ELLENWOOD, P.E.
EXECUTIVE DIRECTOR: NAYANKUMAR SHAH, P.E.

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CAPITAL PROJECT WP-269
RECONSTRUCTION OF
PAERDEGAT PUMPING STATION
CONTRACT PS-318
ELECTRICAL
CONDUIT AND CABLE SCHEDULE SHEET 6

DATE: OCTOBER 2026
SCALE: AS INDICATED
SHEET NO: 242 OF 274
DRAWING NO. E-133.00

All inquiries regarding this drawing(s) or project should be made to NYC Environmental Protection, Bureau of Engineering Design and Construction.

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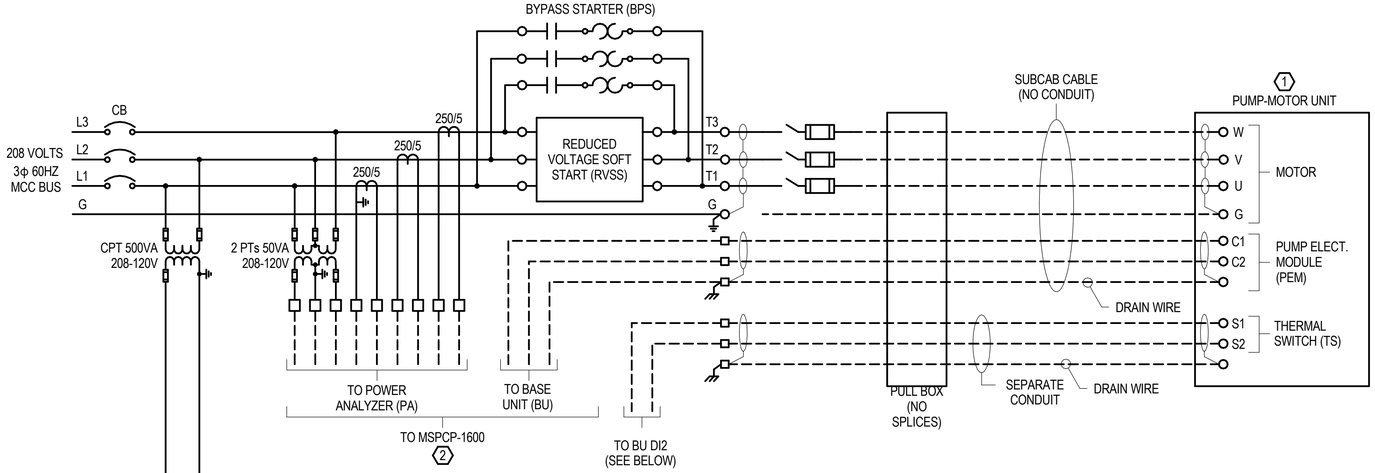

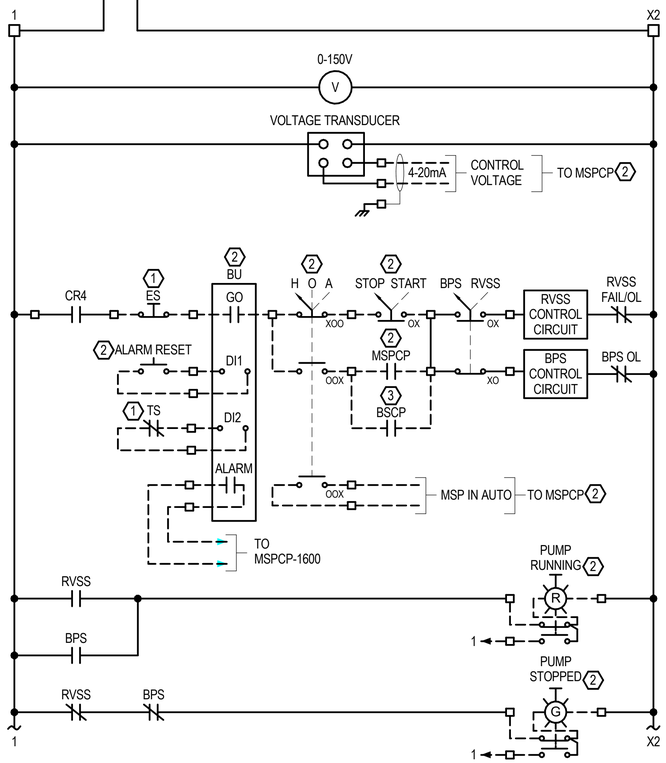

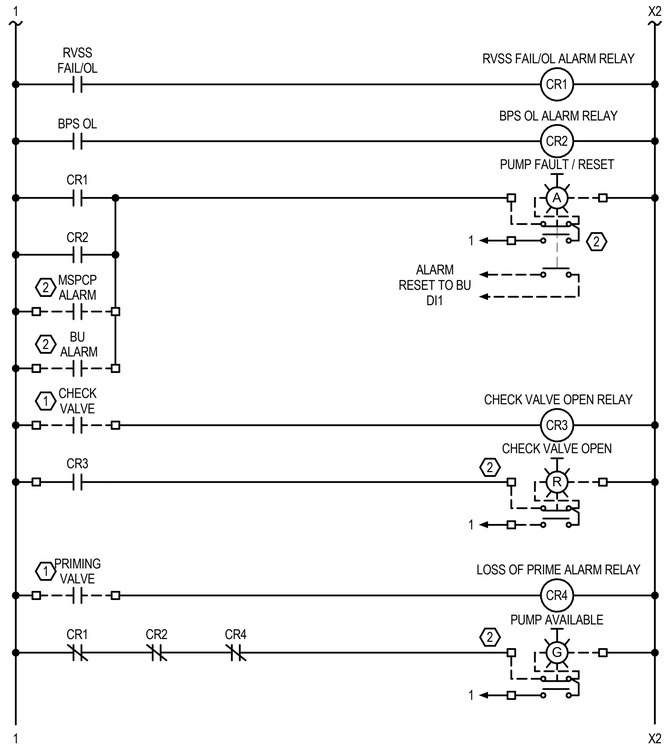

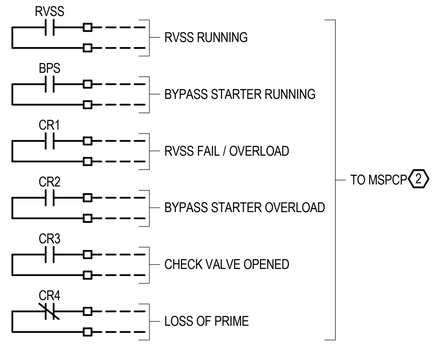

NOTES:

1. CONTROL SCHEMATIC FOR RVSS WITH BYPASS STARTER IS NOT COMPLETELY SHOWN. CONTRACTOR SHALL USE THE ACTUAL MANUFACTURER'S CONTROL SCHEMATIC AS APPLICABLE TO MEET PROJECT REQUIREMENTS.
2. ALL DEVICES ARE LOCATED AT THE MCC UNLESS OTHERWISE NOTED AS FOLLOWS:

IDENTIFIER	LOCATION
(1)	IN OR NEAR THE MOTOR
(2)	MSPCP-1600
(3)	BSCP-9120

HIGH LEVEL MAIN SEWAGE PUMPS MSP-1, 2, 3 CONTROL SCHEMATIC DIAGRAM

(TYPICAL FOR MSP-1601, MSP-1602 & MSP-1603)

BID SET

SUBMITTAL DATE: OCTOBER 2026

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DESIGN LEAD: E. JAMES, P.E.
PROJECT MANAGER: AIMEE BOULET, P.E.

ELECSYS ENGINEERING GROUP

STATE OF NEW YORK ELOO JAMES 086309 LICENSED PROFESSIONAL ENGINEER

NYC Environmental Protection

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CAPITAL PROJECT WP-269
RECONSTRUCTION OF PAERDEGAT PUMPING STATION
CONTRACT PS-318
ELECTRICAL
MSP-1601, 1602, 1603 CONTROL SCHEMATIC DIAGRAM

DATE: OCTOBER 2026
SCALE: AS INDICATED
SHEET NO: 243 OF 274
DRAWING NO. E-134.00

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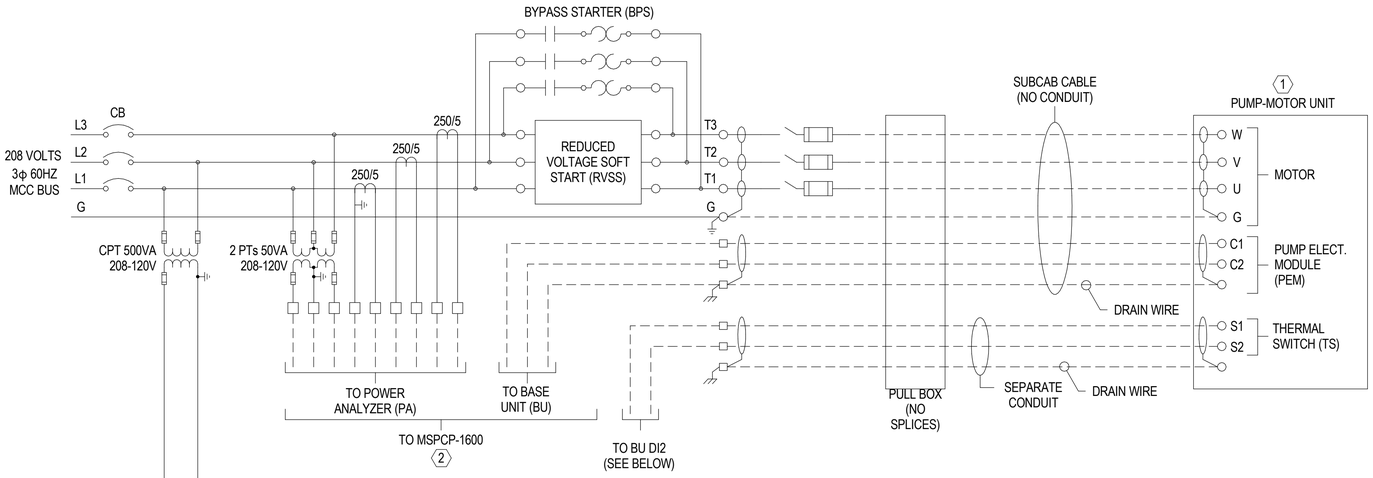

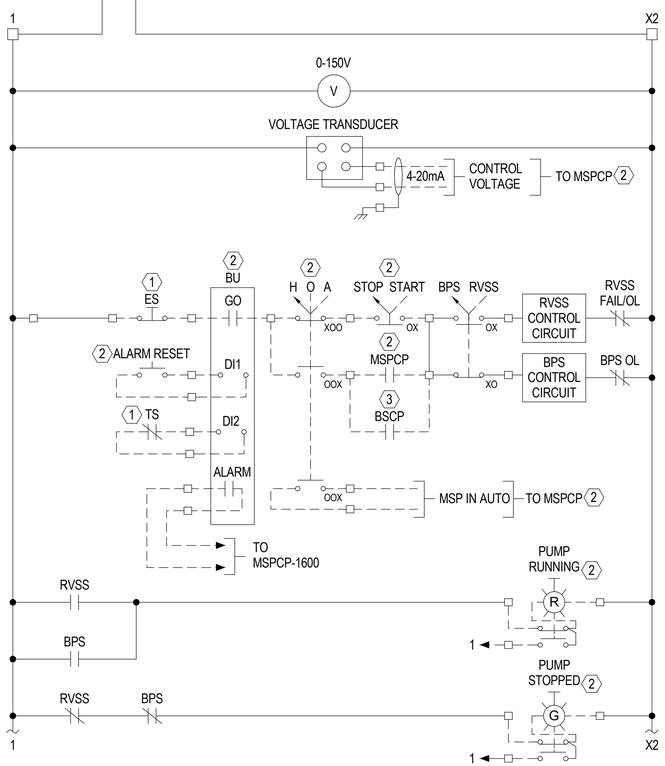

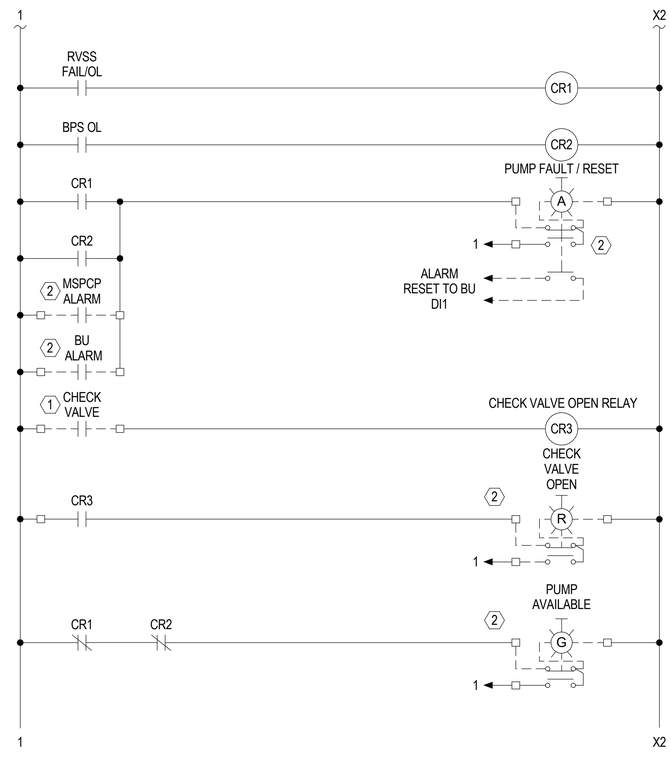

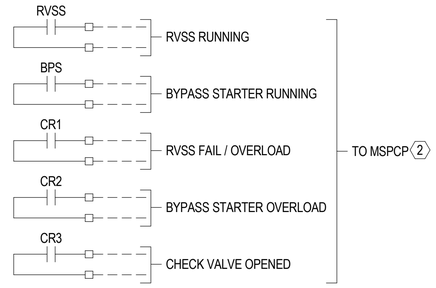

NOTES:

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IDENTIFIER	LOCATION
1	IN OR NEAR THE MOTOR
2	MSPCP-1600
3	BSCP-9120

LOW LEVEL MAIN SEWAGE PUMPS MSP-4, 5, 6
CONTROL SCHEMATIC DIAGRAM
(TYPICAL FOR MSP-1604, MSP-1605 & MSP-1606)

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STATE OF NEW YORK EDO JAMES 089309 PROFESSIONAL ENGINEER

NYC Environmental Protection

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CAPITAL PROJECT WP-269
RECONSTRUCTION OF PAERDEGAT PUMPING STATION
CONTRACT PS-318
ELECTRICAL
MSP-1601, 1602, 1603 CONTROL SCHEMATIC DIAGRAM

DATE: OCTOBER 2026
SCALE: AS INDICATED
SHEET NO: 244 OF 274
DRAWING NO. E-135.00

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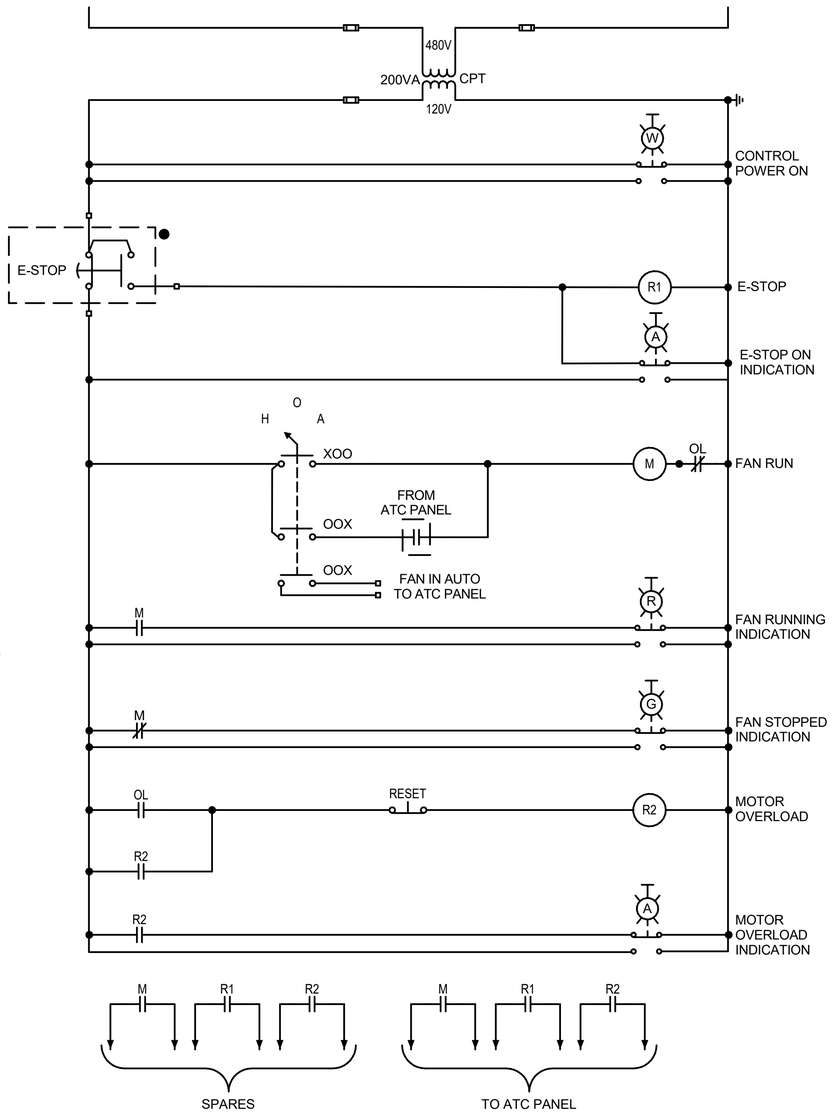
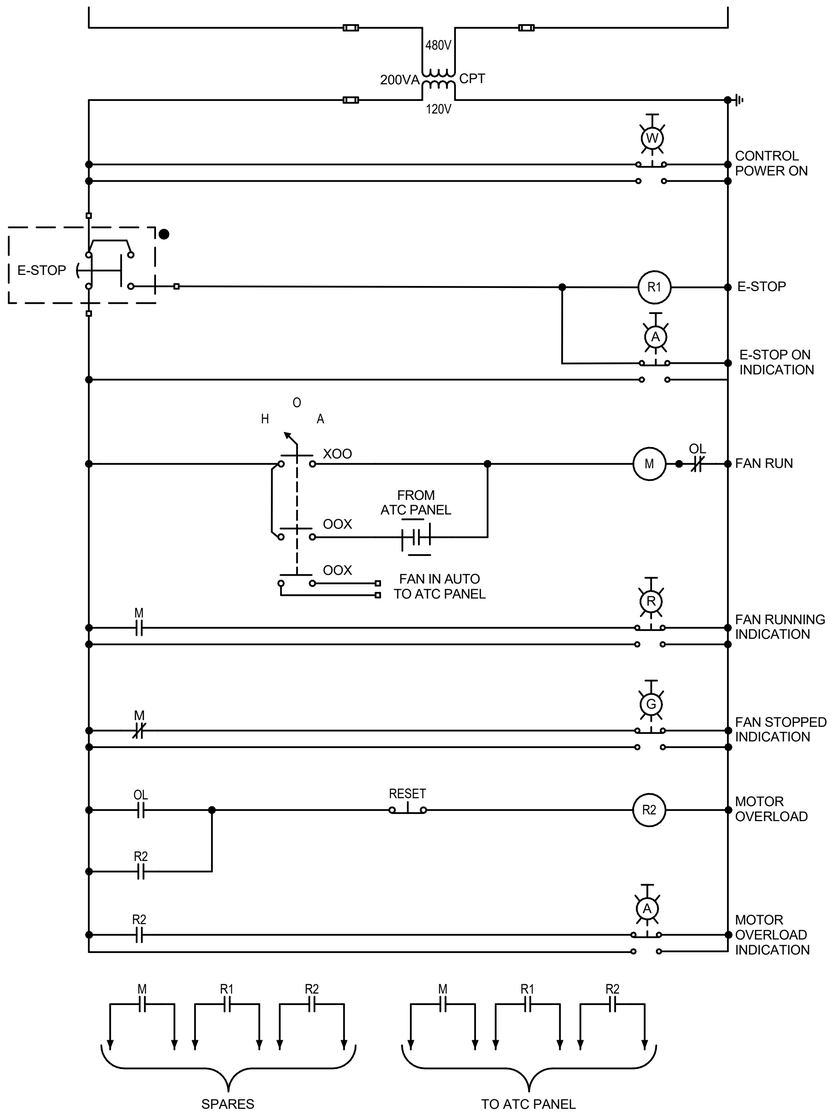


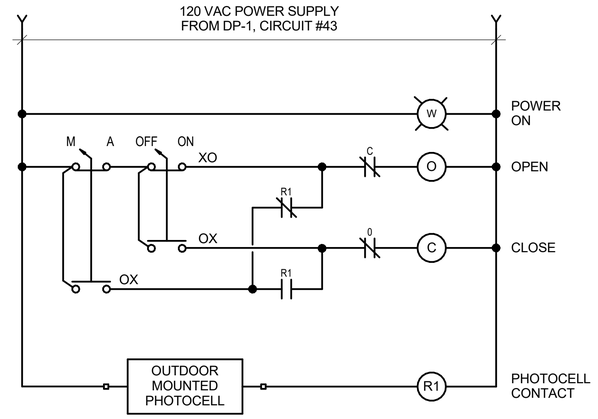
TYPICAL SUPPLY FAN CONTROL SCHEMATIC

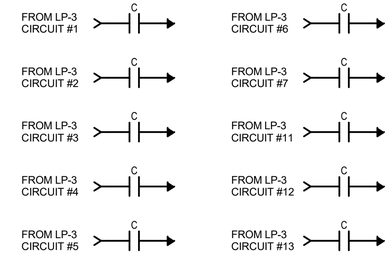


TYPICAL EXHAUST FAN CONTROL SCHEMATIC

NOTES:

1. ALL INTERLOCKING BETWEEN SUPPLY FAN AND EXHAUST FAN AND ANY ASSOCIATED DEVICES, SUCH AS SMOKE DETECTORS, DAMPERS, THERMOSTATS, FLOW SWITCHES, ETC AS REQUIRED FOR THE HVAC SYSTEMS OPERATION SHALL BE VIA THE ATC PANEL. ALL DEVICES FOR THIS SYSTEM INCLUDING ALL CONDUIT AND WIRING SHALL BE PROVIDED AS REQUIRED BY THE CONTRACTOR'S ATC SYSTEM SUPPLIER. COORDINATE FAN MOTOR CONTROL SCHEMATICS SHOWN WITH ATC SYSTEM REQUIREMENTS FOR FAN CONTROL.





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CAPITAL PROJECT WP-269
RECONSTRUCTION OF
PAERDEGAT PUMPING STATION
CONTRACT PS-318
ELECTRICAL
HVAC FAN CONTROL & SITE LIGHTING SCHEMATIC DIAGRAMS

DATE: OCTOBER 2026
SCALE: AS INDICATED
SHEET NO: 245 OF 274
DRAWING NO. E-136.00

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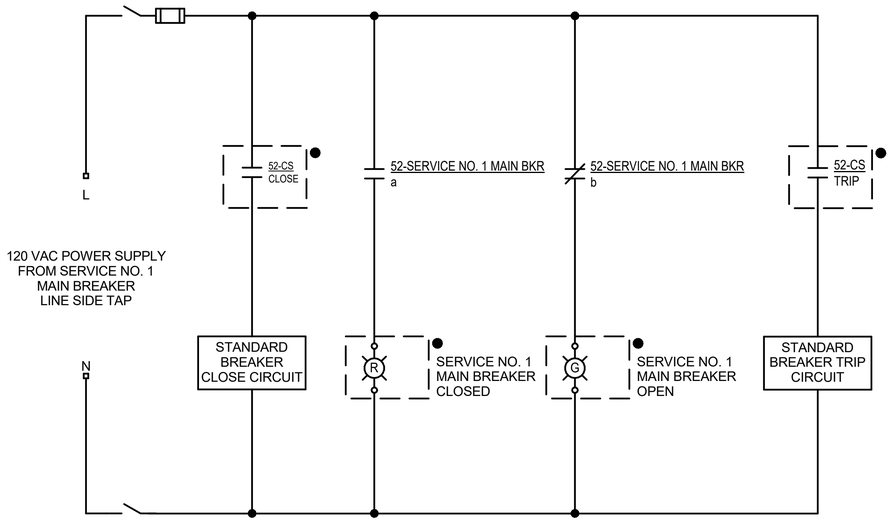
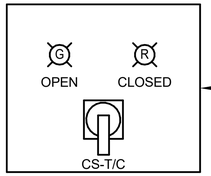


SERVICE NO. 1 MAIN BREAKER CONTROL SCHEMATIC



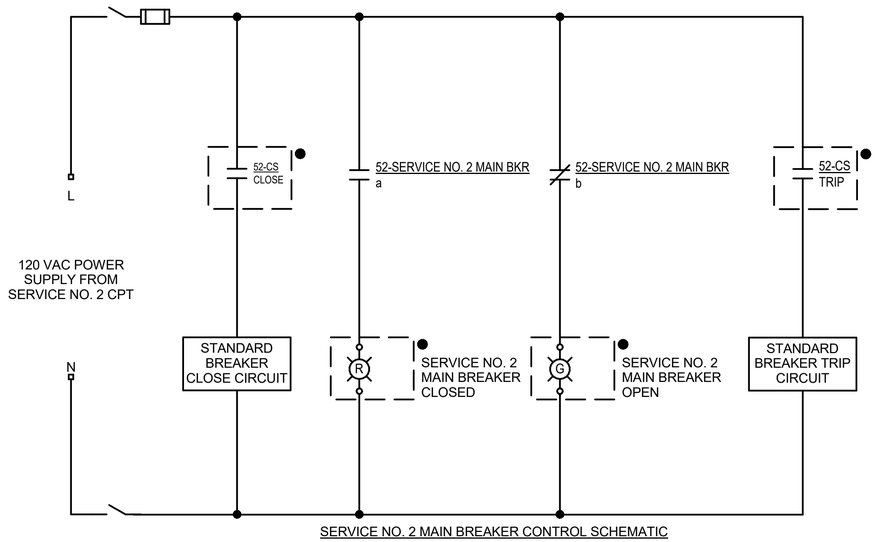
NEMA 4X STAINLESS STEEL WALL-MOUNTED ENCLOSURE WITH PAD-LOCKABLE DOOR IN ADDITION TO INTERIOR ENLCOSURE DOOR CONTAINING PILOT DEVICES.

SERVICE NO. 1 BSCP FRONT VIEW

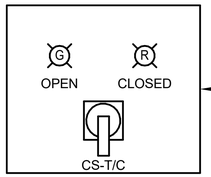
NOTES:

1. UNLESS OTHERWISE NOTED BY THE FOLLOWING DEVICE LOCATION IDENTIFIER, ALL DEVICES SHOWN ON THE SCHEMATIC ABOVE ARE LOCATED AT SERVICE NO. 1 MAIN BREAKER.

IDENTIFIER	LOCATION
●	SERVICE NO. 1 BSCP



SERVICE NO. 2 MAIN BREAKER CONTROL SCHEMATIC



NEMA 4X STAINLESS STEEL WALL-MOUNTED ENCLOSURE WITH PAD-LOCKABLE DOOR IN ADDITION TO INTERIOR ENLCOSURE DOOR CONTAINING PILOT DEVICES.

SERVICE NO. 2 BSCP FRONT VIEW

NOTES:

1. UNLESS OTHERWISE NOTED BY THE FOLLOWING DEVICE LOCATION IDENTIFIER, ALL DEVICES SHOWN ON THE SCHEMATIC ABOVE ARE LOCATED AT SERVICE NO. 2 MAIN BREAKER.

IDENTIFIER	LOCATION
●	SERVICE NO. 2 BSCP

BID SET

SUBMITTAL DATE: OCTOBER 2026

GRAPHIC SCALES CHECK BEFORE USE

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NO.	DATE	REVISIONS/DESCRIPTION	APPR'D.

DESIGNED BY: E. JAMES, P.E.
DRAWN BY: B. ROY
CHECKED BY: E. AMABA, P.E.
DESIGN LEAD: E. JAMES, P.E.
PROJECT MANAGER: AIMEE BOULET, P.E.

ELECSYS ENGINEERING GROUP

Environmental Protection

ACCOUNTABLE MANAGER: JOHN GOULAS, P.E.
PORTFOLIO MANAGER: KEVIN ELLENWOOD, P.E.
EXECUTIVE DIRECTOR: NAYANKUMAR SHAH, P.E.

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96-05 HORACE HARDING EXPRESSWAY 5th FLOOR
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CAPITAL PROJECT WP-269
RECONSTRUCTION OF
PAERDEGAT PUMPING STATION
CONTRACT PS-318
ELECTRICAL
MAIN SERVICE BREAKER CONTROL SCHEMATICS

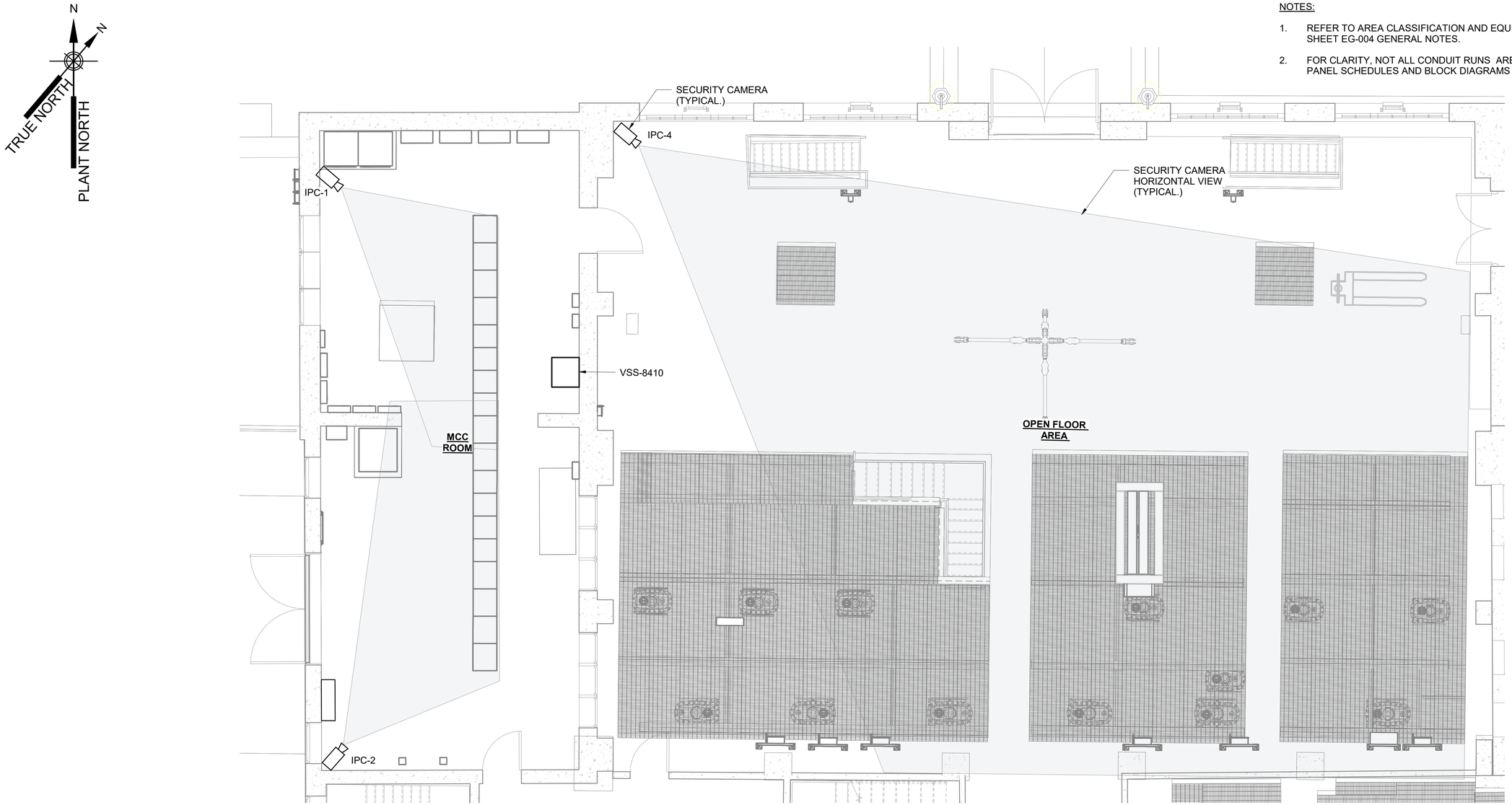
DATE: OCTOBER 2026
SCALE: AS INDICATED
SHEET NO: 246 OF 274
DRAWING NO. E-137.00

All inquiries regarding this drawing(s) or project should be made to NYC Environmental Protection, Bureau of Engineering Design and Construction.

Autodesk Docs://CI-AMER (USA) 60619010-PS-DES-5/PAER-E-MODEL_AECOM.rvt
10/9/2026 1:59:15 PM

NOTES:

1. REFER TO AREA CLASSIFICATION AND EQUIPMENT ENCLOSURE SCHEDULE ON SHEET EG-004 GENERAL NOTES.
2. FOR CLARITY, NOT ALL CONDUIT RUNS ARE SHOWN. REFER TO ONE LINE DIAGRAMS, PANEL SCHEDULES AND BLOCK DIAGRAMS FOR CONDUIT AND CABLE REQUIREMENT.



MCC ROOM AND OPEN FLOOR AREA VIDEO SURVEILLANCE PLAN

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

0 4 8 FT.
1/4"=1'-0"

BID SET

SUBMITTAL DATE: OCTOBER 2026

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DESIGN LEAD: E. JAMES, P.E.
PROJECT MANAGER: AIMEE BOULET, P.E.

DRAWN BY: B. ROY

ELECSYS ENGINEERING GROUP

STATE OF NEW YORK ELDO JAMES 088309 REGISTERED PROFESSIONAL ENGINEER

NYC Environmental Protection

ACCOUNTABLE MANAGER: JOHN GOULAS, P.E.
PORTFOLIO MANAGER: KEVIN ELLENWOOD, P.E.
EXECUTIVE DIRECTOR: NAYANKUMAR SHAH, P.E.

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CAPITAL PROJECT WP-269
RECONSTRUCTION OF PAERDEGAT PUMPING STATION
CONTRACT PS-318
ELECTRICAL
MCC ROOM AND OPEN FLOOR AREA VIDEO SURVEILLANCE SYSTEM PLAN

DATE: OCTOBER 2026
SCALE: AS INDICATED
SHEET NO: 247 OF 274
DRAWING NO. E-138.00

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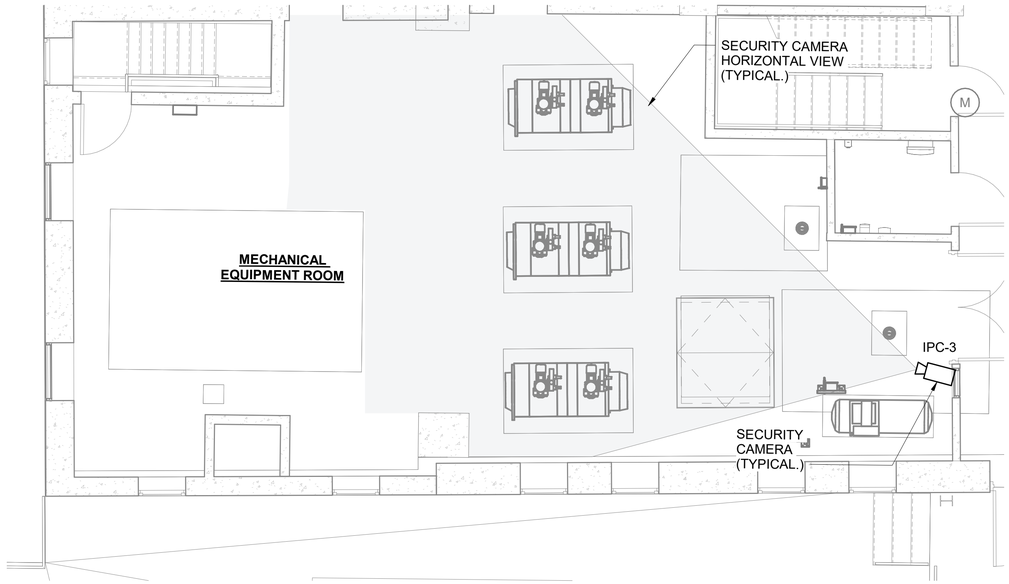
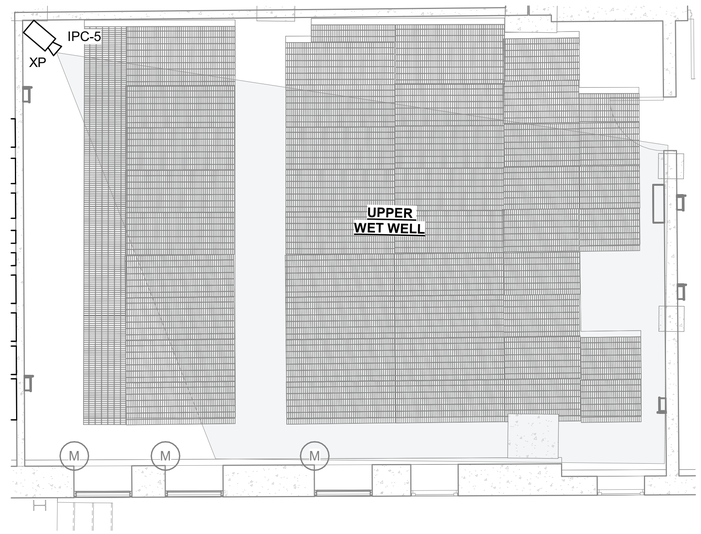


MECHANICAL ROOM VIDEO SURVEILLANCE PLAN

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



UPPER WET WELL AREA VIDEO SURVEILLANCE PLAN

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

0 4 8 FT.
1/4"=1'-0"

BID SET

SUBMITTAL DATE: OCTOBER 2026

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DRAWN BY: B. ROY
CHECKED BY: E. AMABA, P.E.
DESIGN LEAD: E. JAMES, P.E.
PROJECT MANAGER: AIMEE BOULET, P.E.

ELECSYS ENGINEERING GROUP

STATE OF NEW YORK EDDO JAMES 086309 PROFESSIONAL ENGINEER

Environmental Protection

ACCOUNTABLE MANAGER: JOHN GOULAS, P.E.
PORTFOLIO MANAGER: KEVIN ELLENWOOD, P.E.
EXECUTIVE DIRECTOR: NAYANKUMAR SHAH, P.E.

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CAPITAL PROJECT WP-269
RECONSTRUCTION OF
PAERDEGAT PUMPING STATION
CONTRACT PS-318
ELECTRICAL
MECHANICAL ROOM AND UPPER WET WELL AREA VIDEO SURVEILLANCE SYSTEM PLAN

DATE: OCTOBER 2026
SCALE: AS INDICATED
SHEET NO: 248 OF 274
DRAWING NO. E-139.00

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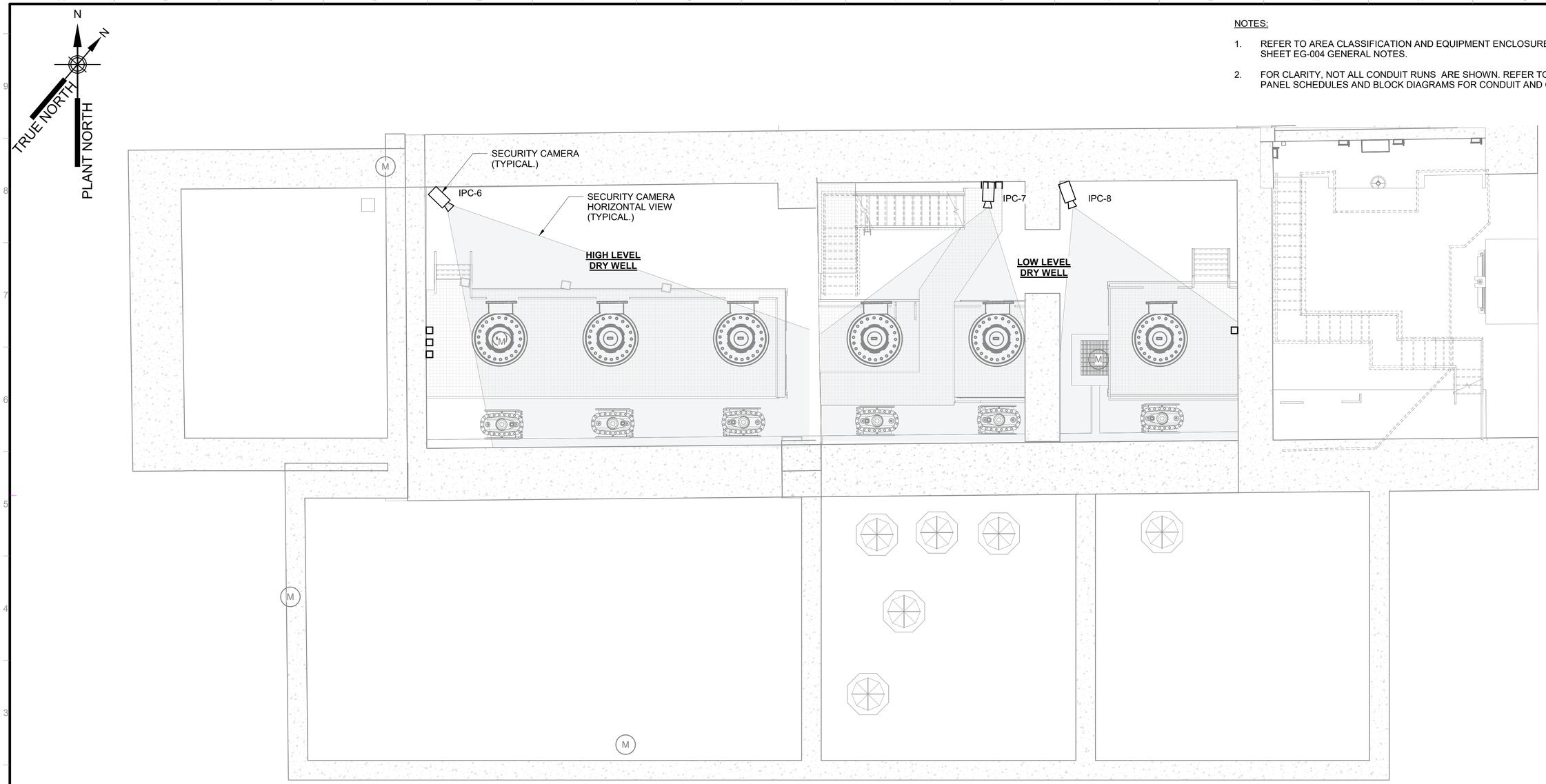
NOTES:

1. REFER TO AREA CLASSIFICATION AND EQUIPMENT ENCLOSURE SCHEDULE ON SHEET EG-004 GENERAL NOTES.
2. FOR CLARITY, NOT ALL CONDUIT RUNS ARE SHOWN. REFER TO ONE LINE DIAGRAMS, PANEL SCHEDULES AND BLOCK DIAGRAMS FOR CONDUIT AND CABLE REQUIREMENT.



DRY WELL AREA VIDEO SURVEILLANCE PLAN

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

0 4 8 FT.

1/4"=1'-0"

BID SET

SUBMITTAL DATE: OCTOBER 2026

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NO.	DATE	REVISIONS/DESCRIPTION	APPR'D.

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CHECKED BY: E. AMABA, P.E.
DESIGN LEAD: E. JAMES, P.E.
PROJECT MANAGER: AIMEE BOULET, P.E.

DRAWN BY: B. ROY

ELECSYS ENGINEERING GROUP

STATE OF NEW YORK ELDO JAMES 088309 LICENSED PROFESSIONAL ENGINEER

NYC Environmental Protection

ACCOUNTABLE MANAGER: JOHN GOULAS, P.E.
PORTFOLIO MANAGER: KEVIN ELLENWOOD, P.E.
EXECUTIVE DIRECTOR: NAYANKUMAR SHAH, P.E.

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CAPITAL PROJECT WP-269
RECONSTRUCTION OF
PAERDEGAT PUMPING STATION
CONTRACT PS-318
ELECTRICAL
DRY WELL AREA VIDEO SURVEILLANCE SYSTEM PLAN

DATE: OCTOBER 2026
SCALE: AS INDICATED
SHEET NO: 249 OF 274
DRAWING NO. E-140.00

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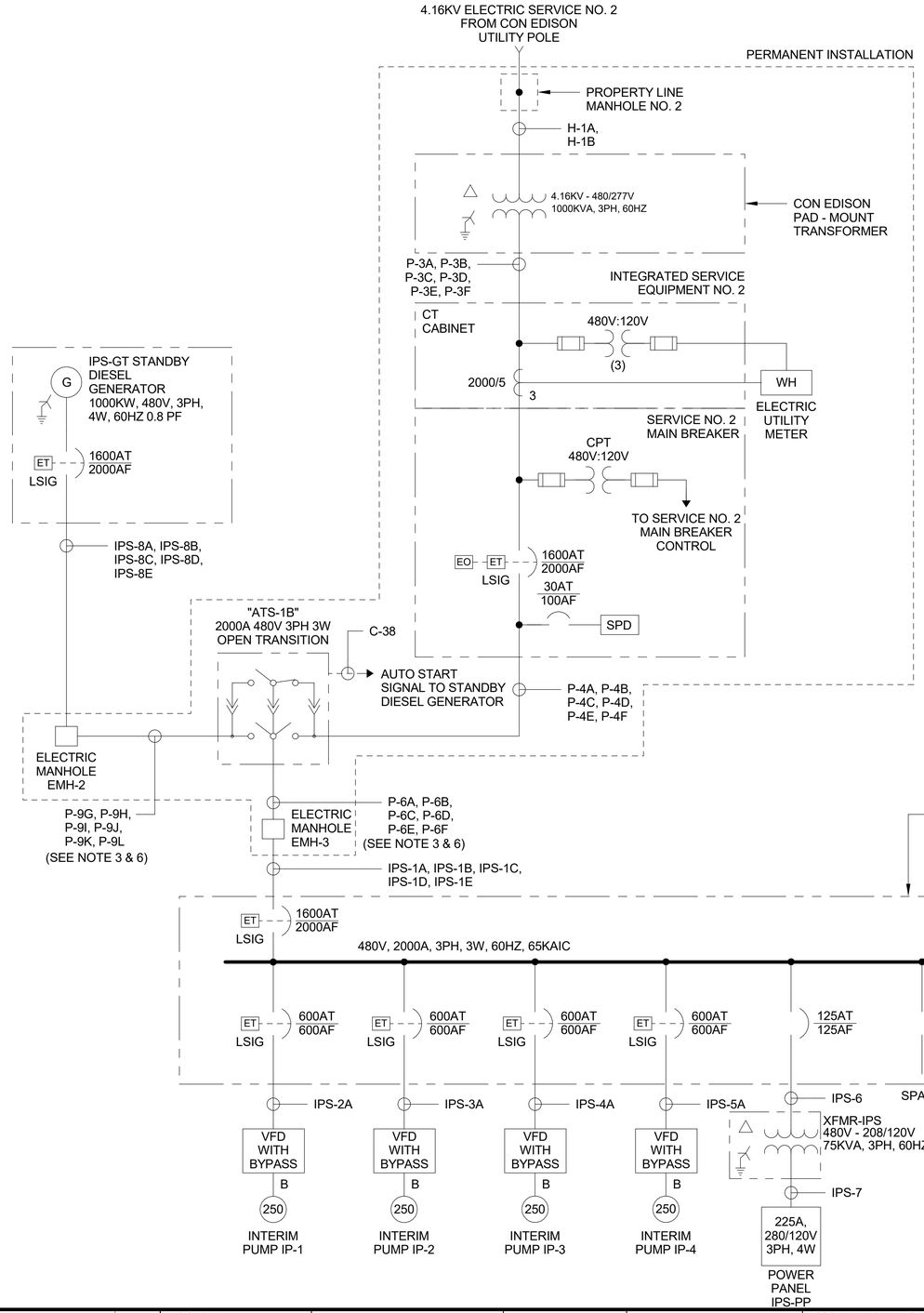

NOTES:

1. WHERE NOTED, THE CONDUITS SHALL BE SIZED ACCORDING TO THE THE CONTRACT DRAWING CONDUIT TAGS.
2. WHEN ALL WORK ASSOCIATED WITH PERMANENT INSTALLATION IS COMPLETE, AND WHEN THE PERMANENT PUMP STATION IS OPERATIONAL FROM CON EDISON SERVICE FEEDER NO. 1 AND APPROVED BY THE ENGINEER, REMOVE ALL INTERIM SYSTEM CABLES AND CONDUITS.
3. THE CONTRACTOR SHALL ONLY REMOVE CABLES IN CONDUITS, WHERE NOTED. THE CONDUITS SHALL REMAIN AND TO BE UTILIZED FOR SERVICE NO. 2 PERMANENT INSTALLATION.
4. REFER TO SHEET E-111.00 FOR PERMANENT INSTALLATION CONDUIT ROUTING.
5. THE VERTICAL BUS RATINGS SHALL MATCH THE MAIN BUS RATING OF THE SWITCHBOARD. GROUND BUSES SHALL BE MINIMUM 1/4" X 2" COPPER BUS, RUNNING THROUGHOUT THE LENGTH OF THE SWITCHBOARD. BUS BAR CURRENT DENSITIES SHALL COMPLY WITH NYC ELECTRICAL CODE AMENDMENTS TO THE NEC.
6. CABLES USED FOR INTERIM SYSTEM SHALL BE REMOVED FROM THE PERMANENT CONDUITS AND INSTALL NEW CABLES FOR PERMANENT INSTALLATION.
7. PROVIDE INTERIM CONDUIT AND CABLE FROM ATS-1B TO IPS-GT STANDBY DIESEL GENERATOR FOR AUTOMATIC START SIGNAL UPON LOSS OF NORMAL POWER.
8. REFER TO SECTION 01 51 40 FOR INTERIM POWER SYSTEM DESIGN REQUIREMENTS.

INTERIM POWER SYSTEM CONDUIT AND CABLE SCHEDULE

CONDUIT		CABLE		FROM	TO	REMARKS
NO	SIZE	QTY	SIZE			
IPS-1A	4"	3-1/C 1-1/C	500KCMIL 4/0	EMH-3	IPS-SWBD	POWER GROUND
IPS-1B	4"	3-1/C 1-1/C	500KCMIL 4/0	EMH-3	IPS-SWBD	POWER GROUND
IPS-1C	4"	3-1/C 1-1/C	500KCMIL 4/0	EMH-3	IPS-SWBD	POWER GROUND
IPS-1D	4"	3-1/C 1-1/C	500KCMIL 4/0	EMH-3	IPS-SWBD	POWER GROUND
IPS-1E	4"	3-1/C 1-1/C	500KCMIL 4/0	EMH-3	IPS-SWBD	POWER GROUND
IPS-2A	4"	3-1/C 1-1/C	500KCMIL 1	IPS-SWBD	INTERIM PUMP IP-1 VFD	POWER GROUND
IPS-2B	4"	3-1/C 1-1/C	500KCMIL 1	INTERIM PUMP IP-1 VFD	INTERIM PUMP IP-1	POWER GROUND
IPS-3A	4"	3-1/C 1-1/C	500KCMIL 1	IPS-SWBD	INTERIM PUMP IP-2 VFD	POWER GROUND
IPS-3B	4"	3-1/C 1-1/C	500KCMIL 1	INTERIM PUMP IP-2 VFD	INTERIM PUMP IP-2	POWER GROUND
IPS-4A	4"	3-1/C 1-1/C	500KCMIL 1	IPS-SWBD	INTERIM PUMP IP-3 VFD	POWER GROUND
IPS-4B	4"	3-1/C 1-1/C	500KCMIL 1	INTERIM PUMP IP-3 VFD	INTERIM PUMP IP-3	POWER GROUND
IPS-5A	4"	3-1/C 1-1/C	500KCMIL 1	IPS-SWBD	INTERIM PUMP IP-4 VFD	POWER GROUND
IPS-5B	4"	3-1/C 1-1/C	500KCMIL 1	INTERIM PUMP IP-4 VFD	INTERIM PUMP IP-4	POWER GROUND
IPS-6	1-1/2"	3-1/C 1-1/C	2 6	IPS-SWBD	XFMR-IPS	POWER GROUND
IPS-7	3"	4-1/C 1-1/C	300KCMIL 4	XFMR-IPS	IPS-PP	POWER GROUND
IPS-8A	4"	3-1/C 1-1/C	500KCMIL 4/0	IPS-GT STANDBY DIESEL GENERATOR	EMH-2	POWER GROUND
IPS-8B	4"	3-1/C 1-1/C	500KCMIL 4/0	IPS-GT STANDBY DIESEL GENERATOR	EMH-2	POWER GROUND
IPS-8C	4"	3-1/C 1-1/C	500KCMIL 4/0	IPS-GT STANDBY DIESEL GENERATOR	EMH-2	POWER GROUND
IPS-8D	4"	3-1/C 1-1/C	500KCMIL 4/0	IPS-GT STANDBY DIESEL GENERATOR	EMH-2	POWER GROUND
IPS-8E	4"	3-1/C 1-1/C	500KCMIL 4/0	IPS-GT STANDBY DIESEL GENERATOR	EMH-2	POWER GROUND

BID SET

SUBMITTAL DATE: OCTOBER 2026

GRAPHIC SCALES CHECK BEFORE USE

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DRAWN BY: B. ROY
CHECKED BY: E. AMABA, P.E.
DESIGN LEAD: E. JAMES, P.E.
PROJECT MANAGER: AIMEE BOULET, P.E.

ELECSYS ENGINEERING GROUP

STATE OF NEW YORK — OSCAR JAMES — 088309 — PROFESSIONAL ENGINEER

NYC Environmental Protection

ACCOUNTABLE MANAGER: JOHN GOULAS, P.E.
PORTFOLIO MANAGER: KEVIN ELLENWOOD, P.E.
EXECUTIVE DIRECTOR: NAYANKUMAR SHAH, P.E.

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CAPITAL PROJECT WP-269
RECONSTRUCTION OF
PAERDEGAT PUMPING STATION
CONTRACT PS-318
ELECTRICAL
INTERIM POWER SYSTEM - ONE LINE DIAGRAM

DATE: OCTOBER 2026
SCALE: AS INDICATED
SHEET NO: 250 OF 274
DRAWING NO. E-201.00

All inquiries regarding this drawing(s) or project should be made to NYC Environmental Protection, Bureau of Engineering Design and Construction.

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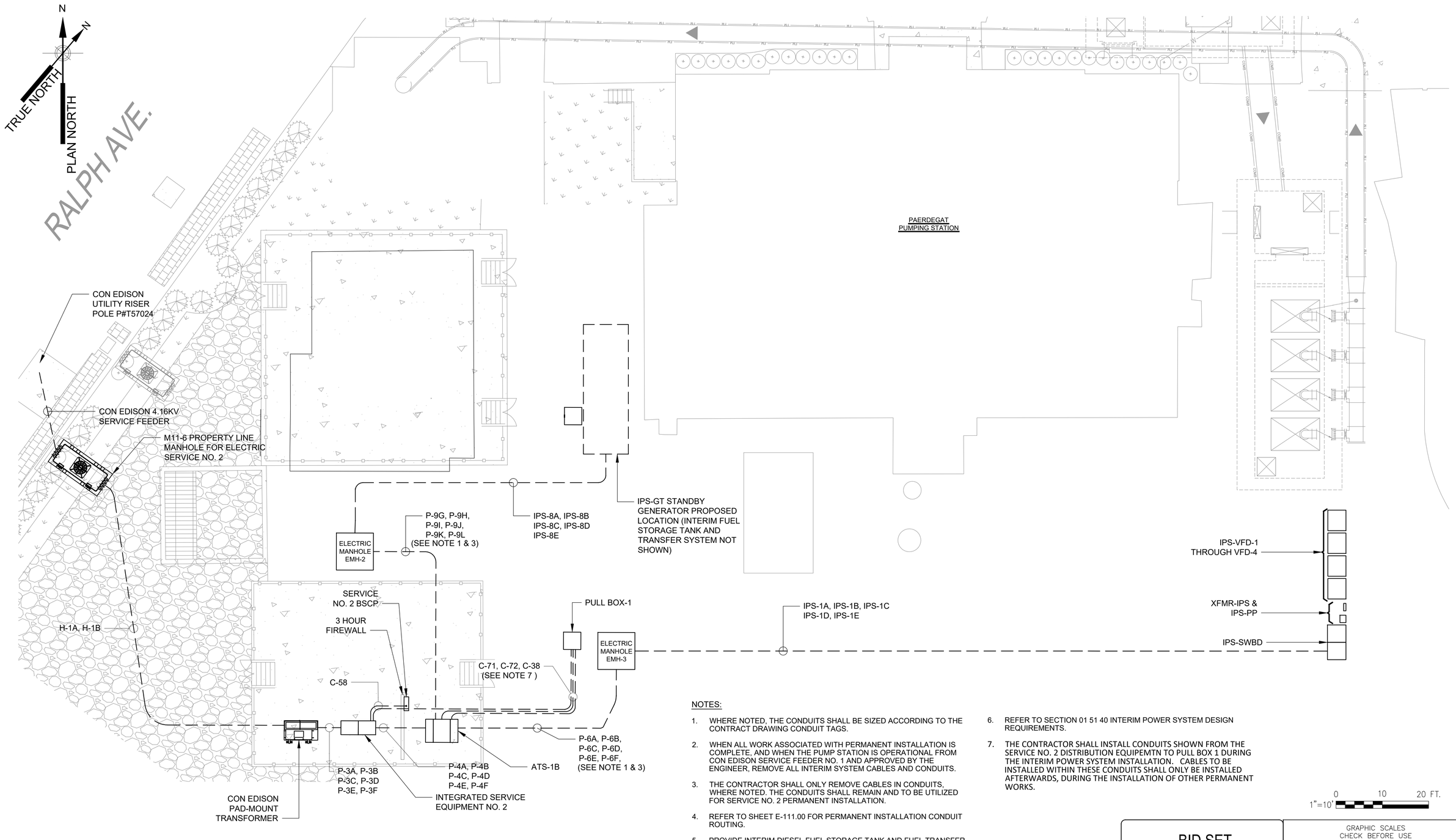

PAERDEGAT ELECTRICAL SITE PLAN

SCALE: 1"= 10'

NOTES:

1. WHERE NOTED, THE CONDUITS SHALL BE SIZED ACCORDING TO THE CONTRACT DRAWING CONDUIT TAGS.
2. WHEN ALL WORK ASSOCIATED WITH PERMANENT INSTALLATION IS COMPLETE, AND WHEN THE PUMP STATION IS OPERATIONAL FROM CON EDISON SERVICE FEEDER NO. 1 AND APPROVED BY THE ENGINEER, REMOVE ALL INTERIM SYSTEM CABLES AND CONDUITS.
3. THE CONTRACTOR SHALL ONLY REMOVE CABLES IN CONDUITS, WHERE NOTED. THE CONDUITS SHALL REMAIN AND TO BE UTILIZED FOR SERVICE NO. 2 PERMANENT INSTALLATION.
4. REFER TO SHEET E-111.00 FOR PERMANENT INSTALLATION CONDUIT ROUTING.
5. PROVIDE INTERIM DIESEL FUEL STORAGE TANK AND FUEL TRANSFER SYSTEM SIZED FOR 48 HOURS OF GENERATOR RUN TIME AT FULL LOAD GENERATOR CAPACITY.
6. REFER TO SECTION 01 51 40 INTERIM POWER SYSTEM DESIGN REQUIREMENTS.
7. THE CONTRACTOR SHALL INSTALL CONDUITS SHOWN FROM THE SERVICE NO. 2 DISTRIBUTION EQUIPEMTN TO PULL BOX 1 DURING THE INTERIM POWER SYSTEM INSTALLATION. CABLES TO BE INSTALLED WITHIN THESE CONDUITS SHALL ONLY BE INSTALLED AFTERWARDS, DURING THE INSTALLATION OF OTHER PERMANENT WORKS.

0 10 20 FT.
1"=10'

BID SET

SUBMITTAL DATE: OCTOBER 2026

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PROJECT MANAGER: AIMEE BOULET, P.E.

ELECSYS ENGINEERING GROUP

Environmental Protection

ACCOUNTABLE MANAGER: JOHN, GOULAS, P.E.
PORTFOLIO MANAGER: KEVIN ELLENWOOD, P.E.
DIRECTOR, IN HOUSE DESIGN: NAYANKUMAR SHAH, P.E.

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CAPITAL PROJECT WP-269
RECONSTRUCTION OF
PAERDEGAT PUMPING STATION
CONTRACT PS-318
ELECTRICAL
INTERIM POWER SYSTEM SITE PLAN

DATE: OCTOBER 2026
SCALE: 1" = 10'
SHEET NO: 251 OF 274
DRAWING NO. E–202.00

All inquiries regarding this drawing(s) or project should be made to NYC Environmental Protection, Bureau of Engineering Design and Construction.

Last Saved By: Broy
Paper Size Printed/Plotted: ANSI full bleed D (22.00 x 34.00 Inches)
Drawing File Name & Drive Location: C:\Users\BasilRoy\DC\ACCDocs\AECOM\C-AMER (USA) 60619010-PS-DES-S\Project Files\900 Design Collaboration\16-E\Paerdegat - Electrical Site Plan\E-202.00.dwg
Last Date Saved: 12/14/2026 9:14 AM
Plot Scale:1:1
Date & Time Plotted: 12/14/2021 5:08 PM
Plot Style Table: DEP_BEDC_22x34_ByWeight.ctb

LIGHTING FIXTURE SCHEDULE

TAG	NOMINAL WATT	NOMINAL LUMEN	COLOR TEMP	DISTRIBUTION	VOLTAGE	DESCRIPTION	MANUFACTURER
		<varies>				<varies>	<varies>
A1A	40	6000	5000K	WIDE	120	PENDANT MOUNT LED 4-FOOT LINEAR LIGHT FIXTURE SUITABLE FOR DAMP LOCATIONS, UL LISTED, NEMA 12, IP66 RATED, FIBERGLASS HOUSING WITH FROSTED POLYCARBONATE LENS. THE FIXTURE SHALL BE RATED FOR USE IN AMBIENT TEMPERATURES OF -20°C TO +50°C. THE FIXTURE SHALL BE L70 TESTED FOR 60000 HOURS OF USE. THE FIXTURE SHALL HAVE MINIMUM EFFICACY OF 140 LUMEN OUTPUT PER WATT.	HOLOPHANE EMS COLUMBIA LXEM OR APPROVED EQUAL
A2A	40	6000	5000K	WIDE	120	PENDANT MOUNT LED 4-FOOT LINEAR LIGHT FIXTURE SUITABLE FOR WET AND CORROSIVE LOCATIONS, UL LISTED, NEMA 4X, IP66 RATED, FIBERGLASS HOUSING WITH FROSTED POLYCARBONATE LENS. THE FIXTURE SHALL BE RATED FOR USE IN AMBIENT TEMPERATURES OF -20°C TO +50°C. THE FIXTURE SHALL BE L70 TESTED FOR 60000 HOURS OF USE.	HOLOPHANE EMS, COLUMBIA LXEM OR APPROVED EQUAL
A3A	40	7250	5000K	WIDE	120	PENDANT MOUNT LED 4-FOOT LINEAR LIGHT FIXTURE SUITABLE FOR WET, CORROSIVE, AND CLASS I DIVISION 1 LOCATIONS. THE FIXTURE SHALL HAVE A DIE-CAST ALUMINUM HOUSING WITH AN INTEGRAL HEAT SINK AND SHALL BE RATED NEMA 4X, IP66 RATED, UL 1598 LISTED. THE FIXTURE SHALL BE RATED FOR USE IN AMBIENT TEMPERATURES OF -20°C TO +45°C. THE FIXTURE SHALL BE L70 OR TM-21 TESTED FOR 60000 HOURS OF USE. THE FIXTURE SHALL HAVE MINIMUM EFFICACY OF 116 LUMEN OUTPUT PER WATT.	HOLOPHANE HXPL DIALIGHT SAFESITE LED LINEAR OR APPROVED EQUAL
A4B	40	6000	5000K	WIDE	120	WALL MOUNT LED 4-FOOT LINEAR LIGHT FIXTURE SUITABLE FOR WET, CORROSIVE. THE FIXTURE SHALL HAVE A DIE-CAST ALUMINUM HOUSING WITH AN INTEGRAL HEAT SINK AND SHALL BE RATED NEMA 4X, IP66 RATED, UL 1598 LISTED. THE FIXTURE SHALL BE RATED FOR USE IN AMBIENT TEMPERATURES OF -20°C TO +45°C. THE FIXTURE SHALL BE L70 OR TM-21 TESTED FOR 60000 HOURS OF USE. THE FIXTURE SHALL HAVE MINIMUM EFFICACY OF 116 LUMEN OUTPUT PER WATT.	HOLOPHANE EMS, COLUMBIA LXEM OR APPROVED EQUAL
B1B	115	11000	5000K	T2S	120	LED WALL PACK LIGHT FIXTURE WITH FULLCUTOFF LENS SUITABLE FOR WET AND CORROSIVE LOCATIONS, IP66 RATED DIE-CAST ALUMINUM HOUSING WITH CORROSION RESISTANT PAINTED BRONZE FINISH. THE FIXTURE SHALL HAVE INTEGRAL SURGE PROTECTION AND PHOTOCELL. PROVIDE MOTION SENSOR IF INDICATED ON DRAWING. THE FIXTURE SHALL BE RATED FOR USE IN AMBIENT TEMPERATURES OF -20°C TO +40°C. THE FIXTURE SHALL BE LM 80 OR TM-21 TESTED FOR 60000 HOURS OF USE. THE FIXTURE SHALL HAVE MINIMUM EFFICACY OF 104 LUMEN OUTPUT PER WATT.	HOLOPHANE HLWPC2 EATON GAW GALLEON WALL OR APPROVED EQUAL
B2B	71	9900	5000K	T2M	120	LED WALL PACK LIGHT FIXTURE WITH FULLCUTOFF LENS SUITABLE FOR WET AND CORROSIVE LOCATIONS, IP66 RATED DIE-CAST ALUMINUM HOUSING WITH CORROSION RESISTANT PAINTED BRONZE FINISH. THE FIXTURE SHALL HAVE INTEGRAL SURGE PROTECTION AND PHOTOCELL. PROVIDE MOTION SENSOR IF INDICATED ON DRAWING. THE FIXTURE SHALL BE RATED FOR USE IN AMBIENT TEMPERATURES OF -20°C TO +40°C. THE FIXTURE SHALL BE LM 80 OR TM-21 TESTED FOR 60000 HOURS OF USE. THE FIXTURE SHALL HAVE MINIMUM EFFICACY OF 112 LUMEN OUTPUT PER WATT.	HOLOPHANE HLWPC2 EATON GAW GALLEON WALL OR APPROVED EQUAL
C1A	196	18000	5000K	TYPE 5	120	PENDANT MOUNT LED AREA LIGHT FIXTURE SUITABLE FOR WET AND CORROSIVE LOCATIONS. FIXTURE SHALL BE UL LISTED, NEMA 4X, IP66 RATED, WITH ALUMINUM HOUSING WITH GLASS LENS. THE FIXTURE SHALL HAVE INTEGRAL SURGE PROTECTION AND A HEAT SINK. THE FIXTURE SHALL BE L70 OR TM-21 TESTED FOR 60000 HOURS OF USE. THE FIXTURE SHALL BE RATED FOR USE IN AMBIENT TEMPERATURES OF -20°C TO +60°C.	HOLOPHANE PETROLUX SERIES EATON CHAMP PRO PVML SERIES OR APPROVED EQUAL
C2A	129	12000	5000K	TYPE 5	120	PENDANT MOUNT LED AREA LIGHT FIXTURE SUITABLE FOR WET AND CORROSIVE LOCATIONS. FIXTURE SHALL BE UL LISTED, NEMA 4X, IP66 RATED, WITH ALUMINUM HOUSING WITH GLASS LENS. THE FIXTURE SHALL HAVE INTEGRAL SURGE PROTECTION AND A HEAT SINK. THE FIXTURE SHALL BE L70 OR TM-21 TESTED FOR 60000 HOURS OF USE. THE FIXTURE SHALL BE RATED FOR USE IN AMBIENT TEMPERATURES OF -20°C TO +60°C.	HOLOPHANE PETROLUX SERIES EATON CHAMP PRO PVML SERIES OR APPROVED EQUAL
C3B	58	8000	5000K	FWD	120	WALL MOUNT LED AREA LIGHT FIXTURE SUITABLE FOR WET AND CORROSIVE LOCATIONS. FIXTURE SHALL BE UL LISTED, NEMA 4X, IP66 RATED, WITH ALUMINUM HOUSING WITH GLASS LENS. THE FIXTURE SHALL HAVE INTEGRAL SURGE PROTECTION AND A HEAT SINK. THE FIXTURE SHALL BE L70 OR TM-21 TESTED FOR 60000 HOURS OF USE. THE FIXTURE SHALL BE RATED FOR USE IN AMBIENT TEMPERATURES OF -20°C TO +65°C. THE FIXTURE SHALL HAVE MINIMUM EFFICACY OF 128 LUMEN OUTPUT PER WATT.	HOLOPHANE PETROLUX SERIES EATON CHAMP PRO PVML SERIES OR APPROVED EQUAL

LIGHTING FIXTURE SCHEDULE

TAG	NOMINAL WATT	NOMINAL LUMEN	COLOR TEMP	DISTRIBUTION	VOLTAGE	DESCRIPTION	MANUFACTURER
C4B	58	8000	5000K	FWD	120	WALL MOUNT LED AREA LIGHT FIXTURE SUITABLE FOR WET, CORROSIVE, AND CLASS I DIVISION 1 LOCATIONS. FIXTURE SHALL BE UL LISTED, NEMA 4X, IP66 RATED, WITH ALUMINUM HOUSING WITH GLASS LENS. THE FIXTURE SHALL HAVE INTEGRAL SURGE PROTECTION AND A HEAT SINK. THE FIXTURE SHALL BE L70 OR TM-21 TESTED FOR 60000 HOURS OF USE. THE FIXTURE SHALL BE RATED FOR USE IN AMBIENT TEMPERATURES OF -20°C TO +65°C. THE FIXTURE SHALL HAVE MINIMUM EFFICACY OF 128 LUMEN OUTPUT PER WATT.	DIALIGHT SAFESITE LED EATON CHAMP VMVL OR APPROVED EQUAL
D1B	NA	NA	NA	NA	120	EMERGENCY LIGHT FIXTURE WITH DUAL LED LAMPS, SUITABLE FOR DAMP LOCATION, NICKEL-CADMIUM BATTERY BACKUP FOR 90 MIN. OPERATION, HIGH IMPACT THERMOPLASTIC WHITE HOUSING, UL DAMP LOCATION LISTED. A REMOTE HEAD OPTION SHALL BE AVAILABLE.	HOLOPHANE CZQ2L EATON SURE LITES APEL SERIES OR APPROVED EQUAL
D2B	<varies>	NA	<varies>	<varies>	<varies>	EMERGENCY LIGHT FIXTURE WITH DUEL LED LAMPS SUITABLE FOR WET AND CORROSIVE LOCATION, NEMA 4X RATED, NICKEL-CADMIUM BATTERY BACKUP FOR 90 MIN. OPERATION, ALUMINUM HOUSING WITH GASKETS AND CORROSION RESISTANT FINISH. A REMOTE HEAD OPTION SHALL BE AVAILABLE	HUBBELL DUAL LITE HLEBS SERIES
D3B	<varies>	NA	<varies>	<varies>	<varies>	EMERGENCY LIGHT FIXTURE WITH LED LAMPS, SUITABLE FOR WET, CORROSIVE AND CLASS I DIVISION 1 LOCATIONS,NICKEL-CADMIUM BATTERY BACKUP FOR 90 MIN. OPERATION, FIXTURE SHALL HAVE A SEPARATE EXPLOSION PROOF EMERGENCY BATTERY ENCLOSURE.	HUBBELL DUAL LITE HLEBS SERIES LIGHTALARMS EXP LED OR APPROVED EQUAL
E1B	NA	NA	NA	NA	120	INDUSTRIAL LED EXIT SIGN, SINGLE OR DOUBLE FACE WITH RED LETTER AND WHITE FINISH, SUITABLE FOR DAMP LOCATION,DIE-CAST ALUMINUM HOUSING WITH NICKEL-CADMIUM BATTERY BACKUP FOR 90 MIN.	HUBBELL DUAL LITE SE SERIES HOLOPHANE MAGELLAN MEX OR APPROVED EQUAL
E2B	NA	NA	NA	NA	120	INDUSTRIAL LED EXIT SIGN, SINGLE OR DOUBLE FACE WITH RED LETTER AND WHITE FINISH, SUITABLE FOR WET AND CORROSIVE LOCATION, NEMA 4X RATED, FULLY GASKETED HOUSING WITH NICKEL-CADMIUM BATTERY BACKUP FOR 90 MIN.	HUBBELL DUAL LITE EVE4X SEREIES LIGHTALARMS SEVERE XVE SERIES OR APPROVED EQUAL
E3B	NA	NA	NA	NA	120	INDUSTRIAL LED EXIT SIGN, SINGLE OR DOUBLE FACE WITH RED LETTER AND WHITE FINISH, SUITABLE FOR WET, CORROSIVE LOCATION AND CLASS I DIVISION 1 LOCATION, DIE-CAST ALUMINUM HOUSING WITH NICKEL-CADMIUM BATTERY BACKUP FOR 90 MIN.	HOLOPHANE HDX SERIES AND DSHZ BATTERY UNIT LIGHTALARMS EXP LED SERIES OR APPROVED EQUAL
F1A	34	3140	5000K	15 DEG	120	FLOOD LIGHT FIXTURE WITH ALUMINUM HOUSING AND GLASS LENS, SUITABLE FOR WET LOCATIONS. FIXTURE SHALL BE UL LISTED AND IP66 RATED. THE FIXTURE SHALL HAVE MINIMUM EFFICACY OF 109 LUMEN OUTPUT PER WATT AND 90 CRI. PROVIDE MOUNTING ACCESSORIES AS REQUIRED.	HYDREL PINE MVOLT LED OR APPROVED EQUAL

BID SET

SUBMITTAL DATE: OCTOBER 2026

GRAPHIC SCALES CHECK BEFORE USE

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NO.	DATE	REVISIONS/DESCRIPTION	APPR'D.

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CHECKED BY: E. AMABA, P.E.
DESIGN LEAD: E. JAMES, P.E.
PROJECT MANAGER: AIMEE BOULET, P.E.
DRAWN BY: R. SAN JUAN

ELECSYS ENGINEERING GROUP

STATE OF NEW YORK — EDO JANOS — 089309 — PROFESSIONAL ENGINEER

NYC Environmental Protection

ACCOUNTABLE MANAGER: JOHN GOULAS, P.E.
PORTFOLIO MANAGER: KEVIN ELLENWOOD, P.E.
EXECUTIVE DIRECTOR: NAYANKUMAR SHAH, P.E.

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CAPITAL PROJECT WP-269
RECONSTRUCTION OF PAERDEGAT PUMPING STATION
CONTRACT PS-318
ELECTRICAL
LIGHTING FIXTURE SCHEDULE

DATE: OCTOBER 2026
SCALE: AS INDICATED
SHEET NO: 252 OF 274
DRAWING NO. E-901.00

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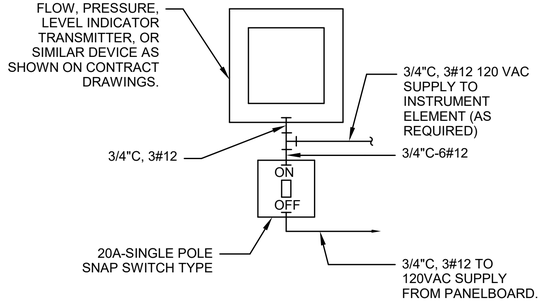
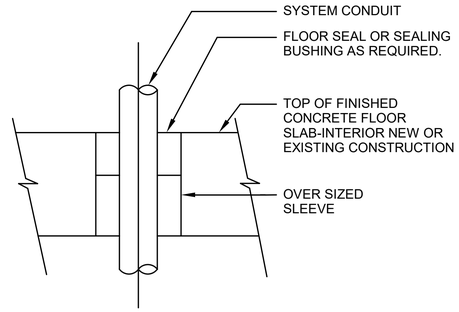


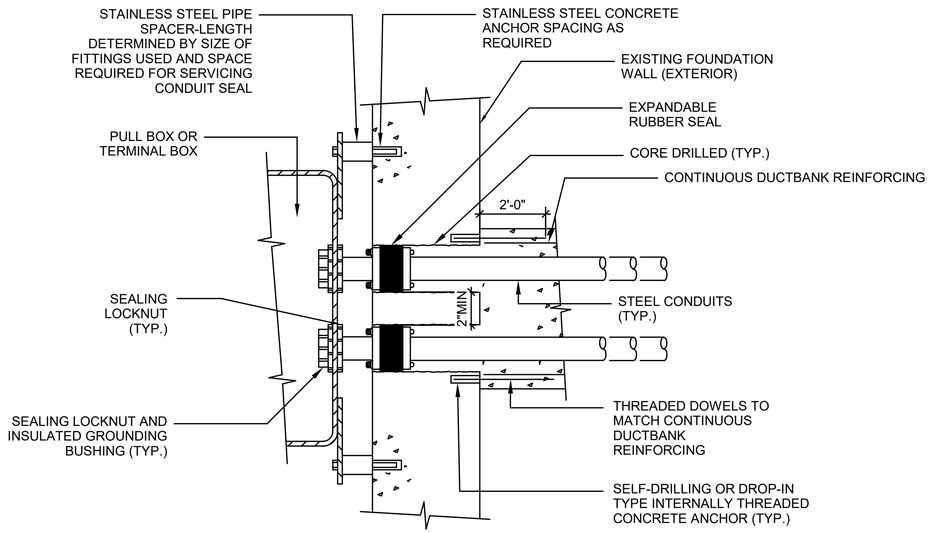
TYPICAL FIELD INSTRUMENTATION WITH 120 VAC "ON-OFF" SWITCH

N.T.S



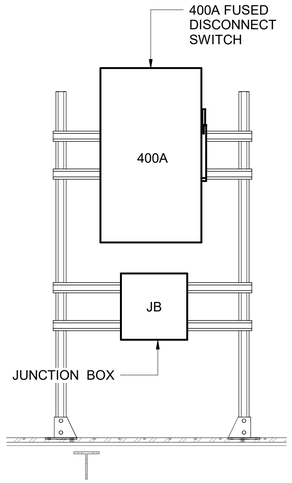
THRU FLOOR CONDUIT DETAIL

N.T.S



CONDUIT ENTRANCE SEAL IN EXISTING WALL

N.T.S

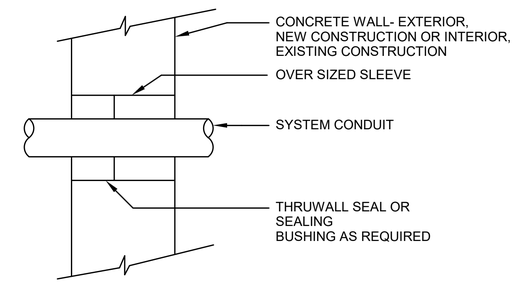


MAIN SEWAGE PUMP CONTROL STATION

N.T.S.

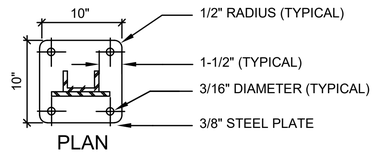
NOTES:

1. CONDUITS NOT SHOWN. REFER TO ONE LINE DIAGRAMS AND CONDUIT AND CABLE SCHEDULES.

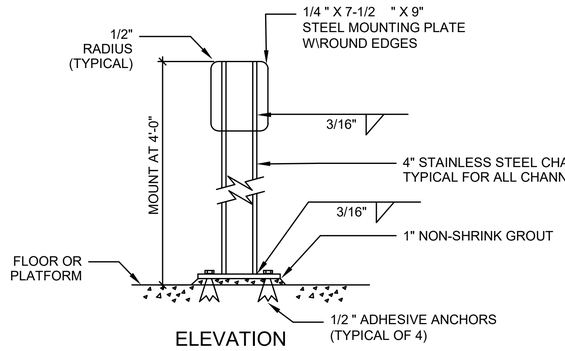


WALL CORING DETAIL

N.T.S



PLAN



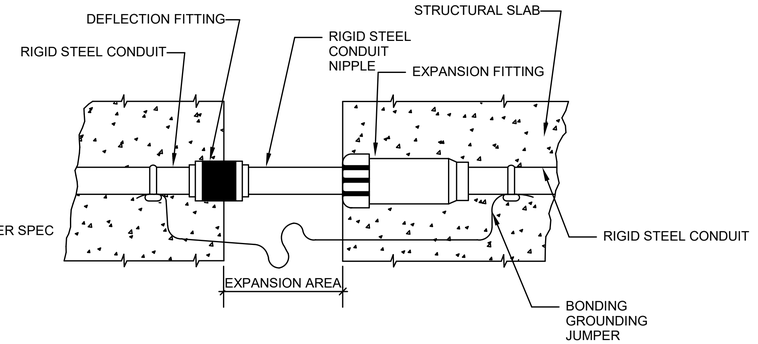
ELEVATION

NOTE:

1. USE FLAT WASHERS AND SPLIT LOCK-WASHERS UNDER ALL NUTS.

EQUIPMENT MOUNTING PEDESTAL DETAIL

N.T.S



NOTE:

WRAP ENTIRE ASSEMBLY IN BURLAP PRIOR TO CONCRETE POUR.

EXPANSION JOINT DETAIL

N.T.S

BID SET

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ELECSYS ENGINEERING GROUP

STATE OF NEW YORK — DIEGO JAMES — 089309 — LICENSED PROFESSIONAL ENGINEER

Environmental Protection

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CAPITAL PROJECT WP-269
RECONSTRUCTION OF PAERDEGAT PUMPING STATION
CONTRACT PS-318
ELECTRICAL
DETAIL SHEET 1

DATE: OCTOBER 2026
SCALE: AS INDICATED
SHEET NO: 253 OF 274
DRAWING NO. E-902.00

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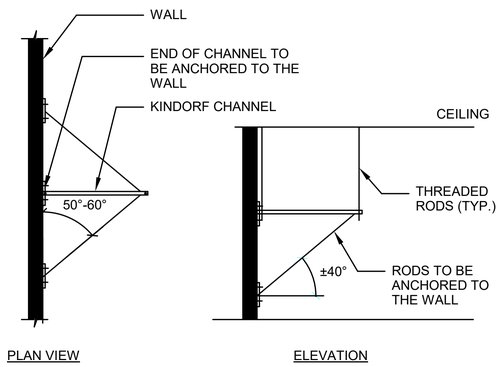
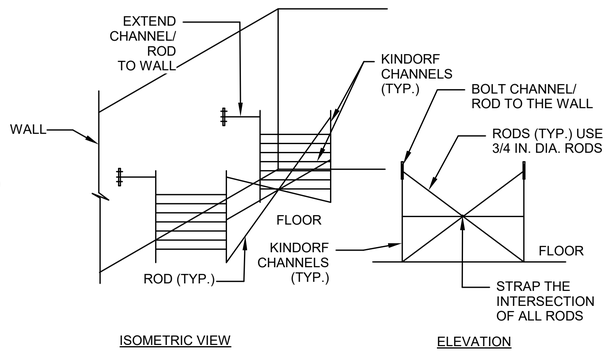


CHANNEL AGAINST WALL DETAIL A
N.T.S



CHANNELS AWAY FROM WALL
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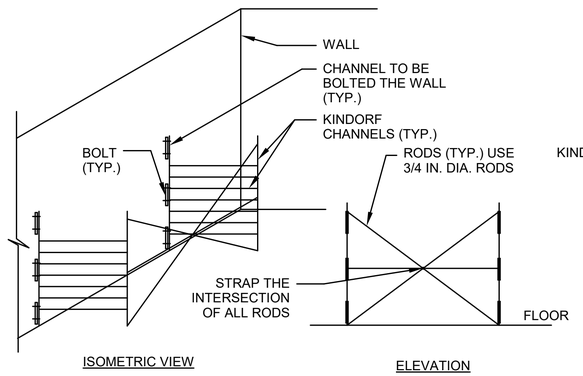

CHANNELS NEAR WALL
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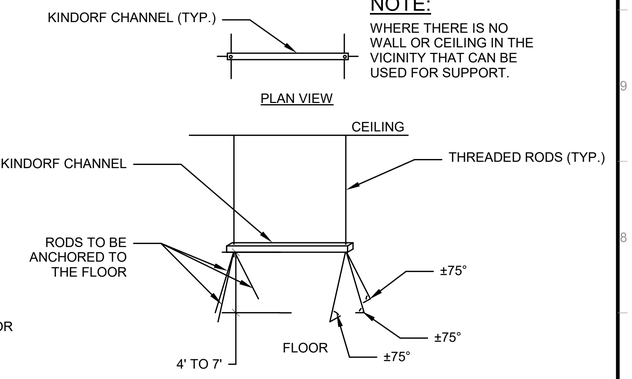
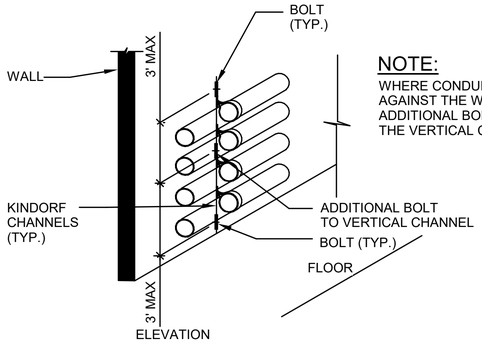


CONDUITS DETAIL 2
N.T.S



CONDUITS DETAIL 1
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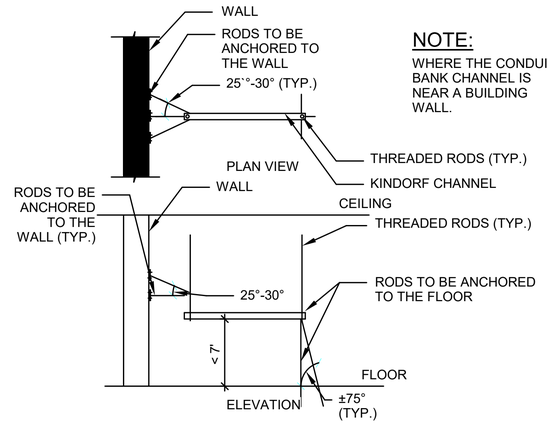

CONDUITS DETAIL 3
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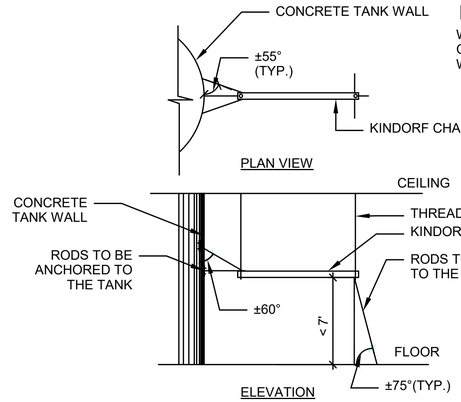

CONDUITS DETAIL 4
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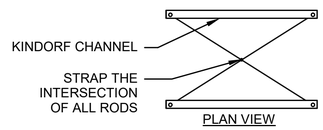

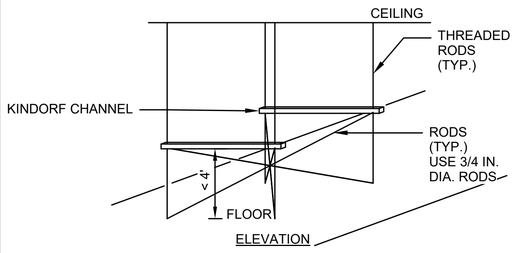

CONDUITS DETAIL 5
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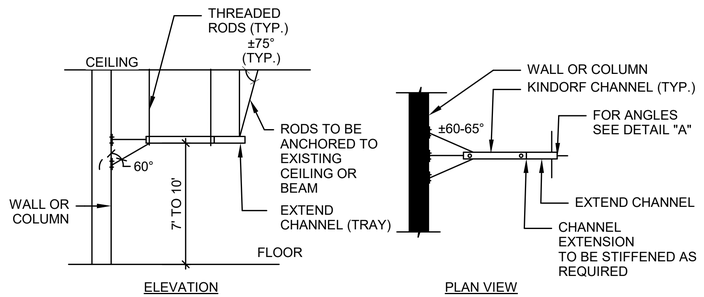

CONDUITS DETAIL 6
N.T.S

BID SET

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STATE OF NEW YORK — EDO JAMES — 089309 — PROFESSIONAL ENGINEER

NYC Environmental Protection

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CAPITAL PROJECT WP-269
RECONSTRUCTION OF
PAERDEGAT PUMPING STATION
CONTRACT PS-318
ELECTRICAL
DETAIL SHEET 2

DATE: OCTOBER 2026
SCALE: AS INDICATED
SHEET NO: 254 OF 274
DRAWING NO. E-903.00

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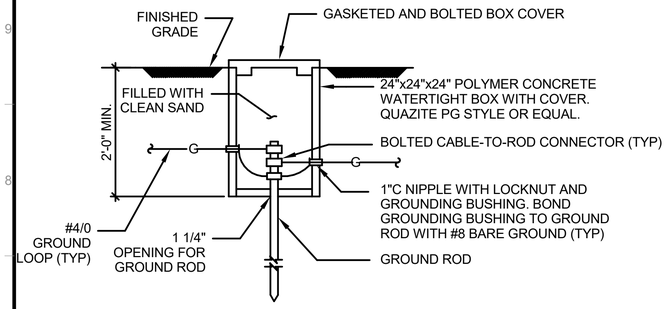
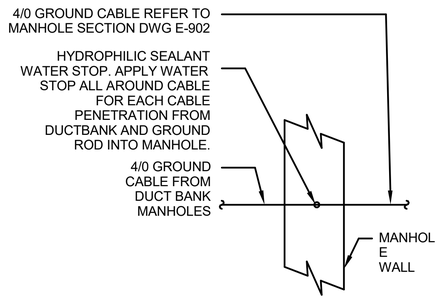


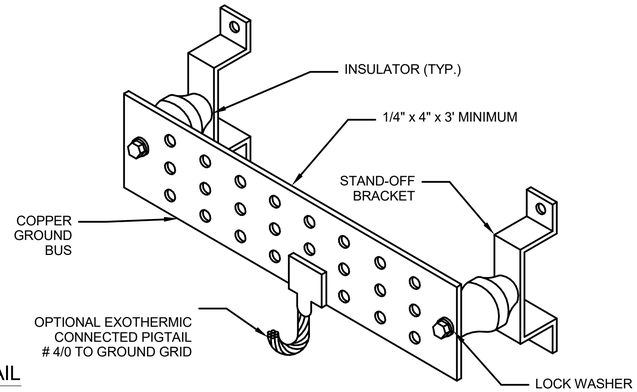
EXTERIOR GROUND CONNECTION POINT

SCALE: N.T.S



GROUND CABLE PENETRATION DETAIL

SCALE: N.T.S



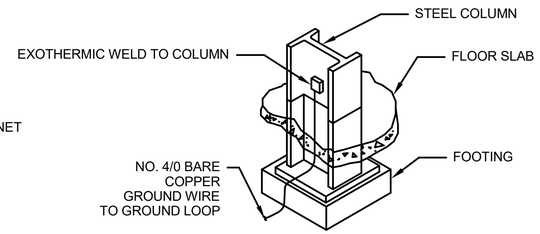
INSULATED GROUND BAR

SCALE: N.T.S

TYPE OF CONNECTION	BOLTED OR COMPRESSION		WELDED
	BURNDY CAT#	T&B CAT#	CADWELL CAT#
CABLE TO LUG (LUG, CABLE)	YA	54000 SERIES	LA
CABLE TO ROD (ROD, CABLE)	-	53000 SERIES	GT
(ROD)	GAR	-	GR
CABLE TO CABLE (CABLE)	GX	53000 SERIES	TV OR TA
CABLE TO PIPE (PIPE OR CONDUIT, CABLE)	-	-	HA OR VS
	GAR OR GD	3900 SERIES	-
CABLE TO FLAT SURFACE (CABLE)	GB	-	HA OR HS
BRAID TO PIPE	GG	-	-

GROUNDING CONNECTIONS

SCALE: N.T.S



GROUNDING FOR STEEL COLUMN

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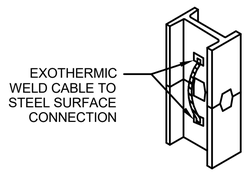
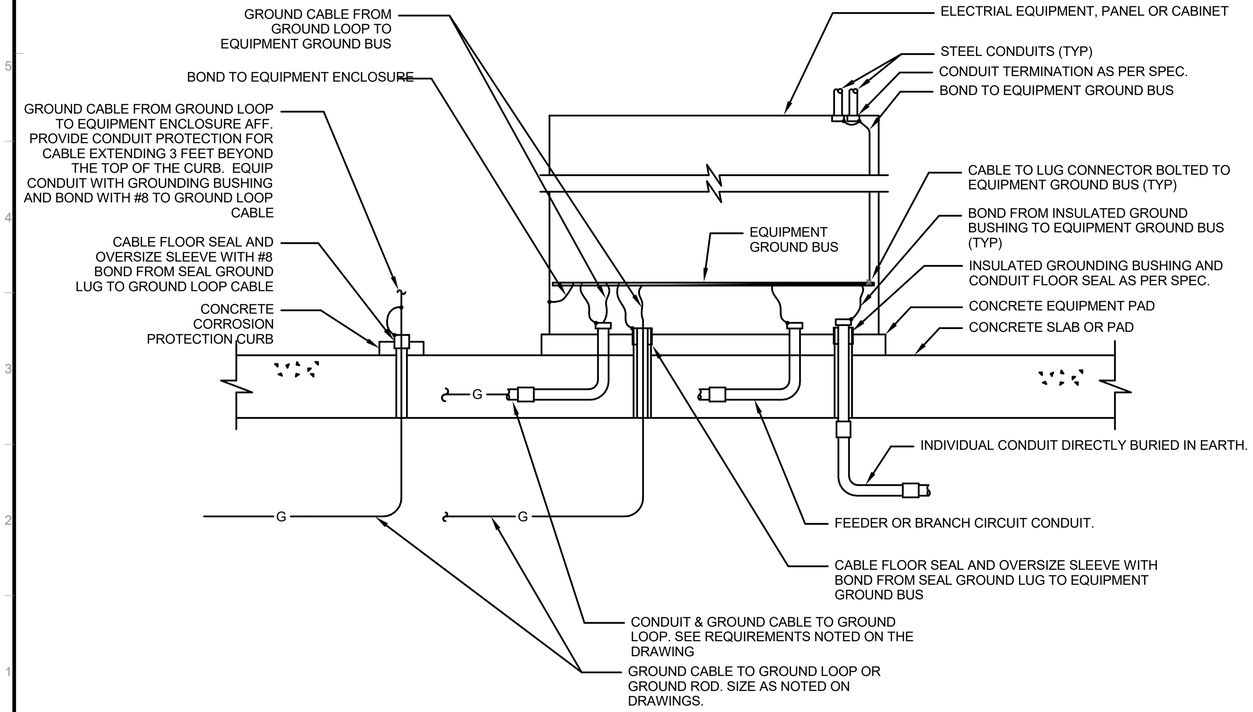


BONDING AT COLUMN SPLICE PLATES

SCALE: N.T.S



EQUIPMENT GROUND DETAIL

SCALE: N.T.S

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Environmental Protection

ACCOUNTABLE MANAGER: JOHN GOULAS, P.E.
PORTFOLIO MANAGER: KEVIN ELLENWOOD, P.E.
EXECUTIVE DIRECTOR: NAYANKUMAR SHAH, P.E.

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BUREAU OF ENGINEERING DESIGN & CONSTRUCTION
96-05 HORACE HARDING EXPRESSWAY 5th FLOOR
CORONA, NEW YORK 11368
www.nyc.gov/dep

CAPITAL PROJECT WP-269
RECONSTRUCTION OF
PAERDEGAT PUMPING STATION
CONTRACT PS-318
ELECTRICAL
DETAIL SHEET 3

DATE: OCTOBER 2026
SCALE: AS INDICATED
SHEET NO: 255 OF 274
DRAWING NO. E-904.00

All inquiries regarding this drawing(s) or project should be made to NYC Environmental Protection, Bureau of Engineering Design and Construction.

Autodesk Docs://CI-AMER (USA) 60619010-PS-DES-S/PAER-E-MODEL_AECOM.rvt
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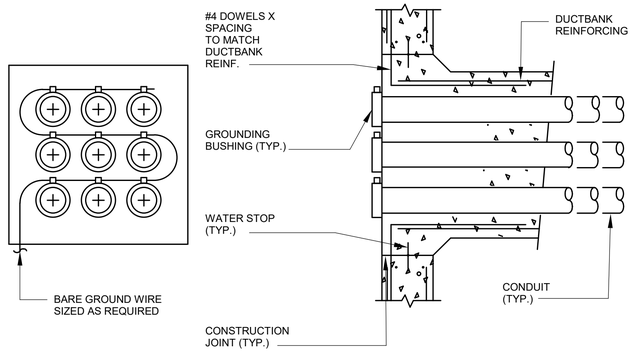
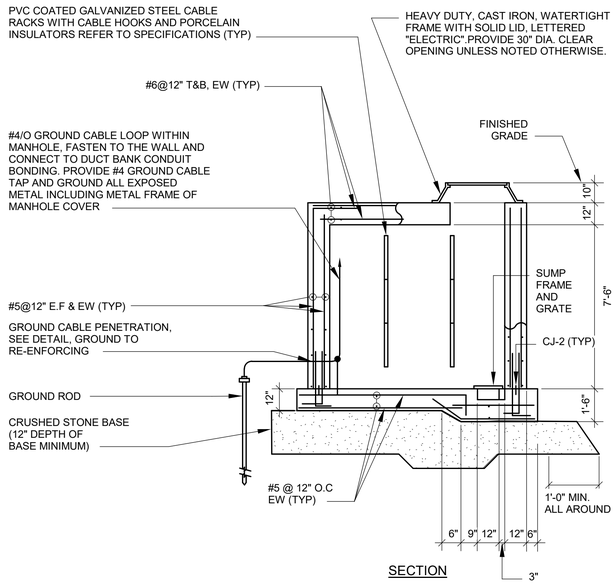
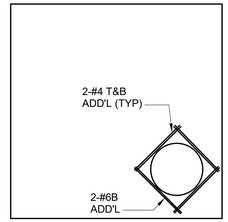


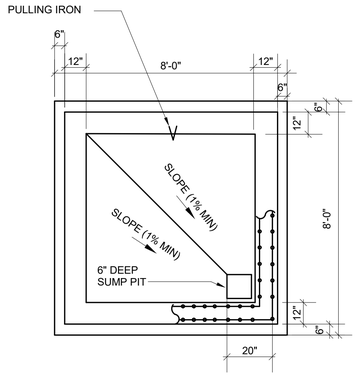
ENTRANCE TO MANHOLE DETAILS
N.T.S



SECTION

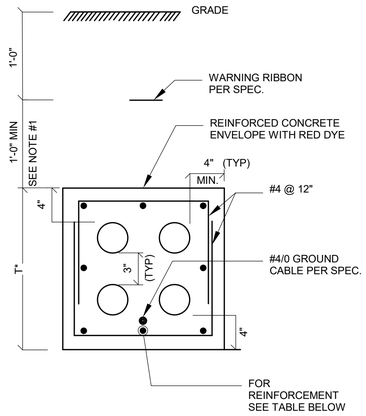


ROOF PLAN



PLAN

TYPICAL MANHOLE DETAILS
N.T.S.

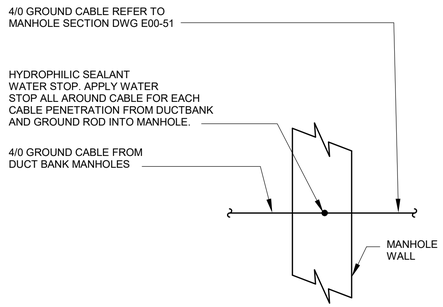


REINFORCEMENT TABLE		
DUCT BANK THICKNESS SEE NOTE #2	UNDER ROADWAY*	AT NON-TRAFFIC AREA
T < 18"	#8 @ 12" (MIN) ALL AROUND	#6 @12" ALL AROUND
T > 18"	#7 @ 12" (MIN) ALL AROUND	#5 @12" ALL AROUND

NOTES:

1. DUCT BANK DIMENSION (1'-0" MINIMUM) VARIES TO CLEAR OTHER UNDERGROUND SYSTEMS AND TO MAINTAIN SLOPE AS REQUIRED.
2. DUCT BANK DEPTH AND WIDTH VARIES, BASED ON THE QUANTITY OF CONDUITS IN EACH DUCT BANK.
3. ENCASE DUCT BANK WITH 3000PSI REINFORCED CONCRETE.

DUCT BANK SECTION DETAIL
N.T.S



GROUND CABLE PENETRATION DETAIL
N.T.S

BID SET

SUBMITTAL DATE: OCTOBER 2026

GRAPHIC SCALES CHECK BEFORE USE

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NO.	DATE	REVISIONS/DESCRIPTION	APPR'D.

DESIGNED BY: E. JAMES, P.E.
DRAWN BY: B. ROY
CHECKED BY: E. AMABA, P.E.
DESIGN LEAD: E. JAMES, P.E.
PROJECT MANAGER: AIMEE BOULET, P.E.

ELECSYS ENGINEERING GROUP

Environmental Protection

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CAPITAL PROJECT WP-269
RECONSTRUCTION OF PAERDEGAT PUMPING STATION
CONTRACT PS-318
ELECTRICAL
DETAIL SHEET 4

DATE: OCTOBER 2026
SCALE: AS INDICATED
SHEET NO: 256 OF 274
DRAWING NO. E-905.00

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INSTRUMENT TYPE IDENTIFICATION LETTERS

THIS TABLE APPLIES ONLY TO THE FUNCTIONAL IDENTIFICATION OF INSTRUMENTS

	FIRST LETTER		SUCCEEDING LETTERS		
	MEASURED OR INITIATING VARIABLE	MODIFIER	READOUT OR PASSIVE FUNCTION	OUTPUT FUNCTION	MODIFIER
A	ANALYSIS	ANALOG	ALARM		
B	BURNER FLAME		USER'S CHOICE	USER'S CHOICE	USER'S CHOICE
C	CONDUCTIVITY (ELECTRICAL)			CONTROL	
D	DENSITY (MASS) OR SPECIFIC GRAVITY	DIFFERENTIAL OR DIGITAL			
E	VOLTAGE (EMF)		PRIMARY ELEMENT		
F	FLOW RATE	RATIO (FRACTION)			
G	GAGING (DIMENSIONAL)		GLASS		
H	HAND (MANUALLY INITIATED)				HIGH
I	CURRENT (ELECTRICAL)		INDICATE OR INPUT		
J	POWER	SCAN			
K	TIME OR TIME SCHEDULE			CONTROL STATION	
L	LEVEL		LIGHT (PILOT)		LOW
M	MOISTURE OR HUMIDITY				MIDDLE OR INTERMEDIATE
N	USER'S CHOICE		USER'S CHOICE	USER'S CHOICE	USER'S CHOICE
O	USER'S CHOICE		ORIFICE (RESTRICTION)		
P	PRESSURE OR VACUUM		POINT (TEST CONNECTION)		
Q	QUANTITY OR EVENT	INTEGRATE OR TOTALIZE			
R	RADIOACTIVITY	RELIEF	RECORD OR PRINT		
S	SPEED OR FREQUENCY	SAFETY		SWITCH	
T	TEMPERATURE			TRANSMIT	
U	MULTIVARIABLE		MULTIFUNCTION	MULTIFUNCTION	MULTIFUNCTION
V	VIBRATION			VALVE, DAMPER OR LOUVER	
W	WEIGHT OR FORCE		WELL		
X	UNCLASSIFIED		UNCLASSIFIED	UNCLASSIFIED	UNCLASSIFIED
Y	USER'S CHOICE			RELAY OR COMPUTE	
Z	POSITION			DRIVE, ACTUATE OR UNCLASSIFIED FINAL CONTROL ELEMENT	

MISCELLANEOUS ABBREVIATIONS

I/P	CURRENT TO PNEUMATIC CONVERTER	D	DERIVATIVE
E/I	VOLTAGE TO CURRENT CONVERTER	∫	INTEGRAL CONTROL MODE
∑	ADD OR TOTALIZE	pH	HYDROGEN ION CONCENTRATION
√	SQUARE ROOT	LSR	LASER
X	MULTIPLY	VFD	VARIABLE FREQUENCY DRIVE
÷	DIVIDE	Δ	DIFFERENCE OR DIFFERENTIAL
>	HIGH SELECT	I/O	INPUT/OUTPUT
MV	MEASURED VARIABLE	ER	ELECTRICAL ROOM
<	LOW SELECT	LEL	LOWER EXPLOSIVE LIMIT
S.P.	SET POINT	DW	DEWATERING
PLC	PROGRAMMABLE LOGIC CONTROLLER	OC	ODOR CONTROL
HMI	HUMAN MACHINE INTERFACE	WW	WASTE WATER
f(x)	CHARACTERISTIC		
P	PROPORTIONAL CONTROL MODE		

(FOR ELECTRICAL ABBREVIATIONS SEE E-DRAWINGS)

EXISTING ELECTRIC INSTRUMENT LINES
HYDRAULIC CONTROL LINES
ELECTRIC INSTRUMENT LINES
PNEUMATIC SIGNAL
PROCESS FLOW
CAPILLARY TUBING
FIBER OPTIC CABLE
CONE CHECK VALVE
BALL VALVE
BALL CHECK VALVE
SWING CHECK VALVE
BUTTERFLY VALVE, DAMPER, OR LOUVER
PLUG VALVE
GATE VALVE
DIAPHRAGM VALVE
GLOBE VALVE
RESTRAINED FLEXIBLE COUPLING
FLOAT VALVE
3-WAY MIX VALVE
3-WAY DIVERTER VALVE
3-WAY SOLENOID VALVE
4-WAY MIX VALVE
4-WAY SOLENOID VALVE
ANGLE VALVE
SOLENOID VALVE
SELF-OPERATING BACK PRESSURE REGULATOR VALVE
SELF-OPERATING PRESSURE REGULATOR VALVE
PRESSURE REDUCING REGULATOR VALVE W/ EXTERNAL PRESSURE TAP
PRESSURE RELIEF VALVE
VACUUM RELIEF VALVE
KNIFE GATE VALVE
PINCH VALVE
STOP LOG
SLUICE GATE

PREFABRICATED SLIDE GATE
MULTI-BLADE DAMPER
ACCUMULATOR
AERATOR
BAR SCREEN
CALIBRATION STANDPIPE
CHEMICAL SEAL
IN LINE SEAL (NOTE 2)
CONCENTRIC REDUCER
DRAIN
DUPLEX FILTER
ECCENTRIC REDUCER
FLEXIBLE HOSE
HOSE CONNECTIONS
GRINDER
LOAD CELL
VERTICAL SHAFT MIXER
PULSATION DAMPENER
QUICK DISCONNECT
RADIO, ULTRASONIC, OR ACOUSTIC SIGNAL
RUPTURE DISC (PRESSURE RELIEF)
RUPTURE DISC (VACUUM RELIEF)
STRAINER
CONE CHECK VALVE
DOUBLE DISC CHECK VALVE
FLAME ARRESTOR

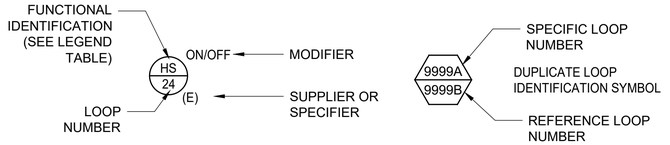
DIFFUSER
STATIC MIXER
TANK VENT
UNION
WEIR
CYLINDER ACTUATOR
DIAPHRAGM ACTUATOR WITH POSITIONER
HAND OPERATOR
HYDRAULIC OPERATOR
MOTOR OPERATOR
PNEUMATIC OPERATOR
SOLENOID OPERATOR
ELECTRO-HYDRAULIC ACTUATOR OR OPERATOR
FLOW RATE CONTROLLER
FLOW ELEMENT (VENTURI)
INSERT FLOW ELEMENT (VENTURI)
MAGNETIC FLOWMETER
ORIFICE PLATE
PARSHALL FLUME
ROTAMETER
ACOUSTIC OR DOPPLER INLINE FLOWMETER
"V" NOTCH WEIR
WEIR GATE
SEDIMENT & DRIP TRAP ASSEMBLY
HEAT EXCHANGER
BLOWER

CENTRIFUGAL PUMP
CENTRIFUGE AND SLUDGE CAKE PUMP
DIAPHRAGM PUMP
HOSE PUMP
METERING PUMP
POSITIVE DISPLACEMENT PUMP
PLUNGER PUMP
PRIMING VALVE
PRESSURE PUMP
PROGRESSIVE CAVITY PUMP
ROTARY LOBE PUMP
VARIBLE INLET VANE DAMPER
INSERTION MASS FLOW METER
LIMITS OF WORK (TRADE, CONTRACT, ETC.)
POINT OF CONNECTION NEW WORK TO EXISTING WORK
CURRENT TRANSFORMER OR TRANSDUCER

GENERAL NOTES

1. SEE MECHANICAL FOR ISOLATION RING DETAIL

INSTRUMENT SYMBOLS



FRONT PANEL MOUNTED
REAR PANEL MOUNTED
FIELD MOUNTED
COMPUTER CONTROL SYSTEM CONFIGURABLE FUNCTION (DISPLAYED ON HMI / OIT)
COMPUTER CONTROL SYSTEM CONFIGURABLE FUNCTION (NOT DISPLAYED ON HMI / OIT)
STATUS INDICATION
COMPLITATION/SIGNAL CONDITIONING
120 VAC POWER SUPPLY
INTERLOCK LOGIC
MOTOR STARTER

BID SET

SUBMITTAL DATE: OCTOBER 2026

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			APPR'D.

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DRAWN BY: B. ROY
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CAPITAL PROJECT WP-269
RECONSTRUCTION OF
PAERDEGAT PUMPING STATION
CONTRACT PS-318

INSTRUMENTATION
SYMBOLS AND ABBREVIATIONS 1

DATE: OCTOBER 2026
SCALE: NOT TO SCALE
SHEET NO: 257 OF 274
DRAWING NO. IG–001.00

Last Saved By:DKilerciyan Last Date Saved:7/6/2026 5:12 PM
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SUPPLIERS, INTEGRATORS & CONTRACTORS

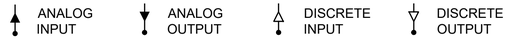
ALL INSTRUMENTS ARE SPECIFIED BY
I&C UNLESS INDICATED BY:

(E)	SPECIFIED BY ELECTRICAL	(M)	SPECIFIED BY MECHANICAL
(F)	FURNISHED WITH EQUIPMENT	(P)	SPECIFIED BY PLUMBING
(H)	SPECIFIED BY HVAC	(X)	EXISTING

NOTES:

1. CONSTRUCTION CONTRACTOR SHALL PROVIDE ALL INSTRUMENTS UNLESS NOTED AS PRE-PURCHASED OR EXISTING.
2. SUPPLIER NOTATIONS APPLY TO INSTRUMENTS ONLY ON P&IDs.
3. SEE DRAWINGS/SPECIFICATIONS FOR MECHANICAL & OTHER EQUIPMENT.

PLC OR DCS INPUT/OUTPUT SYMBOLS



HAND SWITCH POSITION SYMBOLS

(UNLABELED SWITCHES ARE "ON/OFF")

A	AUTOMATIC	L	LOCAL
C	CLOSE	LOR	LOCAL - OFF - REMOTE
ES	EMERGENCY STOP	LR	LOCAL - REMOTE
F	FAST OR FORWARD	M	MANUAL
FR	FORWARD - REVERSE	O	OPEN OR OFF
FSR	FORWARD - STOP - REVERSE	OCA	OPEN - CLOSE - AUTO
H	HAND	OCR	OPEN - CLOSE - REMOTE
HOA	HAND - OFF - AUTO	OSC	OPEN - STOP - CLOSE
J	JOG	R	RUN OR REMOTE
JA	JOG - AUTO	SS	START / STOP PUSH-PULL MAINTAINED CONTACTS

ADDITIONAL ABBREVIATIONS

BLDG	BUILDING
BPS	BYPASS STARTER
B/U	BACKUP
CAT6	CATEGORY 6 COPPER DATA CABLE W/ RJ45 CONNECTORS
CB	CIRCUIT BREAKER
CR	CONTROL RELAY
DCS	DISTRIBUTED CONTROL SYSTEM
DCU	DISTRIBUTED CONTROL UNIT
E/H	ELECTRO-HYDRAULIC
ES	ETHERNET SWITCH (NETWORK DEVICE); OR EMERGENCY STOP (CONTROL DEVICE)
Fi	FIBER COUNT OR STRANDS
FNS	FIBER ETHERNET NETWORK SWITCH
FVNR	FULL-VOLTAGE NON-REVERSING STARTER
FVR	FULL-VOLTAGE REVERSING STARTER
HMI	HUMAN MACHINE INTERFACE
IOC	INPUT/OUTPUT CONTROLLER
IP	INTERNET PROTOCOL
IPC	INTERNET PROTOCOL CAMERA
ISB	INTRINSICALLY SAFE BARRIER
LAP	LOCAL ALARM PANEL
LCP	LOCAL CONTROL PANEL
LCS	LOCAL CONTROL STATION
LEL	LOW EXPLOSIVE LIMIT
MCC	MOTOR CONTROL CENTER
NVR	NETWORK VIDEO RECORDER
PID	PROPORTIONAL-INTEGRAL- DERIVATIVE
PLC	PROGRAMMABLE LOGIC CONTROLLER
PP	FIBER OPTIC PATCH PANEL
PS	POWER SUPPLY
RIO	REMOTE INPUT/OUTPUT
RM	REDUNDANCY MODULE (FOR POWER SUPPLIES)
RTU	REMOTE TELEMETRY UNIT
RVSS	REDUCED-VOLTAGE SOLID-STATE STARTER
STO	STORAGE
SYS	SYSTEM
UPS	UNINTERRUPTIBLE POWER SUPPLY
VFD	VARIABLE FREQUENCY DRIVE

NOTE: SEE DWG I-101.00 FOR MAS-801 SYSTEM ABBREVIATIONS.

INTERLOCK / CONTROL LOGIC

1. WHEN EMERGENCY STOP IS ACTIVATED, STOP/PREVENT RUNNING EQUIPMENT IN ALL MODES (LOCAL, REMOTE, HAND, AUTO, ETC.). SEND ALARM.
2. STOP EQUIPMENT ON MALFUNCTION OR FAIL CONDITION. SEND ALARM.
3. SEND ALARM ON LOW FLOW IN SEAL WATER.
4. STOP MOTOR ON HIGH TEMPERATURE IN MOTOR WINDING. SEND ALARM.
5. STOP MOTOR ON HIGH DISCHARGE PRESSURE. SEND ALARM.
6. STOP HVAC EQUIPMENT ON FIRE ALARM.
7. AUTOMATICALLY TRANSFER TO NEXT AVAILABLE LEVEL SYSTEM.
8. AUTOMATICALLY TRANSFER TO BACKUP LEVEL SYSTEM.
9. PREVENT STARTING OR STOP MOTOR ON LOSS OF PRIME.

TAG NUMBERING FOR WASTEWATER FACILITIES

MAJOR AREAS OR PROCESSES:

0000	WASTEWATER COLLECTION & PUMPING (OUTSIDE PLANT)
1000	HEADWORKS & PRELIMINARY TREATMENT
2000	PRIMARY TREATMENT
3000	SECONDARY TREATMENT
4000	DISINFECTION, ODOR CONTROL & CHEMICAL SYSTEMS
5000	SLUDGE TREATMENT & HANDLING
6000	ADVANCED OR TERTIARY TREATMENT
7000	MISCELLANEOUS SYSTEMS
8000	SAFETY, EMERGENCY & SECURITY
9000	PROCESS CONTROL & AUTOMATION

PROJECT-RELATED SYSTEMS:

1300	INFLUENT GATES & CONTROLS
1500	ELECTRICAL DISTRIBUTION
1600	MAIN SEWAGE PUMPS
7300	HEATING, VENTILATION & AIR-CONDITIONING
7400	VACUUM PRIMING SYSTEM, SERVICE AIR
7600	CITY POTABLE WATER (HOT & COLD)
7700	PLANT DRAINAGE, SUMP PUMPS
7800	HOISTS, MATERIAL HANDLING
7900	AIR COMPRESSORS
8100	FIRE DETECTION & ALARM
8200	FIRE PROTECTION & SUPPRESSION, FIRE PUMPS
8400	PAGING, INTERCOM, CCTV, SECURITY
8500	EMERGENCY GENERATOR
8600	GAS DETECTION & OXYGEN DEFICIENCY MONITORING
8700	EMERGENCY SHOWERS, EYEWASH
9100	SCADA SYSTEM

BID SET

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ELECSYS ENGINEERING GROUP

STATE OF NEW YORK · GLEN JAMES · 090309 · PROFESSIONAL ENGINEER

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CAPITAL PROJECT WP-269
RECONSTRUCTION OF
PAERDEGAT PUMPING STATION
CONTRACT PS-318

INSTRUMENTATION
SYMBOLS AND ABBREVIATIONS 2

DATE: OCTOBER 2026
SCALE: NOT TO SCALE
SHEET NO: 258 OF 274
DRAWING NO. IG–002.00

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Drawing File Name & Drive Location: P:\Projects\0204 – ACM – PS-DES-5\900-CAD-GIS\910 CAD_BIM\02-SHEETS\Paerdegat\IG-002.00.dwg

NOTES:

1. OPERATOR INTERFACE: ONE TOUCHSCREEN AND SIX (1/MSP) FLYGT MAS-711 PUMP MONITORING SYSTEM
2. LOS - LOCAL OPERATING STATION
3. REDUNDANT FLOW CHART RECORDER
4. CRITICAL ALARM WINDOWS
5. EMERGENCY STOP PUSHBUTTON
6. TERMINALS FOR ANALOG AND DISCRETE SIGNALS FOR TELEMETRY SYSTEM
7. UPS
8. BACKUP SYSTEM CONTROL PANEL IS HARDWIRED TO WET WELL FLOAT SWITCHES & MSP CONTROLLERS.
9. DEMOLISH ALL EXISTING INSTRUMENTATION & CONTROLS (I&C) AND REPLACE WITH NEW I&C SYSTEM.

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PROJECT MANAGER: AIMEE BOULET, P.E.

DRAWN BY: B. ROY

ELECSYS ENGINEERING GROUP

STATE OF NEW YORK · ELDO JAMES · 088309 · LICENSED PROFESSIONAL ENGINEER

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CONTRACT PS-318

INSTRUMENTATION
P&ID EXISTING I&C SYSTEM 1

DATE: OCTOBER 2026
SCALE: NOT TO SCALE
SHEET NO: 259 OF 274
DRAWING NO. **DI–101.00**

PUMPING STATION CONTROL PANEL (NEMA 12) ICP1630

PRIMARY LEVEL SYSTEM SELECTION/ INDICATION: IL 020 1/2 | HS 020 1/2 | LAHH 022
BUBBLER FAILURE: NO.1 UA 027 | NO.2 UA 028
BEARINGS: TAH 018 | IL 012
IL 003
MCC MALF: UA 005
VACUUM PRIMING SYSTEM: IL 009
SYSTEM MODE OF OPERATION: HS 007
PROGRAMMED/ MANUAL LEAD PUMP SELECT: HSS 009 A/M | HSS 009 A/M
RESET PUMPS COMMON ALARM: HS 001 ES
LEAD PUMP SELECTION: UA 010 | HS 006
PLC FAILURE: UA 041A | UA 041B
WET WELL LEVEL COMMON ALARM: LAH 022 | LAH 023 | UA 042
LI 027 | LALL 023 | LI 028
WATER LEAKAGE: TAH 014
PUMP FAILURE WINDING TAH 015 | TO START/STOP UA 017 | OUT OF SERVICE IL 002
HS 004 SS | II 011
VACUUM PRIMING SYSTEM: UA 009
CHECK VALVE: ZA 008 | IL 008 OC
UNAUTHORIZED ENTRY: PI 039 | PI 040 | FIQR 031 | FAL 033 | FIQR 034 | FAL 036 | UA 037B | UA 037A
FIRE: UA 038B | UA 038

MCC

PLC I/O | LI | CS 004 | LI | CS 003 | CS 003 | CS 001 | PLC I/O | CS 001 | CS 001 | RELAY LOGIC | RELAY LOGIC

OUT OF SERVICE: IL | IL | EI
OVERLOAD: II | UA | KIQ

LOCAL CONTROLS

PROCESS

120 VAC — LI 027
LI 029
120 VAC (TYP.)

LIT 027 | LIT 028
LE 027 | LE 028

IL | HS | E
HS | 00 | SS
LOR
LCS1601

TE 014 | TE 015 | TE 016 | ZSO 008 | ZSC 008
PG 013 | PG 013

TYP FOR ALL SIX PUMPS

M

LSH 029 | LSH 030

WET WELL

FROM SCREENING CHAMBER (SEE DWG. DI-101.00)

M 1601
M 1602
M 1603
M 1604
M 1605
1606

DRY PIT UPPER LEVEL MAIN SEWAGE PUMPS 1, 2, 3

DRY PIT LOWER LEVEL MAIN SEWAGE PUMPS 4, 5, 6

PIT 039 | FIT 033 — 120VAC (TYP)
FE 033

PIT 040 | FIT 033
FE 033

FORCE MAIN

FROM VACUUM PRIMING SYSTEM (MSP-1, 2, 3 ONLY)

FROM FIRE PROTECTION SYSTEM

FROM SECURITY SYSTEM

NOTE:
1. DEMOLISH ALL EXISTING INSTRUMENTATION & CONTROLS (I&C) AND REPLACE WITH NEW I&C SYSTEM.

BID SET
SUBMITTAL DATE: OCTOBER 2026

GRAPHIC SCALES CHECK BEFORE USE
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DRAWN BY: B. ROY
CHECKED BY: E. JAMES, P.E.
DESIGN LEAD: E. JAMES, P.E.
PROJECT MANAGER: AIMEE BOULET, P.E.

ELECSYS ENGINEERING GROUP

STATE OF NEW YORK — EDO JAMES — 090309 — PROFESSIONAL ENGINEER

Environmental Protection

ACCOUNTABLE MANAGER: JOHN GOULAS, P.E.
PORTFOLIO MANAGER: KEVIN ELLENWOOD, P.E.
DIRECTOR, IN HOUSE DESIGN: NAYANKUMAR SHAH, P.E.

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CAPITAL PROJECT WP-269
RECONSTRUCTION OF
PAERDEGAT PUMPING STATION
CONTRACT PS-318

INSTRUMENTATION
P&ID EXISTING I&C SYSTEM 2

DATE: OCTOBER 2026
SCALE: NOT TO SCALE
SHEET NO: 260 OF 274
DRAWING NO. DI–102.00

Last Saved By:Broy
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Drawing File Name & Drive Location: P:\Projects\0204 – ACM – PS-DES-5\900-CAD-GIS\910 CAD_BIM\02-SHEETS\Paerdegat\DI-102.00.dwg
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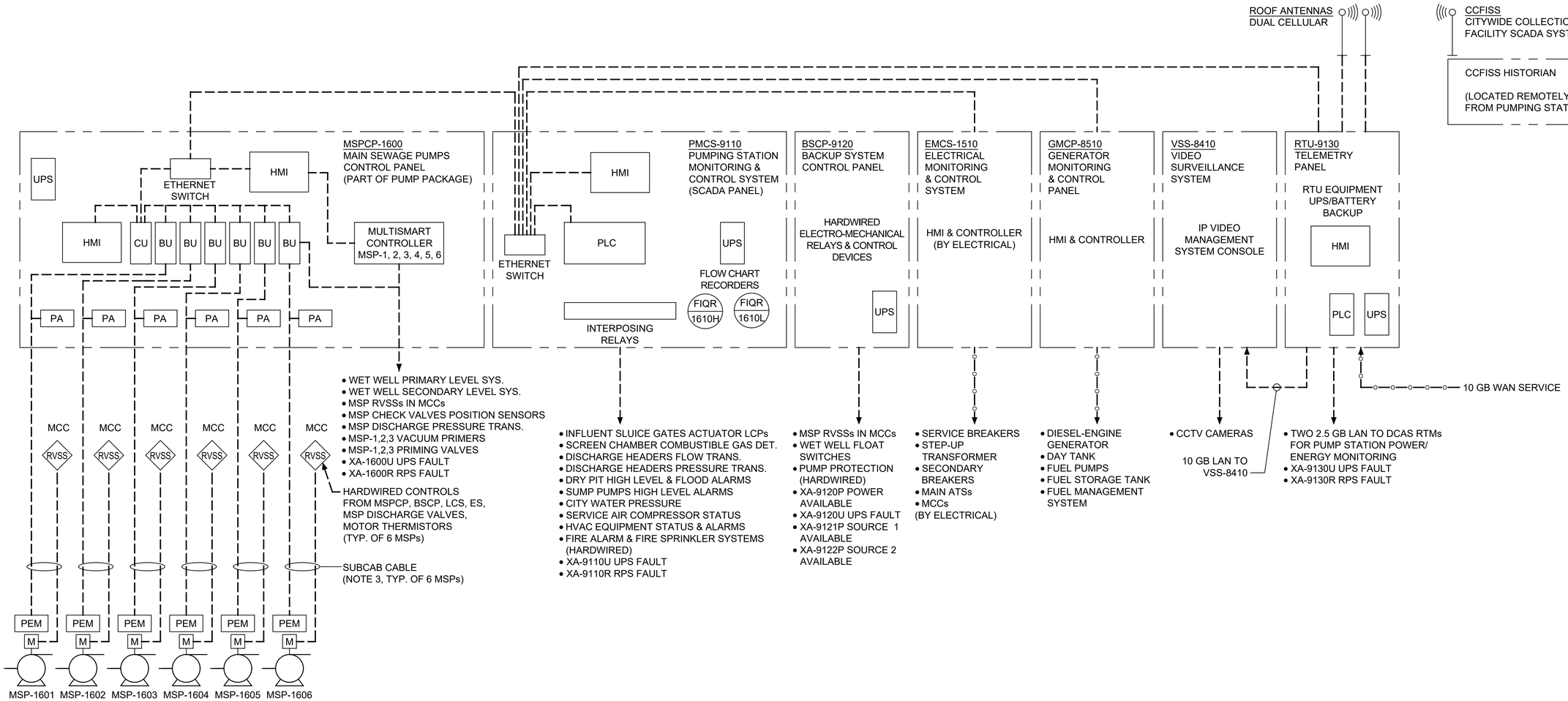

MAS-801 ABBREVIATIONS:

BU	BASE UNIT
CU	CENTRAL UNIT
HMI	HUMAN-MACHINE INTERFACE
NIU	NETWORK INTERFACE UNIT
PA	POWER ANALYZER
PEM	PUMP ELECTRONIC MODULE
PMP	PUMP MONITORING PANEL

NOTES:

1. MSPCP-1600 IS FURNISHED BY PUMP VENDOR.
2. PEM IS FACTORY BUILT INTO PUMP-MOTOR PACKAGE.
3. SUBCAB CABLE IS INTEGRATED POWER AND DATA COMMUNICATIONS CABLE FURNISHED WITH THE PUMP-MOTOR PACKAGE.
4. SEE DWG. IG-001 & IG-002 FOR MORE SYMBOLS & ABBREVIATIONS.

BID SET

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CAPITAL PROJECT WP-269
RECONSTRUCTION OF
PAERDEGAT PUMPING STATION
CONTRACT PS-318

INSTRUMENTATION
NEW I&C SYSTEM DIAGRAM

DATE: OCTOBER 2026
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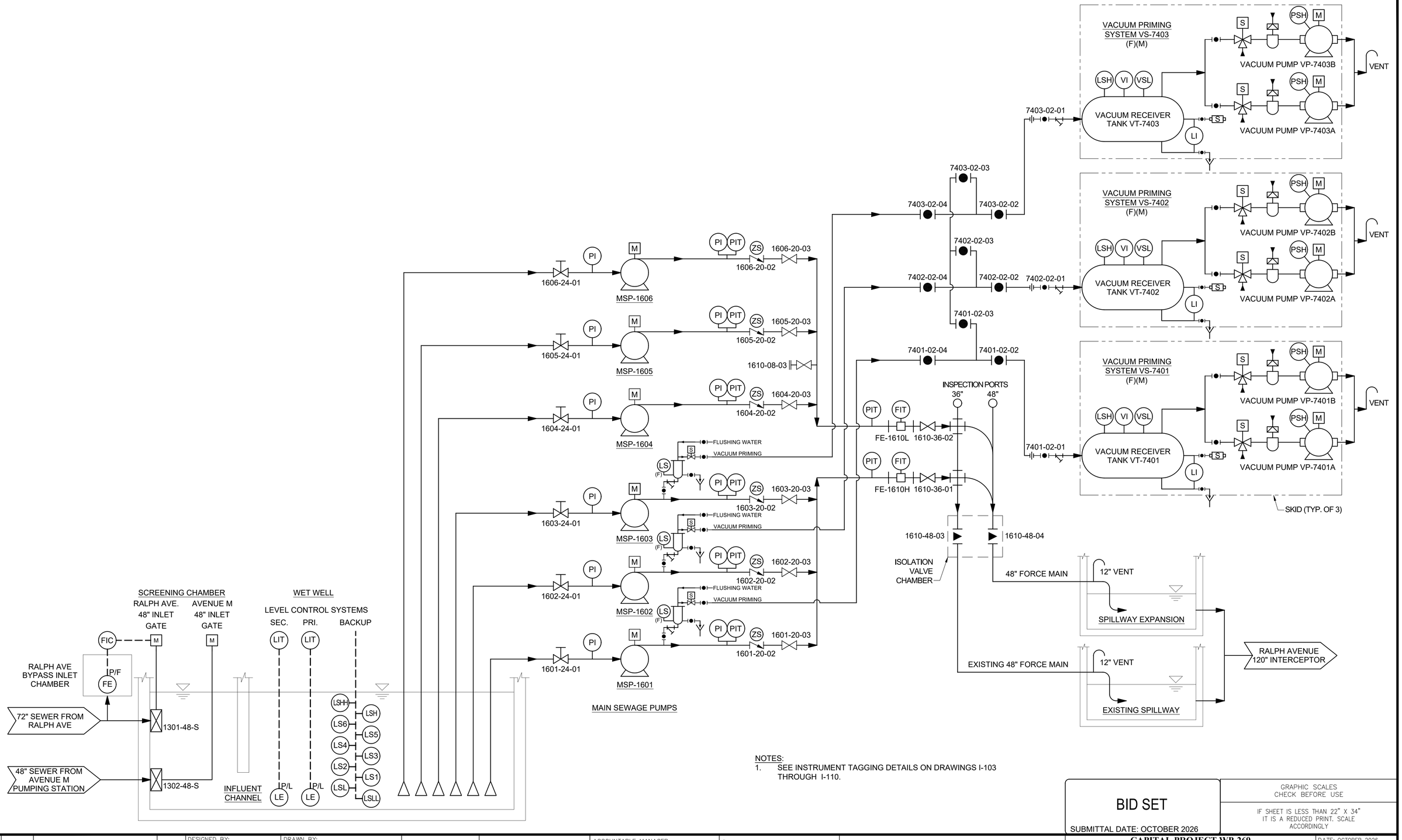

NOTES:
1. SEE INSTRUMENT TAGGING DETAILS ON DRAWINGS I-103 THROUGH I-110.

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RECONSTRUCTION OF PAERDEGAT PUMPING STATION
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INSTRUMENTATION
NEW PUMPING STATION P&ID

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RALPH AVE. FLOW ≥50MGD — FI 026

RALPH AVENUE GATE — JAM XA 1301 — POSITION ZI 1301

AVENUE M GATE — JAM XA 1302 — POSITION ZI 1302

WET WELL LEVEL (PRI.) LIR 027 — WET WELL LEVEL (SEC.) LIR 028 — PRI/SEC. WET WELL LEVEL LOW-LOW LALL 027/028 — PRI/SEC. WET WELL LEVEL LOW LAL 027/028 — PRI/SEC. WET WELL LEVEL HIGH LAH 027/028 — PRI/SEC. WET WELL LEVEL HIGH-HIGH LAHH 027/028

WET WELL LEVEL LOW-LOW LALL 030 — WET WELL LEVEL LOW LAL 030 — WET WELL LEVEL HIGH LAH 030 — WET WELL LEVEL HIGH-HIGH LAHH 030

BACKUP ACTIVE QI 030 — BACKUP NOT IN AUTO QA 030

35% / 60% LEL CH4 / H2S IN WET WELL — AAH 120

35% / 60% LEL CH4 / H2S SCREEN CHAMBER — AAH 140

RTU-9130
TELEMETRY PANEL

RALPH LEVEL HIGH — LAH 026

RALPH AVE. INLET FLOW ≥50MGD — FIR/FIR 026

RALPH AVE. INLET FLOW CONTROL — FC 026

RALPH AVENUE GATE — POSITION ZI 1301A — JAM XA 1301A — OPEN/CLOSE ZIO/ZIC 1301A,B — OSC HC 1301A,B,C

AVENUE M GATE — JAM XA 1302A — OPEN/CLOSE ZIO/ZIC 1302A,B — OSC HC 1302A,B,C — POSITION ZI 1302A

CH4 GAS WET WELL AI 121 — H2S GAS WET WELL AI 131 — CH4 GAS WET WELL AI 122 — H2S GAS WET WELL AI 132 — 35% LEL 60% LEL CH4 / H2S AAH 120 — CH4 GAS SCREEN CHAMBER AI 141 — H2S GAS SCREEN CHAMBER AI 151 — CH4 GAS SCREEN CHAMBER AI 142 — H2S GAS SCREEN CHAMBER AI 152 — 35% LEL 60% LEL CH4 / H2S AAH 140

PMCS-9110
PUMP STATION MONITORING & CONTROL SYSTEM PANEL

PRI/SEC. LEVEL SELECTOR — HC 026

MSP SEQUENCE SELECTOR — HC 029A,B,C,D

MSPCP-1600
MAIN SEWAGE PUMPS CONTROL PANEL

PUMP SEQUENCE SELECTOR — HS 030

BACKUP MODE B/U-OFF-AUTO — HS 030

BACKUP ACTIVE QL 030

BSCP-9120
BACKUP SYSTEM CONTROL PANEL

CH4 AE/AIT 121 — H2S AE/AIT 131 — CH4 AE/AIT 122 — H2S AE/AIT 132 — CH4 AE/AIT 141 — H2S AE/AIT 151 — CH4 AE/AIT 142 — H2S AE/AIT 152

LAP-120 — 35% LEL CH4 / H2S AAH 120 — 60% LEL CH4 / H2S AAHH 120 — TEST HS 120 — RESET HS 120A

LOCAL ALARM PANEL WET WELL ENTRANCE

LAP-140 — 35% LEL CH4 / H2S AAH 140 — 60% LEL CH4 / H2S AAHH 140 — TEST HS 140 — RESET HS 140A — HORN & STROBE (TYP. OF 4)

LOCAL ALARM PANEL SCREEN CHAMBER ENTRANCE

(480V)

RALPH AVENUE
LCP-1301-48-S

OPEN ZIO 1301 — OSC HS 1301 — CLOSED ZIC 1301

GATE JAM XA 1301 — LR HS 1301A — GATE POSITION ZI 1301

(F)(M)

AVENUE M
LCP-1302-48-S

OPEN ZIO 1302 — OSC HS 1302 — CLOSED ZIC 1302

GATE JAM XA 1302 — LR HS 1302A — GATE POSITION ZI 1302

(F)(M)

JAM ZSO 1301 — XSH 1301 — ZSC 1301 — M — ZIT 1301

JAM ZSO 1302 — XSH 1302 — ZSC 1302 — M — ZIT 1302

LIT 026 — RALPH AVE. INLET BYPASS CHAMBER — P/L LE 026

LIT 027 — P/L LE 027

LIT 028 — P/L LE 028

INFLUENT CHANNEL

RALPH AVENUE INLET GATE ACTUATOR 1301-48-S

AVENUE M INLET GATE ACTUATOR 1302-48-S

RALPH AVENUE INLET GATE 1301-48-S

AVENUE M INLET GATE 1302-48-S

72" SEWER FROM RALPH AVE

48" SEWER FROM AVENUE M PUMPING STATION

FLOAT SWITCH (TYP)

LSHH 030 — LS 030F — LS 030E — LS 030D — LS 030C — LS 030B — LS 030A — LSL 030 — LSLL 030

LSH 030

10	-7.50'
9	-8.00'
8	-8.50'
7	-9.00'
6	-9.50'
5	-10.00'
4	-10.50'
3	-11.00'
2	-13.00'
1	-14.00'

WET WELL

OPERATING LEVEL SETPOINTS

30" BELL INTAKE (TYP. OF 6)

TO LOW LEVEL MSP-4, 5, 6 SEE DWG I-105

TO HIGH LEVEL MSP-1, 2, 3 SEE DWG I-104

LEVEL	ELEV.	WET WELL LEVEL CONTROLS
10	-7.50'	HIGH-HIGH LEVEL ALARM - SWITCH TO AUTOMATIC BACKUP SYSTEM.
9	-8.00'	HIGH LEVEL ALARM - AUTOMATICALLY TRANSFER TO SECONDARY LEVEL CONTROL SYSTEM.
8	-8.50'	5TH LAG PUMP IS TURNED ON.
7	-9.00'	4TH LAG PUMP IS TURNED ON.
6	-9.50'	3RD LAG PUMP IS TURNED ON.
5	-10.00'	2ND LAG / STANDBY PUMP IS TURNED ON.
4	-10.50'	1ST LAG PUMP IS TURNED ON.
3	-11.00'	LEAD PUMP IS TURNED ON.
2	-13.00'	STOP ALL MSP MOTORS.
1	-14.00'	SEND LOW-LOW LEVEL ALARM.

BID SET

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CAPITAL PROJECT WP-269
RECONSTRUCTION OF
PAERDEGAT PUMPING STATION
CONTRACT PS-318

INSTRUMENTATION
NEW INLET GATES & WET WELL P&ID

DATE: OCTOBER 2026
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MOTOR TEMP. 3 PHASES TAH 1603A,B,C | MAIN BEARING TEMP. TAH 1603D | SUPPORT BEARING TEMP. TAH 1603E | STATOR HOUSING LEAK XA 1603A | WATER IN OIL XA 1603B | VIBRATION 3-AXIS VAH 1603X,Y,Z | NO. OF STARTS KI 1603S | RUN TIME KI 1603R | MOTOR THERM. TRIP TAH 1603M | PUMP PERM. BU 1603 | PUMP NOT IN SERVICE UAA 1603 | PUMP AVAIL. AI 1603 | PUMP ALARM UA 1603C | CONTROL VOLTAGE FAIL ECA 1603 | CHECK V. FAIL TO OPEN ZAO 1603 | CHECK V. FAIL TO CLOSE ZAC 1603

PUMP NOT IN AUTO QS 1603A | CURRENT 3 PHASES II 1603A,B,C | CURRENT IMBALANCE IA 1603 | VOLTAGE 3 PHASES EI 1603A,B,C | VOLTAGE IMBALANCE EA 1603 | POWER FACTOR JU 1603 | POWER (KW) JI 1603 | ENERGY (KWH) JKI 1603 | PUMP ON/OFF QI 1603 | RVSS IN BYPASS QA 1603 | RVSS FAIL / OVLD UA 1603A | BYPASS STARTER OVLD IAH 1603 | PUMP FAULT UA 1603B | CONTROL VOLTAGE ECI 1603 | CHECK VALVE OPEN ZIO 1603 | CHECK VALVE CLOSE ZIC 1603 | PUMP DISCH. PRESSURE PIR 1603 | PROOF OF PRIME QI 1603P | HIGH SERVICE HEADER PRESSURE PIR 1610H | HIGH SERVICE HEADER FLOW + TOTAL FIQR 1610H

RTU-9130
TELEMETRY PANEL

PMCS-9110
PUMP STATION MONITORING & CONTROL SYSTEM PANEL

MOTOR TEMP. 3 PHASES TAH 1603A,B,C | MAIN BEARING TEMP. TAH 1603D | SUPPORT BEARING TEMP. TAH 1603E | STATOR HOUSING LEAK XA 1603A | WATER IN OIL XA 1603B | VIBRATION 3-AXIS VAH 1603X,Y,Z | NO. OF STARTS KI 1603S | RUN TIME KI 1603R | MOTOR THERM. TRIP TAH 1603M | PUMP PERM. BU 1603 | PUMP NOT IN SERVICE UAA 1603 | PUMP AVAIL. AI 1603 | PUMP ALARM UA 1603C | CONTROL VOLTAGE FAIL ECA 1603 | CHECK V. FAIL TO OPEN ZAO 1603 | CHECK V. FAIL TO CLOSE ZAC 1603

PUMP NOT IN AUTO QS 1603A | CURRENT 3 PHASES II 1603A,B,C | CURRENT IMBALANCE IA 1603 | VOLTAGE 3 PHASES EI 1603A,B,C | VOLTAGE IMBALANCE EA 1603 | POWER FACTOR JU 1603 | POWER (KW) JI 1603 | ENERGY (KWH) JKI 1603 | PUMP ON/OFF QI 1603 | RVSS IN BYPASS QA 1603 | RVSS FAIL / OVLD UA 1603A | BYPASS STARTER OVLD IAH 1603 | PUMP START-STOP QS 1603 | PUMP FAULT UA 1603B | CONTROL VOLTAGE ECI 1603 | CHECK VALVE OPEN ZIO 1603 | CHECK VALVE CLOSE ZIC 1603 | PUMP DISCH. PRESSURE PIR 1603 | PROOF OF PRIME QI 1603P

MSPCP-1600
MAIN SEWAGE PUMPS CONTROL PANEL

PUMP RUNNING IL 1603A | PUMP STOPPED IL 1603B | CTRL POWER AVAIL IL 1603C

SS HS 1603A | HOA HS 1603B | FAULT HS 1603C | ALM RESET HS 1603D

MSPCP PRI./SEC. LEVEL CONTROLS SEE DWG I-103

PERMISSIVE CONTROL & PROTECTION

BU

PA

MSP-1,2,3 START-STOP CONTROLS
EY 030A,B,C

9

BSCP-9120
BACKUP SYSTEM CONTROL PANEL

480V FROM MCC

RVSS

CT

SUBCAB CABLE

LCS-1603A
ES
HS 1603E
(E)

PI 1603

PEM

LS 1603P
(F)

FLUSHING WATER
TO VACUUM PRIMER 7403
SEE DWG I-106

PI 1603A

PIT 1603

ZSC 1603

ZSO 1603

PIT 1610H

FIT 1610H

FE-1610H

HIGH SERVICE DISCHARGE HEADER VALVE 1610-30-01

TO 48" FORCE MAIN SEE DWG I-102

1603-20-02

1603-20-03

1603-24-01 SUCTION VALVE

MSP-1603

FLUSHING WATER
TO VACUUM PRIMER 7402
SEE DWG I-106

INFLUENT FROM WET WELL SEE DWG I-103

1602-20-02

1602-20-03

1602-24-01 SUCTION VALVE

1602 1603

MSP-1602

FLUSHING WATER
TO VACUUM PRIMER 7401
SEE DWG I-106

1601-20-02

1601-20-03

1601-24-01 SUCTION VALVE

1601 1603

MSP-1601

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CONTRACT PS-318

INSTRUMENTATION
NEW HIGH LEVEL PUMPS MSP-1, 2, 3 P&ID

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Drawing File Name & Drive Location: P:\Projects\0204 - ACM - PS-DES-5\900-CAD-GIS\910 CAD_BIM\02-SHEETS\Paerdegat\I-105.00.dwg
Last Date Saved:6/17/2026 3:05 PM
Plot Style Table:DEP_BEDC_22x34_ByWeight.ctb
Plot Scale:1:1
Date & Time Plotted:10/8/2026 10:35 AM

MOTOR TEMP. 3 PHASES TAH 1606A,B,C
MAIN BEARING TEMP. TAH 1606D
SUPPORT BEARING TEMP. TAH 1606E
STATOR HOUSING LEAK XA 1606A
WATER IN OIL XA 1606B
VIBRATION 3-AXIS VAH 1606AX,Y,Z
NO. OF STARTS KI 1606S
RUN TIME KI 1606R
MOTOR THERM. TRIP TAH 1606M
PUMP PERM. BU 1606
PUMP NOT IN SERVICE UAA 1606
PUMP AVAIL. AI 1606
PUMP ALARM UA 1606C
CONTROL VOLTAGE FAIL ECA 1606
CHECK V. FAIL TO OPEN ZAO 1606
CHECK V. FAIL TO CLOSE ZAC 1606

PUMP NOT IN AUTO QS 1606A
CURRENT 3 PHASES II 1606A,B,C
CURRENT IMBALANCE IA 1606
VOLTAGE 3 PHASES EI 1606A,B,C
VOLTAGE IMBALANCE EA 1606
POWER FACTOR JU 1606
POWER (KW) JI 1606
ENERGY (KWH) JKI 1606
PUMP ON/OFF QI 1606
RVSS IN BYPASS QA 1606
RVSS FAIL / OVLD UA 1606A
BYPASS STARTER OVLD IAH 1606
PUMP START-STOP QS 1606
PUMP FAULT UA 1606B
CONTROL VOLTAGE ECI 1606
CHECK VALVE OPEN ZIO 1606
CHECK VALVE CLOSE ZIC 1606
PUMP DISCH. PRESSURE PIR 1606
LOW SERVICE HEADER PRESSURE PIR 1610L
LOW SERVICE HEADER FLOW + TOTAL FIQR 1610L

RTU-9130
TELEMETRY PANEL

PMCS-9110
PUMP STATION MONITORING & CONTROL SYSTEM PANEL

PUMP RUNNING IL 1606A
PUMP STOPPED IL 1606B
CTRL POWER AVAIL IL 1606C
SS HS 1606A
HOA HS 1606B
FAULT HS 1606C
ALM RESET HS 1606D

MSPCP PRI./SEC. LEVEL CONTROLS SEE DWG I-103

PERMISSIVE CONTROL & PROTECTION

BU

PA

MSPCP-1600
MAIN SEWAGE PUMPS CONTROL PANEL

MSP-1,2,3 START-STOP CONTROLS
EY 030D,E

BSCP-9120
BACKUP SYSTEM CONTROL PANEL

480V FROM MCC

RVSS

CT

SUBCAB CABLE

LCS-1606A
ES
HS 1606E
(E)

PI 1606

PEM

M

MSP-1606

1606-24-01 SUCTION VALVE

PI 1606A

PIT 1606

ZSC 1606

ZSO 1606

1606-20-02

1606-20-03

INFLUENT FROM WET WELL SEE DWG I-103

1605-24-01 SUCTION VALVE

1605 1606

MSP-1605

1605-20-02

1605-20-03

16010-08-03 FLUSHING CONNECTION VALVE

PIT 1610L

FIT 1610L

FE-1610L

LOW SERVICE DISCHARGE HEADER VALVE 1610-30-02

TO 48" FORCE MAIN SEE DWG I-101

1604-24-01 SUCTION VALVE

1604 1606

MSP-1604

1604-20-02

1604-20-03

BID SET

SUBMITTAL DATE: OCTOBER 2026

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DIRECTOR, IN HOUSE DESIGN: NAYANKUMAR SHAH, P.E.

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96-05 HORACE HARDING EXPRESSWAY 5th FLOOR
CORONA, NEW YORK 11368
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CAPITAL PROJECT WP-269
RECONSTRUCTION OF
PAERDEGAT PUMPING STATION
CONTRACT PS-318

INSTRUMENTATION
NEW LOW LEVEL PUMPS MSP-4, 5, 6 P&ID

DATE: OCTOBER 2026
SCALE: NOT TO SCALE
SHEET NO: 265 OF 274
DRAWING NO. I-105.00

VP-7403 SYSTEM MALFUNCTION UA 7403
VP-7403A VAC. PUMP ON/OFF QI 7403A
VP-7403A VAC. PUMP FAIL UA 7403A
VP-7403B VAC. PUMP ON/OFF QI 7403D
VP-7403B VAC. PUMP FAIL UA 7403B

RTU-9130
TELEMETRY PANEL

VP-7403 PLC FAILURE XA 7403
VP-7403 SYSTEM LOW VAC. VAL 7403
VP-7403 RECEIVER HI WAT. LEV. LAH 7403
VP-7403A VAC. PUMP RUN TIME KI 7403AR
VP-7403A VAC. PUMP ON/OFF QI 7403AA
VP-7403A MOTOR OVERLOAD IAH 7403A
VP-7403A LOW OIL PRESSURE PAL 7403A
VP-7403A NOT IN AUTO QI 7403AB
VP-7403B VAC. PUMP RUN TIME KI 7403BR
VP-7403B VAC. PUMP ON/OFF QI 7403BA
VP-7403B MOTOR OVERLOAD IAH 7403B
VP-7403B LOW OIL PRESSURE PAL 7403B
VP-7403B NOT IN AUTO QI 7403BB

PMCS-9110
PUMP STATION MONITORING & CONTROL SYSTEM PANEL

VP-7403A VAC. PUMP START-STOP QC 7403A
VP-7403B VAC. PUMP START-STOP QC 7403B
VP-7403 PLC FAILURE XA 7403
VP-7403 SYSTEM LOW VAC. VAL 7403
VP-7403 RECEIVER HI WAT. LEV. LAH 7403
VP-7403A VAC. PUMP RUN TIME KI 7403AR
VP-7403A VAC. PUMP ON/OFF QI 7403AA
VP-7403A MOTOR OVERLOAD IAH 7403A
VP-7403A LOW OIL PRESSURE PAL 7403A
VP-7403A NOT IN AUTO QI 7403AB
VP-7403B VAC. PUMP RUN TIME KI 7403BR
VP-7403B VAC. PUMP ON/OFF QI 7403BA
VP-7403B MOTOR OVERLOAD IAH 7403B
VP-7403B LOW OIL PRESSURE PAL 7403B
VP-7403B NOT IN AUTO QI 7403BB

MSPCP-1600
MAIN SEWAGE PUMPS CONTROL PANEL

DATA CABLE

FACTORY WIRED WITHIN SKID (TYP.)

VACUUM PRIMER VP-7403
AUTO PURGE VALVE
FILTER W/ VACUUM RELEASE
VACUUM PUMP VP-7403A
VACUUM PUMP VP-7403B
LSH VI VSL
VACUUM RECEIVER TANK VT-7403
LI
VACUUM RELEASE W/ SILENCER
7403-02-01

LCP-7403-C CONTROL PANEL (120V)
VP-7403A HOA HS 7403A
PLC FAILURE XA 7403
VP-7403B HOA HS 7403B
MOTOR #1 OVERLOAD IAH 7403A
RECEIVER HIGH WATER LEVEL LAH 7403
MOTOR #2 OVERLOAD IAH 7403B
LOW OIL PRESSURE #1 PAL 7403A
LOW SYSTEM VACUUM VAL 7403
LOW OIL PRESSURE #2 PAL 7403B
RESET HS 7403R
ALARM HORN UA 7403
SILENCE HS 7403S

LCP-7403-M STARTER PANEL (480V)
MOTOR #1 RUN TIME KIQ 7403A
MOTOR #2 RUN TIME KIQ 7403B
MOTOR #1 RUNNING QI 7403A
MOTOR #2 RUNNING QI 7403B
MOTOR #1 O/L RESET HS 7403C
MOTOR #2 O/L RESET HS 7403D
MOTOR #1 STARTER (INSIDE) FVNR
MOTOR #2 STARTER (INSIDE) FVNR
(F)(M)
(F)(M)

SKID (TYP. OF 3)

VENTS OUTSIDE

FROM MSP-1603 PRIMING VALVE SEE DWG I-104
7403-02-03
7403-02-04
7403-02-02

VACUUM PRIMER VP-7402
VACUUM RECEIVER TANK VT-7402
7402-02-03
7402-02-04
7402-02-02
7402-02-01
FROM MSP-1602 PRIMING VALVE SEE DWG I-104
7402
7403

VACUUM PRIMER VP-7401
VACUUM RECEIVER TANK VT-7401
7401-02-03
7401-02-04
7401-02-02
7401-02-01
FROM MSP-1601 PRIMING VALVE SEE DWG I-104
7401
7403

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CAPITAL PROJECT WP-269
RECONSTRUCTION OF PAERDEGAT PUMPING STATION
CONTRACT PS-318

INSTRUMENTATION
NEW VACUUM PRIMING SYSTEM P&ID

DATE: OCTOBER 2026
SCALE: NOT TO SCALE
SHEET NO: 266 OF 274
DRAWING NO. I–106.00

Last Saved By:Broy
Paper Size Printed/Plotted: ANSI full bleed D (22.00 x 34.00 Inches)
Drawing File Name & Drive Location: P:\Projects\0204 – ACM – PS–DES–5\900–CAD–GIS\910 CAD_BIM\02–SHEETS\Paerdegat\I–106.00.dwg
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SERVICE WATER LOW PRESSURE PAL 7601

TROUBLE ALARM XA 8101 | FIRE ALARM UA 8101 | SUPER-VISORY ALARM XA 8101A

HVAC TROUBLE ALARM UA 7301

RTU-9130
TELEMETRY PANEL

SERVICE WATER LOW PRESSURE PAL 7601

TROUBLE ALARM XA 8101 | FIRE ALARM UA 8101 | SUPER-VISORY ALARM XA 8101A

HVAC TROUBLE ALARM UA 7301

PMCS-9110
PUMP STATION MONITORING & CONTROL SYSTEM PANEL

FACP-8100
FIRE ALARM CONTROL PANEL (SEE FIRE ALARM DRAWINGS)
(FA)

ATC-1
HVAC CONTROL PANEL
(H)

6 → TO HVAC EQUIP. =/>2000 CFM (SEE HVAC DRAWINGS)

TO WET PIPE FIRE SPRINKLER SYS. (SEE FIRE PROTECTION DRAWINGS)

PS 8204 (FP) | FS 8205 (FP)

RETARD CHAMBER (FP)

ALARM CHECK VALVE (FP)

PI

PSL 8201 (FP) | ZS 8202 (FP) | ZS 8203 (FP)

BACKFLOW PREVENTER

OS&Y GATE VALVE WITH TAMPER SWITCH

OS&Y GATE VALVE WITH TAMPER SWITCH

FIRE SPRINKLER WATER & FIRE ALARM
(SEE FIRE PROTECTION & FIRE ALARM DRAWINGS)

SERVICE TAP VALVE

CITY WATER SERVICE CONNECTION (SEE DWG C-103)

PSL 7601 (P)

COMPOUND METER (P)

HOUSE CONTROL VALVE

FLAT PLATE STRAINER

METER INLET CONTROL VALVE

METER OUTLET CONTROL VALVE

PRESSURE REDUCING VALVE

REDUCED PRESSURE ZONE BACKFLOW PREVENTER

POTABLE COLD WATER LOOP (SEE PLUMPING DRAWINGS)

METER TRANS-MISSION UNIT

MTU (P)

EXISTING CITY WATER MAIN IN FLATLANDS AVE.

POTABLE & SERVICE WATER
(SEE PLUMBING DRAWINGS)

OUTDOORS ⟷ INSIDE PUMPING STATION BUILDING

REDUCED PRESSURE ZONE BACKFLOW PREVENTER

SERVICE WATER (SEE PLUMPING DRAWINGS)

INTERLOCKS (SEE IG-002):

6 STOP HVAC EQUIPMENT ON FIRE ALARM.

HVAC ALARMS

HVAC CONTROL PANEL / EQUIP.	PMCS ALARM TAG NO.	LOCATION
ATC-1	UA-7301	SCREENING CHAMBER
ATC-2	UA-7302	WET WELL
ATC-3	UA-7303	DRY WELL
AC-1	UA-7304	ELECTRICAL ROOM

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ELECSYS ENGINEERING GROUP

Environmental Protection

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CAPITAL PROJECT WP-269
RECONSTRUCTION OF
PAERDEGAT PUMPING STATION
CONTRACT PS-318

INSTRUMENTATION
CITY WATER & HVAC P&ID

DATE: OCTOBER 2026
SCALE: NOT TO SCALE
SHEET NO: 267 OF 274
DRAWING NO. I-107.00

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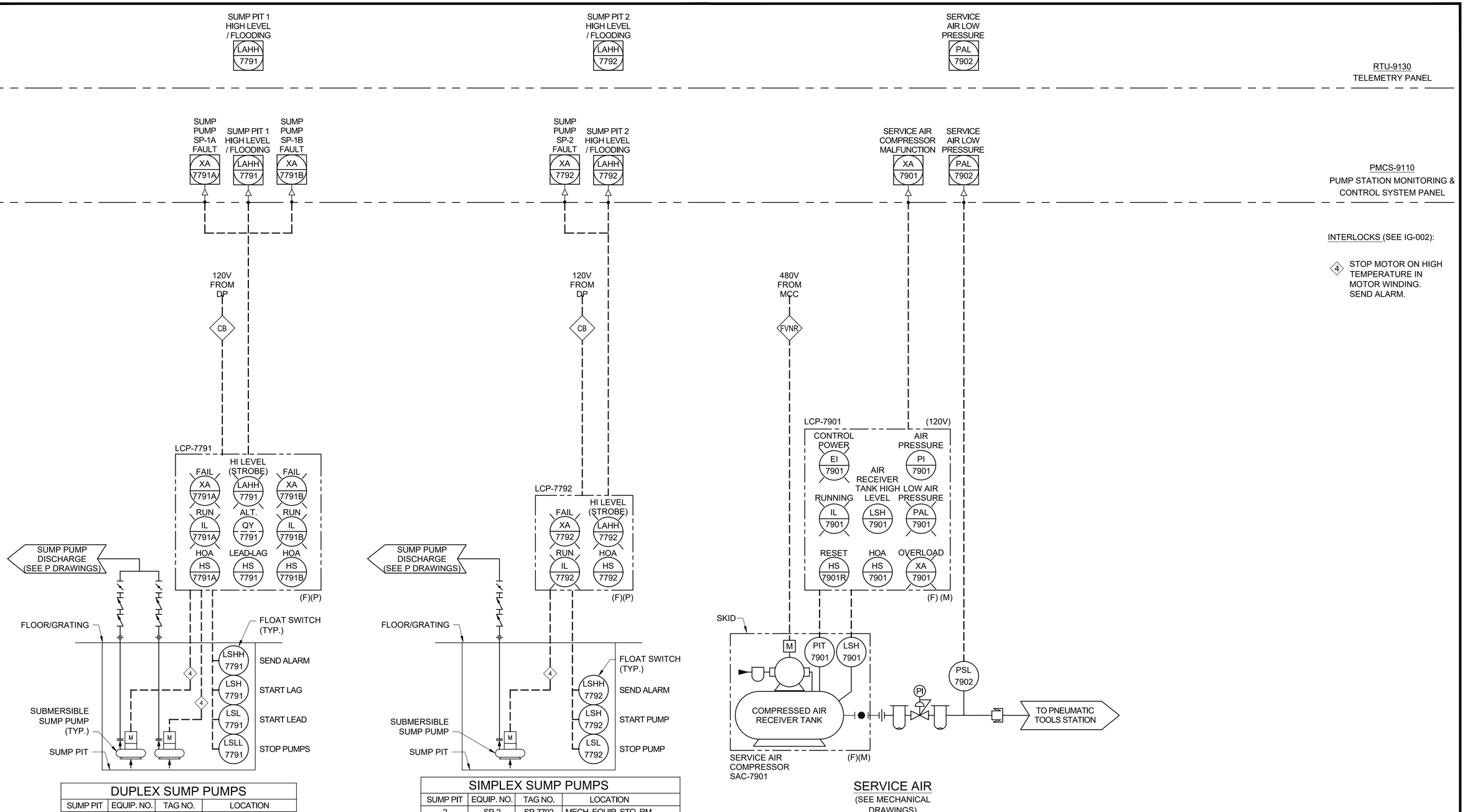

DUPLEX SUMP PUMPS			
SUMP PIT	EQUIP. NO.	TAG NO.	LOCATION
1	SP-1A	SP-7791A	LOWER PUMP ROOM
	SP-1B	SP-7791B	

SIMPLEX SUMP PUMPS			
SUMP PIT	EQUIP. NO.	TAG NO.	LOCATION
2	SP-2	SP-7792	MECH. EQUIP. STO. RM.
3	SP-3	SP-7793	NORTH ELEC. CHAMBER
4	SP-4	SP-7794	SOUTH ELEC. CHAMBER
5	SP-5	SP-7795	WEST STORAGE RM.
6	SP-6	SP-7796	EAST STORAGE RM.
7	SP-7	SP-7797	HVAC STORAGE RM.
8	SP-8	SP-7798	DISCHARGE VALVE CHAMBER

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CAPITAL PROJECT WP-269
RECONSTRUCTION OF
PAERDEGAT PUMPING STATION
CONTRACT PS-318

INSTRUMENTATION
SUMP PUMPS & SERVICE AIR P&ID

DATE: OCTOBER 2026
SCALE: NOT TO SCALE
SHEET NO: 268 OF 274
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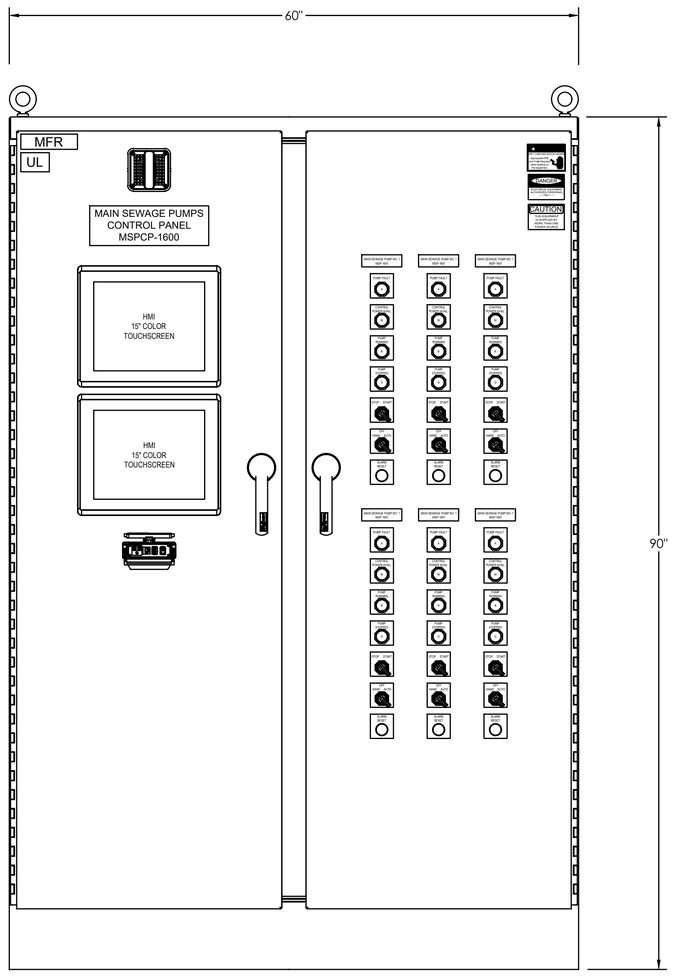
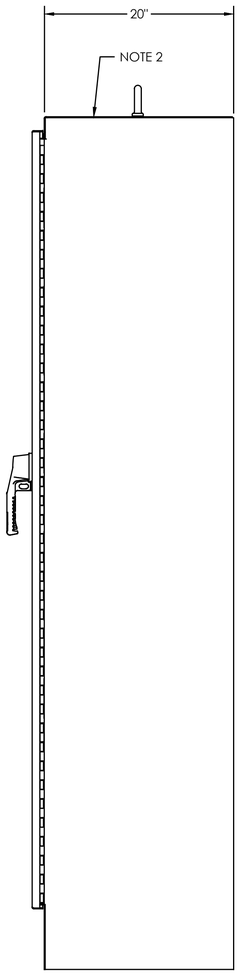
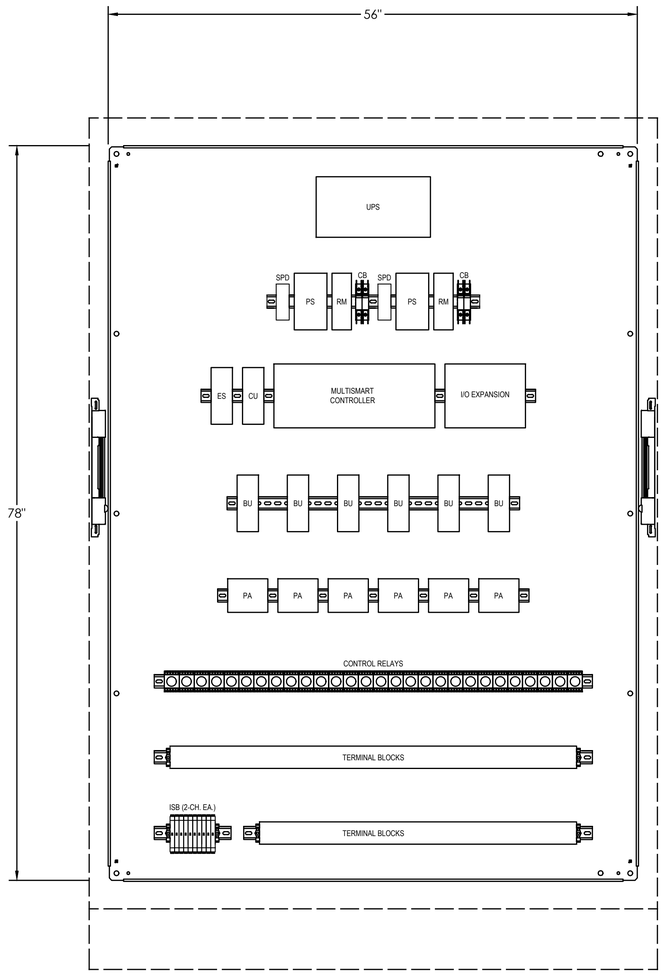


EXTERIOR FRONT VIEW
(CONTROL PANEL EXTERIOR)



RIGHT SIDE VIEW
(ENCLOSURE EXTERIOR)



INTERIOR FRONT VIEW
(ENCLOSURE & DOOR NOT SHOWN)

NOTES:

1. DRAWING SHOWS GENERAL ARRANGEMENT ONLY. ACTUAL LAYOUT, QUANTITIES AND SIZES OF COMPONENTS MAY VARY. DEVICES SUCH AS FUSES, ISBs, SPDs, WIRE DUCTS ARE NOT SHOWN BUT ARE TO BE PROVIDED IN THE CONTROL PANEL.
2. TOP OF PANEL MAY NOT BE AVAILABLE FOR CONDUIT ENTRY. PROVIDE ADEQUATE WIRING SPACE FOR BOTTOM ENTRY OF CONDUITS & CABLES.
3. LATEST MODELS OF EQUIPMENT & DEVICES SHALL BE PROVIDED.

MAIN SEWAGE PUMPS CONTROL PANEL MSPCP-9120
SCALE: NONE

BID SET
SUBMITTAL DATE: OCTOBER 2026

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ELECSYS ENGINEERING GROUP

STATE OF NEW YORK · ELDO JAMES · 088309 · LICENSED PROFESSIONAL ENGINEER

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CAPITAL PROJECT WP-269
RECONSTRUCTION OF
PAERDEGAT PUMPING STATION
CONTRACT PS-318

INSTRUMENTATION, MAIN SEWAGE PUMPS
CONTROL PANEL MSPCP-1600

DATE: OCTOBER 2026
SCALE: NOT TO SCALE
SHEET NO: 269 OF 274
DRAWING NO. I–109.00

Last Saved By: Broy Last Date Saved: 6/17/2026 3:04 PM Date & Time Plotted: 10/8/2026 10:34 AM
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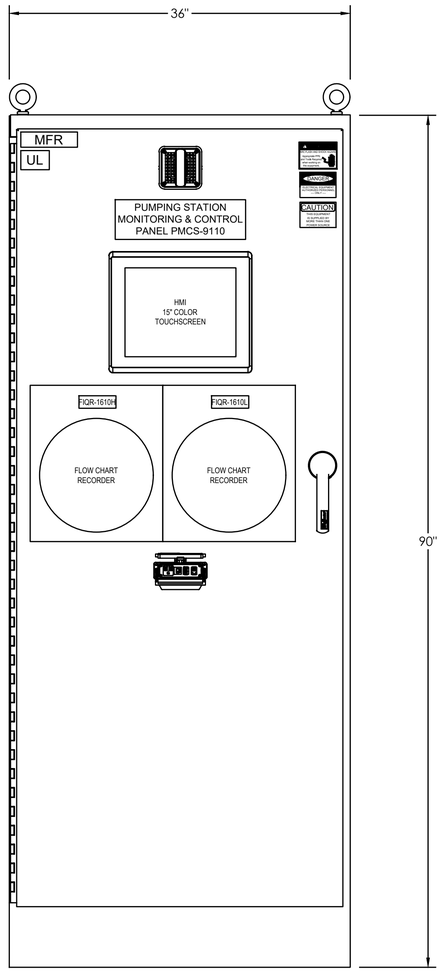
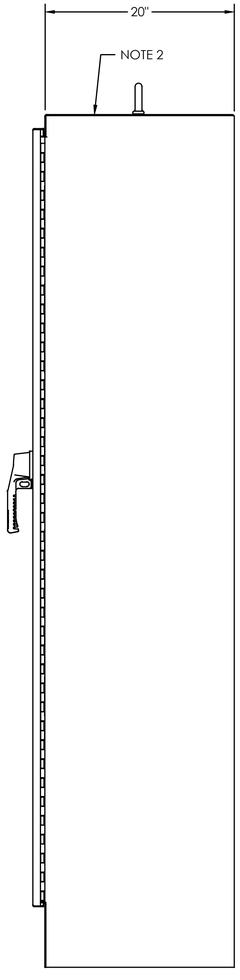
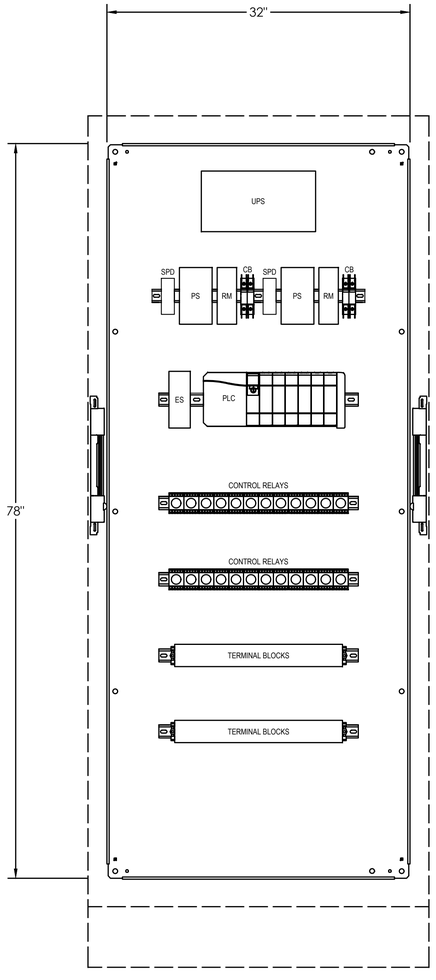


EXTERIOR FRONT VIEW
(CONTROL PANEL EXTERIOR)



RIGHT SIDE VIEW
(ENCLOSURE EXTERIOR)



INTERIOR FRONT VIEW
(ENCLOSURE & DOOR NOT SHOWN)

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2. TOP OF PANEL MAY NOT BE AVAILABLE FOR CONDUIT ENTRY. PROVIDE ADEQUATE WIRING SPACE FOR BOTTOM ENTRY OF CONDUITS & CABLES.
3. LATEST MODELS OF EQUIPMENT & DEVICES SHALL BE PROVIDED.

PUMPING STATION MONITORING & CONTROL PANEL PMCS-9110
SCALE: NONE

BID SET
SUBMITTAL DATE: OCTOBER 2026

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DRAWN BY: B. ROY
CHECKED BY: E. JAMES, P.E.
DESIGN LEAD: E. JAMES, P.E.
PROJECT MANAGER: AIMEE BOULET, P.E.

ELECSYS ENGINEERING GROUP

ACCOUNTABLE MANAGER: JOHN GOULAS, P.E.
PORTFOLIO MANAGER: KEVIN ELLENWOOD, P.E.
DIRECTOR, IN HOUSE DESIGN: NAYANKUMAR SHAH, P.E.

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CAPITAL PROJECT WP-269
RECONSTRUCTION OF
PAERDEGAT PUMPING STATION
CONTRACT PS-318

INSTRUMENTATION, PUMPING STATION MONITORING AND CONTROL PANEL PMCS-9110

DATE: OCTOBER 2026
SCALE: NOT TO SCALE
SHEET NO: 270 OF 274
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Last Saved By:Broy Last Date Saved:6/17/2026 3:04 PM Date & Time Plotted:10/8/2026 10:35 AM
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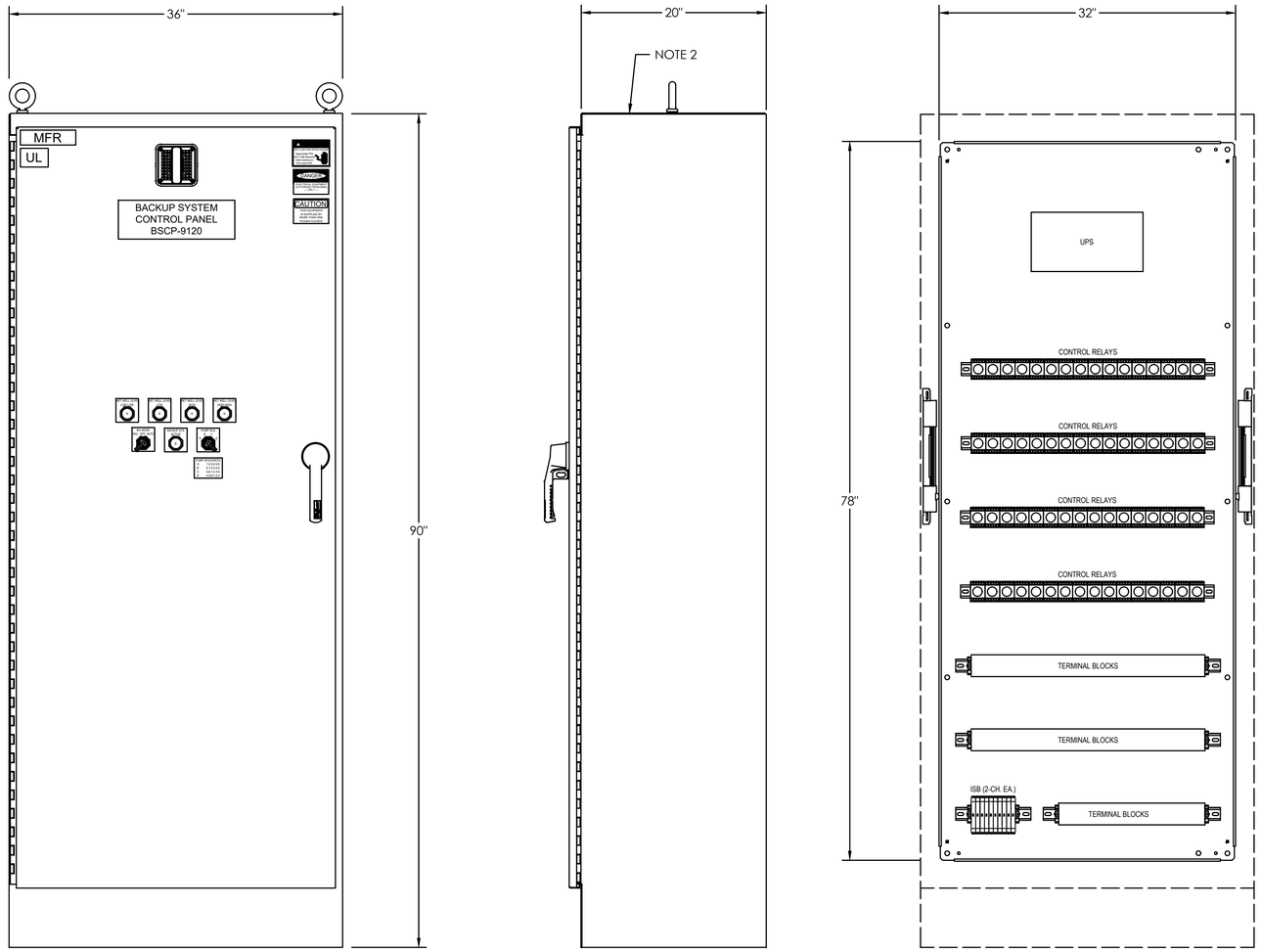
Drawing File Name & Drive Location: P:\Projects\0204 - ACM - PS-DES-5\900-CAD-GIS\910 CAD_BIM\02-SHEETS\Paerdegat\I-110.00.dwg



EXTERIOR FRONT VIEW
(CONTROL PANEL EXTERIOR)

RIGHT SIDE VIEW
(ENCLOSURE EXTERIOR)

INTERIOR FRONT VIEW
(ENCLOSURE & DOOR NOT SHOWN)

BACKUP SYSTEM CONTROL PANEL BSCP-9120
SCALE: NONE

NOTES:

1. DRAWING SHOWS GENERAL ARRANGEMENT ONLY. ACTUAL LAYOUT, QUANTITIES AND SIZES OF COMPONENTS MAY VARY. DEVICES SUCH AS FUSES, ISBs, SPDs, WIRE DUCTS ARE NOT SHOWN BUT ARE TO BE PROVIDED IN THE CONTROL PANEL.
2. TOP OF PANEL MAY NOT BE AVAILABLE FOR CONDUIT ENTRY. PROVIDE ADEQUATE WIRING SPACE FOR BOTTOM ENTRY OF CONDUITS & CABLES.
3. LATEST MODELS OF EQUIPMENT & DEVICES SHALL BE PROVIDED.
4. PUMP SEQUENCE SELECTOR SWITCH:

POSITION	PUMP SEQUENCE
A	1-2-3-4-5-6
B	6-1-2-3-4-5
C	5-6-1-2-3-4
D	4-5-6-1-2-3

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DRAWN BY: B. ROY

ELECSYS ENGINEERING GROUP

STATE OF NEW YORK · ELDO JAMES · 088309 · LICENSED PROFESSIONAL ENGINEER

NYC Environmental Protection

ACCOUNTABLE MANAGER
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PORTFOLIO MANAGER
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DIRECTOR, IN HOUSE DESIGN
NAYANKUMAR SHAH, P.E.

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PAERDEGAT PUMPING STATION
CONTRACT PS-318

INSTRUMENTATION
BACKUP SYSTEM CONTROL PANEL, BSCP-9120

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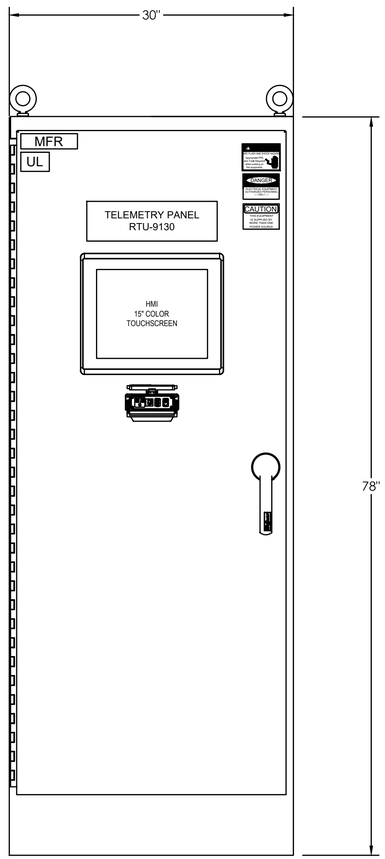
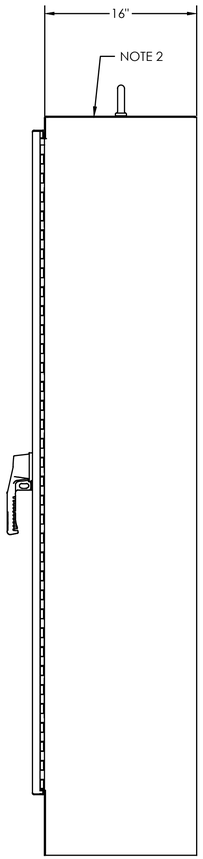
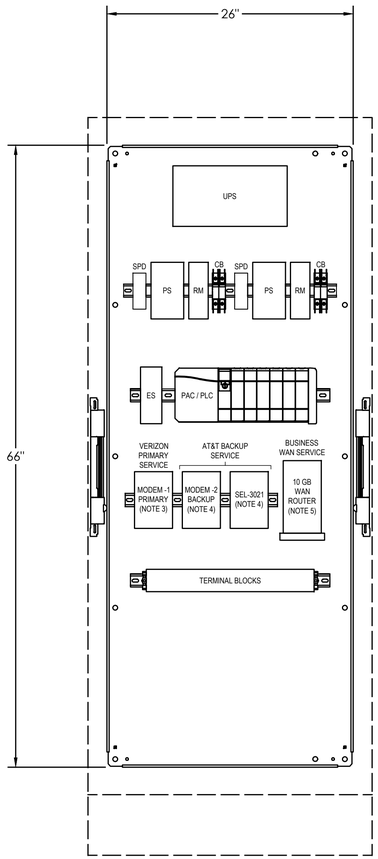


EXTERIOR FRONT VIEW
(PANEL EXTERIOR)



RIGHT SIDE VIEW
(ENCLOSURE EXTERIOR)



INTERIOR FRONT VIEW
(ENCLOSURE & DOOR NOT SHOWN)

TELEMETRY PANEL RTU-9130
SCALE: NONE

NOTES:

1. DRAWING SHOWS GENERAL ARRANGEMENT ONLY. ACTUAL LAYOUT, QUANTITIES AND SIZES OF COMPONENTS MAY VARY. DEVICES SUCH AS FUSES, SPDs, WIRE DUCTS ARE NOT SHOWN BUT ARE TO BE PROVIDED IN THE CONTROL PANEL.
2. TOP OF PANEL MAY NOT BE AVAILABLE FOR CONDUIT ENTRY. PROVIDE ADEQUATE WIRING SPACE FOR BOTTOM ENTRY OF CONDUITS & CABLES.
3. MODEM-1: VERIZON WIRELESS APPROVED AIRLINK COMMUNICATIONS, INC. RAVEN ETHERNET E-EV-DO MODEM V3215E (OR LATEST MODEL) FOR PRIMARY PLC/PAC COMMUNICATIONS.
4. MODEM-2: SIXNET INDUSTRIAL TELEPHONE MODEM MODEL VT-MODEM-5US (OR LATEST MODEL) AND SCHWEITZER ENGINEERING LABORATORIES, INC. (SEL) SERIAL ENCRYPTION TRANSCEIVER MODEL SEL-3021 (OR LATEST MODEL) FOR BACKUP PLC/PAC COMMUNICATIONS.
5. WAN ROUTER: VERIZON WIDE AREA NETWORK (WAN) ROUTER MODEL CR1000A (OR LATEST MODEL) WITH 10 GIGABIT (GB) FIBER OPTIC WAN SERVICE, 10 GB LAN PORT FOR CCTV OR VIDEO SURVEILANCE SYSTEM, TWO 2.5 GB LAN PORTS FOR DCAS RTMs, & WIFI 6E CERTIFIED (802.11ax, BACKWARD COMPATIBLE).
6. TELEMETRY PANEL SHALL COMPLY WITH THE LATEST REQUIREMENTS OF CITYWIDE COLLECTION FACILITIES INTEGRATED SCADA SYSTEM (CCFISS), VERIZON, AT&T AND OTHER COMMUNICATIONS SERVICE PROVIDERS, IF ANY.

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CAPITAL PROJECT WP-269
RECONSTRUCTION OF
PAERDEGAT PUMPING STATION
CONTRACT PS-318

INSTRUMENTATION
TELEMETRY PANEL, RTU-9130

DATE: OCTOBER 2026
SCALE: NOT TO SCALE
SHEET NO: 272 OF 274
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Last Saved By:Broy
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Drawing File Name & Drive Location: P:\Projects\0204 - ACM - PS-DES-5\900-CAD-GIS\910 CAD_BIM\02-SHEETS\Paerdegat\I-112.00.dwg
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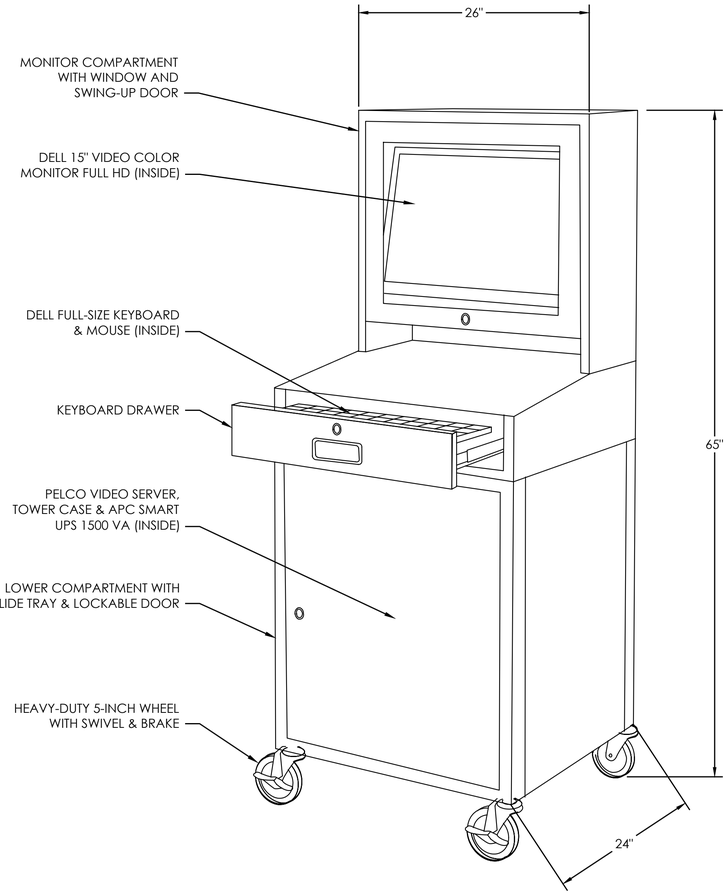
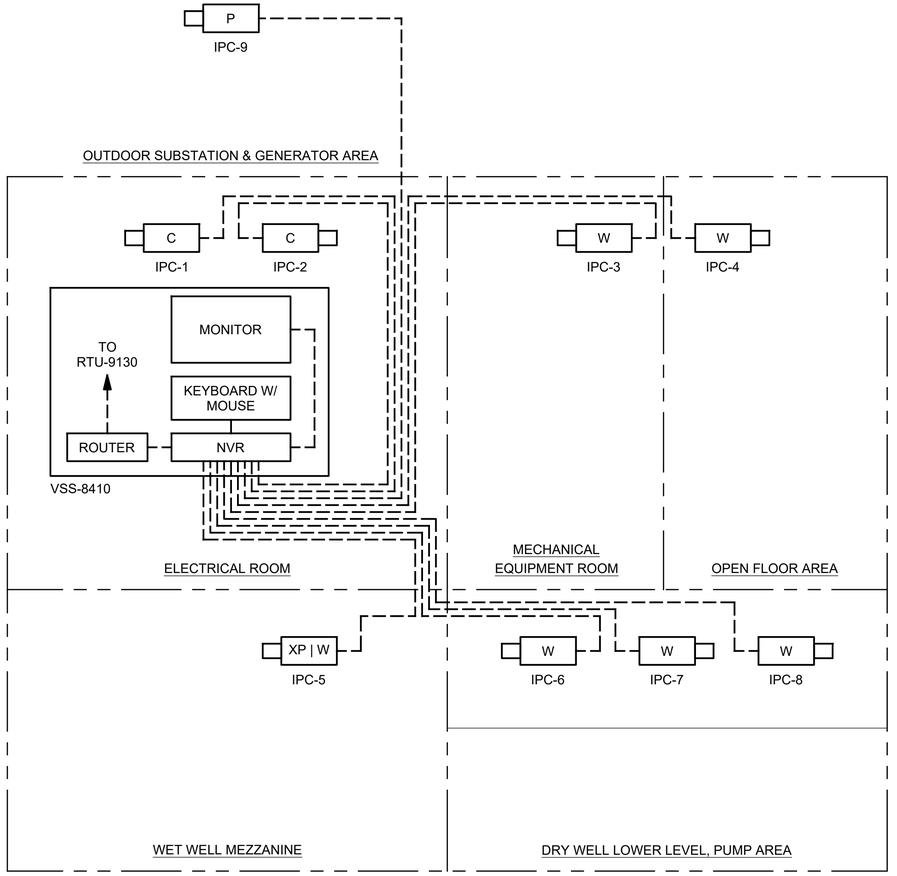


VIDEO CABINET FRONT RIGHT PERSPECTIVE VIEW
VIDEO SURVEILLANCE SYSTEM VSS-8410
SCALE: NONE



VIDEO SURVEILLANCE SYSTEM DIAGRAM
SCALE: NONE

CAMERA ABBREVIATIONS:

P	POLE MOUNTED
W	WALL MOUNTED
C	CEILING MOUNTED
XP	EXPLOSION PROOF

NOTES:

1. DRAWING SHOWS GENERAL ARRANGEMENT ONLY. ACTUAL LAYOUT, QUANTITIES AND SIZES OF COMPONENTS MAY VARY. CONTRACTOR AND VIDEO SYSTEM SUPPLIER SHALL PROVIDE ALL DEVICES, WIRING, AND ACCESSORIES NEEDED TO MAKE THE SYSTEM COMPLETE AND OPERATIONAL.
2. CABINET IS INTENDED TO BE MOBILE WITHIN A SIX-FOOT RADIUS. POWER CONNECTION SHALL BE VIA FLEXIBLE CORD PLUGGED TO A 120 VAC WALL OUTLET. NO CONDUIT IS REQUIRED BETWEEN THE NEAREST ADJACENT WALL AND THE CABINET FOR POWER AND VIDEO CABLES.
3. CABINET DIMENSIONS SHOWN ARE MAXIMUM DIMENSIONS TO FIT IN THE LIMITED SPACE INSIDE THE ELECTRICAL ROOM.

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CAPITAL PROJECT WP-269
RECONSTRUCTION OF
PAERDEGAT PUMPING STATION
CONTRACT PS-318

INSTRUMENTATION
VIDEO SURVEILLANCE SYSTEM, VSS-8410

DATE: OCTOBER 2026
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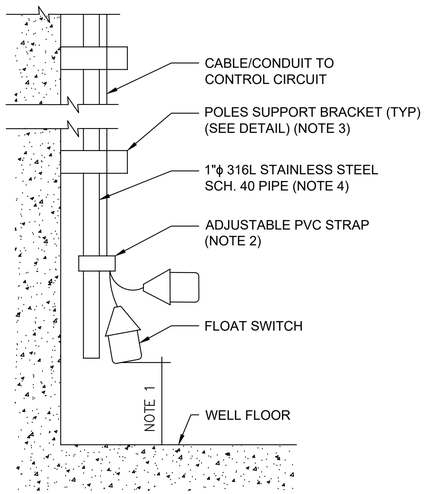
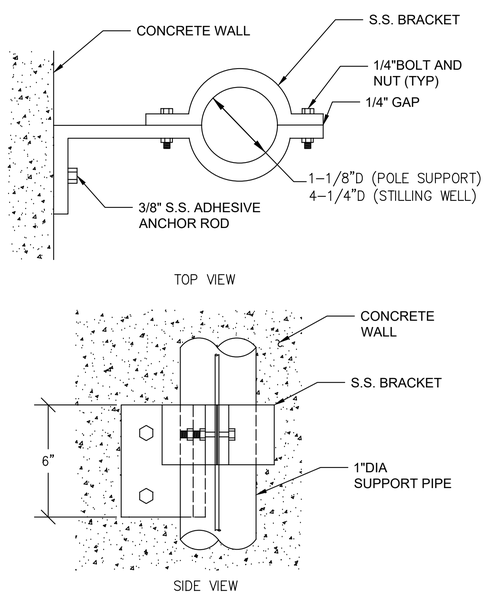


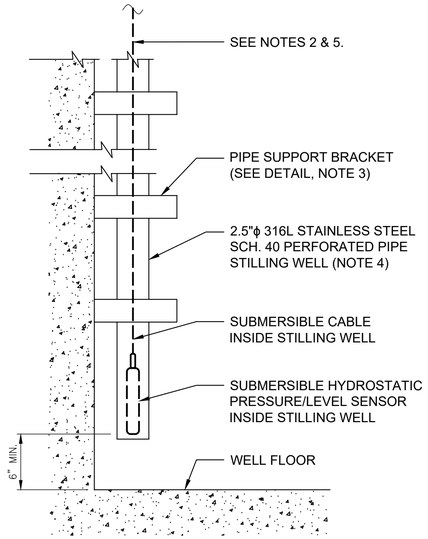
NOTES:

1. COORDINATE FOR INSTALLATION ELEVATION AND FLOAT SET POINT REQUIREMENT.
2. LEAVE 3 INCHES OF CABLE BETWEEN FLOAT AND STRAP.
3. POLE SUPPORT BRACKETS SHALL BE EVENLY SPACED A MAXIMUM DISTANCE OF 4 FEET APART. PROVIDE MINIMUM OF TWO POLE SUPPORT BRACKETS.
4. ALL BRACKETS, NUTS, BOLTS. ANCHOR RODS, AND POLES SHALL BE 316L STAINLESS STEEL.
5. PROVIDE REQUIRED QUANTITY OF FLOAT SWITCHES AND SUPPORTS AT CALIBRATED SET POINT ELEVATIONS.

FLOAT SWITCH INSTALLATION DETAIL



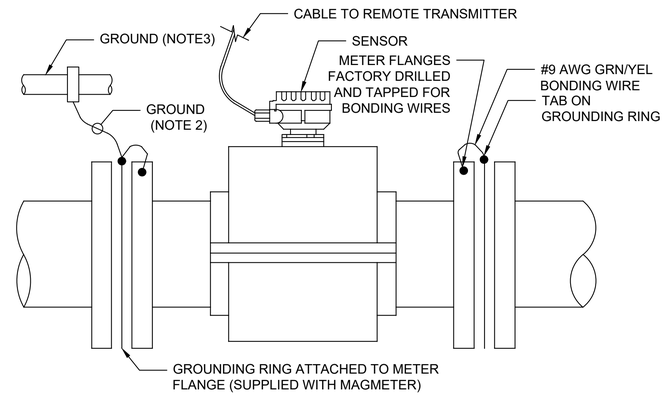
POLE SUPPORT/STILLING WELL BRACKET DETAIL



NOTES:

1. FOLLOW MANUFACTURER'S INSTALLATION INSTRUCTIONS.
2. TERMINATE CABLE IN ASSOCIATED TRANSDUCER OR TRANSMITTER DIRECTLY WITHOUT JUNCTION BOX IN BETWEEN. PROVIDE RIGID CONDUIT WITH EYS SEAL, ALL PVC-COATED RGS. PROVIDE CABLE STRAIN RELIEF AND PROTECTION FROM DAMAGE.
3. PIPE SUPPORT BRACKETS SHALL BE EVENLY SPACED A MAXIMUM DISTANCE OF 4 FEET APART. PROVIDE MINIMUM OF TWO PIPE SUPPORT BRACKETS.
4. ALL BRACKETS, NUTS, BOLTS. ANCHOR RODS, AND PIPE SHALL BE 316L STAINLESS STEEL.
5. PROVIDE INTRINSICALLY SAFE BARRIER IN NON-HAZARDOUS AREA WHERE REQUIRED BY MANUFACTURER.

SUBMERSIBLE HYDROSTATIC PRESSURE/LEVEL SENSOR INSTALLATION DETAIL



NOTES:

1. FLOW METER DETAIL SHOWN SHALL BE USED FOR BOTH ELECTRICALLY NON-CONDUCTIVE AND CONDUCTIVE TYPE PIPELINES.
2. GROUND WIRE SHALL BE NO. 12 AWG INSULATED. IF LENGTH OF GROUND IS MORE THAN 6 FEET,INSTALL CONDUCTOR IN 3/4" CONDUIT.
3. BOND MAGNETIC FLOW METER TO ONE OF THE FOLLOWING ACCEPTABLE GROUNDS:
   a) METALLIC WATER PIPE BURIED PORTION IS MORE THAN 10 FEET.
   b) STRUCTURAL STEEL
4. REMOTE TRANSMITTER SHALL BE LOCATED IN A SUITABLE LOCATION AND MOUNTED INSIDE AN ENCLOSURE. ENCLOSURE SHALL BE PIPE STAND OR WALL MOUNTED AS REQUIRED. FOLLOW MANUFACTURER'S INSTRUCTIONS.

MAGNETIC FLOW METER MOUNTING DETAIL

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ELECSYS ENGINEERING GROUP

STATE OF NEW YORK · GLOO JAMES · 091309 · LICENSED PROFESSIONAL ENGINEER

Environmental Protection

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CAPITAL PROJECT WP-269
RECONSTRUCTION OF
PAERDEGAT PUMPING STATION
CONTRACT PS-318

INSTRUMENTATION
TYPICAL I&C DETAILS

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