

# COLLIER COUNTY, FLORIDA NORTH COUNTY WATER RECLAMATION FACILITY

## EQ ODOR CONTROL - PHASE II

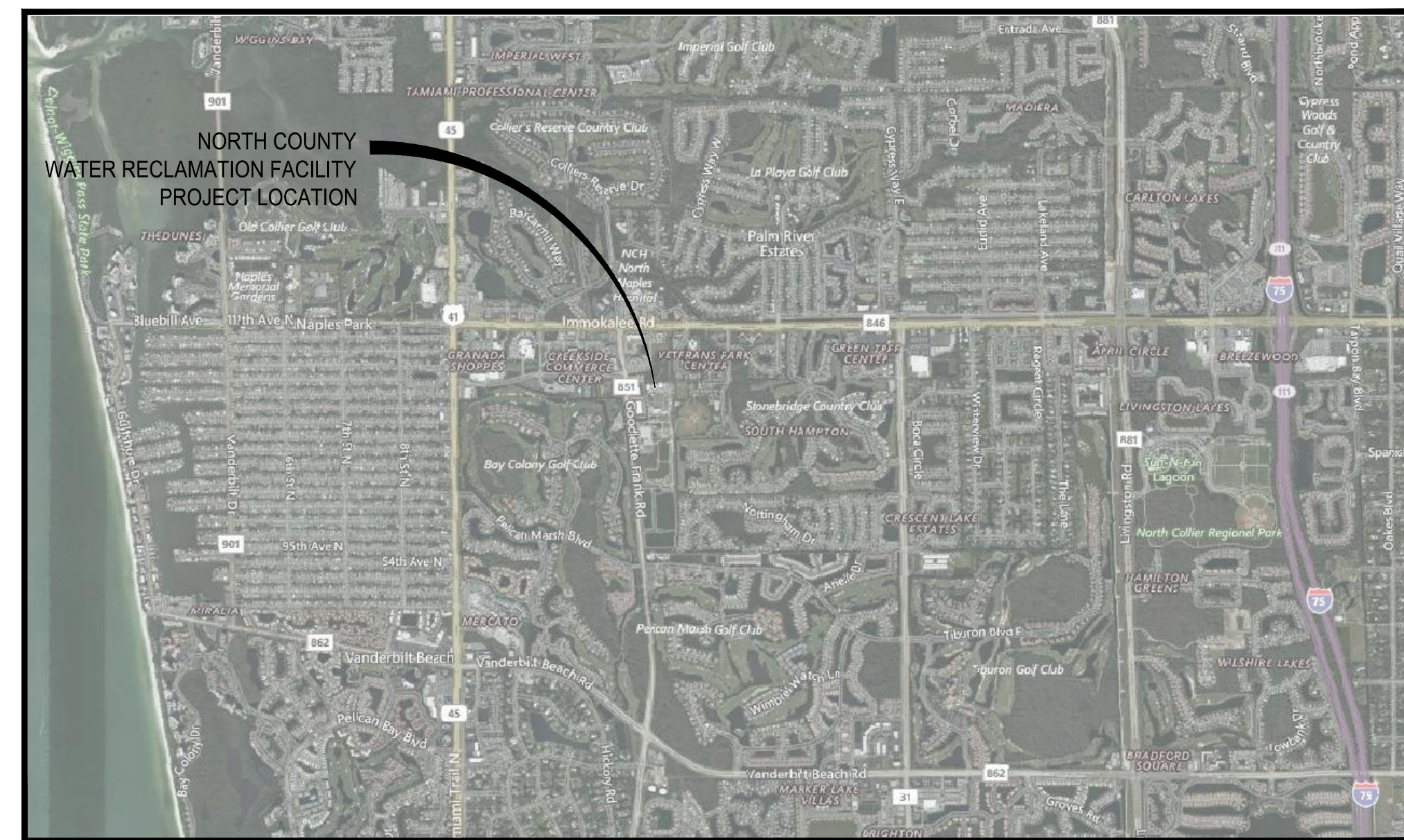
SECTION 35, TOWNSHIP 48 SOUTH, RANGE 27 EAST

PARCEL ID NO. 167840006 - ZONING DESIGNATION INDUSTRIAL, ORD 92-52

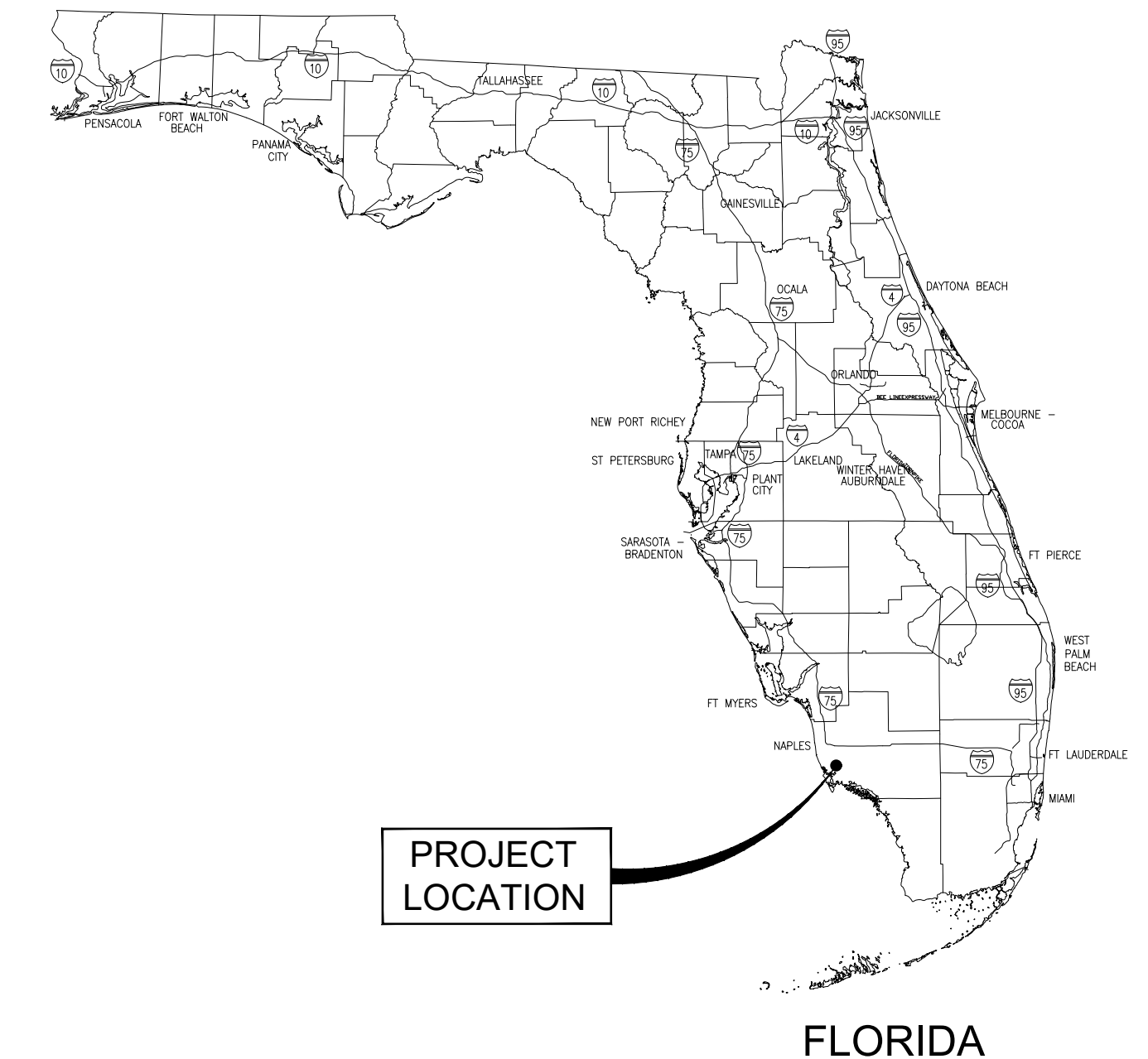
COLLIER COUNTY EPMD PROJECT #70148.12.4.2

INSUBSTANTIAL CHANGE TO PL20120001111

SHEET INDEX			
SHEET NUMBER	TITLE	DESCRIPTION	ENGINEER OF RECORD
1	G-001	COVER AND INDEX SHEET	MARC LEAN, P.E.
2	G-002	SIGNATURE SHEET	
3	G-003	GENERAL NOTES AND ABBREVIATIONS	
4	C-101	EXISTING CONDITIONS PLAN	
5	C-102	DEMOLITION PLAN	
6	C-103	PROPOSED SITE PLAN AND ASPHALT RESTORATION	
7	C-104	STORMWATER POLLUTION PREVENTION PLAN	
8	C-500	BEST MANAGEMENT PRACTICES	
9	C-501	CIVIL DETAILS	
10	S-101	ODOR CONTROL EQUIPMENT PAD AND DUCT SUPPORT	
11	S-102	SECTIONS AND DETAILS	
12	S-103	ELEVATIONS AND DETAILS	
13	M-101	MECHANICAL PLAN AND SECTION VIEW	HAROLD E. SCHMIDT, P.E.
14	E-001	ELECTRICAL GENERAL NOTES, LEGENDS, AND ABBREVIATIONS	BRADLEY C. BUCHANAN, P.E.
15	E-002	ELECTRICAL GENERAL NOTES, LEGENDS, AND ABBREVIATIONS	
16	E-003	ELECTRICAL GENERAL NOTES, LEGENDS, AND ABBREVIATIONS	
17	E-101	ELECTRICAL DEMOLITION	
18	E-102	ELECTRICAL SITE PLAN	
19	E-103	ELECTRICAL GROUNDING AND LIGHTNING PROTECTION	
20	E-401	ELECTRICAL COORDINATION NOTES	
21	E-501	ELECTRICAL TYPICAL DETAILS	
22	E-502	ELECTRICAL TYPICAL DETAILS	
23	E-601	ELECTRICAL ONE LINE DIAGRAMS MCC-12A/12B	
24	E-602	ELECTRICAL ELEVATION AND LOAD CALC MCC-12A/12B	
25	E-603	TYPICAL EXHAUST FAN STARTER SCHEMATIC	
26	E-604	KEY INTERLOCK PROCEDURE	
27	I-001	INSTRUMENTATION AND CONTROLS GENERAL NOTES, LEGENDS, AND ABBREVIATIONS	
28	I-601	INSTRUMENTATION AND CONTROLS CARBON SCRUBBER P&ID	
29	I-602	INSTRUMENTATION AND CONTROLS TYPICAL LOOP DIAGRAMS	
30	I-701	PLC-8 MODIFICATIONS LAYOUT	
31	I-702	PLC-8 MODIFICATIONS SCHEMATIC - I	
32	I-703	PLC-8 MODIFICATIONS SCHEMATICS - II	
33	I-704	PLC-8 MODIFICATIONS SCHEMATICS - III	



LOCATION MAP



FLORIDA

PLANS PREPARED FOR:



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PLANS PREPARED BY:



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DAN KOWAL .....DISTRICT 4  
WILLIAM L. McDANIEL, JR .... DISTRICT 5

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IT'S THE LAW! DIAL 811  
SUNSHINE STATE ONE CALL OF  
FLORIDA, INC.

STANTEC PROJECT NO. 177311697  
NOVEMBER, 2023

BID SET



Revision	By	Appd	Date
BID SET	ML	SM	NOVEMBER, 2023
Issued	By	Appd	Date
File Name: 11697-G-002	MPL Dwn.	ML Dsgn.	SM Chkd. NOVEMBER, 2023 Date

Permit/Seal

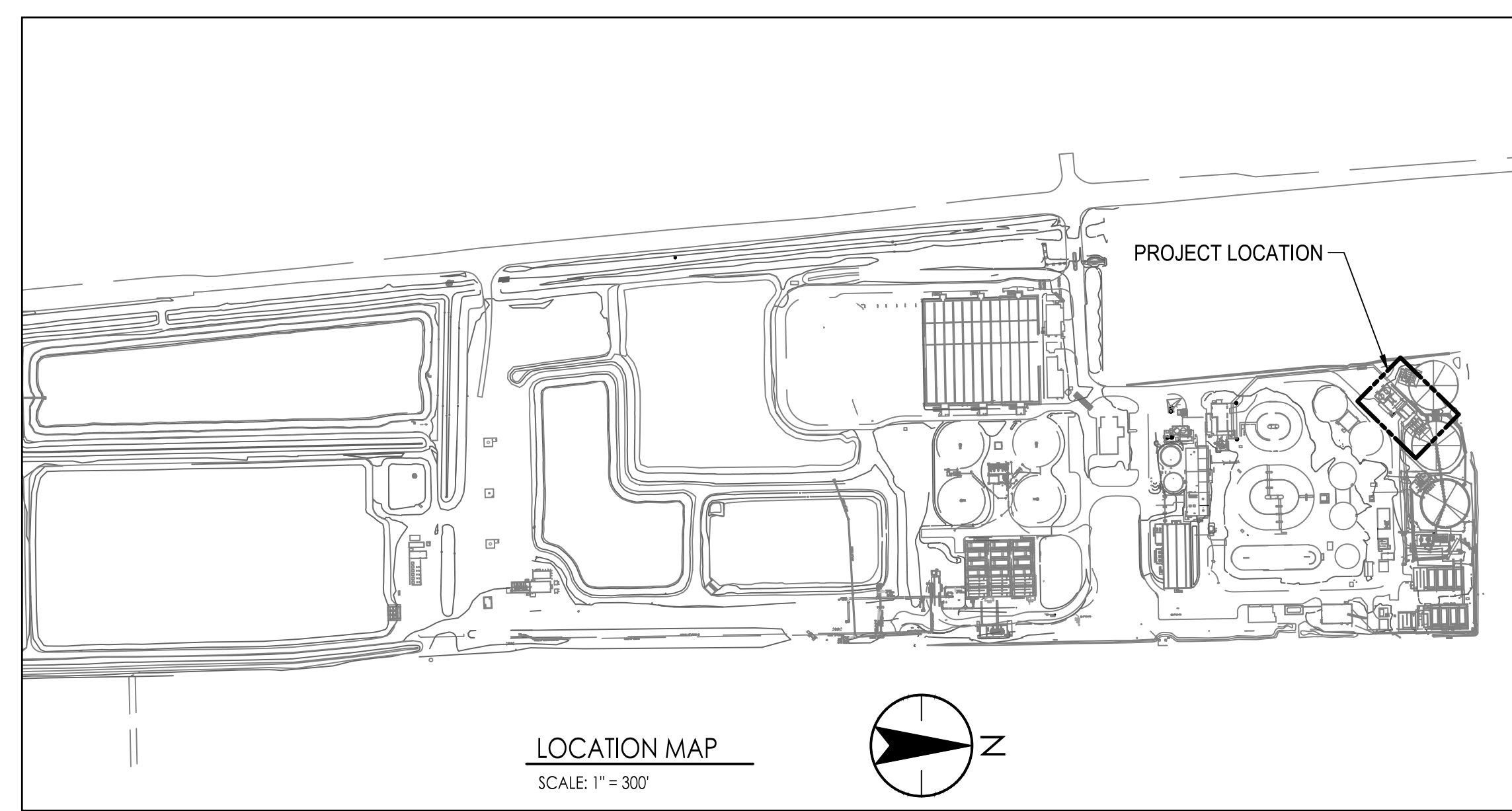
MARC LEAN, PE 66473

Client/Project  
COLLIER COUNTY PUBLIC UTILITIES

NORTH COUNTY WATER RECLAMATION  
FACILITY ODOR CONTROL - PHASE II

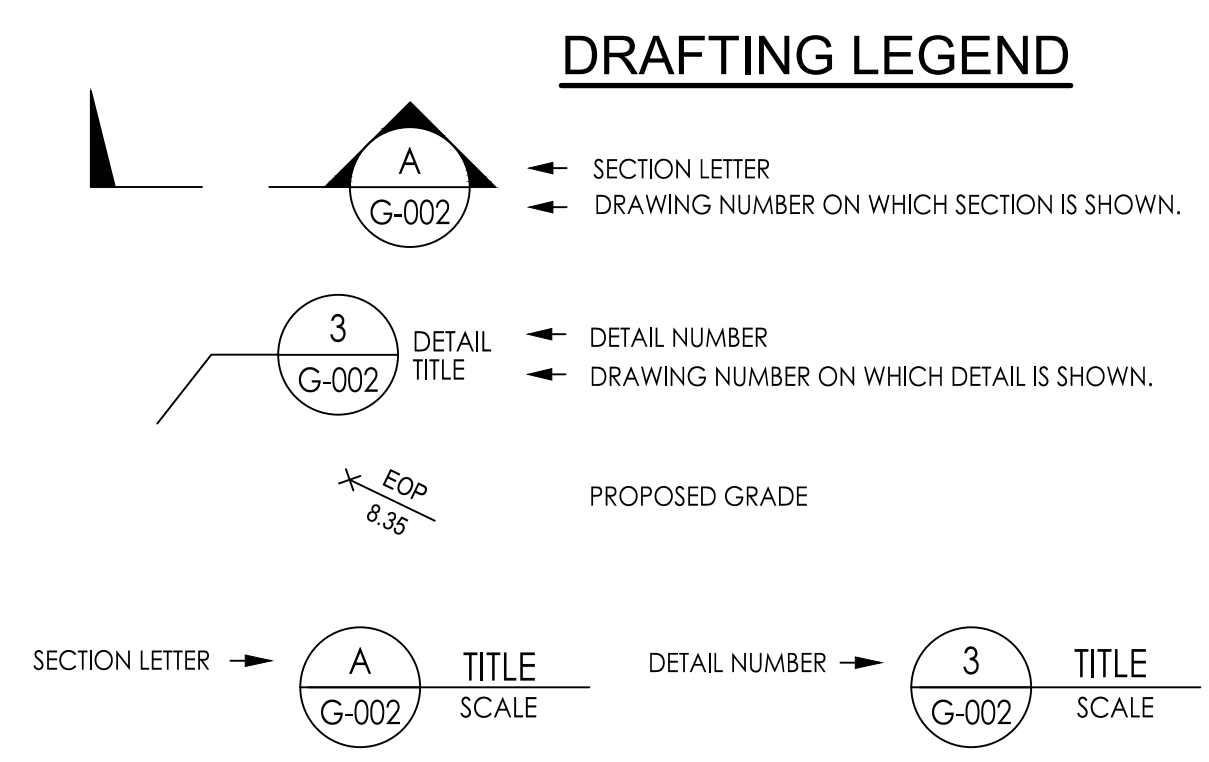
Title  
GENERAL NOTES AND ABBREVIATIONS

Project No. 177311697	Scale AS SHOWN
Phase BID SET	Drawing No. G-003
3 of 33	

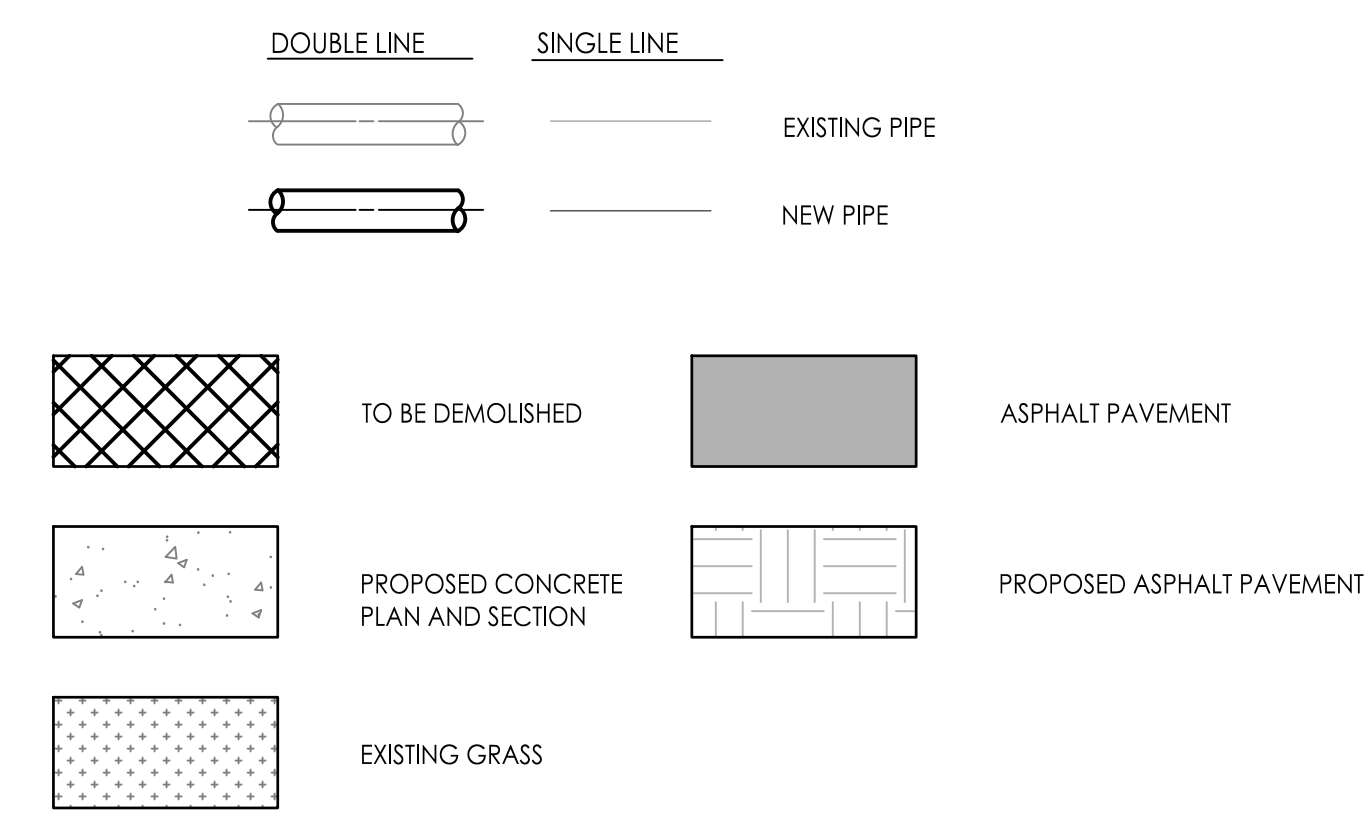


**GENERAL NOTES**

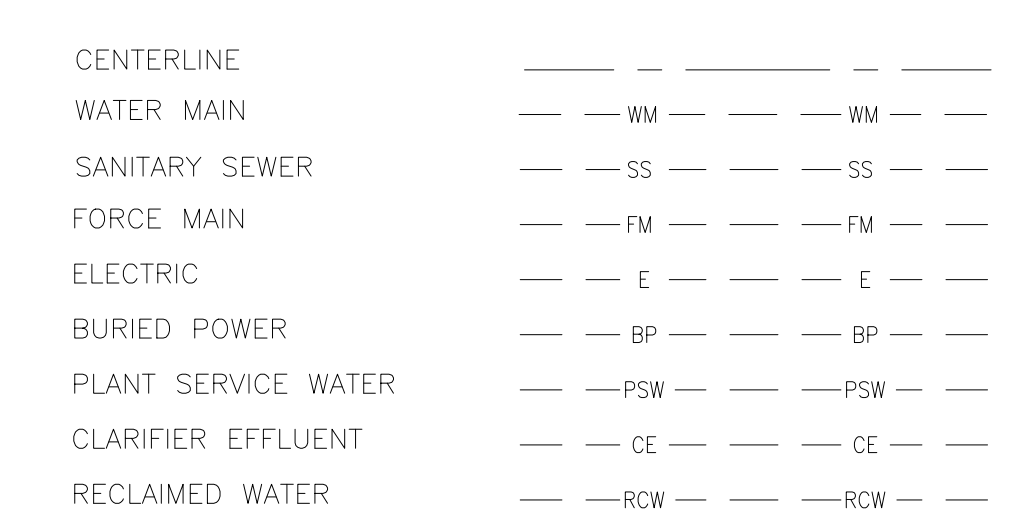
- ALL MATERIALS AND CONSTRUCTION METHODS USED FOR THE PROPOSED IMPROVEMENTS SHALL CONFORM WITH THE COLLIER COUNTY LAND DEVELOPMENT CODE, THE COLLIER COUNTY WATER - SEWER DISTRICT UTILITIES STANDARDS MANUAL, THE APPROVED SUPPLEMENTAL TECHNICAL STANDARDS AND SPECIFICATIONS, AND ALL FEDERAL, STATE, AND LOCAL REGULATIONS. IN THE CASE OF A CONFLICT, THE MORE STRINGENT REQUIREMENT THAT RESULTS IN A HIGHER QUALITY FINISHED PRODUCT SHALL GOVERN.
- ALL MATERIALS SUPPLIED SHALL CONFORM TO THE PLANS AND SPECIFICATIONS, AS WELL AS SHOP DRAWINGS AS APPROVED BY ENGINEER PRIOR TO CONSTRUCTION. SUBSTITUTE MATERIALS SHALL NOT BE APPROVED AFTER DELIVERY TO THE JOB SITE. ALL REQUESTS FOR MATERIAL SUBSTITUTION SHALL BE APPROVED PRIOR TO DELIVERY OF THESE MATERIALS TO THE JOB SITE.
- THE CONTRACTOR SHALL BE RESPONSIBLE AT ALL TIMES THROUGH THE DURATION OF CONSTRUCTION FOR THE PROTECTION OF EXISTING AND NEWLY INSTALLED UTILITIES FROM DAMAGE OR DISRUPTION OF SERVICE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR TAKING SUCH MEASURES AS NECESSARY TO PROTECT THE HEALTH, SAFETY, AND WELFARE OF THOSE PERSONS HAVING ACCESS TO THE WORK SITE.
- ELEVATIONS ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988. NAVD 88, (+1.23') to = NGVD 29.
- THE HORIZONTAL DATUM IS THE FLORIDA STATE PLANE COORDINATE SYSTEM, EAST ZONE, NORTH AMERICAN DATUM 1983 (2011).
- LOCATIONS, ELEVATIONS AND DIMENSIONS OF EXISTING UTILITIES, STRUCTURES AND OTHER FEATURES ARE SHOWN ACCORDING TO THE BEST INFORMATION AVAILABLE AT THE TIME OF THE PREPARATION ON THESE PLANS BUT DOES NOT PURPORT TO BE ABSOLUTELY CORRECT. THE CONTRACTOR SHALL VERIFY THE LOCATIONS, ELEVATIONS AND DIMENSIONS OF ALL EXISTING UTILITIES AND OTHER FEATURES AFFECTING THIS WORK PRIOR TO COMMENCING ANY CONSTRUCTION ACTIVITY.
- CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL APPLICABLE PERMITS BEFORE COMMENCING WORK.
- CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING OR REPLACING AND REMOVING AND DISPOSING ANY DAMAGED ITEMS INCLUDING, BUT NOT LIMITED TO DRIVEWAYS, SIDEWALKS, BOLLARDS, SIGNS, STORM CULVERTS, FENCES AND LANDSCAPING AS REQUIRED BY OWNER, ENGINEER OF RECORD, AND/OR OTHER GOVERNING ENTITIES.
- ALL DISTURBED AREAS SHALL BE RESTORED, INCLUDING REGRADING, TO THEIR ORIGINAL CONDITION OR BETTER UNLESS OTHERWISE NOTED.
- CONTRACTOR SHALL BE RESPONSIBLE FOR REGRADING AND REPLANTING VEGETATION IN ALL AREAS DISTURBED BY THE CONSTRUCTION.
- CONTRACTOR SHALL PROVIDE ALL LABOR, EQUIPMENT, TOOLS, MATERIALS AND SERVICES NEEDED TO ENSURE ADEQUATE EROSION AND SEDIMENT CONTROL MEASURES. THESE MEASURES SHALL CONFORM TO THE PLANS AND SPECIFICATIONS AND ALL STATE AND LOCAL REQUIREMENTS.
- ANY DISCREPANCIES IN THE DRAWINGS AND/OR SPECIFICATIONS SHALL BE BROUGHT TO THE ATTENTION OF THE COUNTY IN WRITING BEFORE BIDDING OR COMMENCING WORK.
- NO FIELD CHANGES OR DEVIATION FROM DESIGN SHALL BE MADE WITHOUT PRIOR APPROVAL OF THE COUNTY IN WRITING.
- NO CONNECTION TO, OR ANY OTHER CONSTRUCTION SHALL BE PERFORMED ON AN EXISTING UTILITY MAIN OR STRUCTURE WITHOUT THE PRESENCE OF A COLLIER COUNTY UTILITY INSPECTOR.
- CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING TRAFFIC AND USAGE OF THE EXISTING STREETS ADJACENT TO THE PROJECT. ALL TRAFFIC MAINTENANCE CONTROLS SHALL BE IN ACCORDANCE WITH FLORIDA MANUAL OF TRAFFIC CONTROL AND SAFE PRACTICES FOR STREET CONSTRUCTION, MAINTENANCE, AND UTILITY OPERATIONS.
- CONTRACTOR SHALL CONFIRM LIMITS OF STAGING AREA WITH PLANT MANAGER.
- EXCAVATIONS MUST MEET OSHA REQUIREMENTS AND CONTRACTOR SHALL CONFORM TO THE GUIDELINES SET FORTH IN THE FLORIDA TRENCH SAFETY ACT THROUGHOUT THE DURATION OF THE PROJECT. CONTRACTOR SHALL PROVIDE WRITTEN ASSURANCE THAT THE TRENCH EXCAVATION WILL COMPLY WITH THE APPLICABLE TRENCH SAFETY STANDARDS.
- COLLIER COUNTY PUBLIC UTILITIES DEPARTMENT WILL BE RESPONSIBLE FOR MAINTENANCE OF INFRASTRUCTURE PROPOSED ON THIS PROJECT, WITHIN THE SITE, INCLUDED OPEN SPACE, PAVED AREAS, ETC.
- COLLIER COUNTY PUBLIC UTILITIES DEPARTMENT IS RESPONSIBLE FOR MAINTENANCE OF EXISTING WATER MANAGEMENT FACILITIES WITHIN THE FACILITY.
- THE APPROVAL OF THESE CONSTRUCTION PLANS DOES NOT AUTHORIZE CONSTRUCTION OF REQUIRED IMPROVEMENTS WHICH ARE INCONSISTENT WITH EASEMENT OF RECORD.



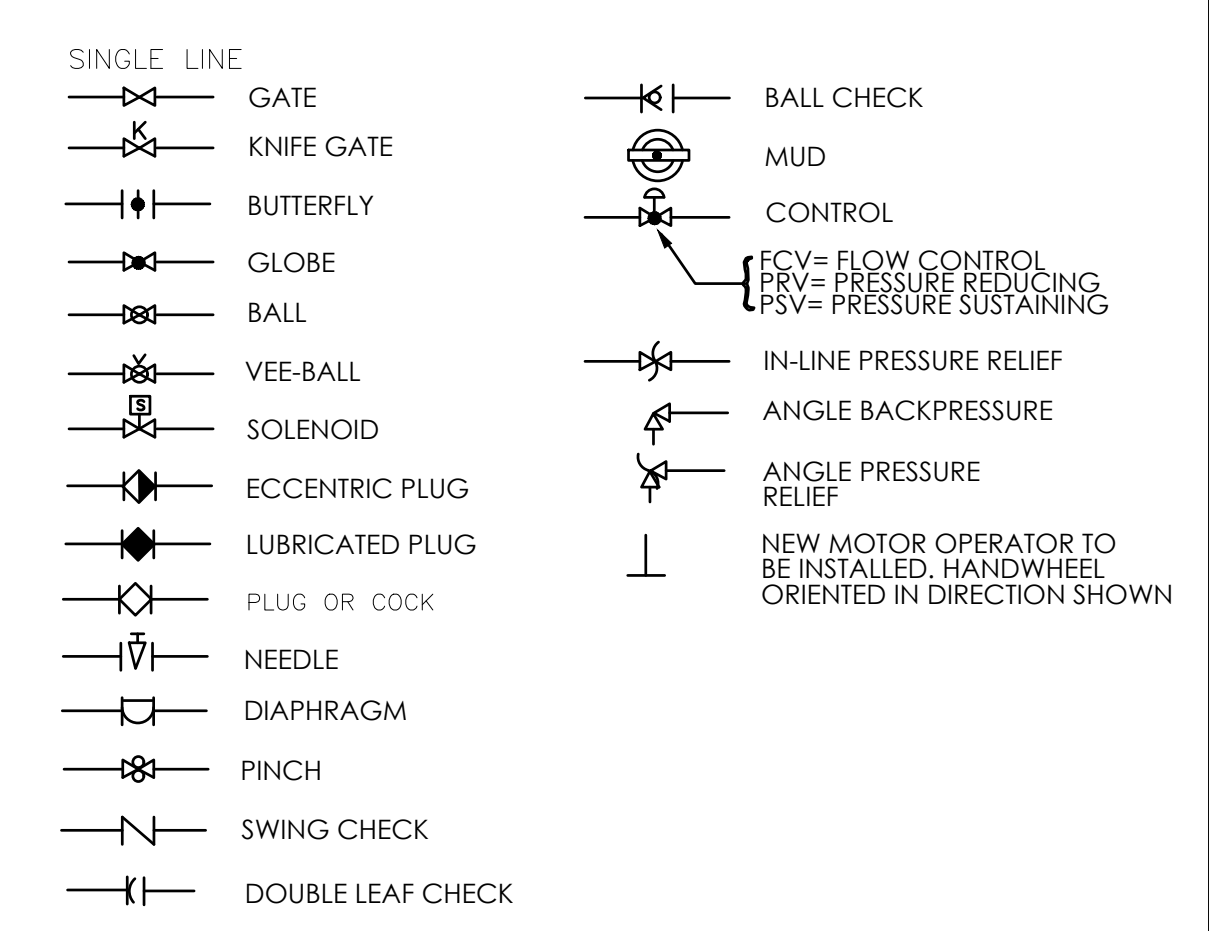
**SYMBOLS LEGEND**



**EXISTING LINETYPE**



**EXISTING VALVE SYMBOLS**



**SURVEY NOTES**

- TOPOGRAPHIC SURVEY PROVIDED BY AIM ENGINEERING & SURVEYING, INC. AIM PROJECT NUMBER 21-1416 PHASE 300, DATED SEPTEMBER 14, 2022.
- SUBSURFACE UTILITY ENGINEERING TEST HOLE DATA PROVIDED BY AIM ENGINEERING & SURVEYING, INC. DATED DECEMBER 27, 2021 TO JUNE 16, 2022. HORIZONTAL DATUM: FLORIDA STATE PLANE, EAST ZONE, NAD 83. VERTICAL DATUM: NAVD 88 (NATIONAL GEODETIC VERTICAL DATUM) 1988.
- NCWRF FLOW EQUALIZATION SYSTEM, PHASE 2 RECORD DRAWINGS, DATED JANUARY 2006, PREPARED BY HAZEN AND SAWYER AND HOLE MONTES.

Client/Project Logo



NOTES:

Revision	By	Appd	Date
BID SET	ML	SM	NOVEMBER, 2023
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File Name: 11697-C-101	MPL	ML	SM NOVEMBER, 2023
	Dwn	Dsgn	Chkd.

Permit/Seal

MARC LEAN, PE 66473

Client/Project  
COLLIER COUNTY PUBLIC UTILITIES

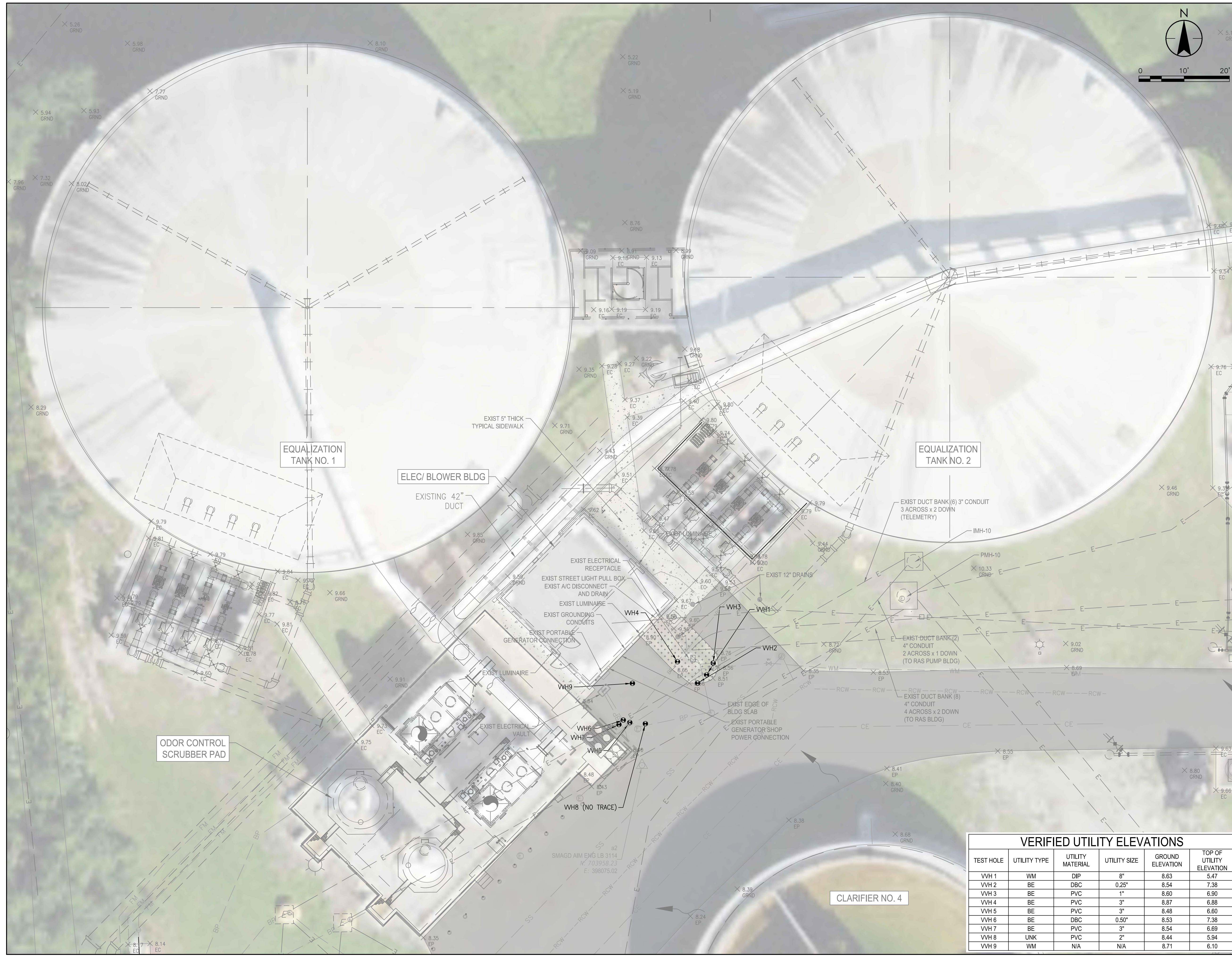
NORTH COUNTY WATER RECLAMATION  
FACILITY ODOR CONTROL - PHASE II

Title  
EXISTING CONDITIONS PLAN

Project No. 177311697 Scale 1" = 10'

Phase Drawing No.

BID SET 4 of 33 C-101



TEST HOLE	UTILITY TYPE	UTILITY MATERIAL	UTILITY SIZE	GROUND ELEVATION	TOP OF UTILITY ELEVATION
VH 1	WM	DIP	8"	8.63	5.47
VH 2	BE	DBC	0.25"	8.54	7.38
VH 3	BE	PVC	1"	8.60	6.90
VH 4	BE	PVC	3"	8.87	6.88
VH 5	BE	PVC	3"	8.48	6.60
VH 6	BE	DBC	0.50"	8.53	7.38
VH 7	BE	PVC	3"	8.54	6.69
VH 8	UNK	PVC	2"	8.44	5.94
VH 9	VM	N/A	N/A	8.71	6.10

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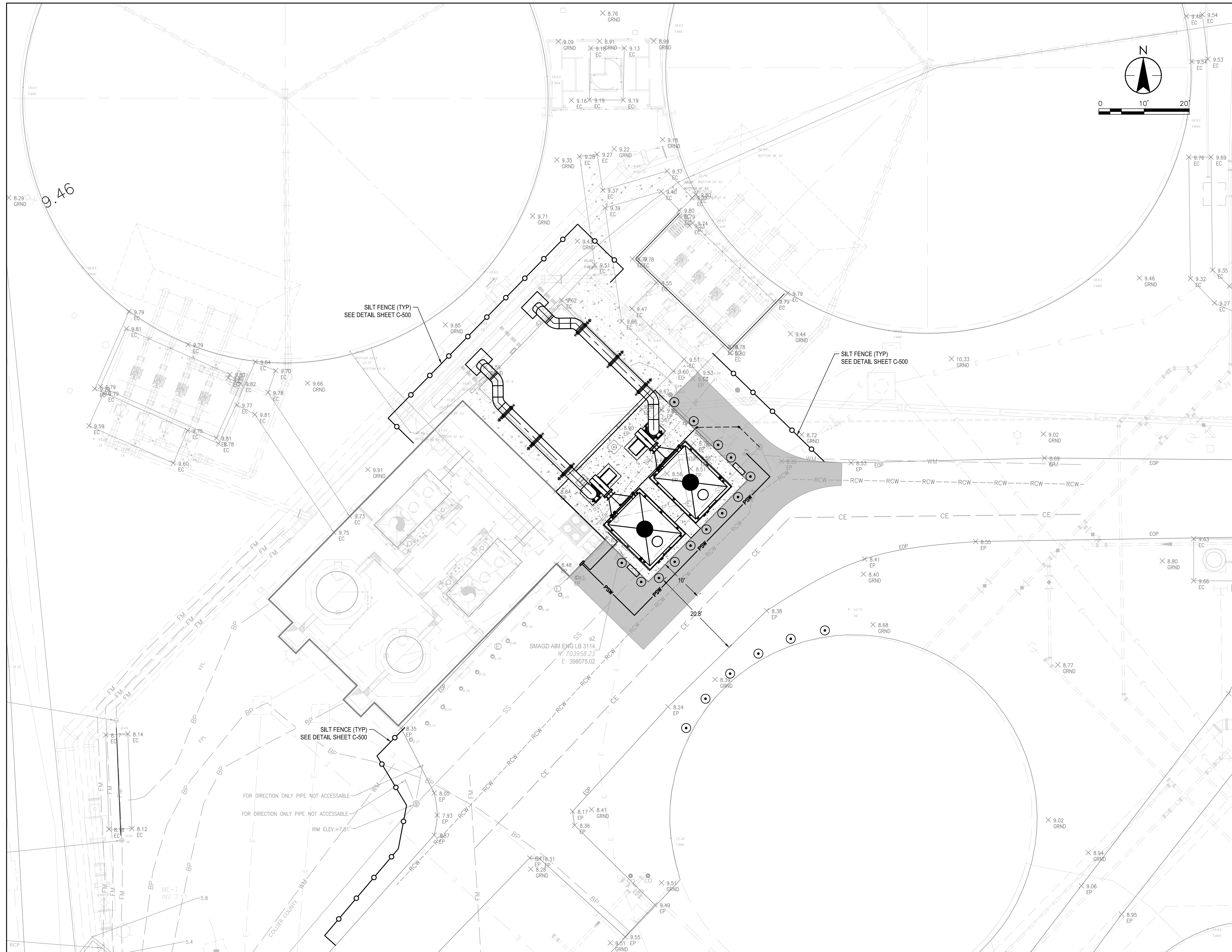
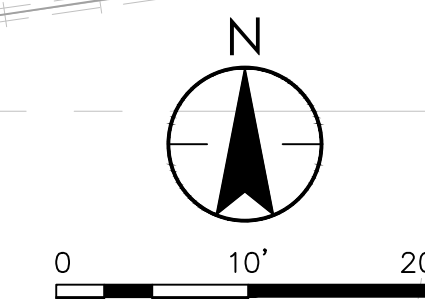




Client/Project Logo



NOTES:



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BID SET	ML	SM	NOVEMBER, 2023
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File Name: 11697-C-104	MPL	ML	SM NOVEMBER, 2023
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Permit/Seal

MARC LEAN, PE 66473

Client/Project  
COLLIER COUNTY PUBLIC UTILITIES

NORTH COUNTY WATER RECLAMATION  
FACILITY ODOR CONTROL - PHASE II

Title  
STORMWATER POLLUTION  
PREVENTION PLAN

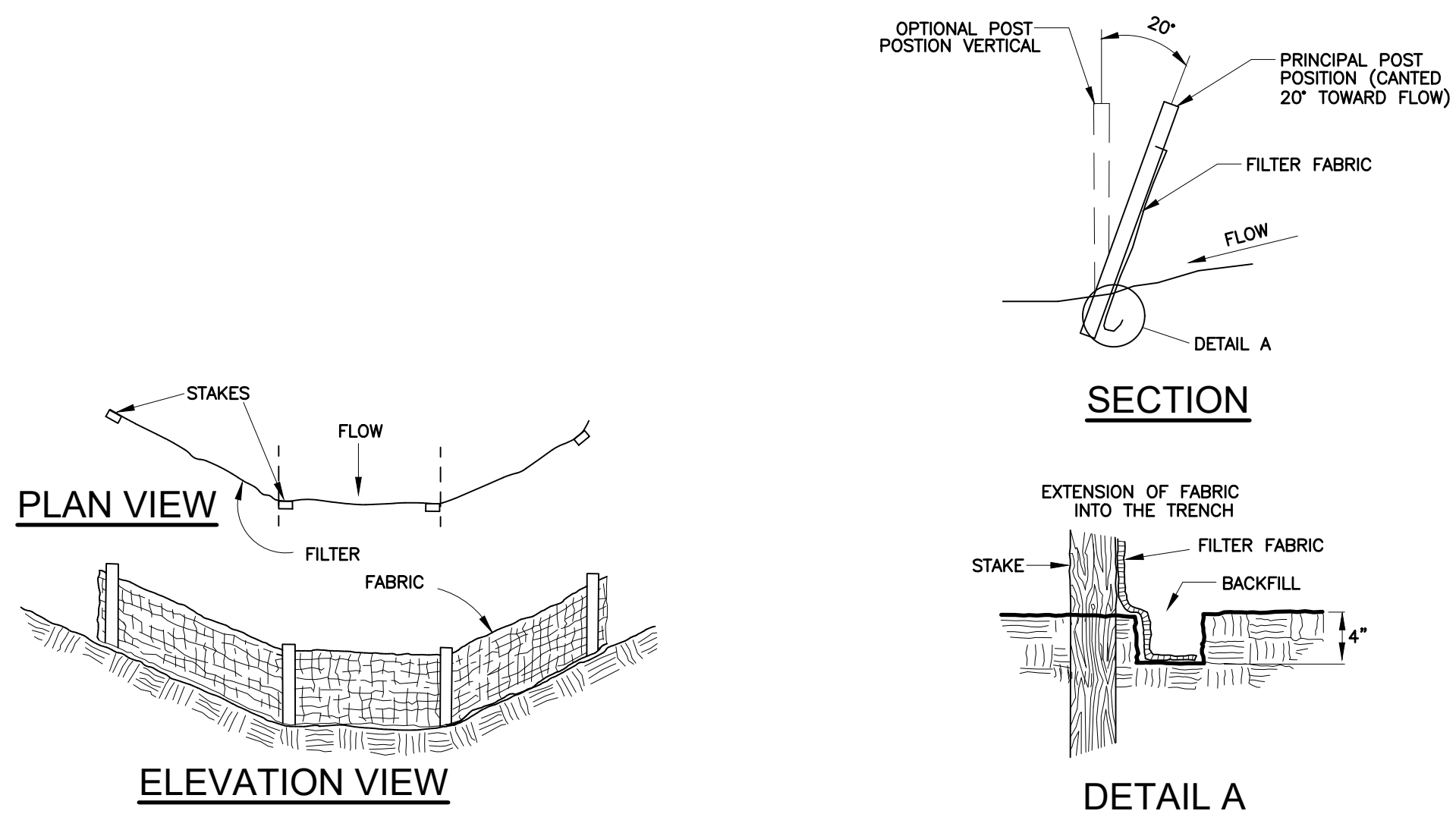
Project No. 177311697 Scale AS SHOWN

Phase Drawing No.

BID SET 7 of 33 C-104

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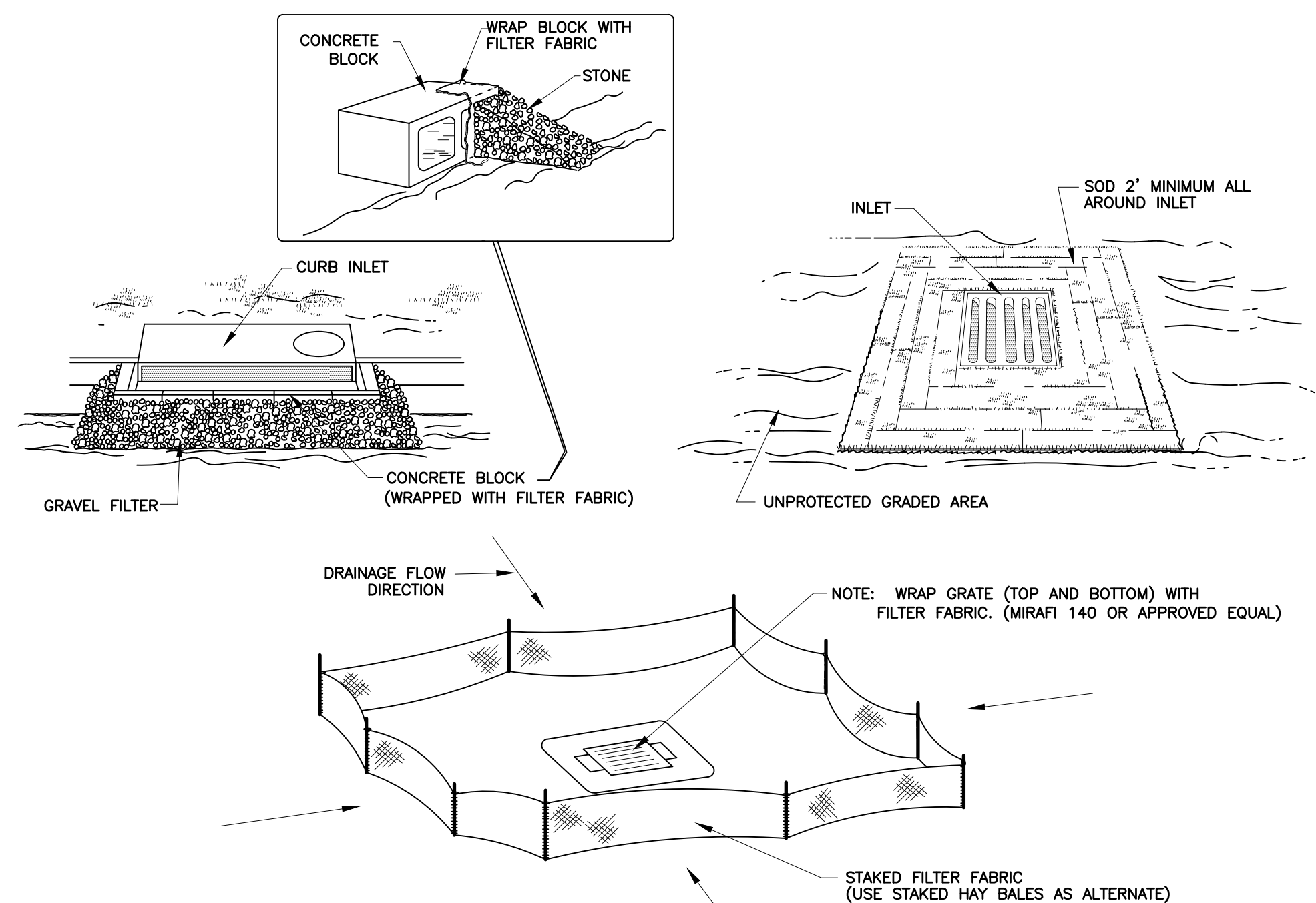
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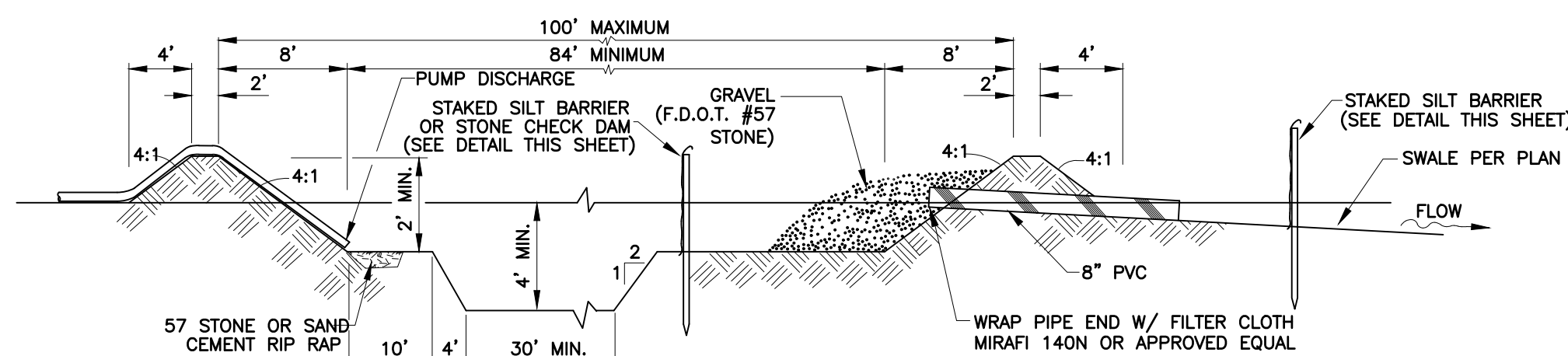
1. FILTER BARRIERS MUST BE INSTALLED, AS INDICATED HEREIN, PRIOR TO CONSTRUCTION.
2. FILTER BARRIERS SHALL NOT BE INSTALLED IN ANY CONFIGURATION THAT BLOCKS THE THROAT OF ANY STORMWATER INLET.
3. INSPECTIONS AND REPAIRS TO BARRIERS SHALL BE MADE DAILY.
4. FILTER BARRIERS SHALL BE REMOVED UNTIL APPROVED BY ENGINEER.

**STAKED SILT BARRIER**

( DURING CONSTRUCTION ONLY )



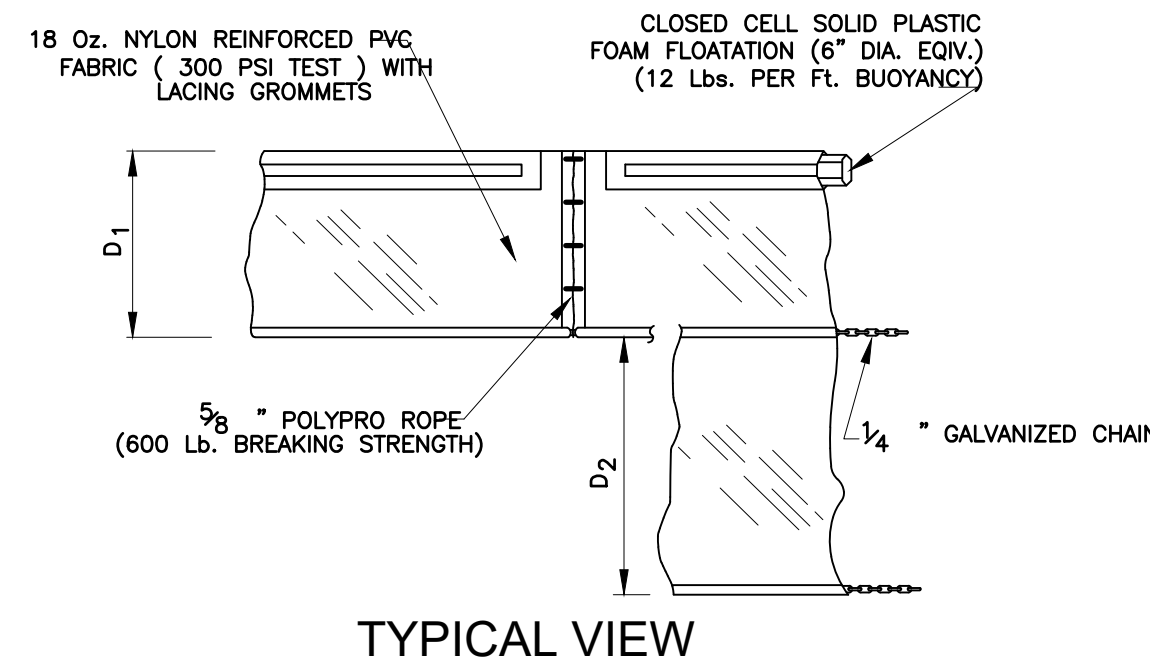
**PROTECTION OF INLETS**



NOTE: SUMP DESIGNED TO USE A 4" DIESEL PUMP @ 200 G.P.M.

**SILTATION POND DETAILS**

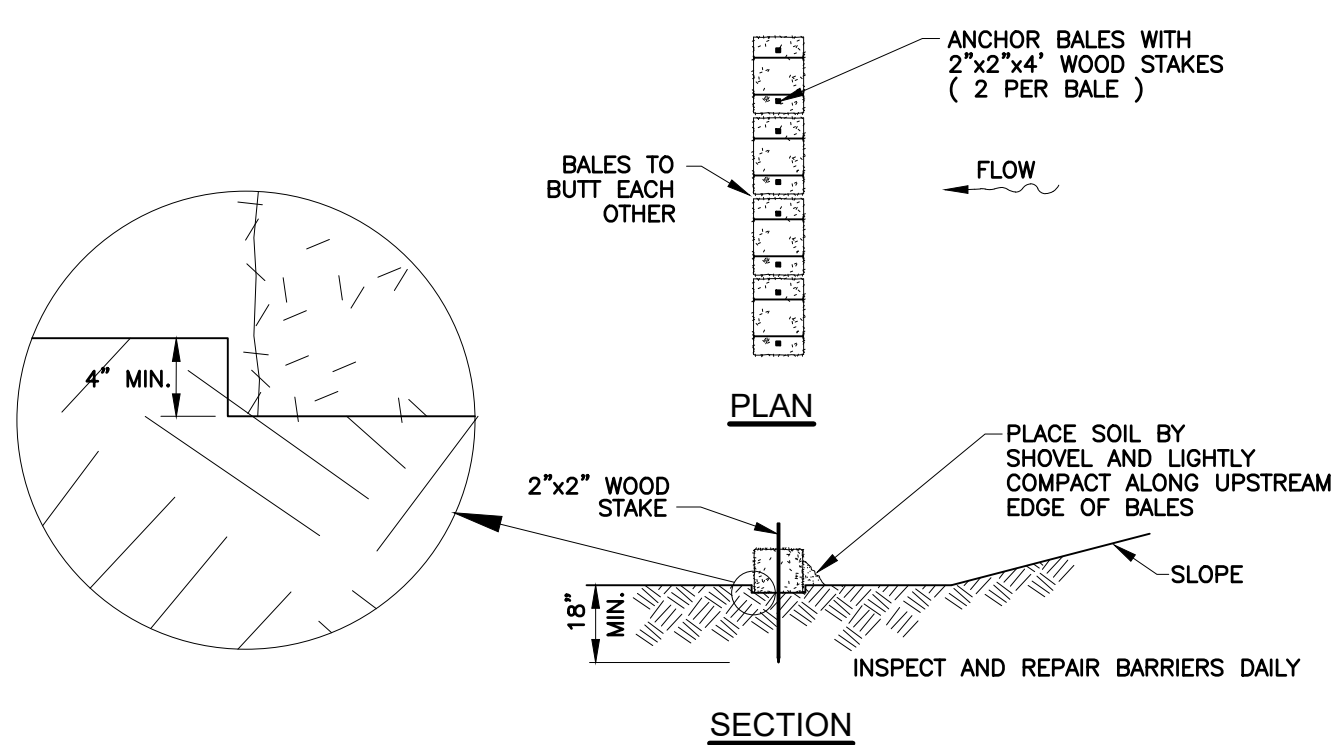
( REQUIRED DURING DEWATERING FOR SUMP EXCAVATION ONLY )



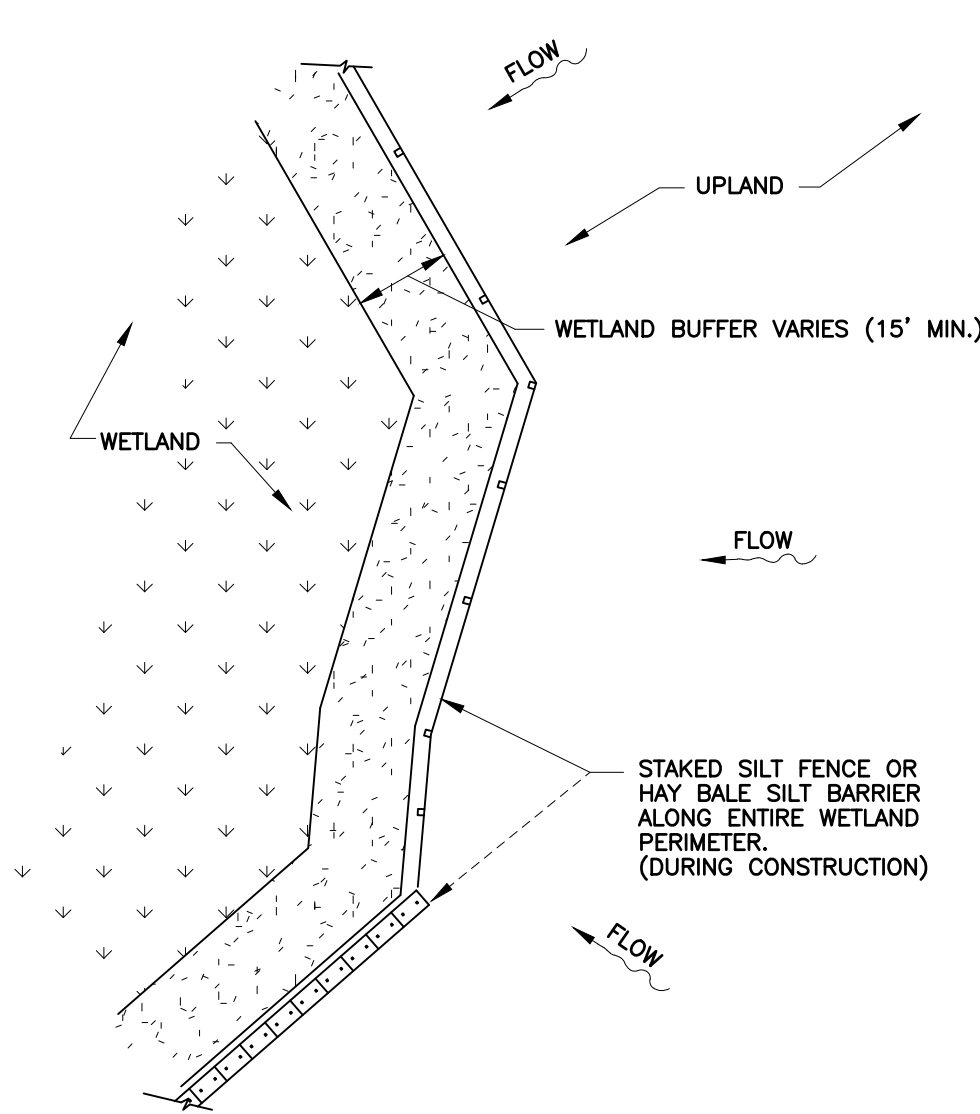
**NOTES:**

1. D = 5' STANDARD ( SINGLE PANEL FOR DEPTH 5' OR LESS). D = 5' STANDARD (ADDITIONAL PANEL FOR DEPTHS >5'). CURTAIN TO REACH BOTTOM UP TO DEPTHS OF 10 FEET. TWO (2) PANELS TO BE USED FOR DEPTHS GREATER THAN 10 FEET UNLESS SPECIAL DEPTH CURTAINS SPECIFICALLY CALLED FOR IN THE PLANS OR AS DETERMINED BY THE ENGINEER.
2. TURBIDITY BARRIERS ARE TO BE USED IN ALL PERMANENT BODIES OF WATER REGARDLESS OF WATER DEPTH WHEN ADJACENT TO CONSTRUCTION ACTIVITIES.
3. NUMBER AND SPACING OF ANCHORS DEPENDENT ON WATER VELOCITIES.
4. BARRIERS TO REMAIN IN PLACE UNTIL APPROVED FOR REMOVAL BY ENGINEER.

**FLOATING TURBIDITY BARRIER**



**HAY BALE SILT BARRIER**



**WETLAND PROTECTION**

**EROSION CONTROL NOTES**

**1. GENERAL**

THE CONTRACTOR SHALL PROVIDE ALL LABOR, EQUIPMENT, TOOLS, MATERIALS AND SERVICES NEEDED TO INSTALL ALL EROSION AND SEDIMENT CONTROL MEASURES. THESE MEASURES SHALL CONFORM TO THE PLANS AND SPECIFICATIONS AND ALL APPLICABLE STATE AND LOCAL REQUIREMENTS.

**2. WETLAND PROTECTION**

IN AREAS OF CONSTRUCTION ADJACENT TO WETLANDS, THE FOLLOWING SHALL BE PERFORMED:

1. THE ACTUAL WETLAND AND REQUIRED BUFFERS, AS SHOWN ON THE PLANS, MUST BE ESTABLISHED AND ROPED OFF PRIOR TO THE START OF ANY CONSTRUCTION ACTIVITY ADJACENT TO SAID AREAS.
2. PRIOR TO THE PLACEMENT OF ANY FILL MATERIAL ADJACENT TO WETLANDS OR BUFFER AREAS, A SILTATION BARRIER SHALL BE CONSTRUCTED.
3. NO RIM DITCHING OF THE WETLANDS SHALL BE PERFORMED. WATER LEVELS IN THE WETLANDS SHALL BE MAINTAINED ACCORDING TO LEVELS EXISTING PRIOR TO SITE DISTURBANCE.
4. IN AREAS OF WETLANDS IN WHICH WORK IS TO BE PERFORMED, SUCH AREAS MUST BE CLEARLY STAKED AND ROPED OFF. ALONG SUCH LIMITS, A SILTATION BARRIER MUST BE CONSTRUCTED.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE MAINTENANCE OF BARRIERS. BARRIERS SHALL REMAIN IN PLACE UNTIL ALL AREAS ARE STABILIZED.
6. THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY UPON DISTURBANCE OF WETLAND AREAS. THE CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE TO ALL PROTECTED AREAS.
7. AREAS WHERE IMPACTS WILL BE PERFORMED SHALL BE STRIPPED OF EXISTING MATERIAL AND STOCKPILED FOR USE IN THE RE-CREATION OF THE DISTURBED AREAS OR IN LITTORAL ZONES.

**3. EARTH MOVING ACTIVITIES**

1. THE CONTRACTOR SHALL EXERCISE CARE TO PRESERVE THE NATURAL LANDSCAPE AND SHALL PLAN CONSTRUCTION OPERATIONS SO AS TO PREVENT ANY UNNECESSARY DESTRUCTION, SCARRING, OR DEFACING OF THE NATURAL SURROUNDINGS. EXCEPT WHERE CLEARING IS REQUIRED FOR PERMANENT WORK, FOR APPROVED CONSTRUCTION ROADS OR FOR EXCAVATION OPERATIONS, ALL TREES, NATIVE SHRUBBERY AND VEGETATION SHALL BE PRESERVED AND SHALL BE PROTECTED FROM DAMAGE WHICH MAY BE CAUSED BY THE CONTRACTOR'S CONSTRUCTION OPERATIONS AND EQUIPMENT.
2. THE FIRST STAGE OF THE EARTH MOVING ACTIVITY SHALL BE CONFINED TO THE EXCAVATION OF THE STORMWATER FACILITY.
3. TOPSOIL SHOULD BE TAKEN FROM THE CONSTRUCTION AREAS AND SHOULD BE STOCKPILED FOR REUSE IN FINISHED GRADING. STOCKPILES SHOULD BE PLACED SO AS NOT TO ADD ANY CONTAMINATION TO THE CONSTRUCTION. THE STOCKPILES SHOULD BE MULCHED AND/OR SEEDED WHEN EXPOSED BEYOND THIRTY (30) DAYS.
4. GRADED AREAS ARE TO BE SEEDDED AND/OR SODDED WITHIN THIRTY (30) DAYS FOLLOWING EARTH MOVING. IF THE TIME OF YEAR IS NOT CONDUIVE FOR SEEDING, PERMANENT SEEDING, A TEMPORARY MULCH AND/OR SEEDING SHOULD BE USED.
5. TEMPORARY DIVERSION BERMS AND/OR BARRIERS SHALL BE REMOVED ONLY AFTER THE CONSTRUCTION OF THOSE AREAS DIRECTED TO THE BERMS AND/OR BARRIERS HAVE BEEN COMPLETED.
6. THE SILT COLLECTION PONDS SHOULD BE REMOVED AND/OR REGRADED FOR PERMANENT USE, AS THE FINAL GRADING AND SEEDING OVERLAP THE AREA USED BY SAME.

**4. FILLS**

1. LAND TO BE CUT OR FILLED SHOULD BE CLEARED OF TREES, STUMPS, ROOTS, BRUSH, BOULDERS, SOD AND DEBRIS.
2. FILL AREAS SHOULD BE SCARIFIED, KEYS AND DRAINED.
3. FILL MATERIAL SHOULD BE FREE OF SOD, ROOTS, OR OTHER DECOMPOSABLE MATERIAL.
4. THE PLACING AND SPREADING OF FILL MATERIAL SHOULD BE STARTED AT THE LOWEST POINT.
5. GENERALLY, A 6:1 SLOPE SHOULD BE USED UNLESS SPECIFIC ENGINEERING DATA SHOWS A STEEPER SLOPE IS STABLE. SLOPES OF 4:1 OR FLATTER ARE DESIRABLE FOR EROSION CONTROL AND MAINTENANCE.
6. FILLS SHOULD BE SEEDDED AND/OR MULCHED IMMEDIATELY UPON COMPLETION OF EARTH PLACEMENT.
7. WATER MANAGEMENT SYSTEMS SHOULD BE PROVIDED TO PREVENT WATER CONCENTRATION AND ERODING THE FACE OF THE SLOPE. KEEP SURFACE WATER OFF THE FACE OF THE SLOPE.

**5. CUTS**

1. DIVERSIONS SHOULD BE CONSTRUCTED AT TOP OF THE SLOPES PRIOR TO CUTTING OPERATIONS TO CONVEY WATER FROM FACE OF SLOPE.
2. STEEPNESS OF CUTS WILL DEPEND ON SOIL TYPE AND DESIGN; HOWEVER, CUT SLOPES OF 4:1 OR FLATTER ARE DESIRABLE FOR EROSION CONTROL AND STABILITY.
3. CUT SLOPES SHOULD BE BENCHED TO PROVIDE ACCESS FOR SEEDING AND MULCHING EQUIPMENT.
4. CUT SLOPES SHOULD BE SEEDDED AND/OR MULCHED IMMEDIATELY AFTER REMOVAL OF EARTH.

**6. TEMPORARY SEDIMENT BASIN AND PERMANENT STORMWATER BASINS**

**a) SITE PREPARATION**

AREAS UNDER THE EMBANKMENT AND ANY STRUCTURAL WORKS SHALL BE CLEARED, GRUBBED AND STRIPPED OF TOPSOIL TO REMOVE TREES, VEGETATION, ROOTS AND OTHER OBJECTIONABLE MATERIALS. IN ORDER TO FACILITATE CLEAN-OUT AND RESTORATION, THE POOL AREA (MEASURED AT THE TOP OF THE SPILLWAY) WILL BE CLEARED OF ALL BRUSH AND TREES.

**b) CUT-OFF TRENCH**

A CUT-OFF TRENCH, WHEN POND DEPTHS ARE IN EXCESS OF THREE FEET, SHALL BE EXCAVATED ALONG THE CENTERLINE OF EARTH FILL EMBANKMENTS. THE MINIMUM DEPTH SHALL BE TWO FEET. THE CUT-OFF TRENCH SHALL EXTEND UP BOTH ABUTMENTS TO THE RISER CREST ELEVATION. THE MINIMUM BOTTOM DEPTH SHALL BE FOUR FEET BUT WIDE ENOUGH TO PERMIT OPERATION OF EXCAVATION AND COMPACTION EQUIPMENT. THE SIDES OF THE TRENCH SHALL BE NO STEEPER THAN 1:1. COMPACTION REQUIREMENTS SHALL BE THE SAME AS THOSE FOR THE EMBANKMENT. THE TRENCH SHALL BE DEWATERED DURING THE BACKFILLING-COMPACTION OPERATIONS.

**c) EMBANKMENT**

THE FILL MATERIAL SHALL BE TAKEN FROM APPROVED BORROW AREAS. IT SHALL BE CLEAN SOIL FREE OF ROOTS, WOODY VEGETATIONS, OVER-SIZED STONES, ROCKS OR OTHER OBJECTIONABLE MATERIAL. AREAS ON WHICH FILL IS TO BE PLACED SHALL BE SCARIFIED PRIOR TO PLACEMENT OF FILL. FILL MATERIAL SHALL BE PLACED IN SIX TO EIGHT INCHES THICK CONTINUOUS LAYERS OVER THE ENTIRE LENGTH OF THE FILL. COMPACTION SHALL BE OBTAINED BY ROUTING HEAVY EQUIPMENT OVER THE FILL SO THAT THE ENTIRE SURFACE OF EACH LAYER OF THE FILL IS TRAVERSED BY AT LEAST ONE WHEEL OF TREAD TRUCK OF THE EQUIPMENT OR BY THE USE OF A COMPACTOR. THE EMBANKMENT SHALL BE CONSTRUCTED TO AN ELEVATION OF 10% HIGHER THAN THE DESIGN HEIGHT TO ALLOW FOR SETTLEMENT IF COMPACTION IS OBTAINED WITH HAULING EQUIPMENT. COMPACTORS ARE USED FOR COMPACTION, THE OVERBUILD MAY BE REDUCED TO NOT LESS THAN 5%.

**d) PIPE SPILLWAYS**

THE RISER SHALL BE SECURELY ATTACHED TO THE BARREL OF THE OUTFALL PIPE. THE BARREL AND RISER SHALL BE PLACED ON A FIRM, SMOOTH SOIL FOUNDATION. THE CONNECTION BETWEEN THE RISER AND RISER BASE SHALL BE WATERTIGHT. FILL MATERIAL AROUND THE PIPE SPILLWAY SHALL BE PLACED IN INCH LAYERS AND COMPACTED UNDER THE SHOULDERS AND AROUND THE PIPE TO AT LEAST THE SAME DENSITY AS THE ADJACENT EMBANKMENT. HAND COMPACTED BACKFILL SHALL BE PLACED OVER THE PIPE SPILLWAY BEFORE CROSSING IT WITH CONSTRUCTION EQUIPMENT.

**e) EROSION POLLUTION CONTROL**

CONSTRUCTION OPERATIONS SHALL BE CARRIED OUT IN SUCH A MANNER THAT EROSION AND WATER POLLUTION WILL BE MINIMIZED. STATE AND LOCAL LAWS CONCERNING POLLUTION ABATEMENT SHALL BE COMPLIED WITH.

**7. MAINTENANCE**

1. REPAIR ALL DAMAGES CAUSED BY SOIL EROSION OR CONSTRUCTION EQUIPMENT AT OR BEFORE THE END OF EACH WORK DAY.
2. SEDIMENT SHALL BE REMOVED FROM SUMP AREAS. THE SEDIMENT SHALL BE PLACED IN SUCH A MANNER THAT IT WILL NOT ERODE FROM THE SITE. THE SEDIMENT SHALL NOT BE DEPOSITED DOWNSTREAM FROM THE EMBANKMENT OR IN OR ADJACENT TO A STREAM OR FLOOD PLAIN.
3. AFTER CONSTRUCTION IS COMPLETED AND AREAS ARE SEEDDED AND/OR SODDED, MAINTENANCE IS LIMITED TO VISUAL INSPECTIONS ON A ROUTINE BASIS. ANY DAMAGE TO THE BERM SHALL BE REPAIRED AT ONCE AND RE-SODDED AND/OR RE-SEEDDED. IF THE LEVEL OF WATER IS BEING MAINTAINED OVER THE EXPECTED DRAW DOWN TIME, THE OUTFALL SYSTEM SHALL BE CLEANED AND REPAIRED.

MARC LEAN, PE

66473

Client/Project  
COLLIER COUNTY PUBLIC UTILITIES

NORTH COUNTY WATER RECLAMATION  
FACILITY ODOR CONTROL - PHASE II

Title  
BEST MANAGEMENT PRACTICES

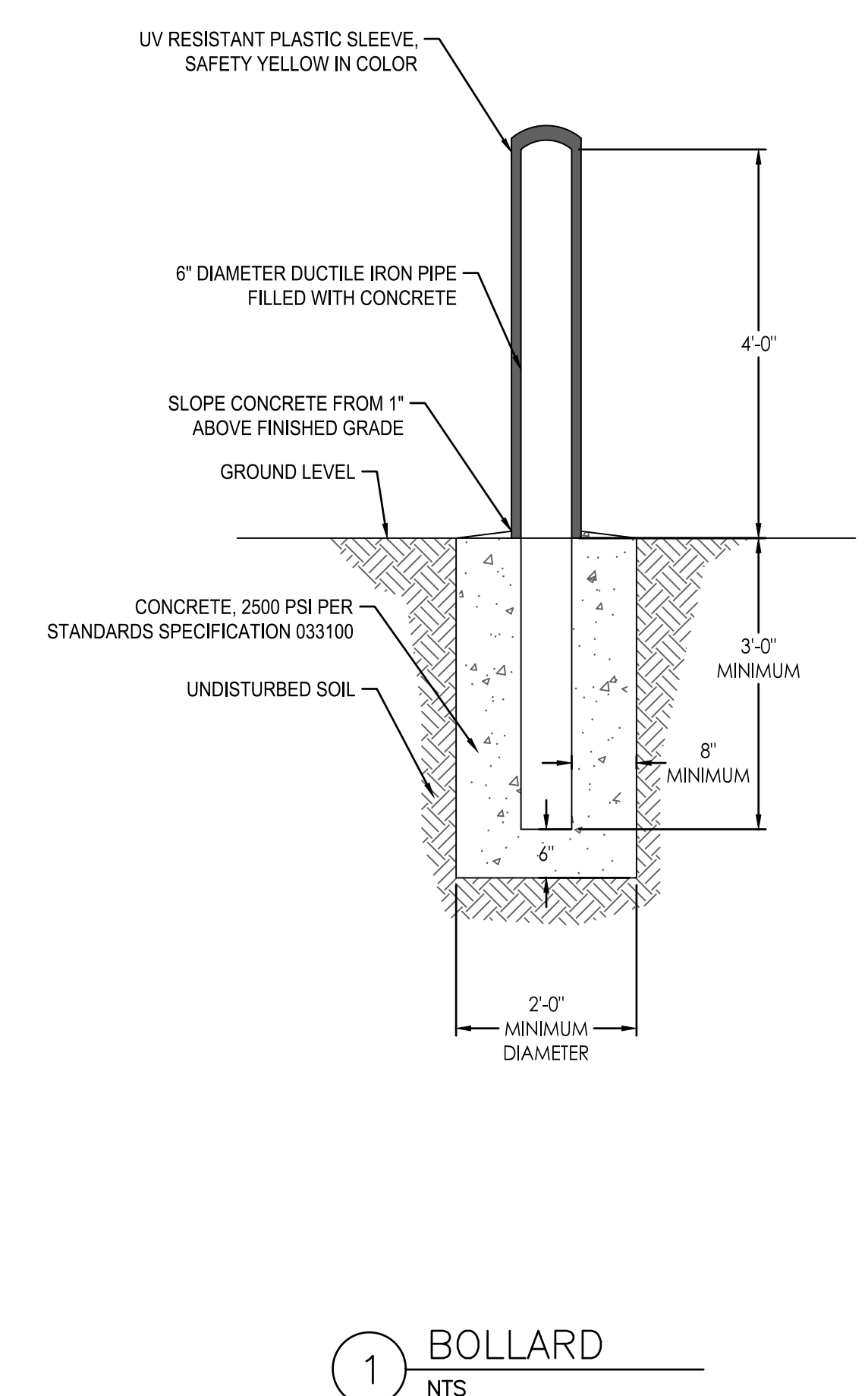
Project No.	Scale
177311697	
Phase	Drawing No.
BID SET	8 of 33



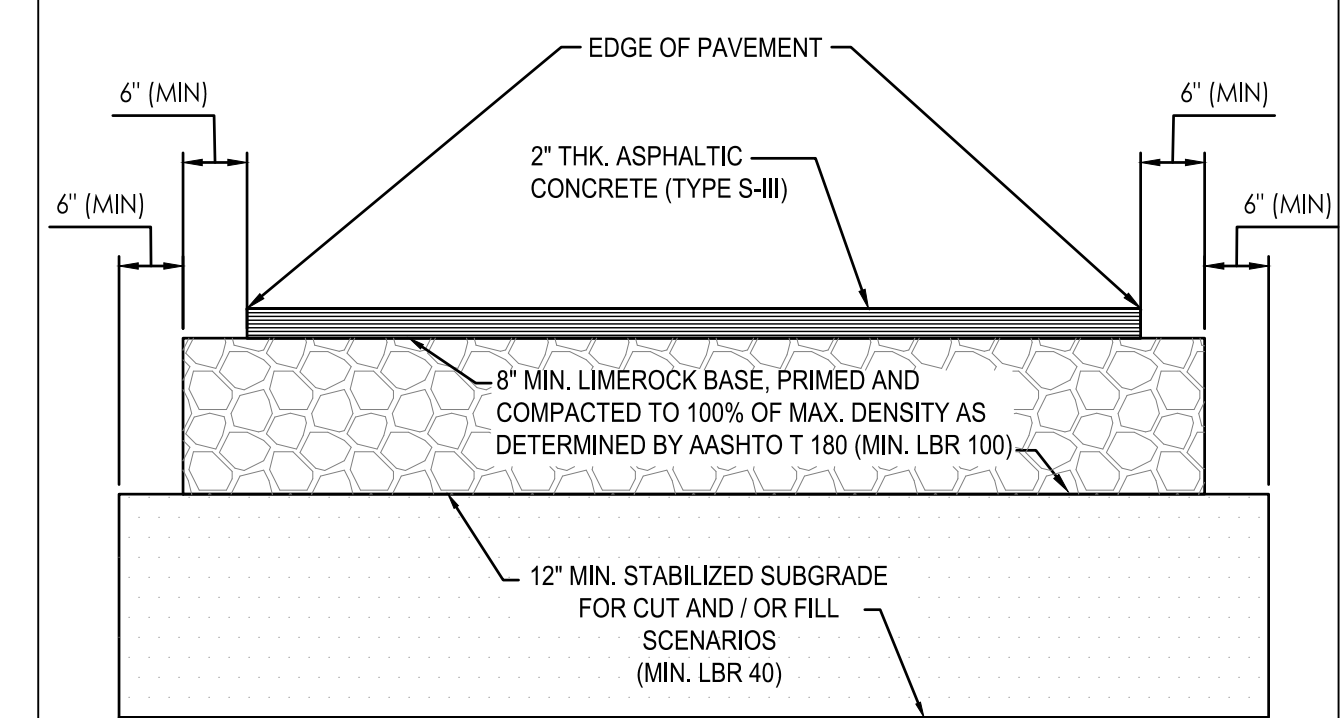
Client/Project Logo



NOTES:



1 BOLLARD  
NTS



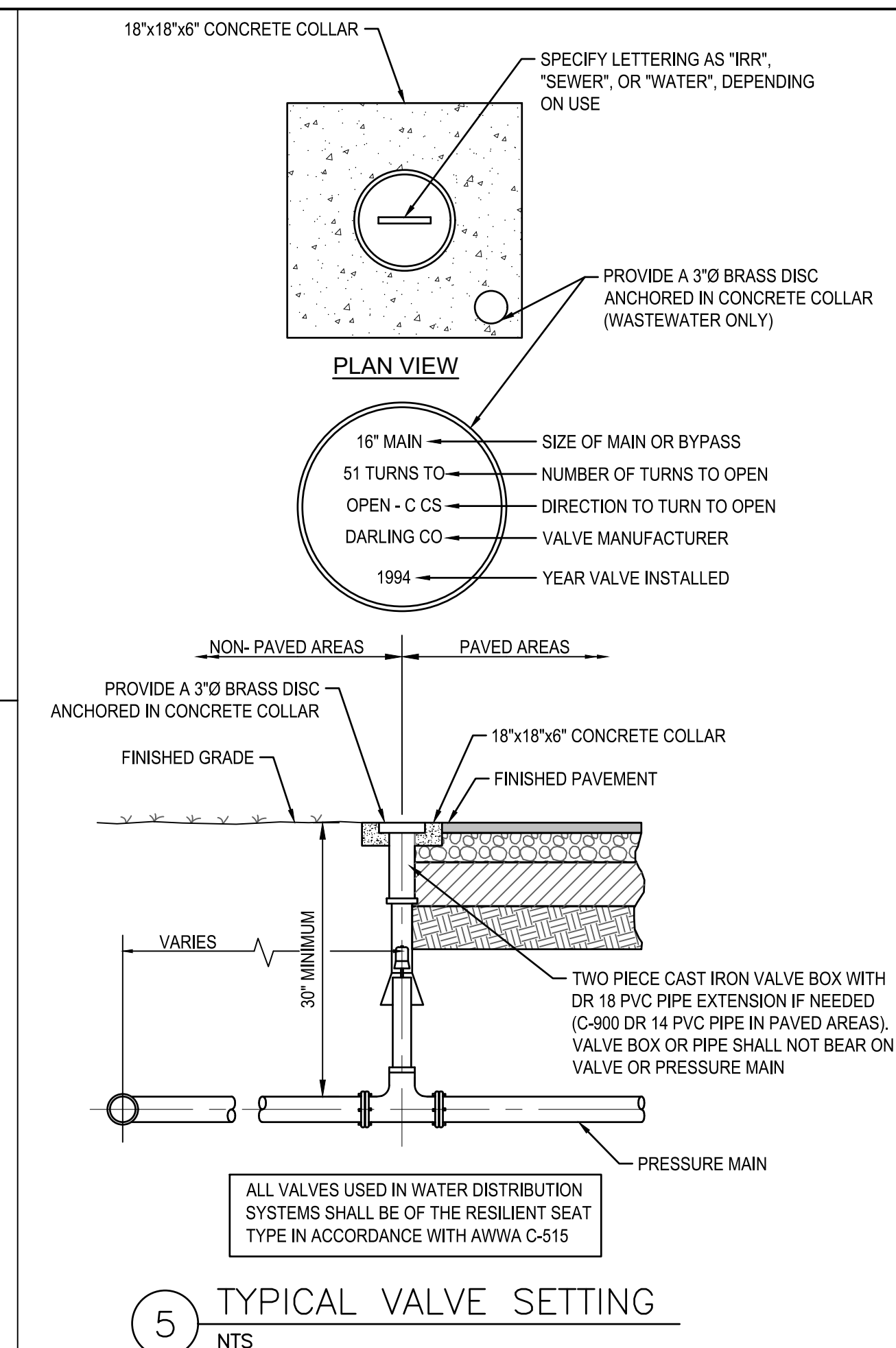
**ROADWAY COMPACTION NOTES:**

1. THE STABILIZED SUBGRADE SHALL BE COMPACTED TO 100% OF THE MAXIMUM DENSITY, IN ACCORDANCE WITH AASHTO T-180 AND THE ENGINEERS TECHNICAL SPECIFICATIONS. 5-1/2" LIMEROCK BASE MATERIAL MAY BE SUBSTITUTED AS AN ALTERNATE DESIGN TO THE 12" STABILIZED SUBGRADE. ALL SPECIFICATIONS FOR LIMEROCK BASE SHALL BE ADHERED TO.
2. THE LIMEROCK BASE SHALL BE COMPACTED IN 6" LIFTS TO 100% OF THE MAXIMUM DENSITY, IN ACCORDANCE WITH AASHTO T-180 AND THE ENGINEERS TECHNICAL SPECIFICATIONS.
3. ASPHALTIC CONCRETE PAVEMENT (TYPE S-III) SHALL BE PLACED IN TWO 1" LIFTS, ACCORDING TO AASHTO ASPHALT MANUAL.

2 TYPICAL ASPHALT PAVEMENT SECTION DETAIL  
NTS

3 NOT INCLUDED IN SET  
NTS

4 NOT INCLUDED IN SET  
NTS



5 TYPICAL VALVE SETTING  
NTS

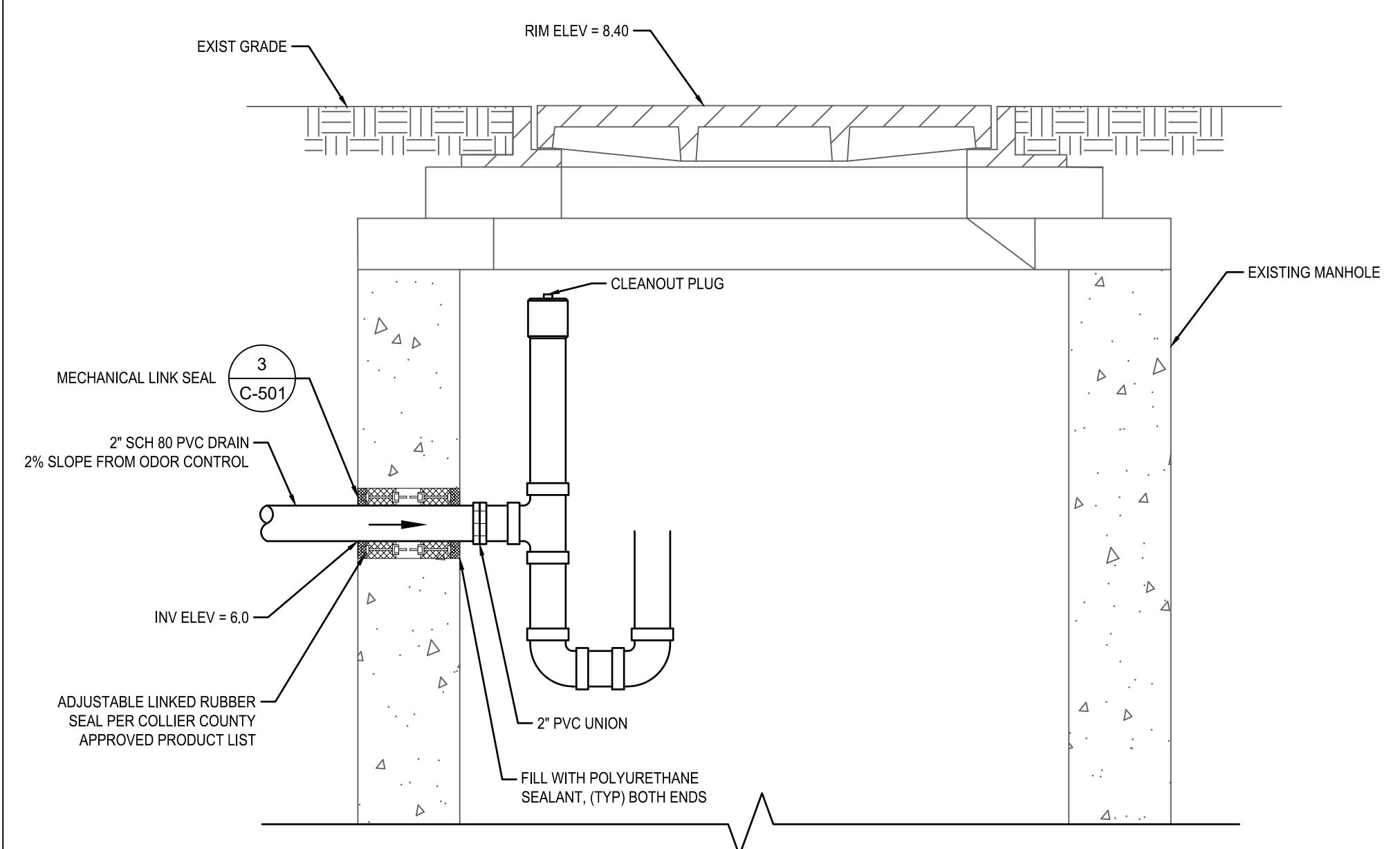
PIPE SIZE IN INCHES	RESTRAINED PIPE LENGTH IN FEET (1)					45° VERTICAL BENDS				
	HORIZONTAL BENDS					UPPER	LOWER			
	90°	45°	22-1/2'	11-1/4'	DEAD ENDS (2)					
4	23	9	5	2	55	23	8			
6	32	13	8	3	77	32	11			
8	40	17	8	4	100	41	14			
10	48	20	10	5	120	50	17			
12	56	23	11	6	141	58	20			
16	71	29	14	7	181	75	25			
18	20	77	32	35	15	8	200	83	28	30
24	30	84	40	47	17	8	218	90	35	35
36	96	53	19	10	253	105	41	41	41	41
	112	127		22	25	11	303	125	145	47
					13		350			

PIPE SIZE IN INCHES	RESTRAINED PIPE LENGTH IN FEET (1)	
	TEE (3)	REDUCER (4)
6 x 4	0	40
6 x 6	34	
8 x 4	0	72
8 x 8	55	
10 x 6	10	74
10 x 12	75	
12 x 8	4	122
12 x 12	31	75
16 x 6	12	95
16 x 8	0	153
16 x 10	44	107
16 x 16	134	
18 x 8	0	157
18 x 12	68	108
18 x 18	152	
20 x 10	20	161
20 x 16	120	77
20 x 20	170	
24 x 12	37	187
24 x 18	132	109
24 x 24	204	
30 x 16	78	213
30 x 20	138	165
30 x 30	252	
36 x 18	84	259
36 x 24	170	191
36 x 36	298	

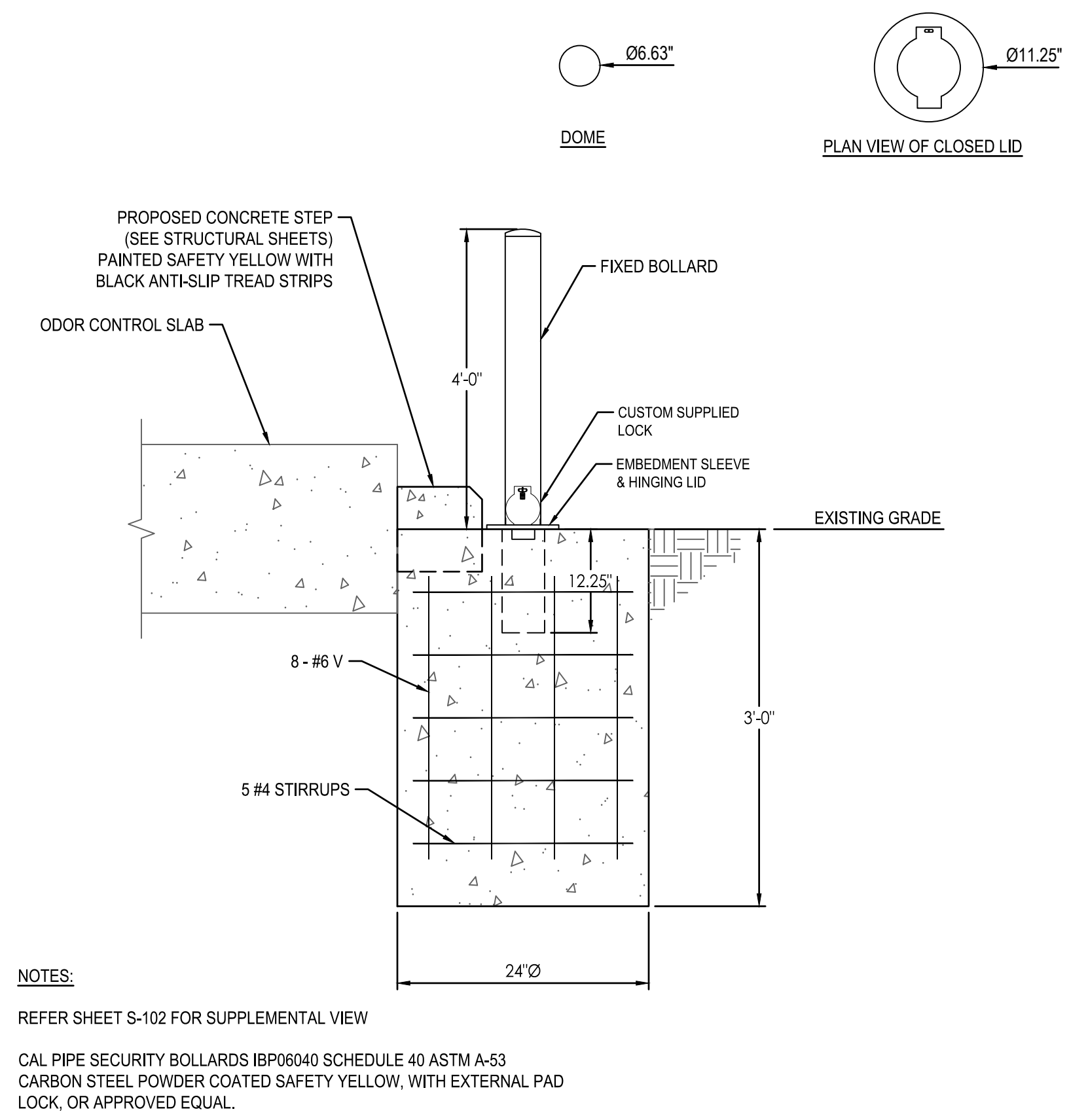
**NOTES:**

1. RESTRAIN ALL PIPE JOINTS WITHIN THE DISTANCE SHOWN ON THE TABLES MEASURED FROM THE POINT OF CONNECTION.
2. ISOLATION VALVES SHALL BE TREATED AS DEAD ENDS. WITH RESTRAINT ON BOTH SIDES OF THE VALVE.
3. RESTRAINT IS FOR BRANCH OF TEE, IF BRANCH SIZE IS NOT ON TABLE, USE NEXT LARGEST BRANCH.
4. RESTRAINT IS FOR LARGE DIAMETER SIDE OF REDUCER. IF REDUCER SIZE IS NOT ON TABLE, USE NEXT SMALLER REDUCER (SMALL END).
5. THIS SCHEDULE IS TO BE USED FOR DUCTILE IRON AND PVC PIPE.

6 PIPE RESTRAINT SCHEDULE  
NTS



7 P-TRAP CONNECTION TO EXISTING MANHOLE  
NTS



8 REMOVABLE BOLLARD  
NTS

Revision	By	Appd	Date
BID SET	ML	SM	NOVEMBER, 2023
Issued	By	Appd	Date
File Name: 11697-C-001	MPL	ML	SM NOVEMBER, 2023
	Dwn.	Dsgn.	Chkd.

Permit/Seal

MARC LEAN, PE 66473

Client/Project  
COLLIER COUNTY PUBLIC UTILITIES

NORTH COUNTY WATER RECLAMATION FACILITY ODOR CONTROL - PHASE II

Title  
CIVIL DETAILS

Project No.	Scale
177311697	AS SHOWN
Phase	Drawing No.
BID SET	C-501

Revision	By	Appd	Date
BID SET	ML	SM	NOVEMBER 2023
Issued	By	Appd	Date
File Name: N/A	DMB	PRD	RS
	Dwn.	Dsgn.	Chkd.
			NOVEMBER 2023
			Date

**GENERAL NOTES**

**FOUNDATIONS**

1. NO CONCRETE SHALL BE PLACED IN WATER OR ON SATURATED GROUND.
2. IN GENERAL, EXTERIOR CONSTRUCTION SHALL BE CARRIED DOWN A MINIMUM OF 2'-0" BELOW FINISHED EXTERIOR GRADE.
3. ALL FOUNDATIONS SHALL BEAR ON 12" OF COMPACTED STRUCTURAL FILL ON UNDISTURBED SOIL WITH A BEARING CAPACITY OF NOT LESS THAN 2500 PSF.
4. ALL FINISHED EXCAVATIONS SHALL BE INSPECTED AND APPROVED BY THE ENGINEER OR HIS DESIGNEE BEFORE ANY CONCRETE IS PLACED.
5. ALL BACKFILL UNDER OR ADJACENT TO ANY PORTION OF THE STRUCTURES SHALL BE COMPACTED IN 12" LIFTS. SEE SPECIFICATIONS.
6. PROVIDE 6" STRUCTURAL FILL, COMPACTED TO 95% MODIFIED PROCTOR DENSITY, UNDER ALL SLABS ON GRADE AND WHERE INDICATED ON THE DRAWINGS OVER WELL COMPACTED STRUCTURAL FILL.

**CONCRETE**

1. ALL CONCRETE WORK SHALL CONFORM TO THE REQUIREMENTS OF THE SPECIFICATIONS, THE LATEST EDITION OF THE ACI BUILDING CODE (ACI 318) AND ACI 301, SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS, AND TO THE FLORIDA BUILDING CODE. IN CASE OF CONFLICT, THE MORE STRINGENT REQUIREMENTS SHALL GOVERN.
2. ALL CONCRETE SHALL BE READY-MIXED IN ACCORDANCE WITH ASTM C94.
3. VERTICAL CONSTRUCTION JOINTS AND STOPS IN THE CONCRETE WORK SHALL BE MADE AT MIDSPAN. PROVIDE DOVELS AT CONSTRUCTION JOINTS OF AREA EQUAL TO 0.5% OF THE VERTICAL CONCRETE AREA. SEE SPECIFICATIONS. PROVIDE BEVELED KEYWAYS AT ALL CONSTRUCTION JOINTS.
4. AT LEAST 48 HOURS SHALL ELAPSE BEFORE DEPOSITING NEW CONCRETE AGAINST PREVIOUSLY PLACED CONCRETE.
5. ALL CONCRETE SHALL ATTAIN THE FOLLOWING MINIMUM COMPRESSIVE STRENGTHS AT 28 DAYS AGE: CONCRETE EXPOSED TO THE ELEMENTS (EXTERIOR SLABS) CONCRETE EXPOSED TO SEWAGE - 4,000 PSI. REFER TO SPECIFICATIONS AND ACI 301 FOR DESIGN STRENGTHS REQUIRED FOR SELECTING MIX PROPORTIONS.
6. ALL SLABS ON GRADE SHALL BE PLACED IN ALTERNATE PANELS NOT EXCEEDING 900 S.F.

**REINFORCING**

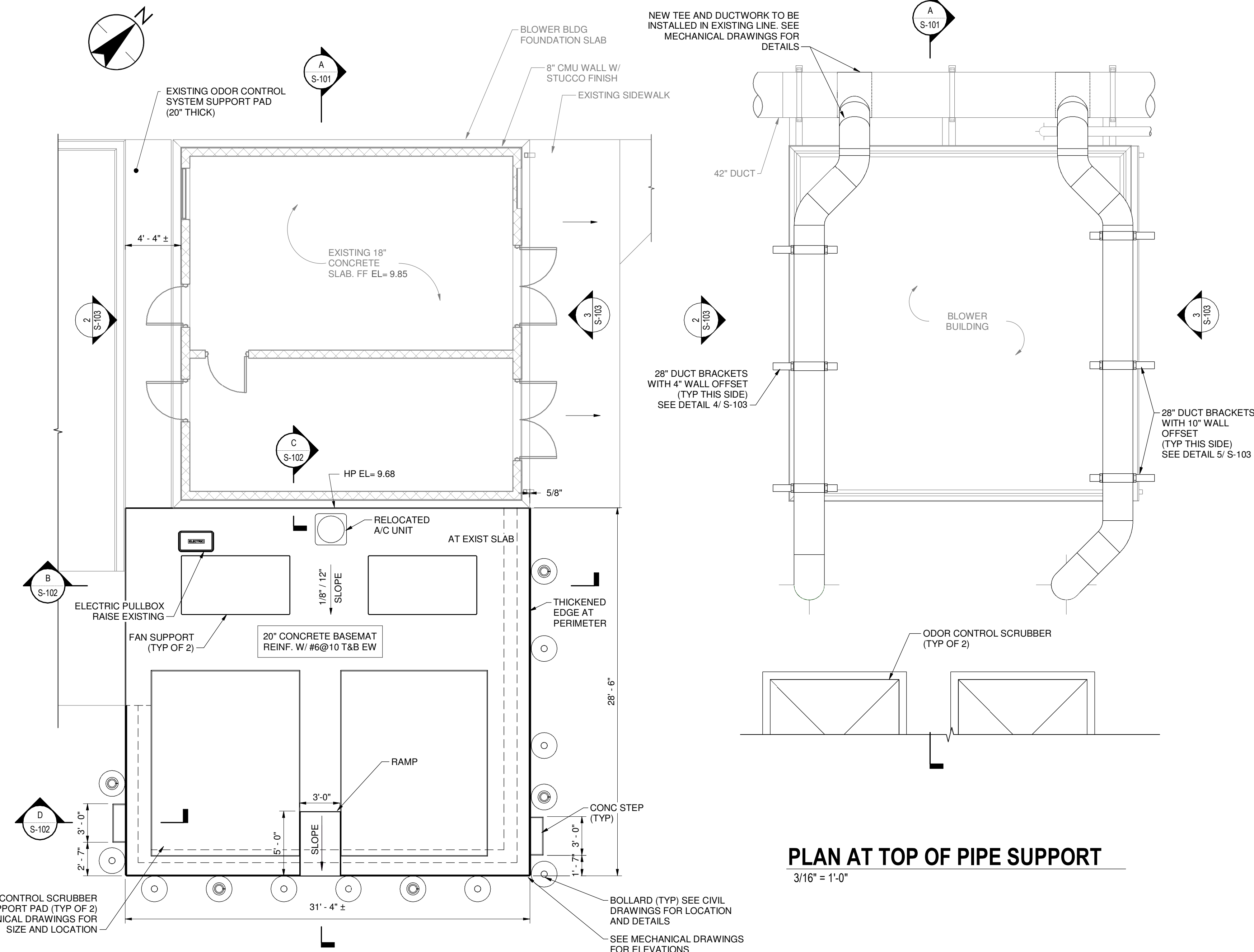
1. ALL REINFORCING BAR DETAILS SHALL CONFORM TO THE LATEST ACI CODE AND DETAILING MANUAL, EXCEPT AS OTHERWISE SPECIFIED.
2. ALL REINFORCING BARS SHALL CONFORM TO ASTM A615 GRADE 60. ALL WELDED WIRE FABRIC SHALL CONFORM TO ASTM A185 AND SHALL BE PROVIDED IN FLAT SHEETS. LAPS SHALL BE STAGGERED AND SHALL BE 1-1/2 FULL MESH MIN.
3. SCHEDULE WITH THE SHOP DRAWINGS ALL NECESSARY ACCESSORIES TO HOLD REINFORCING SECURELY IN POSITION. MINIMUM REQUIREMENTS SHALL BE: HIGH CHAIRS - 4 FEET ON CENTERS; SLAB BOLSTERS - 3'-6" ON CENTERS; SUPPORT BARS FOR HIGH CHAIRS - #5.
4. ALL BARS, EXCEPT AS OTHERWISE NOTED, SHALL BE CONTINUOUS AND SHALL BE RUN CONTINUOUSLY AROUND CORNERS, LAPPED AT NECESSARY SPLICES, AND HOOKED AT DISCONTINUOUS ENDS. LAPS SHALL BE 48-BAR DIAMETER MINIMUM, UNLESS OTHERWISE NOTED.
5. THE CONCRETE PROTECTIVE COVERING FOR MAIN REINFORCEMENT SHALL BE, UNLESS SHOWN OTHERWISE:
  - A. FOOTING BOTTOMS... 3 INCHES.
  - B. COLUMNS, BEAMS AND FORMED SURFACES IN DIRECT CONTACT WITH SOIL OR EXPOSED TO THE WEATHER (EXCEPT SLABS)... 2 INCHES.
  - C. SLABS EXPOSED TO THE WEATHER... 2 INCHES.
6. ALL CONCRETE, UNLESS SPECIFICALLY NOTED TO BE PLAIN CONCRETE, SHALL BE REINFORCED.
7. ALL REINFORCING SHALL BE INSPECTED AND APPROVED BY THE ENGINEER OR HIS DESIGNEE BEFORE CONCRETE IS PLACED.

**STRUCTURAL STEEL**

1. ALL STRUCTURAL STEEL SHALL BE DESIGNED IN ACCORDANCE WITH THE LATEST ISSUE OF THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC) SPECIFICATIONS FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS.
2. ALL STRUCTURAL STEEL SHALL CONFORM TO ASTM A992, FY = 50 KSI & ASTM A572 FY = 50 KSI AS NOTED.
3. ALL STRUCTURAL TUBING SHALL CONFORM TO ASTM A500, FY = 46 KSI.
4. ALL COLUMN ANCHOR BOLTS SHALL CONFORM TO ASTM F1554, UNLESS NOTED.
5. ANCHOR BOLTS AND BASE PLATES SHALL BE LOCATED AND BUILT INTO CONNECTING WORK, PRESET BY TEMPLATES OR SIMILAR METHODS.
  - A. SHOP AND FIELD CONNECTIONS, UNLESS OTHERWISE NOTED, SHALL BE MADE BY WELDING OR HIGH-STRENGTH BOLTING. BOLTED CONNECTIONS SHALL CONFORM TO ASTM F3125.
  - B. SEE PLANS FOR INFILL BEAM REACTIONS FOR BEAMS NOT PART OF THE LATERAL FORCE RESTRAINT SYSTEM.
6. ALL STRUCTURAL STEEL SHALL BE PAINTED. SEE SPECIFICATIONS.

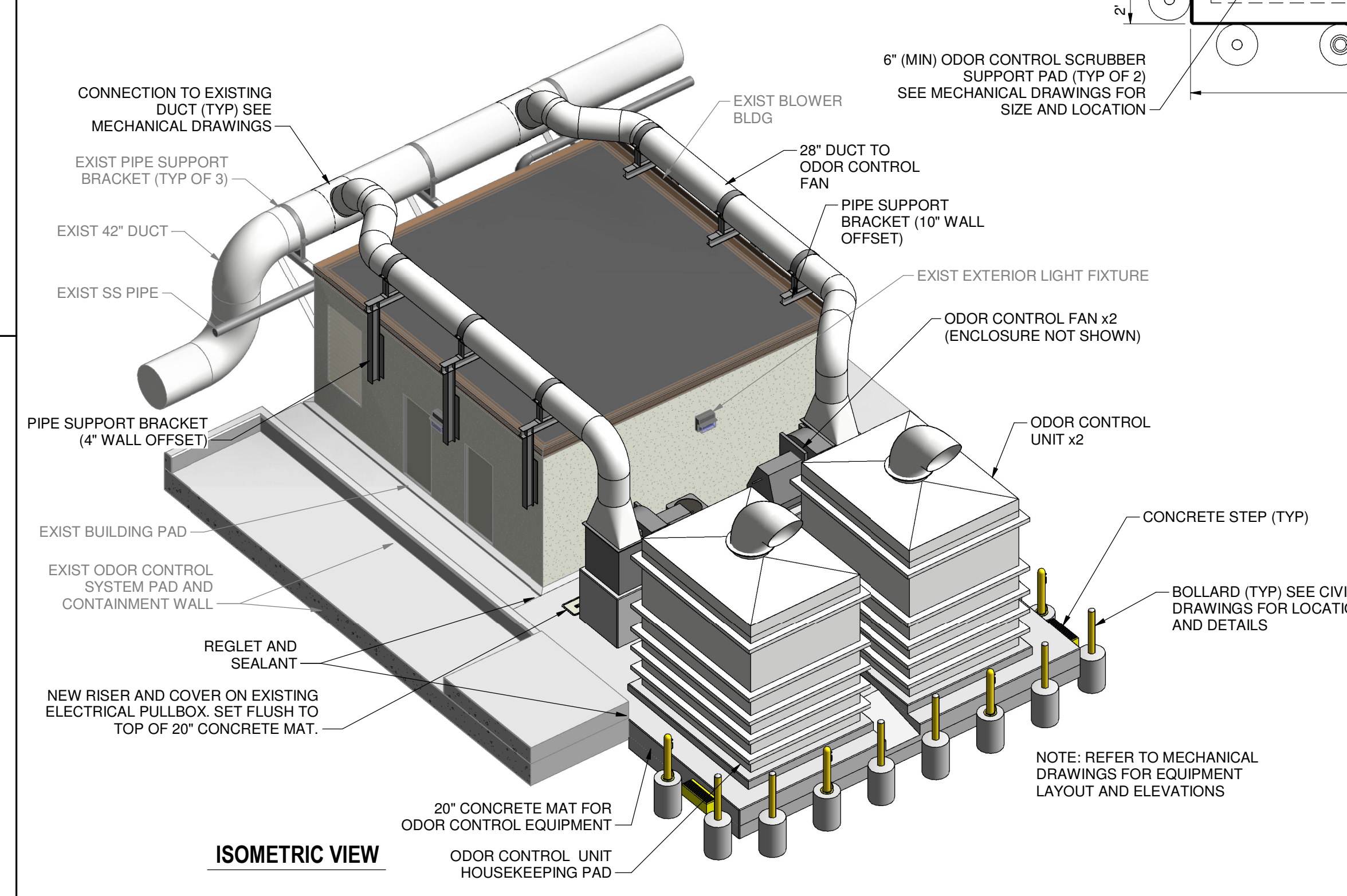
**MISCELLANEOUS**

1. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AT THE JOB SITE.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL SHORING AND BRACING AND SHALL DISCUSS HIS METHODS WITH THE ENGINEER PRIOR TO THE START OF WORK.
3. CONSULT THE MECHANICAL AND ELECTRICAL DRAWINGS FOR VERIFICATION OF LOCATION AND DIMENSIONS OF CHASES, INSERTS, OPENINGS, SLEEVES, WASHES, REVEALS, DEPRESSIONS AND OTHER PROJECT REQUIREMENTS.
4. ALL EQUIPMENT PENETRATIONS TO BE VERIFIED BY THE CONTRACTOR.
5. DO NOT SCALE FROM DRAWINGS.

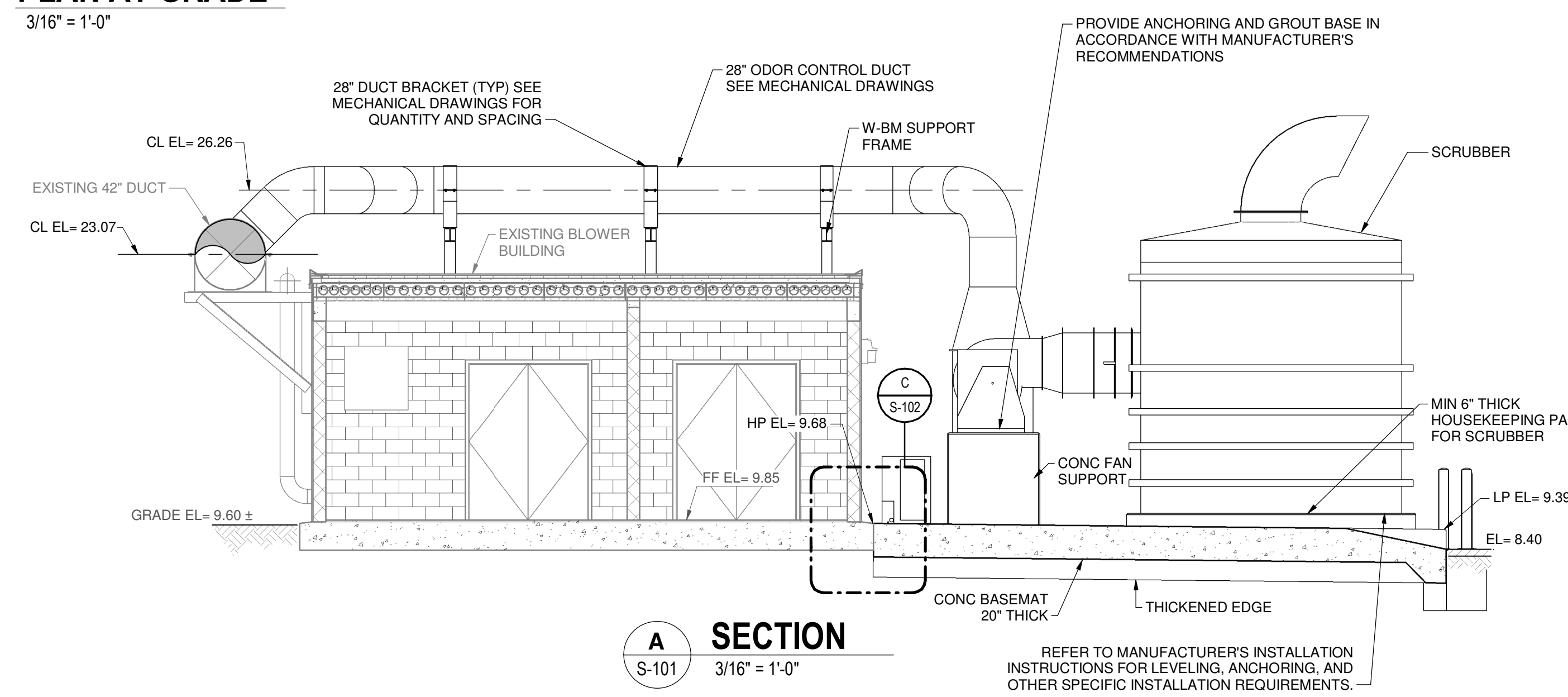


**PLAN AT TOP OF PIPE SUPPORT**  
3/16" = 1'-0"

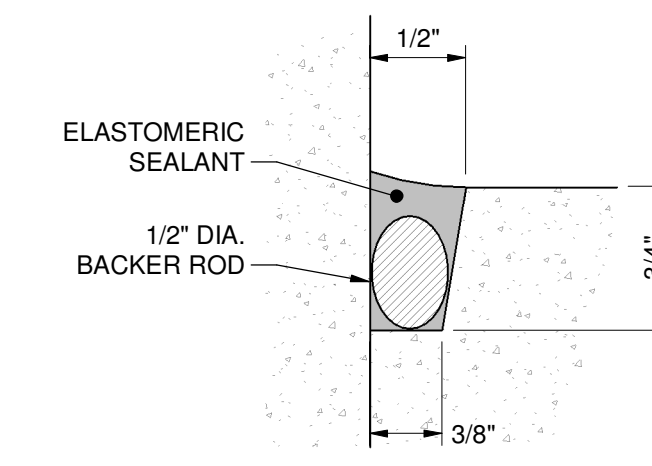
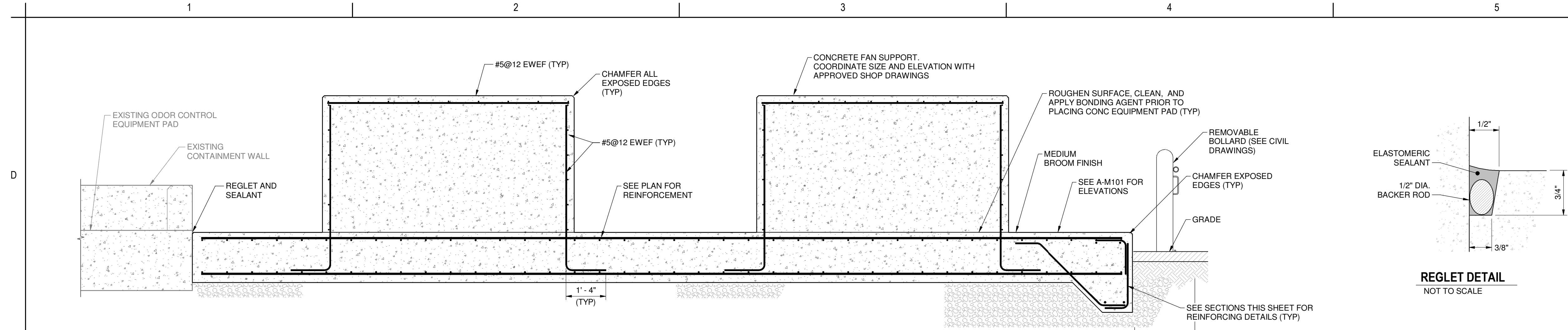
**PLAN AT GRADE**  
3/16" = 1'-0"



**ISOMETRIC VIEW**

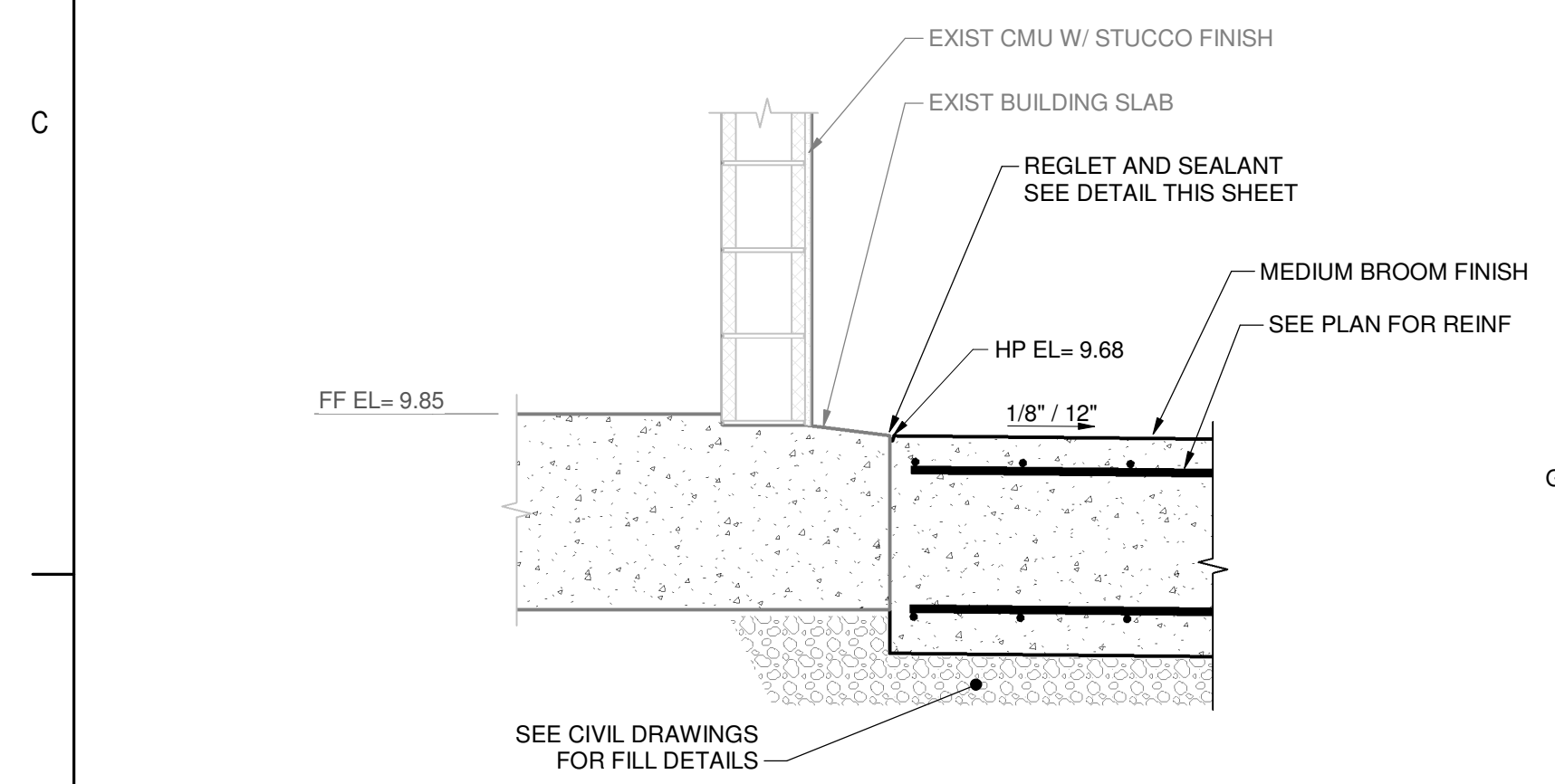


**SECTION A-S-101**  
3/16" = 1'-0"

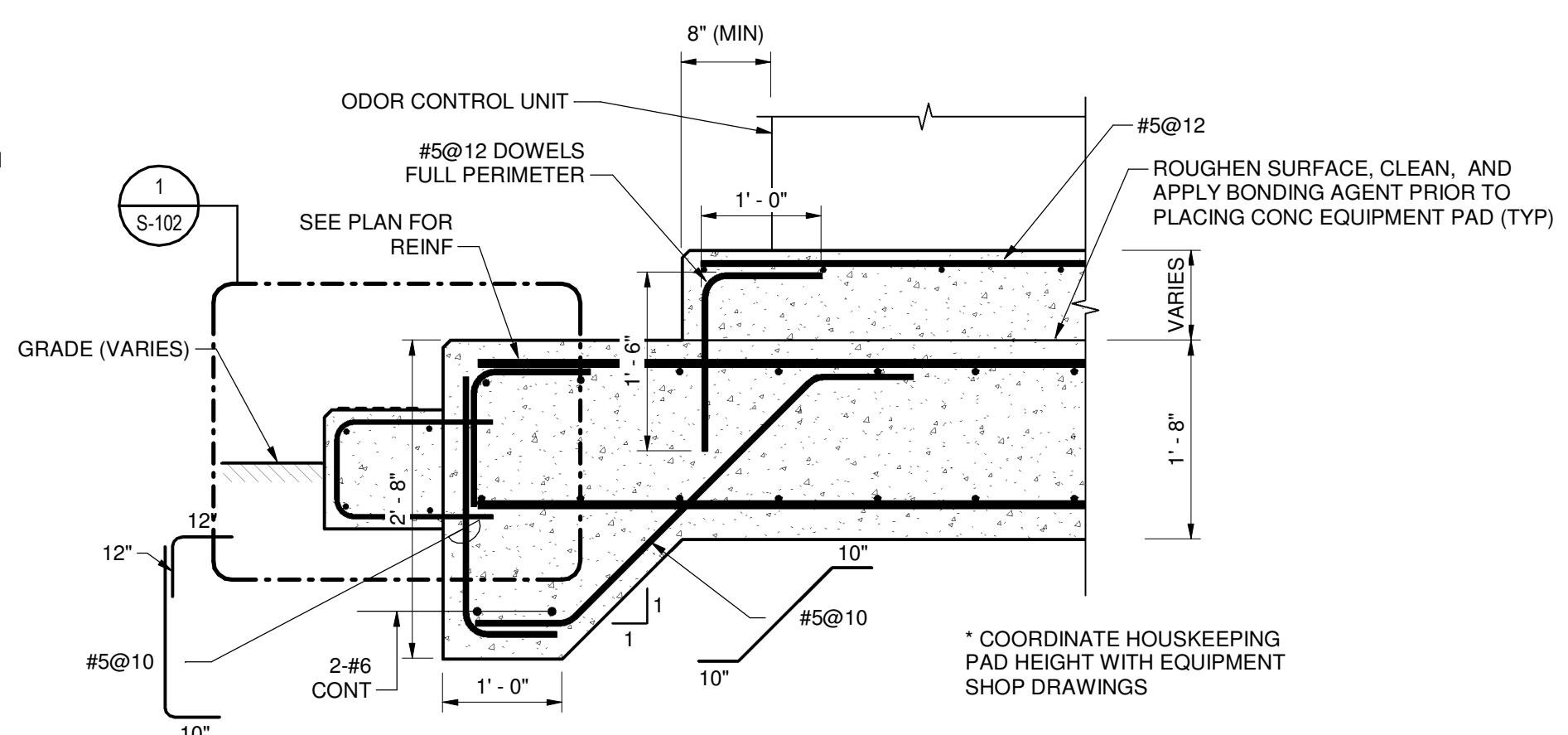


**REGLET DETAIL**  
NOT TO SCALE

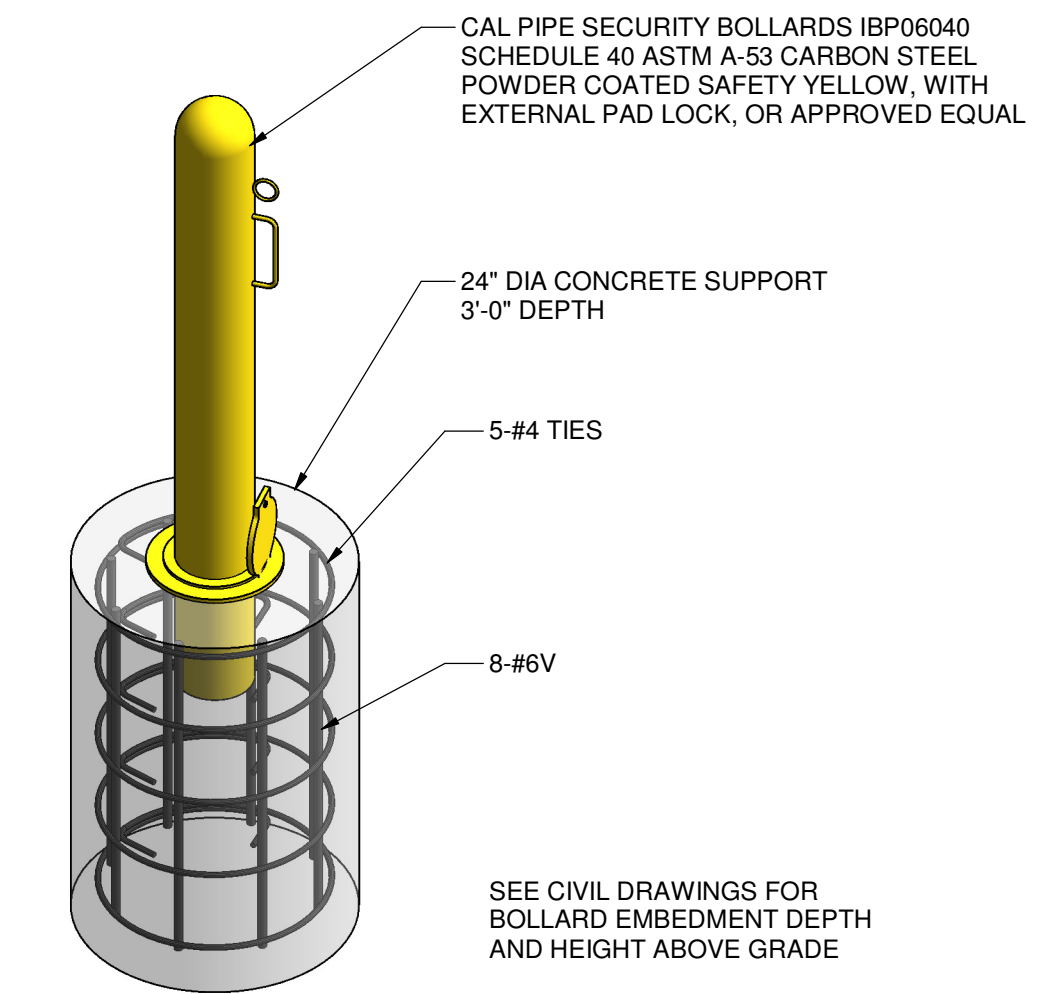
**B SECTION AT SUPPORT PAD**  
S-102 1/2" = 1'-0"



**C SECTION AT SLAB/BUILDING**  
S-102 3/4" = 1'-0"



**D SECTION AT ODOR CONTROL PAD**  
S-102 3/4" = 1'-0"



**REMOVABLE BOLLARD BASE REINFORCING**

Revision	By	Appd	Date
BID SET	ML	SM	NOVEMBER 2023
Issued	By	Appd	Date
File Name: N/A	DMB Dwn.	PRD Dsgn.	RS Chkd. NOVEMBER 2023

Permit/Seal

PAUL R. DUQUETTE, PE 45457

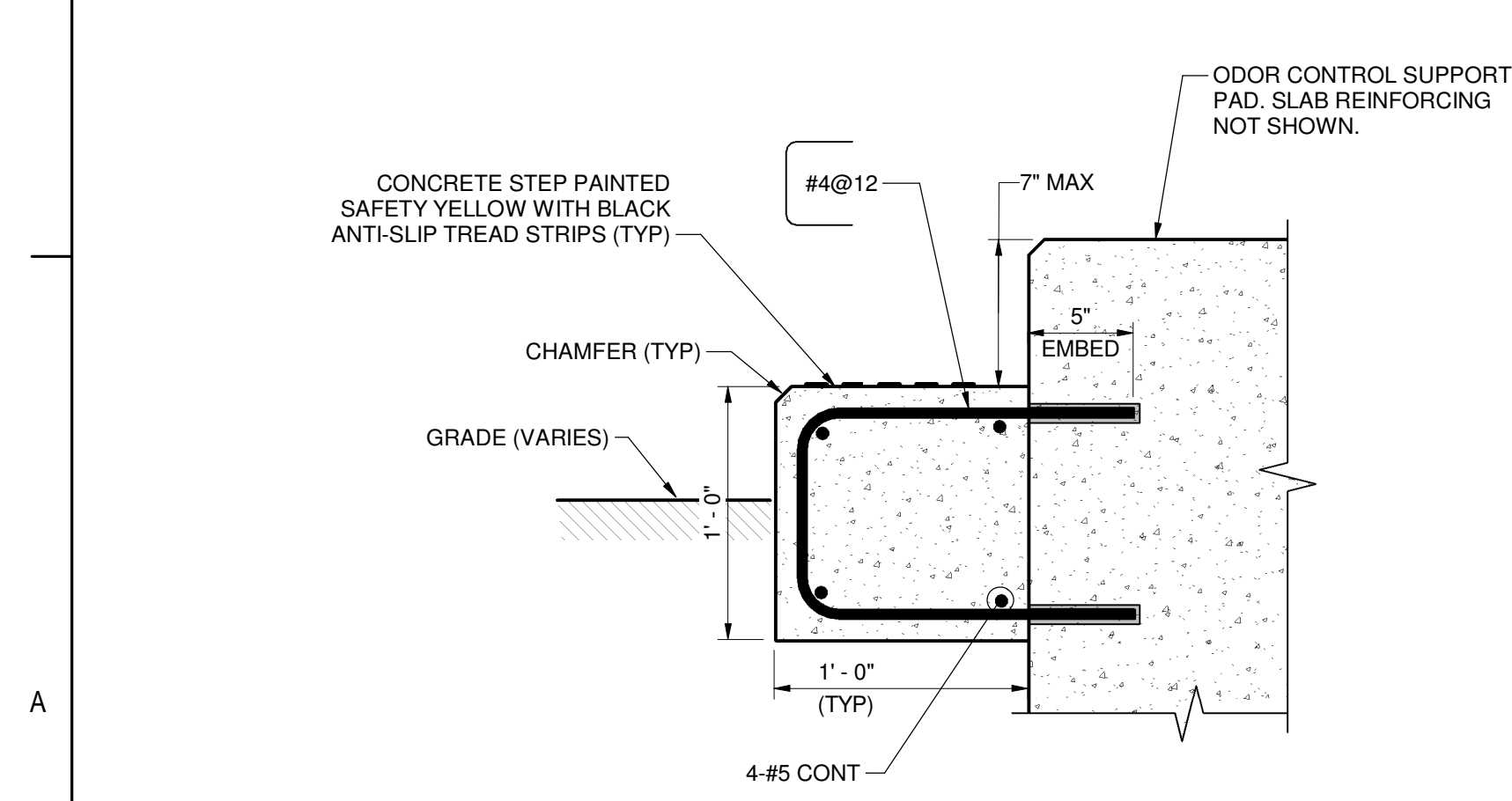
Client/Project  
COLLIER COUNTY PUBLIC UTILITIES

NORTH COUNTY WATER RECLAMATION  
FACILITY ODOR CONTROL - PHASE II

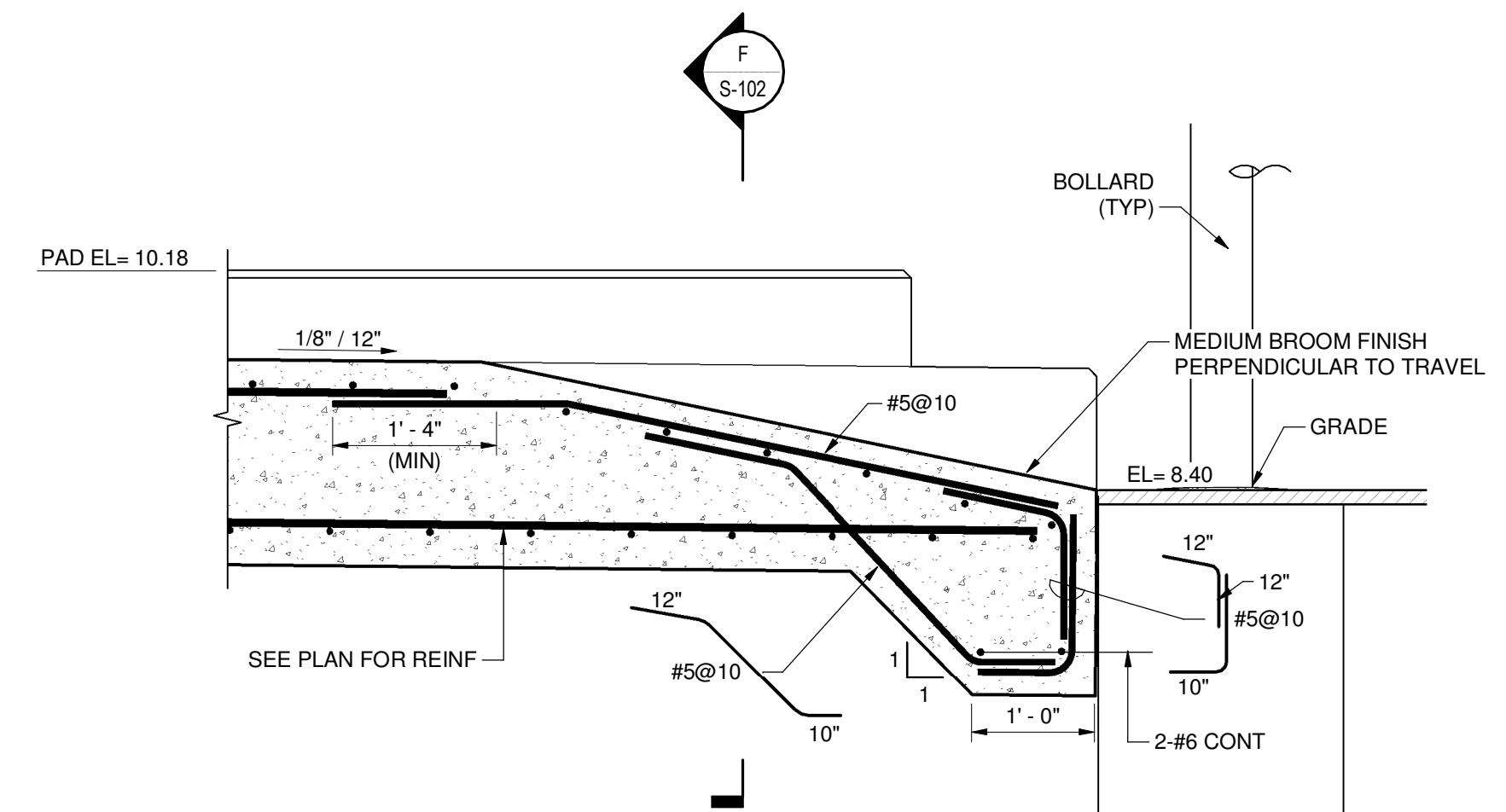
Title  
SECTIONS AND DETAILS

Project No. 177311697 Scale AS SHOWN  
Phase Drawing No.

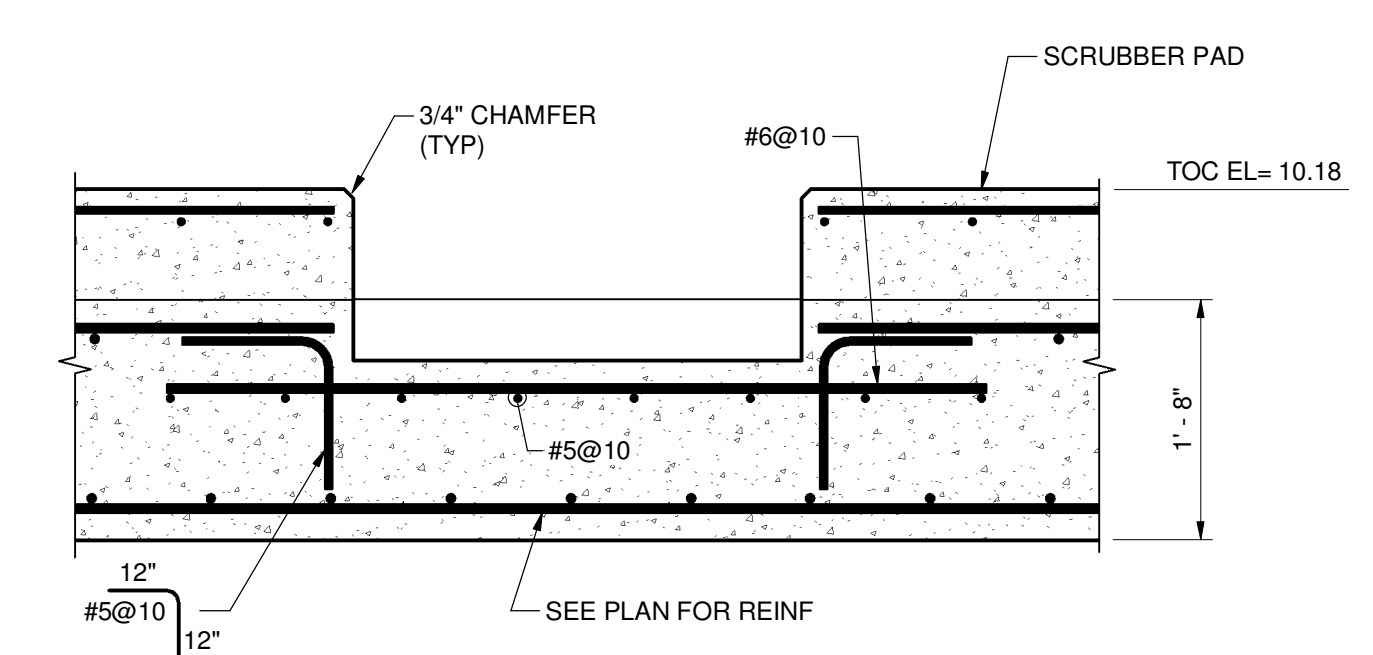
BID SET 11 of 33 S-102



**1 (TYP) STEP REINFORCING DETAIL**  
S-102 1 1/2" = 1'-0"



**E REINFORCING DETAIL AT RAMP**  
S-102 3/4" = 1'-0"



**F SECTION AT RAMP**  
S-102 3/4" = 1'-0"

Client/Project Logo



NOTES:


Revision	By	Appd	Date
BID SET	ML	SM	NOVEMBER 2023
Issued	By	Appd	Date
File Name: N/A	DMB	PRD	RS
	Dwn.	Dsgn.	Chkd.
			NOVEMBER 2023
			Date

Permit/Seal

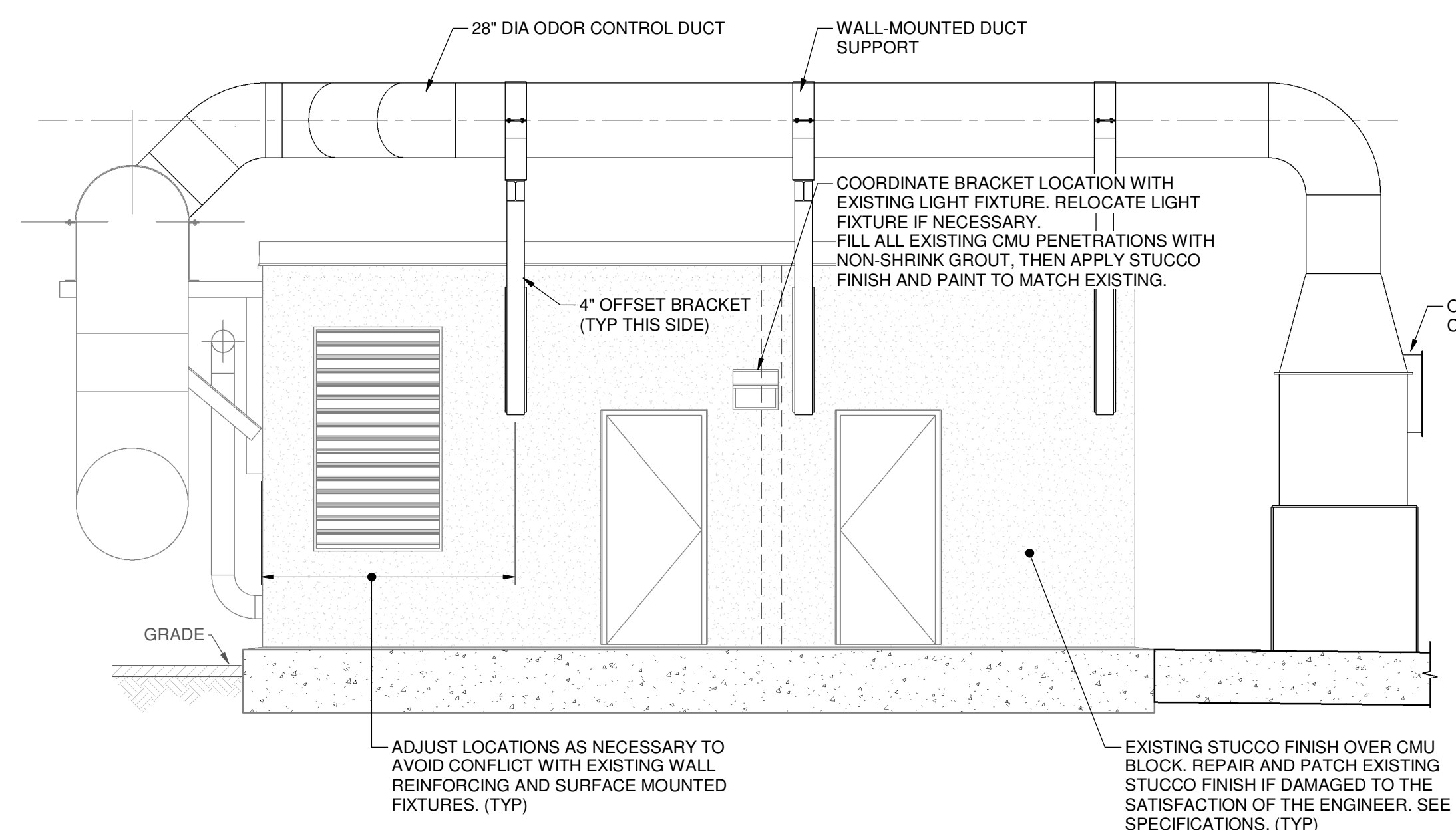
PAUL R. DUQUETTE, PE 45457

Client/Project  
COLLIER COUNTY PUBLIC UTILITIES

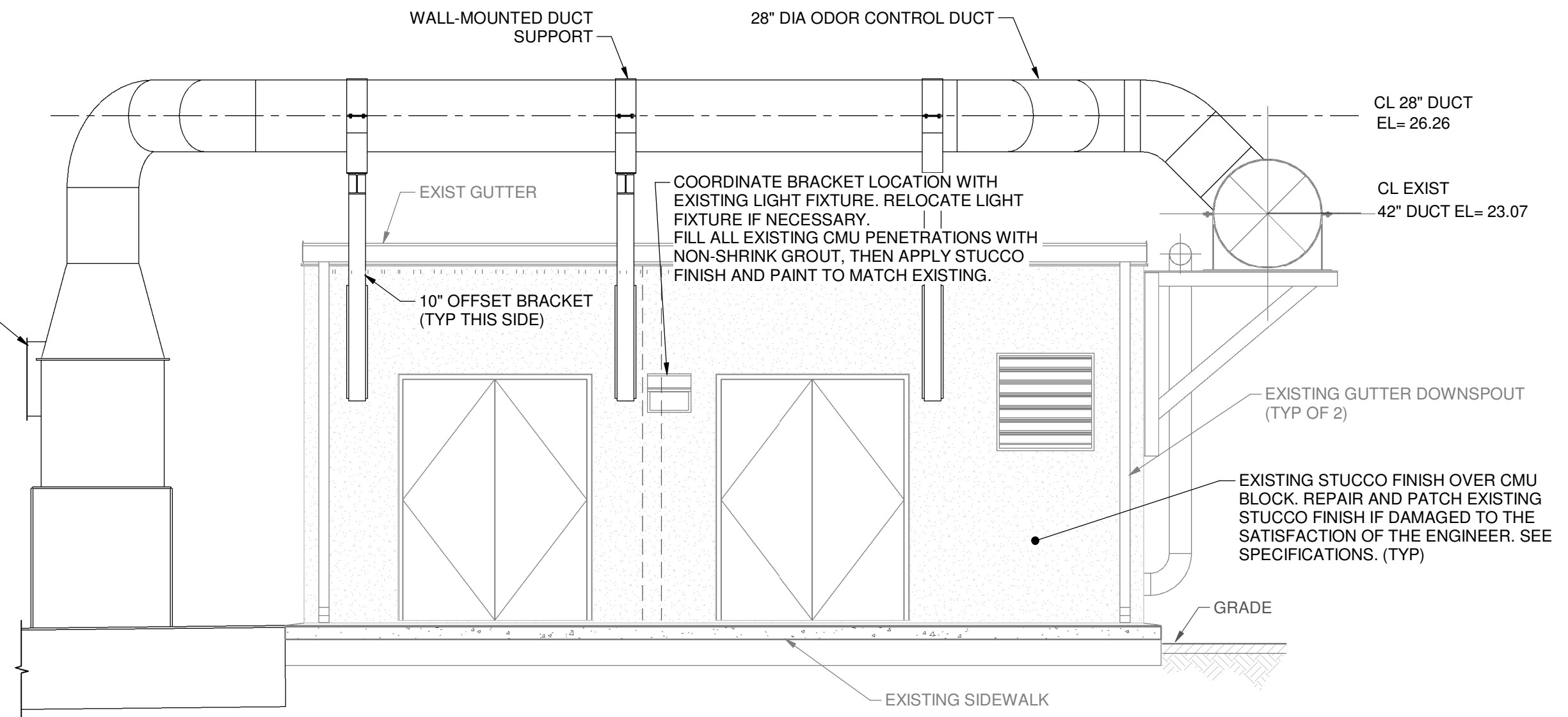
NORTH COUNTY WATER RECLAMATION  
FACILITY ODOR CONTROL - PHASE II

Title  
ELEVATIONS AND DETAILS

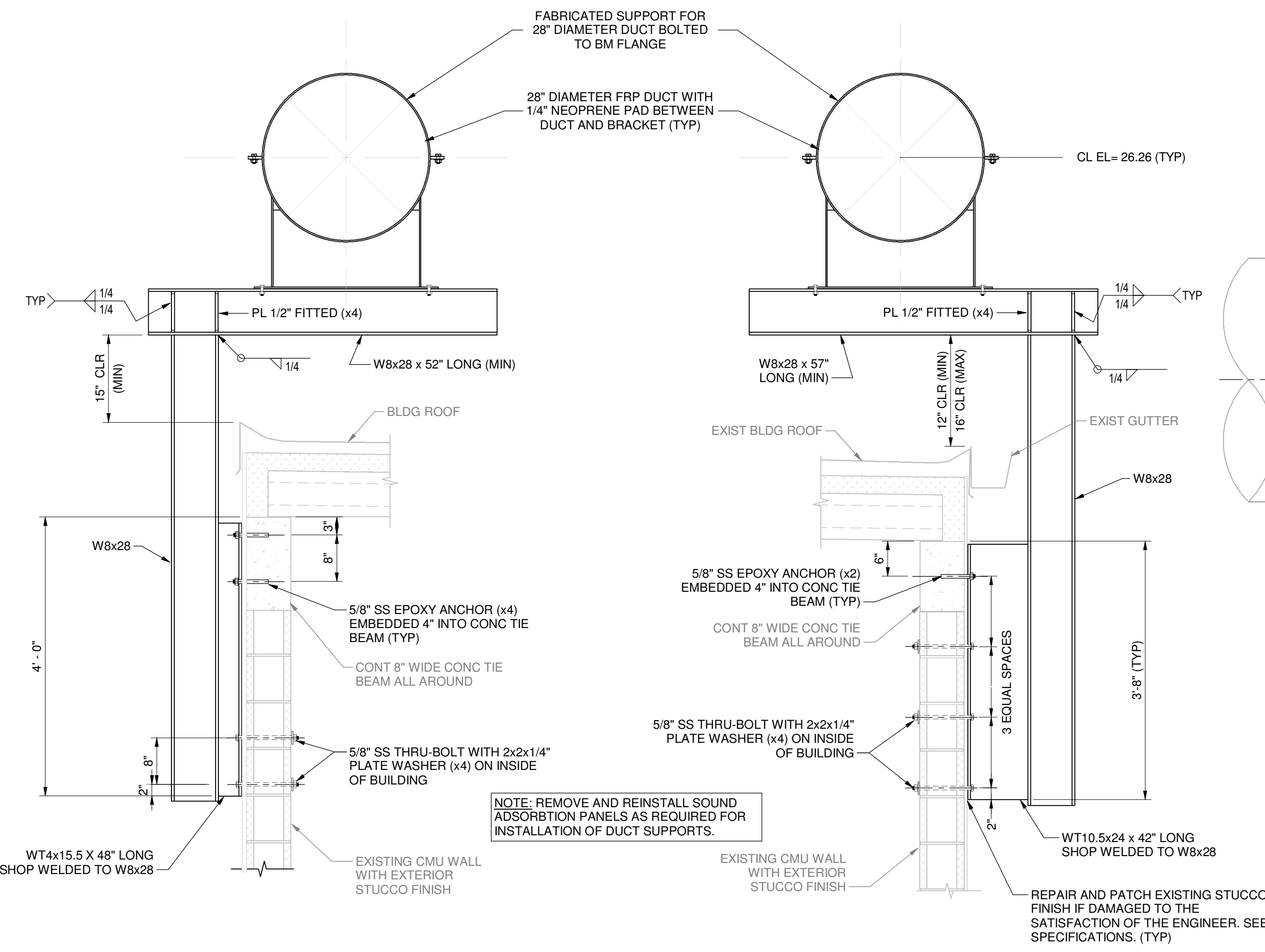
Project No. 177311697	Scale AS SHOWN
Phase	Drawing No. S-103
BID SET	12 of 33



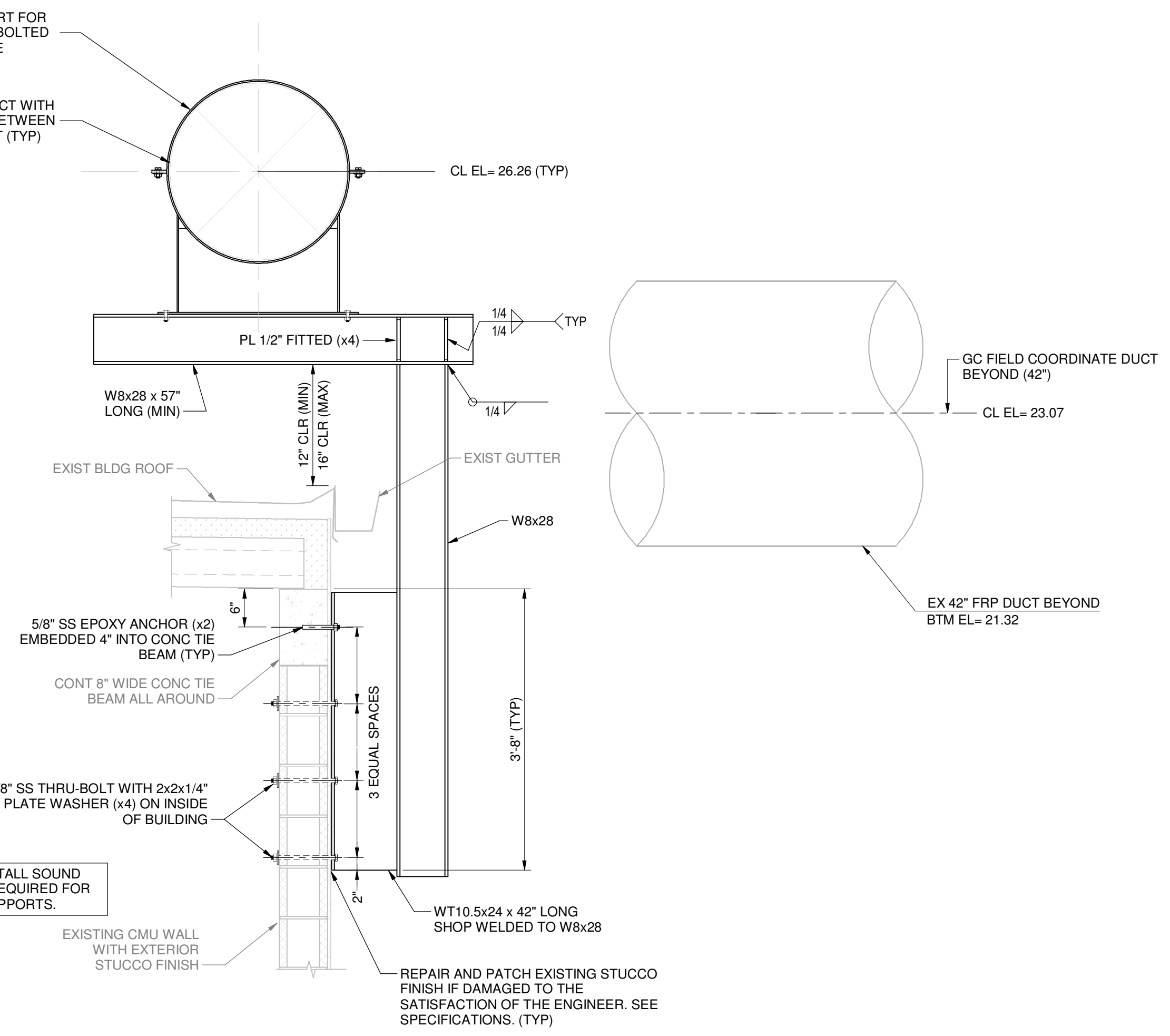
**2 WEST ELEVATION**  
S-103 1/4" = 1'-0"



**3 EAST ELEVATION**  
S-103 1/4" = 1'-0"



**4 4" OFFSET BRACKET**  
S-103 3/4" = 1'-0"



**5 10" OFFSET BRACKET**  
S-103 3/4" = 1'-0"





Client/Project Logo



NOTES:


Revision	By	Appd	Date
BID SET	BB	SM	NOVEMBER, 2023
Issued	By	Appd	Date
File Name: 11697-E-001	FL	BB	RC NOVEMBER, 2023
	Dwn.	Dsgn.	Chkd.

Permit/Seal

BRADLEY C. BUCHANAN, PE 86225

Client/Project  
COLLIER COUNTY PUBLIC UTILITIES

NORTH COUNTY WATER RECLAMATION  
FACILITY ODOR CONTROL - PHASE II

Title  
ELECTRICAL  
GENERAL NOTES, LEGENDS,  
AND ABBREVIATIONS

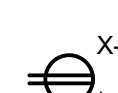



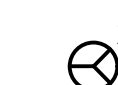



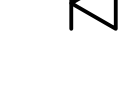
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Phase Drawing No.

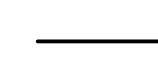
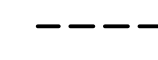
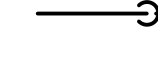





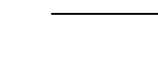


BID SET 15 of 33 E-002

## PLAN SYMBOLOGY








### RECEPTACLES

-  X-#  
120V DUPLEX RECEPTACLE, NEMA CONFIGURATION 5-20R (WALL MOUNT)  
X = PANELBOARD DESIGNATION  
# = CIRCUIT DESIGNATION  
\* = TYPE  
WP WEATHERPROOF  
XP EXPLOSION PROOF  
GFCI GROUND FAULT CIRCUIT INTERRUPTER
-  120V DUPLEX RECEPTACLE, NEMA CONFIGURATION 5-20R (FLOOR MOUNT)
-  SINGLE SPECIAL PURPOSE RECEPTACLE, 240V 1 PHASE  
X = AMPERAGE
-  WELDING RECEPTACLE  
X = AMPERAGE
-  SPECIAL PURPOSE RECEPTACLE, 480 VAC  
X = AMPERAGE
-  TELEPHONE OUTLET - FLOOR TYPE
-  TELEPHONE OUTLET - WALL TYPE
-  COMPUTER/DATA OUTLET - FLOOR TYPE
-  COMPUTER/DATA OUTLET - WALL TYPE

### CONDUIT AND RACEWAY SYMBOLOGY


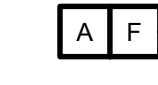
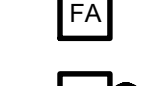





-  EXPOSED OR CONCEALED CONDUIT
-  CONDUIT RUN (UNDERGROUND OR IN CONCRETE)
-  CONDUIT RUN (CHANGE IN ELEVATION)
-  CONDUIT TURNING UP
-  CONDUIT TURNING DOWN
-  CONDUITS GROUPED TOGETHER BUT SHOWN AS A SINGLE LINE FOR CLARITY
-  CONDUIT FROM FLOOR ABOVE TO FLOOR BELOW
-  CONDUIT CAPPED, OR SEALED
-  HOMERUN TO EQUIPMENT INDICATED (3/4" CONDUIT, 2 #12, 1 #12 GND UNLESS INDICATED OTHERWISE)
-  RACEWAY BOX  
X = BOX TYPE  
MH MANHOLE  
HH HANDHOLE  
PB PULLBOX
-  JUNCTION BOX OR FITTING

### MISCELLANEOUS ELECTRICAL SYMBOLOGY



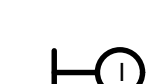
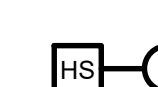


-  POWER PANEL
-  DISCONNECT SWITCH
-  MOTOR
-  THERMOSTAT
-  HORN
-  COMBINATION STARTER
-  MANUAL MOTOR STARTER

REV 010119

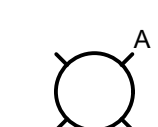
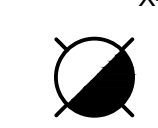
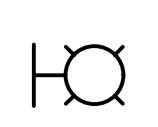
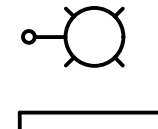




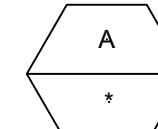
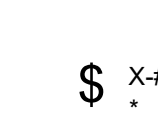

### FIRE PROTECTION SYMBOLOGY

-  FIRE ALARM HORN WITH STROBE
-  FIRE ALARM LOUDSPEAKER WITH AMPLIFIER
-  FIRE ALARM PULL STATION
-  FIRE ALARM STROBE
-  FIRE ALARM BELL WITH STROBE
-  FIRE SUPPRESSION SWITCH
-  END-OF-LINE TERMINATOR
-  DETECTOR  
X = TYPE  
SD SMOKE DETECTOR  
HD HEAT DETECTOR  
CD COMBINATION DETECTOR








### SECURITY & COMM SYSTEMS SYMBOLOGY

-  INTERCOM SPEAKER  
\* = TYPE (REFER TO SPECIFICATIONS)
-  INTERCOM SPEAKER WITH STROBE LIGHT  
\* = TYPE (REFER TO SPECIFICATIONS)
-  INTERCOM WALL JACK
-  INTERCOM HANDSET - WALL MOUNTED
-  VIDEO CAMERA  
\* = TYPE  
F FIXED  
PTZ PAN-TILT-ZOOM
-  SECURITY ACCESS DEVICE  
\* = TYPE  
CR CARD READER  
KS KEY SWITCH  
PS DIGITAL KEYPAD

### LIGHTING SYMBOLOGY

-  PENDANT OR CEILING MOUNT LUMINAIRE  
A = LUMINAIRE TYPE  
X = LIGHTING PANEL DESIGNATION  
# = CIRCUIT NUMBER  
a = SWITCH DESIGNATION
-  PENDANT OR CEILING MOUNT LUMINAIRE - UNSWITCHED (NIGHT LIGHT)
-  WALL MOUNTED LUMINAIRE
-  POLE, BRACKET, ARM, AND STREETLIGHT
-  LINEAR LUMINAIRE
-  LINEAR LUMINAIRE - UNSWITCHED
-  EMERGENCY LUMINAIRE BATTERY OPERATED
-  EXIT LIGHT, ARROW INDICATE DIRECTION OF EXIT, SHADING INDICATES FACE
-  LUMINAIRE CALLOUT  
A = LUMINAIRE TYPE  
\* = APPROXIMATE MOUNTING HEIGHT AFF  
CLG = CEILING MOUNT (SEE LUMINAIRE SCHEDULE FOR MORE DETAILS)
-  LIGHT SWITCH  
X = LIGHTING PANEL DESIGNATION  
# = CIRCUIT DESIGNATION  
a = SWITCH DESIGNATION  
\* = TYPE  
3 3-WAY  
4 4-WAY  
D DIMMER  
M MANUAL MOTOR STARTER
-  LIGHTING PANEL

### GROUNDING SYMBOLOGY

-  GROUND ROD AND GROUND WELL
-  GROUND ROD (3/4" X 10'-0")
-  GROUND CONNECTION - BOLTED TYPE
-  GROUND CONNECTION - EXOTHERMIC TYPE
-  BARE COPPER GROUND TO GROUND WIRE IN SLAB, OR UNDERGROUND GROUND GRID, SIZE AS NOTED
-  EARTH GROUNDING
-  LIGHTNING PROTECTION AIR TERMINAL



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NOTES:


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Permit/Seal

BRADLEY C. BUCHANAN, PE 86225

Client/Project  
COLLIER COUNTY PUBLIC UTILITIES

NORTH COUNTY WATER RECLAMATION  
FACILITY ODOR CONTROL - PHASE II

Title  
ELECTRICAL  
GENERAL NOTES, LEGENDS,  
AND ABBREVIATIONS

Project No. 177311697 Scale NO SCALE

Phase Drawing No.

BID SET 16 of 33 E-003

ELECTRICAL ABBREVIATIONS

A	AMPERE, AUTOMATIC
AC	ALTERNATING CURRENT
AF	CIRCUIT BREAKER FRAME SIZE
AM	AMMETER
ANN	ANNUNCIATOR
AS	ADJUSTABLE SPEED
AT	AMPERE TRIP
ATS	AUTOMATIC TRANSFER SWITCH
AUTO	AUTOMATIC
AWG	AMERICAN WIRE GAUGE
BATT	BATTERY
BC	BARE COPPER
BKR	BREAKER
C	CONDUIT, CLOSED
CAP	CAPACITOR
CB	CIRCUIT BREAKER
CEM	CONTINUOUS EMISSIONS MONITORING
CKT	CIRCUIT
CLF	CURRENT LIMITING FUSE
COM	COMMON
COMM	COMMUNICATIONS
COMP	COMPARTMENT
CP	CONTROL PANEL
CPT	CONTROL POWER TRANSFORMER
CR	CONTROL RELAY, CARD READER
CT	CURRENT TRANSFORMER
DCS	DISTRIBUTED CONTROL SYSTEM
DISC	DISCONNECT
DISTR	DISTRIBUTION
DPDT	DOUBLE POLE DOUBLE THROW
DPST	DOUBLE POLE SINGLE THROW
E	EMERGENCY
EMT	ELECTRICAL METALLIC TUBING
ENCL	ENCLOSURE
ETM	ELAPSED TIME METER
F	FREQUENCY, FUSE, FIXED
FDR	FEEDER
FLA	FULL LOAD AMPS
FLOUR	FLUORESCENT
FM	FREQUENCY METER
FO	FIBER OPTIC
FVR	FULL VOLTAGE REVERSING
FVNR	FULL VOLTAGE NON-REVERSING
GEN	GENERATOR
GFCI	GROUND FAULT CIRCUIT INTERRUPTER
GND	GROUND
H	HAND
HD	HEAT DETECTOR
HH	HAND HOLE
HID	HIGH INTENSITY DISCHARGE
HOA	HAND-OFF-AUTOMATIC
HPS	HIGH PRESSURE SODIUM
HS	HAND SWITCH
HZ	HERTZ
IMC	INTERMEDIATE METALLIC CONDUIT
INCAND	INCANDESCENT
IND	INDICATION
INST	INSTANTANEOUS
I/O	INPUT/OUTPUT
Isc	SHORT CIRCUIT CURRENT, AMPS
ISO	ISOLATION
J, JB	JUNCTION BOX
KA	KILO AMPERES
KAIC	KILO AMP INTERRUPTING CURRENT
KMIL	KILO CIRCULAR MILS
KVA	KILOVOLT AMPERE
L	LOCAL
LCP	LOCAL CONTROL PANEL
LCS	LOCAL CONTROL STATION
LOC	LOCAL
LOR	LOCAL-OFF-REMOTE
LOS	LOCKOUT STOP PUSHBUTTON
LP	LIGHTING PANEL
LRA	LOCKED ROTOR AMPS
LS	LEVEL SWITCH
LTG	LIGHTING
LTS	LIGHTS

M	MOTOR CONTACTOR COIL
mA	MILLIAMPERE
MCP	MOTOR CIRCUIT PROTECTOR
MLO	MILLS ONLY
MOV	MOTOR OPERATED VALVE
MS	MANUAL MOTOR STARTER
MTS	MANUAL TRANSFER SWITCH
NEUT	NEUTRAL
NP	NAMEPLATE
O	OPEN, OFF
OL	OVERLOAD
PA	PUBLIC ADDRESS
PB	PUSHBUTTON, PULLBOX
PC	PHOTOCELL
PCM	PROCESS CONTROL MODULE
PF	POWER FACTOR
PFM	POWER FACTOR METER
PH	PHASE
PL	PILOT LIGHT
PNLBD	PANELBOARD
PP	POWER PANELBOARD
POS	POSITION
POT	POTENTIOMETER
PRI	PRIMARY
PT	POTENTIAL TRANSFORMER
PTS	PAN-TILT-ZOOM
PWR	POWER
R	REMOTE
RECPT	RECEPTACLE
RGS	RIGID GALVANIZED STEEL
RMS	ROOT MEAN SQUARE
RTU	REMOTE TERMINAL UNIT
RVSS	REDUCED VOLTAGE SOLID STATE
SEL SW	SELECTOR SWITCH
SEQ	SEQUENCE
SHLD	SHIELDED
SIG	SIGNAL
SP	SPARE
SP HTR	SPACE HEATER
SPDT	SINGLE POLE DOUBLE THROW
SPST	SINGLE POLE SINGLE THROW
SSM	SOLID STATE METER
SSMP	SOLID STATE MOTOR PROTECTOR
ST, SH	SHUNT TRIP
STR	STARTER
SSTU	SOLID STATE TRIP UNIT
SW	SWITCH
SWBD	SWITCHBOARD
SWGR	SWITCHGEAR
TACH	TACHOMETER
TB	TERMINAL BOX
TERM	TERMINAL
TM	REPEAT CYCLE TIMER
TD	TIME DELAY RELAY
TS	TEMPERATURE SWITCH
UPS	UNINTERRUPTIBLE POWER SUPPLY
V	VOLTAGE, VOLTS
VA	VOLT AMPERE
VAR	VOLT AMPERE REACTIVE
VFD	VARIABLE FREQUENCY DRIVE
VFM	VOLTMETER
VP	VAPOR PROOF
W	WATTS, WIRE
WM	WATT METER
WP	WEATHERPROOF
XFMR	TRANSFORMER
XMTR	TRANSMITTER
XP	EXPLOSION PROOF

GENERAL ELECTRICAL NOTES

- ALL RACEWAYS AND EQUIPMENT SHALL BE INSTALLED AND GROUNDED IN ACCORDANCE WITH THE LATEST ADOPTED EDITION OF THE NATIONAL ELECTRICAL CODE AND APPLICABLE LOCAL CODES.
- THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION OF TERMINAL BOXES AND CONDUIT ENTRANCES OF ALL EQUIPMENT AGAINST APPROVED SHOP DRAWINGS BEFORE STUBBING UP CONDUITS.
- CONDUIT RUNS ARE SHOWN DIAGRAMMATICALLY ONLY AND SHALL BE INSTALLED IN A MANNER TO PREVENT CONFLICTS WITH EQUIPMENT OR STRUCTURAL CONDITIONS. EXPOSED CONDUIT SHALL BE INSTALLED PARALLEL OR PERPENDICULAR TO BEAMS AND WALLS.
- CONDUIT STUB-UPS SHALL NOT BE MORE THAN 6 INCHES FROM THE CENTERLINE OF TERMINAL BOXES.
- IN THE EVENT OF INTERFERENCE BETWEEN ELECTRICAL EQUIPMENT SHOWN ON THE DRAWINGS AND OTHER EQUIPMENT, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IN WRITING AND THE ENGINEER SHALL APPROVE PROPOSED CHANGES BEFORE THEY ARE MADE.
- ALL SURFACE MOUNTED PANELS AND PANELBOARDS ON THE INTERIOR OF EXTERIOR WALLS ABOVE GRADE OR IN OTHER LOCATIONS CONSIDERED DAMP OR WET SHALL BE MOUNTED SO AS TO MAINTAIN A 1/4" INCH (MINIMUM) AIR SPACE BETWEEN THE ENCLOSURE AND THE WALL.
- LOCATION OF PULLBOXES ARE APPROXIMATE. THE CONTRACTOR SHALL COORDINATE EXACT LOCATION WITH MECHANICAL PIPING AND SHALL BE 6 INCHES (MINIMUM) AWAY FROM MECHANICAL PIPING FLOW LINES.
- ONLY MAJOR PULLBOXES ARE SHOWN. THE CONTRACTOR SHALL PROVIDE ADDITIONAL PULLBOXES WHERE REQUIRED TO MAKE A WORKABLE INSTALLATION.
- THE WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE DETAILS WHETHER OR NOT THEY ARE REFERENCED ON THE DRAWINGS.
- ALL CONDUIT RUNS CROSSING EXPANSION JOINTS SHALL HAVE EXPANSION OR EXPANSION AND DEFLECTION TYPE FITTINGS. FOR LOCATIONS OF EXPANSION JOINTS, REFER TO THE STRUCTURAL DWGS.
- LUMINAIRES SHALL BE MOUNTED ACCORDING TO THE MOUNTING HEIGHT GIVEN ON THE DRAWINGS, WITH THE DISTANCE BEING MEASURED FROM THE BOTTOM OF THE LUMINAIRE TO THE FINISHED FLOOR. THE APPROPRIATE MOUNTING BRACKETS AND HARDWARE SHALL BE SUPPLIED.
- ALL PANELBOARDS SHALL BE MOUNTED SO THAT THE DISTANCE FROM THE CENTERLINE OF THE TOP CIRCUIT BREAKER OPERATING HANDLE IN THE UPPERMOST POSITION TO THE FINISHED FLOOR SHALL NOT EXCEED 6'-7".
- 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.
- CONNECTIONS BETWEEN RIGID CONDUIT AND MOTOR TERMINAL BOXES OR SIMILAR EQUIPMENT SUBJECT TO VIBRATION SHALL BE FLEXIBLE LIQUID-TIGHT CONDUIT.
- CONDUITS SHALL BE TERMINATED SO AS TO PERMIT NEAT CONNECTION TO MOTORS AND OTHER EQUIPMENT.
- CONDUITS FOR FUTURE EQUIPMENT OR EXTENSIONS SHALL BE TERMINATED AS SHOWN IN DETAIL OR AS SPECIFIED.
- MCC AND SWITCHGEAR COMPARTMENT DESIGNATIONS SHALL BE AS FOLLOWS:  
  
BLANK/SPACE: CONTAINS NECESSARY BUS AND HARDWARE FOR FUTURE ADDITION OF BREAKERS OR STARTERS.  
  
SPARE: CONTAINS A COMPLETE INSTALLED BREAKER OR STARTER AVAILABLE FOR FUTURE USE.
- ALL MOTOR STARTER CONTROL POWER TRANSFORMERS SHALL BE SIZED TO PROVIDE SUFFICIENT VOLT-AMPERE CAPACITY FOR OPERATING ALL LOCAL AND REMOTE ELECTRICAL DEVICES ASSOCIATED WITH CONTROL OF THE MOTOR IN ADDITION TO THE STARTER COIL.
- MOTOR CONTROL CENTERS AND ALL FREE STANDING PANELS SHALL BE SET ON CONCRETE HOUSEKEEPING PADS WITH LEVELING CHANNELS EMBEDDED IN THE PAD.
- ALL RECEPTACLES IN OUTDOOR AND ANTICIPATED WET AREAS SHALL BE GROUND FAULT CIRCUIT INTERRUPTER RECEPTACLES WITH WEATHERPROOF COVERS.
- ELECTRICAL CONTRACTOR SHALL VISIT THE SITE PRIOR TO BIDDING THE PROJECT TO VERIFY THE SCOPE OF WORK WITH FIELD CONDITIONS. PARTICULAR ATTENTION SHOULD BE GIVEN TO NEW CONDUIT RUNS IN EXISTING BUILDINGS.
- EQUIPMENT LOCKOUTS SHALL BE IN STRICT ACCORDANCE WITH OWNER'S REQUIREMENTS.
- FOR LIGHTING AND RECEPTACLE SYSTEMS, ONLY CIRCUIT NUMBERS ARE SHOWN. CONTRACTOR SHALL PROVIDE ALL NECESSARY CONDUITS, WIRES, FITTINGS, JUNCTION BOXES AND ALL NECESSARY COMPONENTS SHOWN OR NOT SHOWN ON THE DRAWINGS, TO MAKE THE ELECTRICAL INSTALLATION COMPLETE AND OPERATIONAL. ALL CONDUIT RUNS SHALL BE CONCEALED UNLESS INDICATED OTHERWISE. CIRCUIT LOADING SHALL BE AS INDICATED IN THE PANEL SCHEDULES. ALL LIGHTING AND RECEPTACLE CIRCUITS SHALL INCLUDE GROUND WIRE.

ELECTRICAL DEMOLITION NOTES

- BIDDING CONTRACTORS SHALL VISIT THE SITE TO ASSESS THE SCOPE OF DEMOLITION, REMOVAL AND MODIFICATION WORK.
- ELECTRICAL CONTRACTOR AND THE OWNER SHALL DE-ENERGIZE ALL WIRING PRIOR TO REMOVAL OF EQUIPMENT DEVICES, MOTORS INSTRUMENTATION, CONTROL PANELS, ETC. CONTRACTOR SHALL OBTAIN PRIOR APPROVAL FROM THE OWNER.
- EXPOSED RACEWAYS: REMOVE CONDUIT, WIRES, AND BOXES. PATCH TO MATCH EXISTING. FINISH-ALL OPENINGS IN WALLS AND FLOORS.
- CONCEALED CONDUITS IN THE SLAB: REMOVE EXISTING WIRES TO THE EXTENT POSSIBLE AND ABANDON CONDUITS IN THE SLAB. CUT CONDUIT FLUSH AND PATCH THE FLOOR TO MATCH EXISTING.
- CONTROL PANEL: ELECTRICAL CONTRACTOR SHALL DE-ENERGIZE AND REMOVE ALL CONDUIT AND WIRE AS DESCRIBED IN NOTE 2. CONTRACTOR SHALL REMOVE PANELS AS NOTED ON THE CONTRACT DRAWINGS. REFER TO NOTE 4 ABOVE FOR DISPOSITION OF ENCASED CONDUITS.
- MOTOR CONTROL CENTERS: DISCONNECT AND REMOVE ALL CONDUITS AND WIRING TO EXISTING STARTERS AND/OR BREAKERS, PANELBOARDS, BRANCH CIRCUITS, INTERLOCKS AND STATUS WIRING WITHIN MCC. REFER TO SECTION 260000 FOR ADDITIONAL ELECTRICAL DEMOLITION AND REMOVAL REQUIREMENTS.

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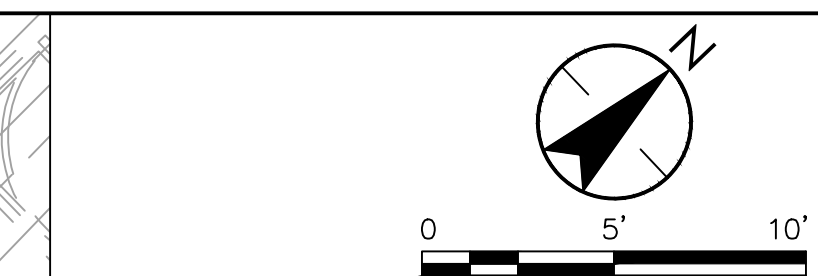




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NOTES:



**GENERAL SHEET NOTES**

A. DRAWING IS BASED OFF AS-BUILT INFORMATION AND DATA COLLECTED IN THE FIELD. THE CONTRACTOR SHALL ALERT THE ENGINEER IF ANY VARIATIONS FROM THE INFORMATION PRESENTED HEREIN ARE UNCOVERED IN THE FIELD

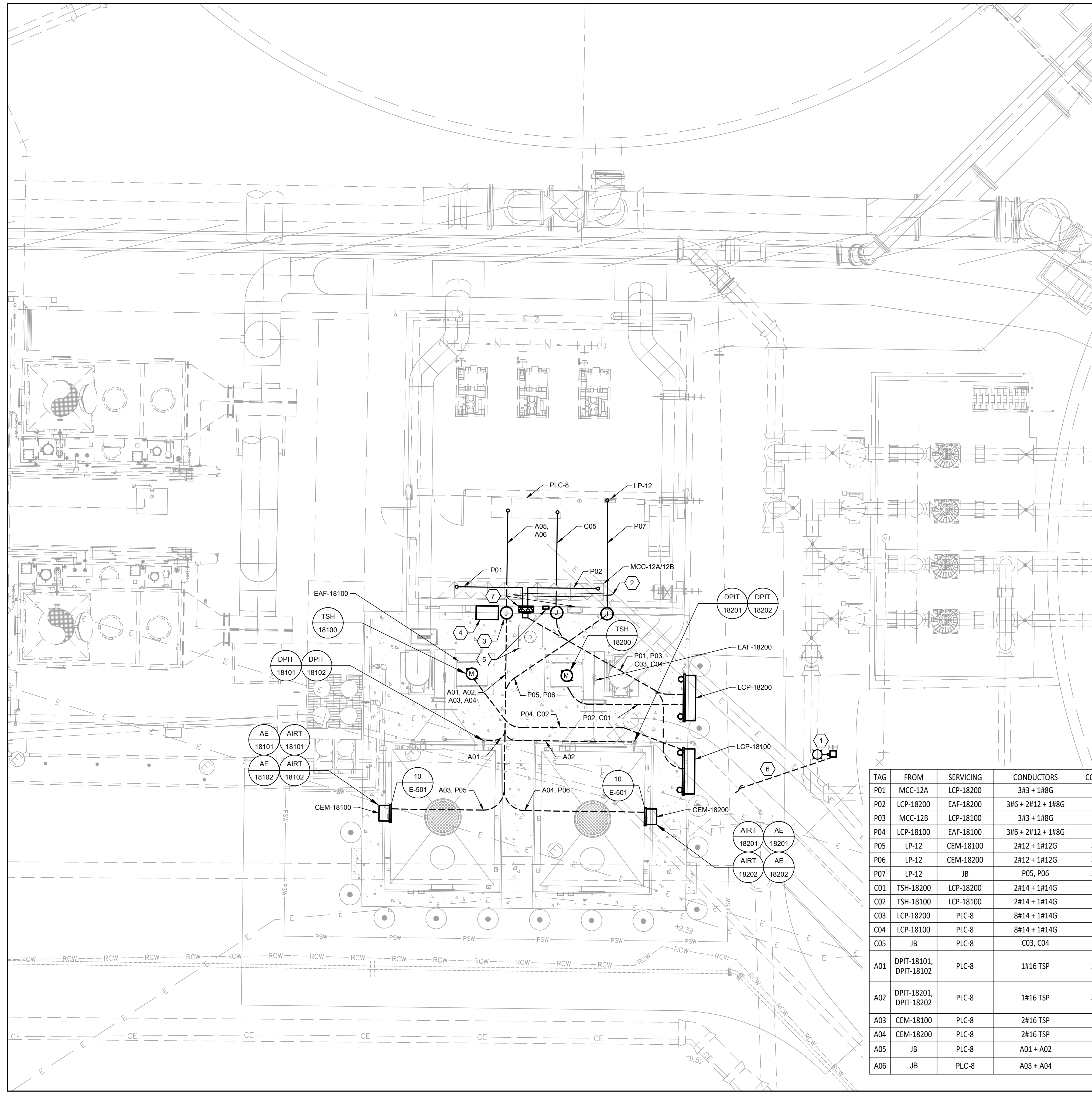
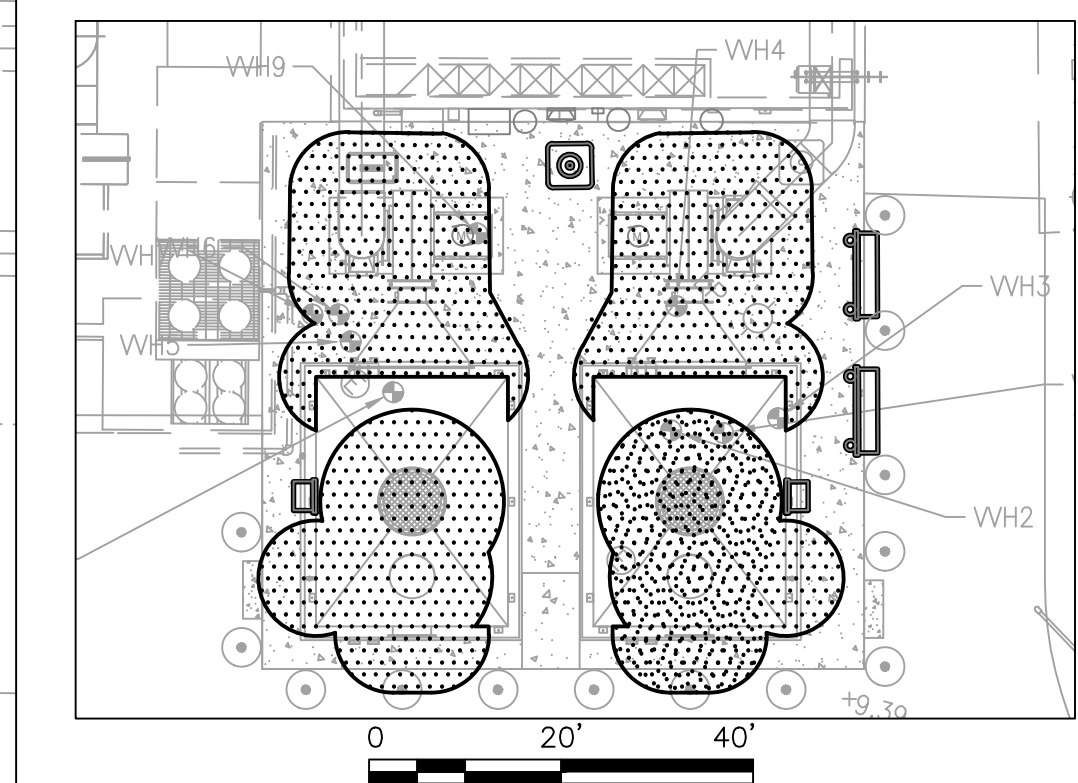
**KEYNOTES**

1. NEW LOCATION FOR EXISTING POLE REMOVED PER DRAWING E-101. FURNISH AND INSTALL NEW HAND HOLE ADJACENT TO POLE WITH BREAKAWAY FUSE HOLDERS, 5A FUSES, GROUND ROD, AND SURGE PROTECTION DEVICE (SPD). DOTPLUG OR EQUAL. REPLACE LIGHT FIXTURE WITH NEW, LITHONIA DSXD LED P2 40K 70CRI T3M MVOLT OR EQUAL.
2. ROUTE CONDUITS THROUGH WALLS AND ALONG CEILING INSIDE BUILDING. ALL CONDUITS ENTERING THE BUILDING SHALL BE SEALED TO PREVENT HUMID AIR FROM ENTERING THE CONDITIONED AREA.
3. NEMA 4X S.S. OR DIE CAST ALUMINUM JUNCTION BOXES. FURNISH AND INSTALL SEPARATE JUNCTION BOXES FOR DISCRETE AND ANALOG SIGNALS, AND INTRINSIC SAFE CIRCUITS (THREE TOTAL). BOXES ARE FOR COLLECTING SIGNALS AND PULLING ONLY. NO SPLICES OR TERMINATIONS WITHIN BOX. SEAL CONDUITS EXISTING BOX, PRIOR TO ENTERING BUILDING.
4. NEW LOCATION FOR EXISTING GENERATOR CONNECTION BOX. REMOVE EXISTING CONDUCTORS FROM BOX, TO HANDHOLE TO MCC AND REPLACE WITH NEW. REMOVE CONDUIT ON WALL AND REPLACE WITH NEW RIGID ALUMINUM CONDUIT. CONNECT GROUND TO NEW GES. REFER TO DRAWING E-401 FOR ADDITIONAL DETAIL.
5. NEW LOCATION FOR AIR CONDITIONING CONDENSER UNIT AND DISCONNECT SWITCH. EXTEND BRANCH CIRCUIT AND CONTROL CIRCUIT RACEWAYS TO NEW LOCATION AND REPLACE CONDUCTORS WITH NEW, SAME AS EXISTING. REPLACE FLEXIBLE CONDUIT WITH NEW (3' MAX LENGTH).
6. COORDINATE DEMOLITION AND RE-LOCATION OF LIGHT POLE WITH DRAWING E-101. FURNISH AND INSTALL NEW 2#10+1#10 AWG CONDUCTORS IN 1" CONDUIT TO RE-ESTABLISH CIRCUIT.
7. REPLACE AND RE-LOCATE EXISTING WALL MOUNTED LIGHT FIXTURE WITH NEW, LITHONIA TWR2 LED ALO SWW2 UVOLT PE DDBTXD WITH ADJUSTABLE LUMEN OUTPUT AND SELECTABLE PHOTOCELL AND TEMPERATURE. 4000K, 16,100 INITIAL SETTINGS.

**HAZARDOUS AREA CLASSIFICATION**

1. HAZARDOUS AREAS WITHIN SCOPE OF ELECTRICAL WORK ARE CLASSIFIED AS FOLLOWS IN ACCORDANCE WITH NFPA 820, 2020 EDITION. ALL ELECTRICAL WORK WITHIN CLASSIFIED HAZARDOUS AREAS SHALL BE IN ACCORDANCE WITH THE APPLICABLE SECTIONS OF NEC ARTICLE 500 AND 501.

A. ODOR CONTROL UNITS - TABLE 4.2.2 ROW 18a: AREAS WITHIN 3 FT OF LEAKAGE SOURCES SUCH AS FANS, DAMPERS, FLEXIBLE CONNECTIONS, FLANGES, PRESSURIZED NON-WELDED DUCTWORK AND ODOR CONTROL VESSELS PLUS ENVELOPE 3FT AROUND VENTS FROM DIVISION 2 GAS IS CLASS I, DIVISION 2.



TAG	FROM	SERVICING	CONDUCTORS	CONDUIT	NOTES
P01	MCC-12A	LCP-18200	3#3 + 1#8G	1" C	
P02	LCP-18200	EAF-18200	3#6 + 2#12 + 1#8G	1" C	FAN AND HEATER POWER
P03	MCC-12B	LCP-18100	3#3 + 1#8G	1" C	
P04	LCP-18100	EAF-18100	3#6 + 2#12 + 1#8G	1" C	FAN AND HEATER POWER
P05	LP-12	CEM-18100	2#12 + 1#12G	3/4" C	
P06	LP-12	CEM-18200	2#12 + 1#12G	3/4" C	
P07	LP-12	JB	P05, P06	3/4" C	P05, P06 IN COMBINED CONDUIT
C01	TSH-18200	LCP-18200	2#14 + 1#14G	3/4"	
C02	TSH-18100	LCP-18100	2#14 + 1#14G	3/4"	
C03	LCP-18200	PLC-8	8#14 + 1#14G	1"	
C04	LCP-18100	PLC-8	8#14 + 1#14G	1"	
C05	JB	PLC-8	C03, C04	1"	COMBINE CONDUCTORS FROM CONDUITS AT JB AND RUN TO PLC-8 IN SINGLE CONDUIT.
A01	DPIT-18101, DPIT-18102	PLC-8	1#16 TSP	3/4" C	INSTRUMENT IN CLASS I, DIV 2 HAZARDOUS AREA, INSTALLATION SHALL COMPLY WITH NEC ARTICLE 501. FURNISH AND INSTALL JB ADJACENT TO INSTRUMENTS AND RUN 1#16 TSP IN 3/4" C FROM JB TO EACH INSTRUMENT.
A02	DPIT-18201, DPIT-18202	PLC-8	1#16 TSP	3/4" C	INSTRUMENT IN CLASS I, DIV 2 HAZARDOUS AREA, INSTALLATION SHALL COMPLY WITH NEC ARTICLE 501. FURNISH AND INSTALL JB ADJACENT TO INSTRUMENTS AND RUN 1#16 TSP IN 3/4" C FROM JB TO EACH INSTRUMENT.
A03	CEM-18100	PLC-8	2#16 TSP	1" C	
A04	CEM-18200	PLC-8	2#16 TSP	1" C	
A05	JB	PLC-8	A01 + A02	1" C	COMBINE CONDUCTORS FROM CONDUITS AT JB AND RUN TO PLC-8 IN SINGLE CONDUIT.
A06	JB	PLC-8	A03 + A04	1" C	COMBINE CONDUCTORS FROM CONDUITS AT JB AND RUN TO PLC-8 IN SINGLE CONDUIT.

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Permit/Seal

BRADLEY C. BUCHANAN, PE 86225

Client/Project  
COLLIER COUNTY PUBLIC UTILITIES

NORTH COUNTY WATER RECLAMATION  
FACILITY ODOR CONTROL - PHASE II

Title  
ELECTRICAL  
SITE PLAN

Project No. 177311697 Scale 1" = 5'

Phase Drawing No.

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Client/Project Logo



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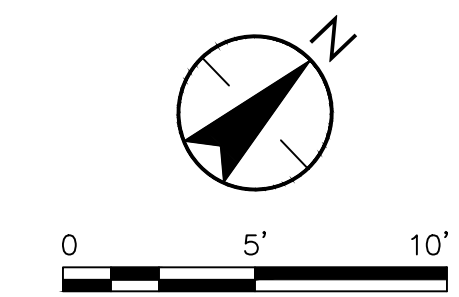
NORTH COUNTY WATER RECLAMATION  
FACILITY ODOR CONTROL - PHASE II

Title  
ELECTRICAL  
GROUNDING AND  
LIGHTNING PROTECTION

Project No. 177311697 Scale 1" = 5'

Phase Drawing No.

BID SET 19 of 33 E-103



**GENERAL SHEET NOTES**

A. DRAWING IS BASED OFF AS-BUILT INFORMATION AND DATA COLLECTED IN THE FIELD. THE CONTRACTOR SHALL ALERT THE ENGINEER IF ANY VARIATIONS FROM THE INFORMATION PRESENTED HEREIN ARE UNCOVERED IN THE FIELD

**GENERAL GROUNDING NOTES**

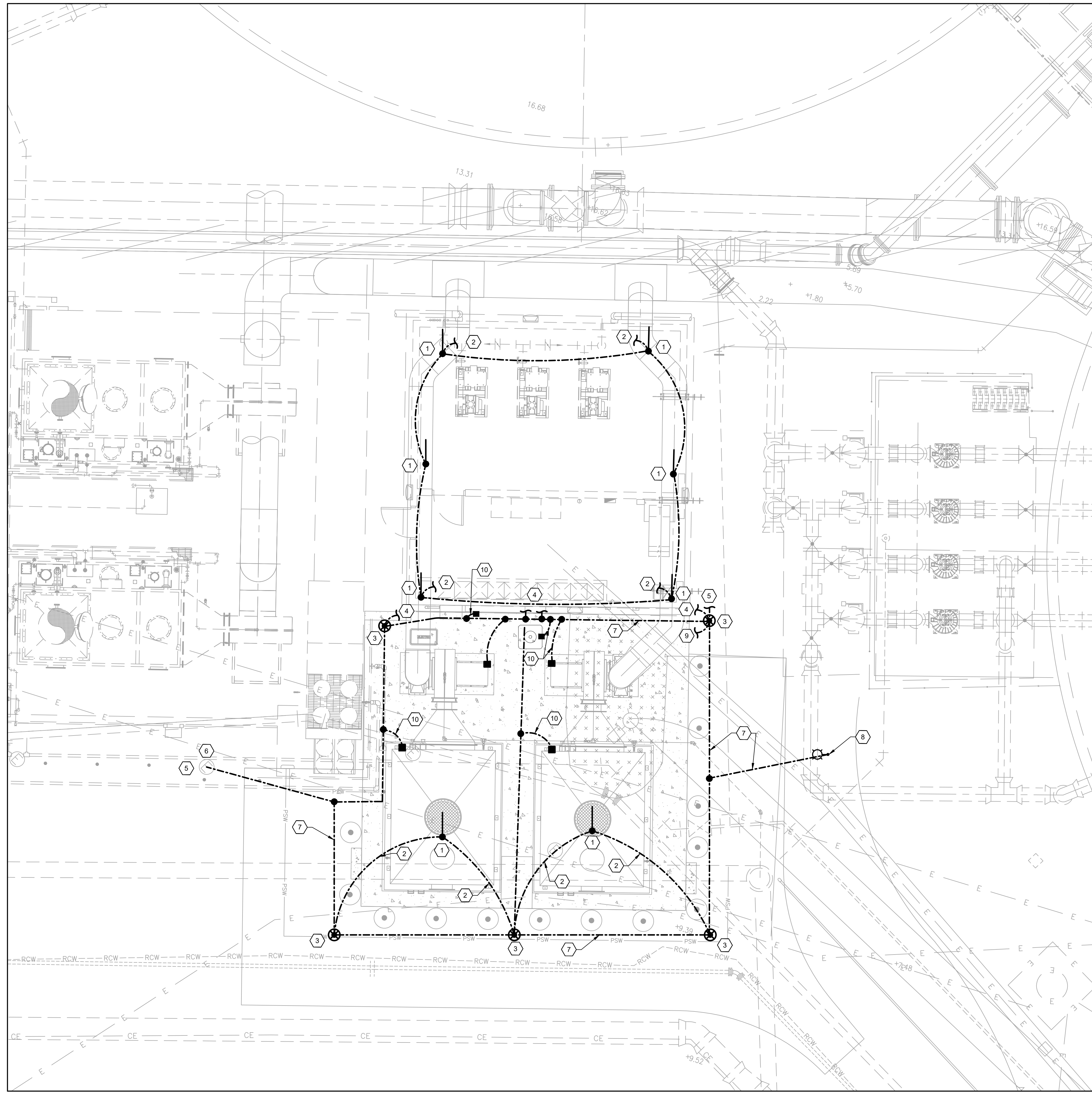
- A. THE CONTRACTOR SHALL ROUTE GROUNDING AND LIGHTNING PROTECTION CONDUCTORS UNDERNEATH SLAB RATHER THAN OVER TOP TO AVOID TRIPPING HAZARDS. FURNISH AND INSTALL PVC PIPE AT THE LOCATION WHERE THE CONDUCTOR EMERGES FROM CONCRETE TO PROTECT FROM DAMAGE.
- B. ALL NON CURRENT CARRYING METALLIC PARTS AND EQUIPMENT SHALL BE EFFECTIVELY GROUNDED.
- C. COORDINATE GROUND ROD LOCATIONS WITH PIPING AND EXISTING UTILITIES. VERIFY GROUND ROD LOCATIONS ARE CLEAR OF OBSTRUCTIONS.
- D. CONNECTIONS AT EQUIPMENT END SHALL BE OF BOLTED TYPE. CONNECTIONS BETWEEN GRID CONDUCTORS SHALL BE EXOTHERMIC WELD TYPE.
- E. MECHANICAL LUGS SHALL ONLY HAVE ONE WIRE LANDED IN EACH TERMINATION. STACKING OF INDIVIDUAL LUGS WILL NOT BE ACCEPTABLE. EACH LUG SHALL BE FASTENED WITH A STAINLESS STEEL NUT AND BOLT.
- F. EXPOSED GROUNDING SHALL BE 1" SCHEDULE 80 PVC OR LIQUID TIGHT FLEXIBLE CONDUIT.
- G. THE GROUNDING ARRANGEMENT SUCH AS GROUND CONDUCTOR BURIED DEPTH, SPACING & QUANTITY MAY BE CHANGED BASED ON THE SOIL ELECTRICAL RESISTIVITY.
- H. CONTRACTOR SHALL TEST THE GROUNDING SYSTEM PER IEEE-81 PRIOR TO CONNECTION OF ANY STRUCTURES. READING OF 0.20Ω OR LESS IS ACCEPTABLE. ADDITIONAL RODS AND/OR COPPER CONDUCTORS SHALL BE ADDED UNTIL THE TEST READING REACHES 0.20Ω OR LESS.

**GENERAL LIGHTNING PROTECTION NOTES**

- A. THE CONTRACTOR SHALL MODIFY AND ADD TO THE EXISTING LIGHTNING PROTECTION SYSTEM TO MAINTAIN PROTECTION FOR THE EXISTING BUILDING AND PROVIDE ADDITIONAL PROTECTION FOR THE NEW CARBON SCRUBBER EQUIPMENT. THE LIGHTNING PROTECTION SYSTEM SHALL BE DESIGNED AND INSTALLED IN ACCORDANCE WITH:
  - A.A. NFPA DOCUMENT #780
  - A.B. UL STANDARD #96A
  - A.C. LIGHTNING PROTECTION INSTITUTE (LPI) STD#175
- B. A FIRM SUITABILITY QUALIFICATION AND LISTED WITH UL AND LPI SHALL INSTALL THE SYSTEM AND SHALL FURNISH A UL MASTER LABEL AND LPI SYSTEM CERTIFICATION UPON COMPLETION OF INSTALL.
- C. ALL METAL BODIES WITHIN 6 FT OF THE CONDUCTOR SHALL BE BONDED TO THE SYSTEM WITH APPROVED FITTINGS AND CONDUCTORS. CONNECTIONS BETWEEN DISSIMILAR METALS SHALL BE MADE WITH APPROVED BIMETALLIC CONNECTIONS. PRIMARY BONDS FOR CONDUCTING METAL BODIES SHALL BE BONDED WITH APPROPRIATE FITTINGS AND FULL SIZE CONDUCTORS, AND SHALL CONSIST OF, BUT NOT LIMITED TO THE FOLLOWING: LADDER AND RAIL SYSTEMS, VENTS AND PIPING. ALUMINUM TO COPPER CONNECTIONS SHALL BE MADE WITH BIMETALLIC CONNECTORS.
- D. ALUMINUM TO COPPER CONNECTIONS SHALL BE MADE WITH BIMETALLIC CONNECTORS. GROUNDS FOR ELECTRICAL AND LIGHTNING GROUNDS SHALL BE TIED TOGETHER TO FORM A COMMON GROUND.
- E. AIR TERMINALS AND LIGHTNING PROTECTION CONDUCTORS SHALL BE ALUMINUM.

**KEYNOTES**

1. LIGHTNING AIR TERMINAL (TYP).
2. LIGHTNING PROTECTION DOWN CONDUCTOR (TYP). THE EXISTING LIGHTNING PROTECTION DOWN CONDUCTORS MAY BE RE-USED IF FOUND TO BE IN SUITABLE CONDITION.
3. GROUND ROD IN TEST WELL (TYP).
4. BOND NEW GES TO EXISTING GES AND LIGHTNING PROTECTION SYSTEM (TYP.)
5. BOND TO EXISTING GROUNDING ELECTRODE CONDUCTOR WITH EXOTHERMIC WELD CONNECTION (TYP).
6. EXISTING GROUND ROD IN TEST WELL TO REMAIN.
7. #4/0 COPPER GROUNDING ELECTRODE CONDUCTOR (TYP).
8. FURNISH AND INSTALL MIN 3/4"x10' GROUND ROD IN LIGHT POLE HANDHOLE.
9. BOND TO REBAR IN CONCRETE SLAB.
10. #4 COPPER BONDING JUMPER (TYP).



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Client/Project Logo



NOTES:



### KEYNOTES

1. REMOVE AND PROTECT EXISTING LIGHT POLE AND FIXTURE. THIS LIGHT POLE IS TO BE RE-LOCATED PER DRAWING E-102.
2. REMOVE EXISTING HAND HOLE. REMOVE EXISTING CONDUIT AND CONDUCTORS FROM PREVIOUS POLE AND NEXT POLE IN CIRCUIT AND EXTEND TO NEW LOCATION. PORTIONS OF THE EXISTING UNDERGROUND CONDUIT MAY BE RE-USED IF IT IS NOT IN CONFLICT WITH THE PROPOSED FOUNDATION FOR THE NEW ODOR CONTROL EQUIPMENT OR OTHER NEW WORK. REPLACE CONDUCTORS WITH NEW #10AWG.
3. EXISTING GROUND ROD AND TEST WELL TO BE REMOVED. REFER TO GROUNDING PLAN FOR MODIFICATIONS AND CONNECTIONS TO THE EXISTING GES. MODIFICATIONS TO THE EXISTING GES SHALL SEQUENCED TO PREVENT INTERRUPTION OF SERVICE.
4. EXISTING HAND HOLE FOR THE GENERATOR CONNECTION BOX. EXTEND HAND HOLE TO SIT FLUSH WITH TOP OF NEW SLAB.
5. RE-LOCATE EXISTING GENERATOR CONNECTION BOX. REFER TO PLAN DRAWING E-102 FOR ADDITIONAL DETAIL. AS PART OF RE-LOCATING THIS PANEL, REPLACE ALL EXPOSED CONDUIT ON WALL WITH NEW RIGID ALUMINUM CONDUIT AND REPLACE CONDUCTORS BETWEEN GENERATOR CONNECTION BOX AND MCC.
6. HVAC CONTRACTOR SHALL RE-LOCATE AIR CONDITIONER CONDENSER AND ALL REQUIRED AUXILIARIES (REFRIGERANT LINE, POWER AND CONTROL CONDUCTORS AND CONDUITS, DISCONNECT, HURRICANE STRAPS, ETC.) REFER TO PLAN DRAWING FOR PROPOSED LOCATION. THE CONTRACTOR SHALL FURNISH TEMPORARY AIR CONDITIONING FOR THE BUILDING ELECTRICAL ROOM WHILE THE AIR CONDITIONER IS TAKEN OUT OF SERVICE.
7. EXISTING GROUNDING ELECTRODE CONNECTIONS. ALL EXISTING GROUNDING ELECTRODE CONNECTIONS FOR EQUIPMENT AND LIGHTNING PROTECTION ARE TO BE MAINTAINED. REFER TO GROUNDING PLAN ON DRAWING E-103 FOR DETAIL.
8. EXISTING LIGHTNING PROTECTION SYSTEM TO BE MODIFIED TO PROTECT PROPOSED PIPING AND ODOR CONTROL UNITS. REFER TO DRAWING E-103 FOR DETAIL.
9. REMOVE EXISTING LIGHT FIXTURE AND REPLACE WITH NEW IN LOCATION SHOWN. REFER TO PLAN DRAWING FOR FIXTURE TYPE AND LOCATION.
10. REMOVE LIGHT FIXTURE AND REPLACE WITH STAINLESS STEEL OR ALUMINUM JUNCTION BOX. EXTEND BRANCH CIRCUIT AND CONDUCTORS (2#12 + 1#12G IN 3/4" C) ALONG WALL TO NEW FIXTURE LOCATION. SECURE NEW FIXTURE TO WALL IN ACCORDANCE WITH MANUFACTURER RECOMMENDATIONS USING STAINLESS STEEL HARDWARE.


Revision	By	Appd	Date
BID SET	BB	SM	NOVEMBER, 2023
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Client/Project  
COLLIER COUNTY PUBLIC UTILITIES

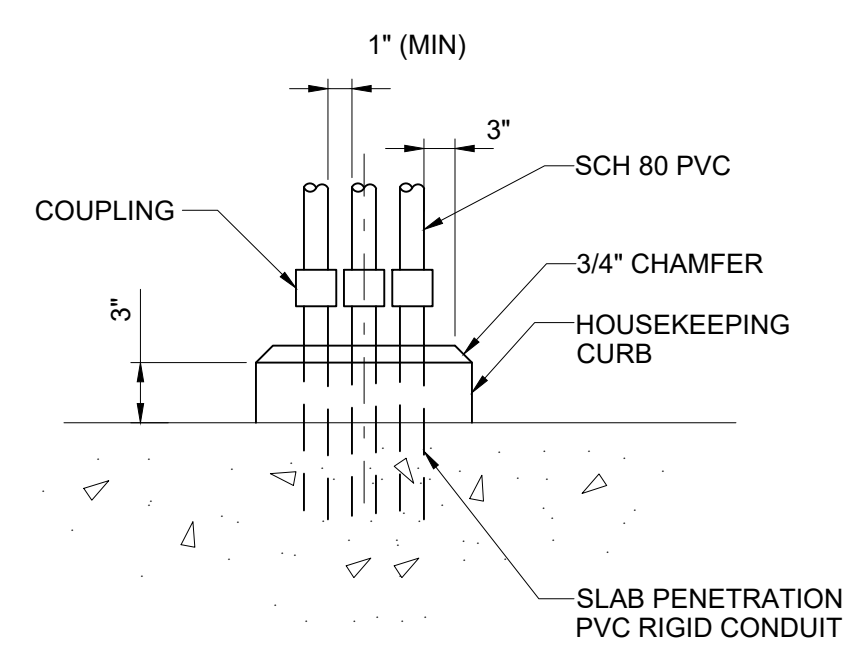
NORTH COUNTY WATER RECLAMATION  
FACILITY ODOR CONTROL - PHASE II

Title  
ELECTRICAL  
COORDINATION NOTES

Project No. 177311697 Scale NO SCALE

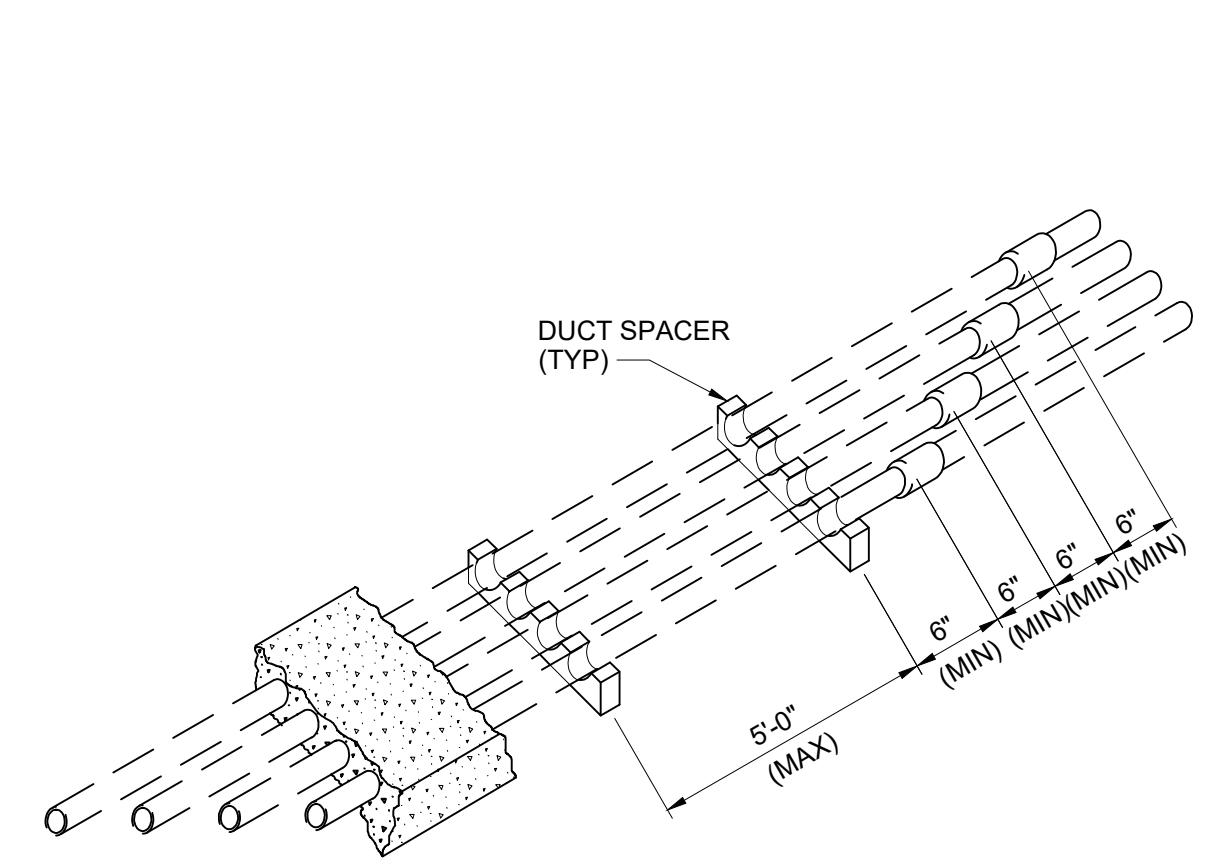
Phase Drawing No.

BID SET 20 of 33 E-401

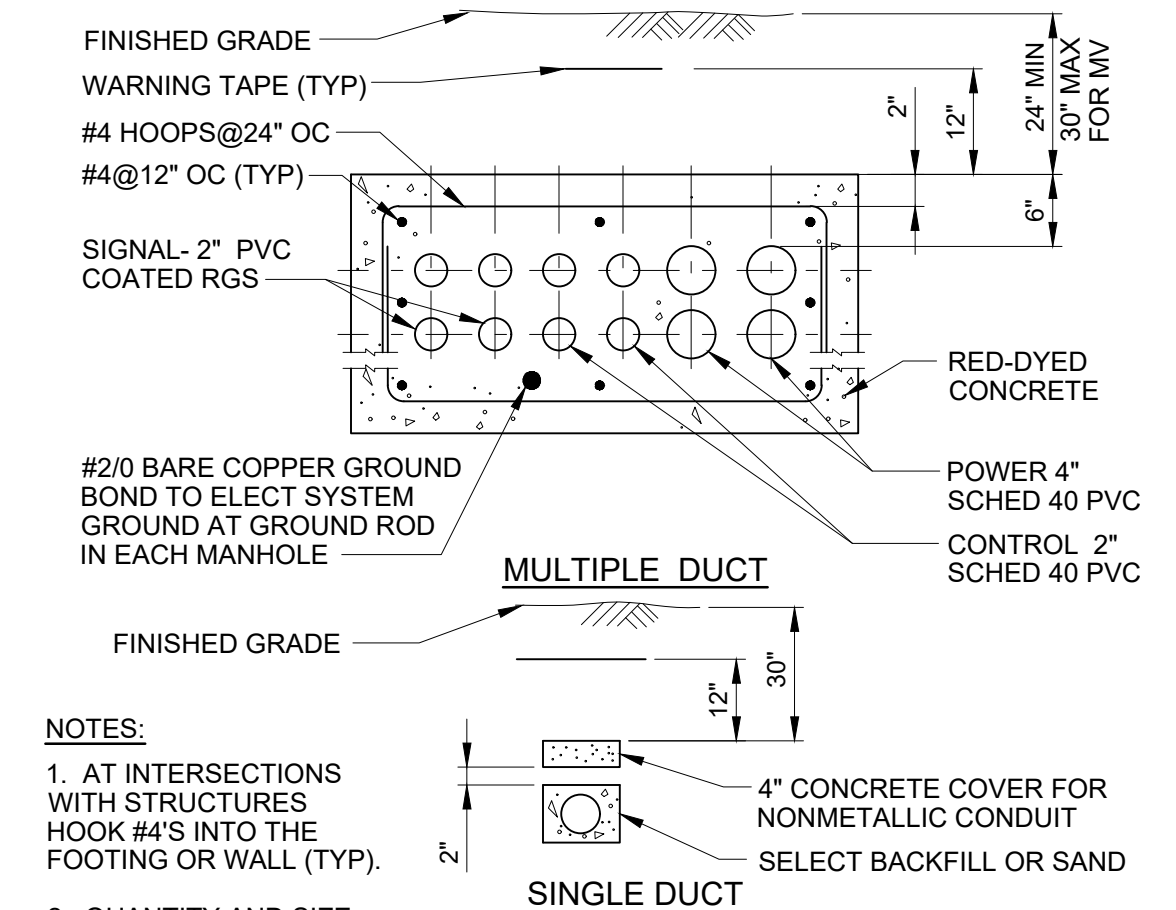


**NOTE:**  
HOUSEKEEPING CURB REQUIRED AT ALL LOCATIONS FOR SINGLE AND MULTIPLE RISERS.

**1** CONCRETE HOUSEKEEPING CURB  
NON-HAZARDOUS LOCATIONS  
STD NO SCALE

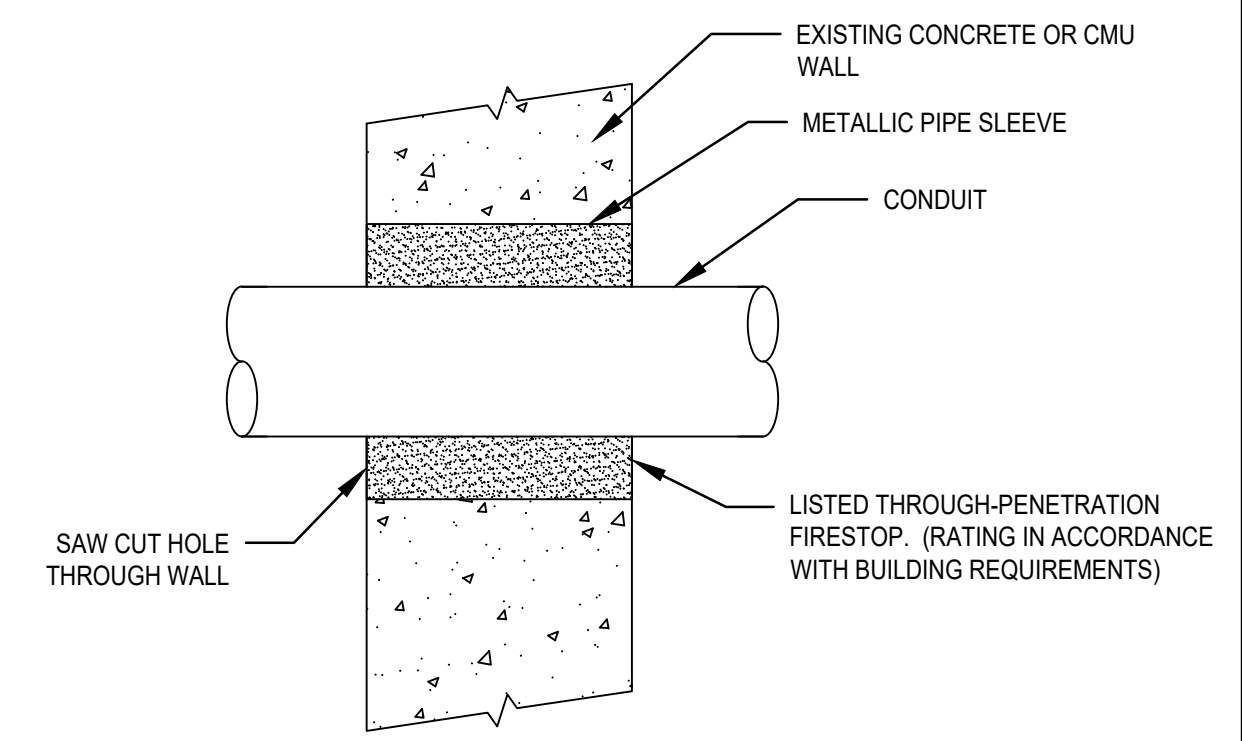


**2** TYPICAL DUCTBANK  
JOINT/SUPPORT SPACING  
STD NO SCALE



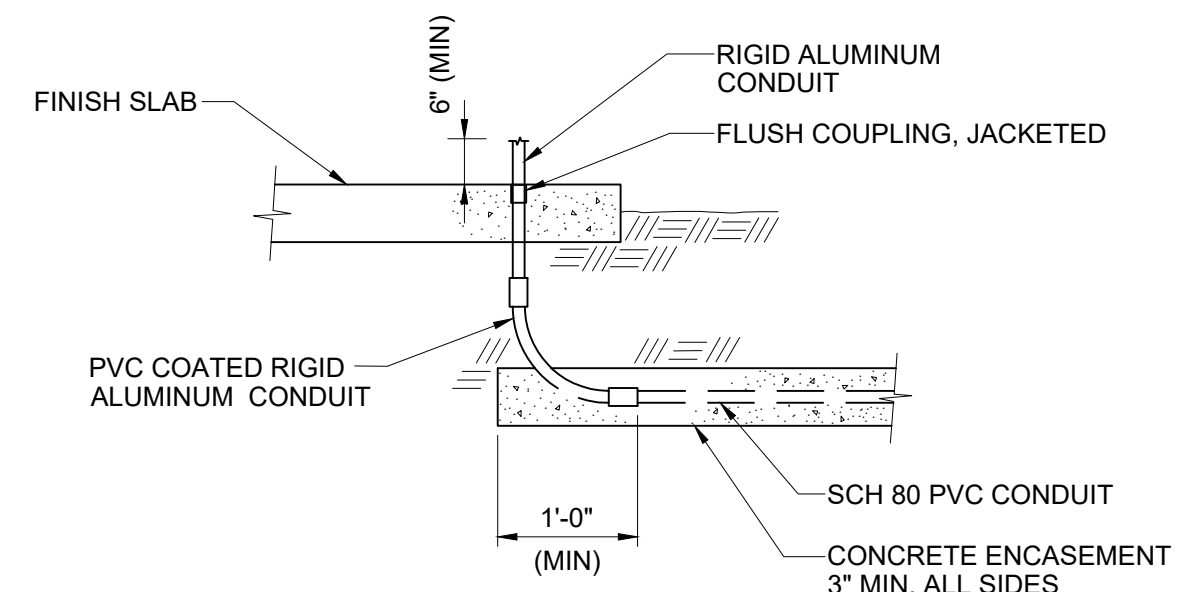
**NOTES:**  
1. AT INTERSECTIONS WITH STRUCTURES WITH SYSTEM HOOK #4'S INTO THE FOOTING OR WALL (TYP).  
2. QUANTITY AND SIZE AS REQUIRED. REFER TO PLAN DRAWINGS AND ONE-LINE DIAGRAMS.

**3** TYPICAL DUCTBANK  
STD NO SCALE

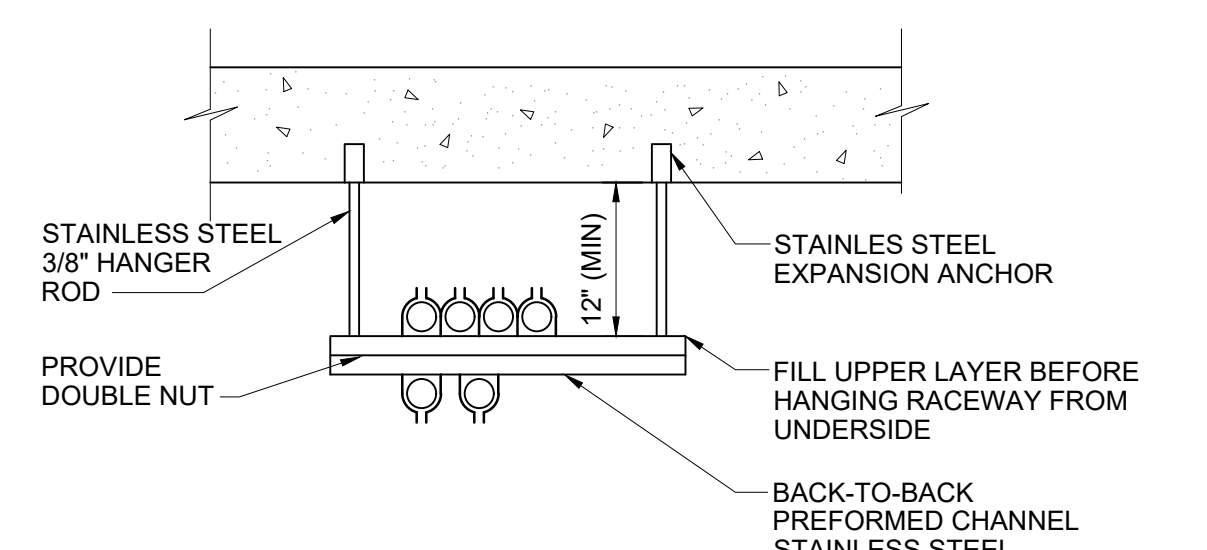


**NOTES:**  
1. ALL CONDUIT RUNS SHALL BE SUPPORTED IN ACCORDANCE WITH THE LATEST NEC CODE.  
2. RIGID ALUMINUM CONDUIT SHALL BE COATED WHERE CONDUIT PENETRATES WALL TO PREVENT REACTION WITH CONCRETE.

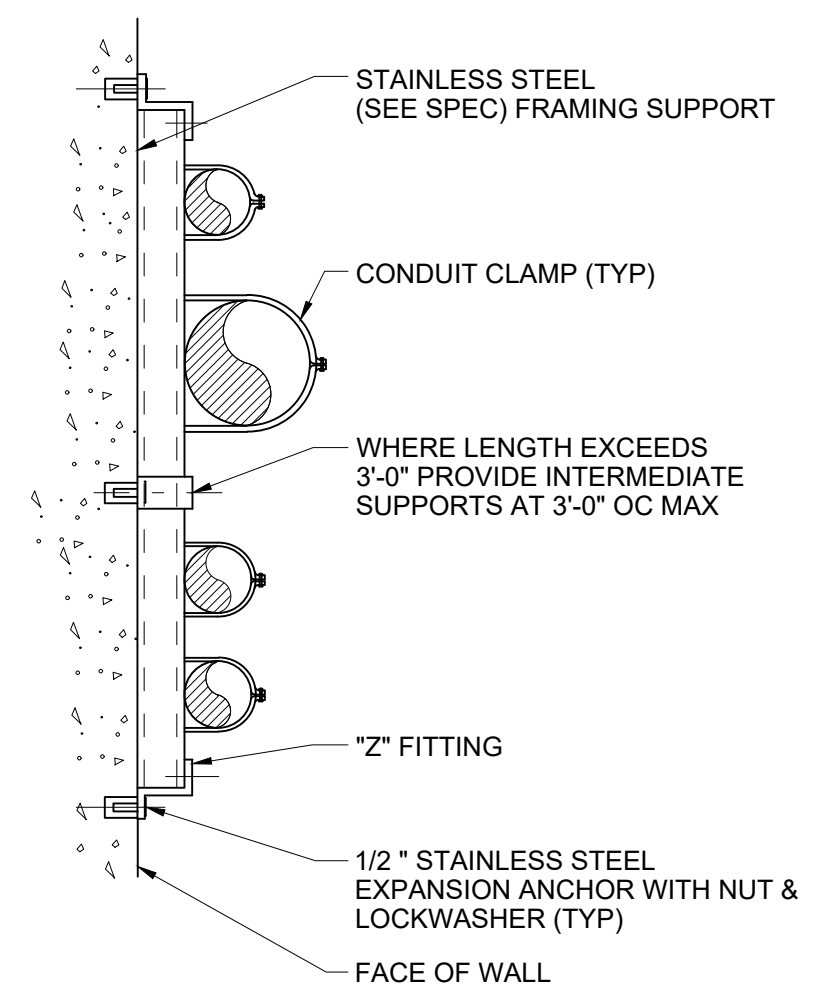
**4** WALL PENETRATION  
STD NO SCALE



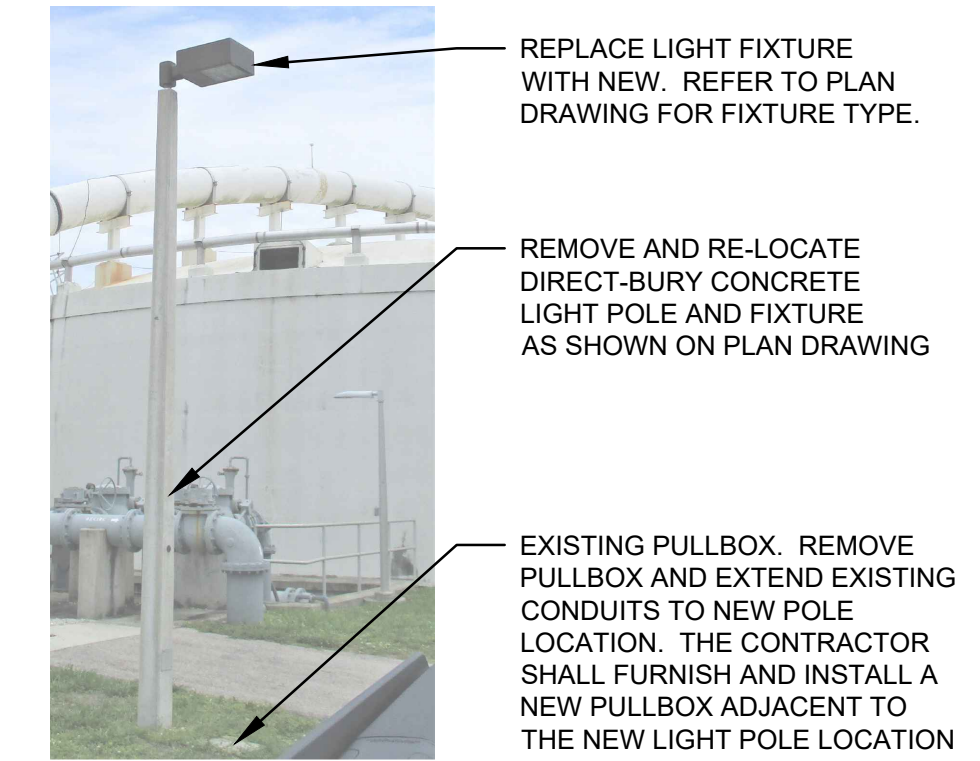
**5** RISER FROM NON-METALLIC DUCT  
STD NO SCALE



**6** CONDUIT TRAPEZE  
STD NO SCALE



**7** CONDUIT SUPPORT  
FLUSH MOUNT  
STD NO SCALE

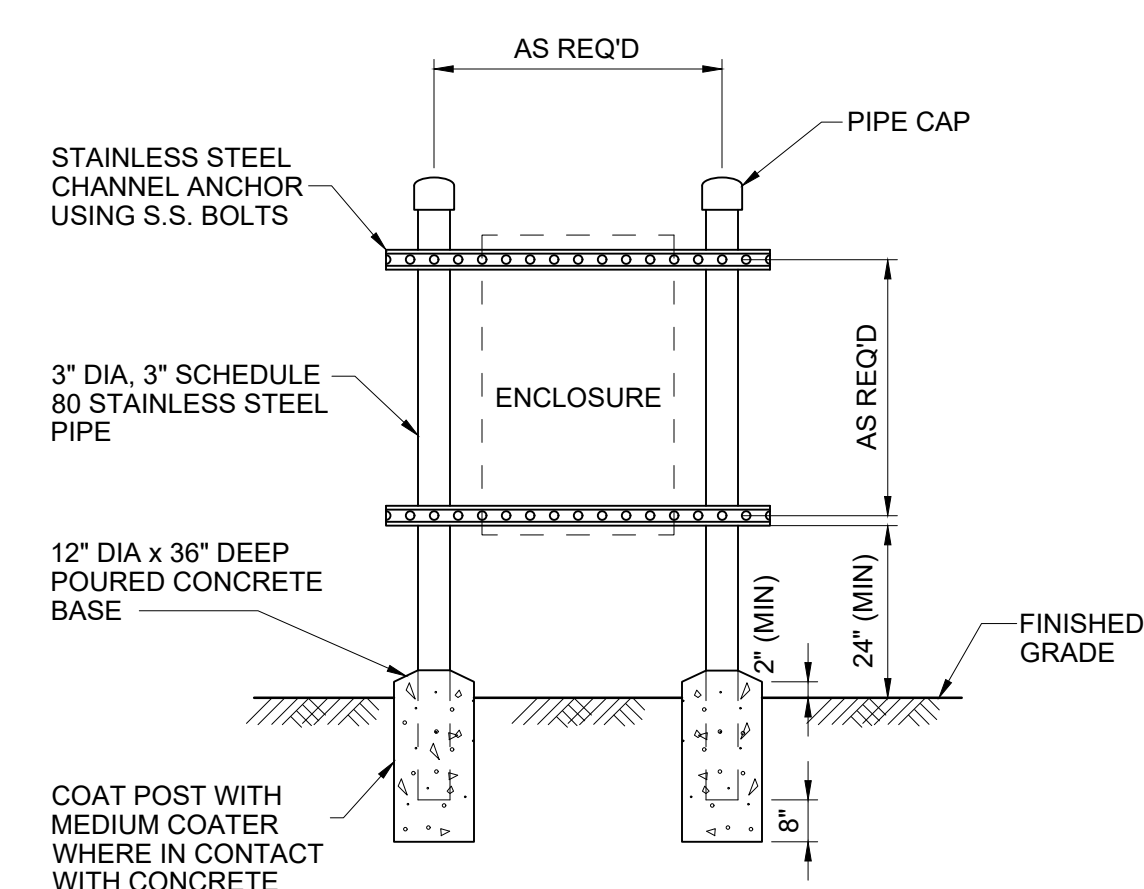


**NOTES:**  
1. THE CONTRACTOR IS RESPONSIBLE FOR FURNISHING AND INSTALLING ALL REQUIRED LABOR AND MATERIALS FOR RE-LOCATION OF LIGHT POLE, INCLUDING, BUT NOT LIMITED TO, CONDUIT AND WIRING TO EXTEND EXISTING RACEWAYS, PULLBOXES, SUBMERSION RATED SPLICES AND IN-LINE FUSES, ETC.

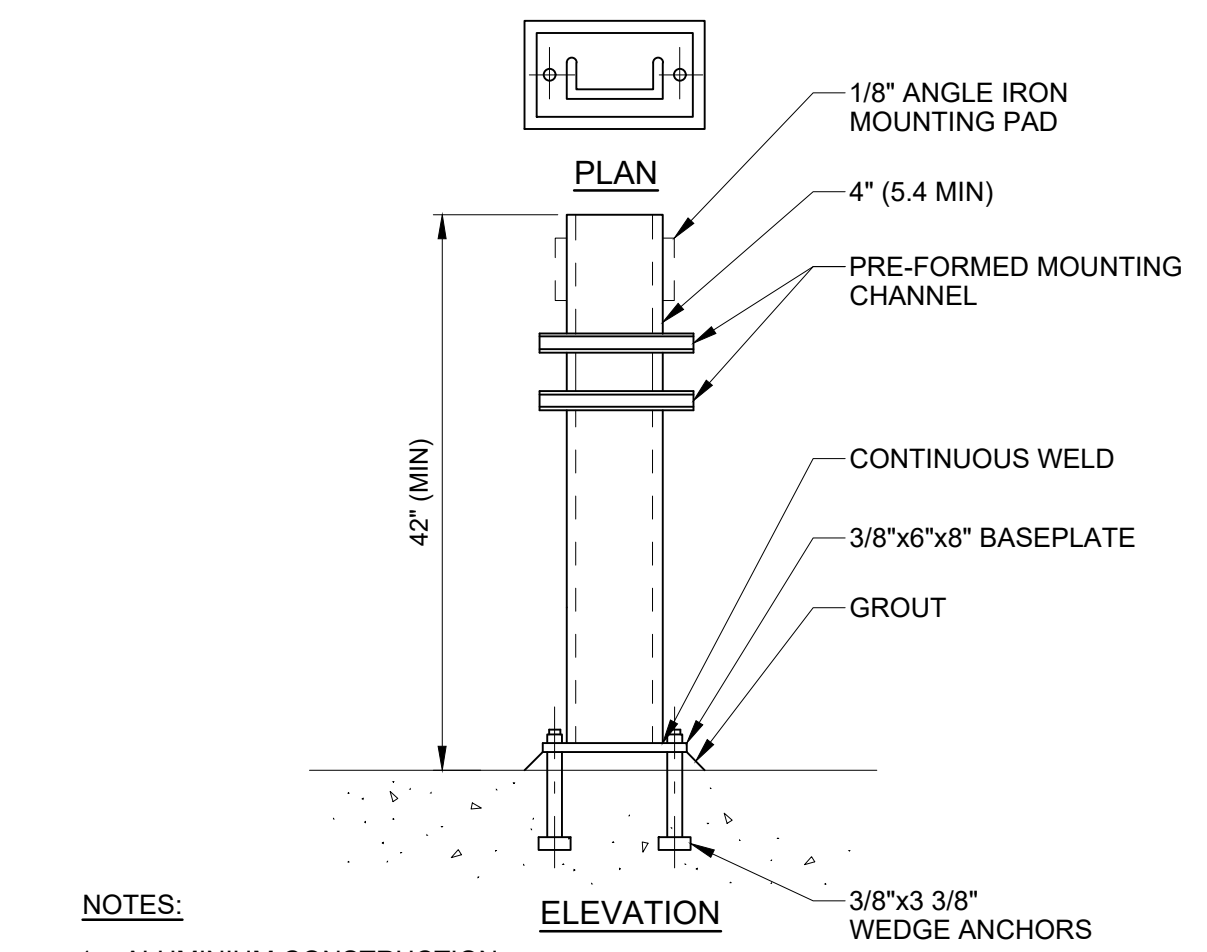
**8** LIGHT POLE RE-LOCATION  
STD NO SCALE

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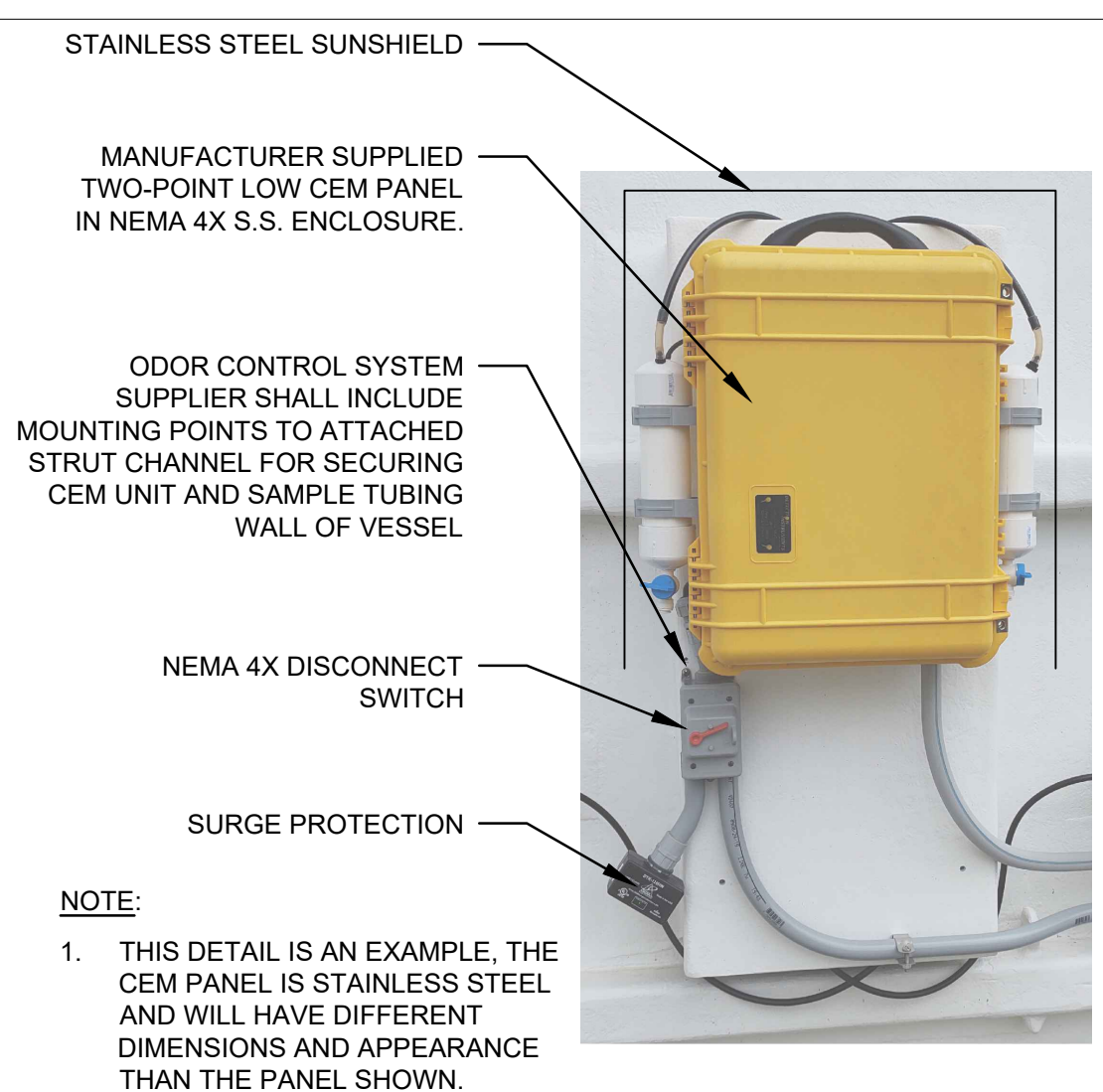


**9** ENCLOSURE MOUNTING STAND  
STD NO SCALE



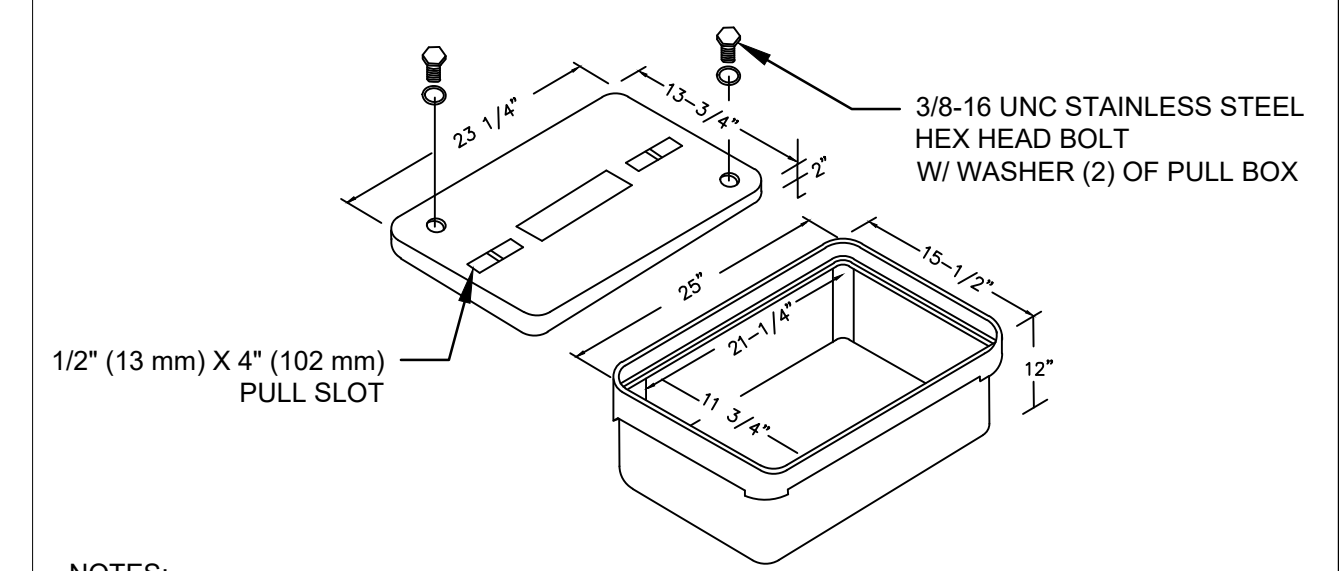
**NOTES:**  
1. ALUMINIUM CONSTRUCTION.  
2. PROVIDE MOUNTING ACCESSORY TO SUIT EQUIPMENT.

**10** PEDESTAL FOR PANEL  
STD NO SCALE



**NOTE:**  
1. THIS DETAIL IS AN EXAMPLE, THE CEM PANEL IS STAINLESS STEEL AND WILL HAVE DIFFERENT DIMENSIONS AND APPEARANCE THAN THE PANEL SHOWN.

**10** H2S DETECTOR DETAIL  
STD NO SCALE



**NOTES:**  
1. ALL PULL BOXES SHALL HAVE AN OPEN-BOTTOM, QUAZITE POLYMER CONCRETE DESIGN WITH A MINIMUM COMPRESSIVE STRENGTH OF 2,500 PSI AT TWENTY EIGHT (28) DAYS. POLYMER CONCRETE PULL BOX SHALL BE QUAZITE PRODUCT NO. PG1324BA12 OR APPROVED EQUIVALENT.  
2. ALL PULL BOX COVERS FURNISHED AND INSTALLED SHALL BE POLYMER CONCRETE QUAZITE PRODUCT NO. PG1324HH00 TIER 22, OR APPROVED EQUIVALENT. PULL BOX COVERS SHALL BE MARKED "LIGHTING".  
3. PULL BOXES, JUNCTION BOXES, AND ALL ELECTRICAL WORK MUST CONFORM TO N.E.C. (LATEST REQUIREMENTS).  
4. DO NOT LOCATE PULL BOXES IN AREAS SUBJECT TO VEHICULAR TRAFFIC.

**12** PULL BOX  
STD NO SCALE

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NORTH COUNTY WATER RECLAMATION  
FACILITY ODOR CONTROL - PHASE II

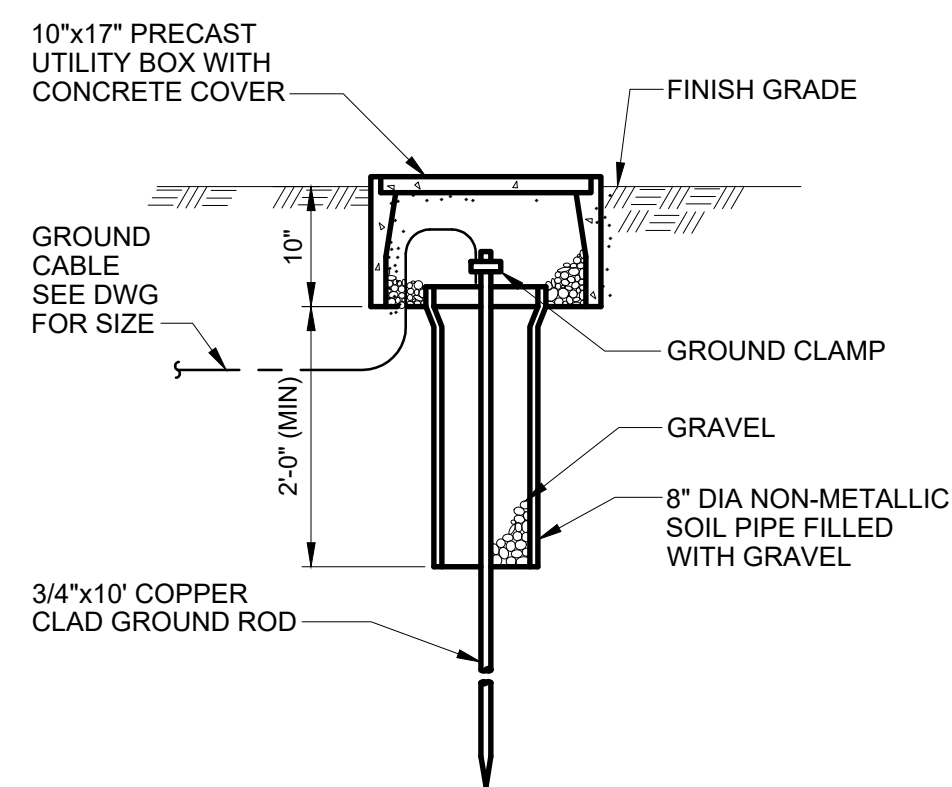
Title  
ELECTRICAL  
TYPICAL DETAILS

Project No. 177311697	Scale NO SCALE
Phase	Drawing No.

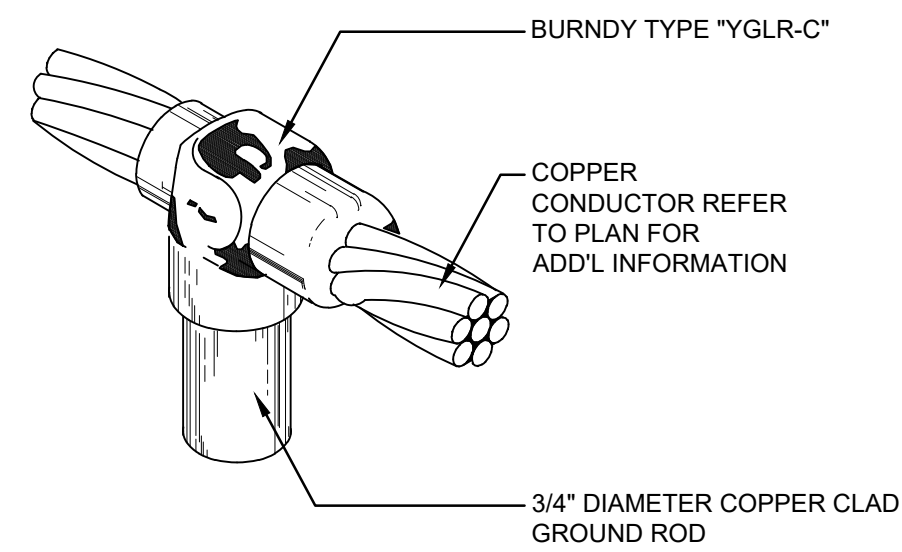
Client/Project Logo



NOTES:

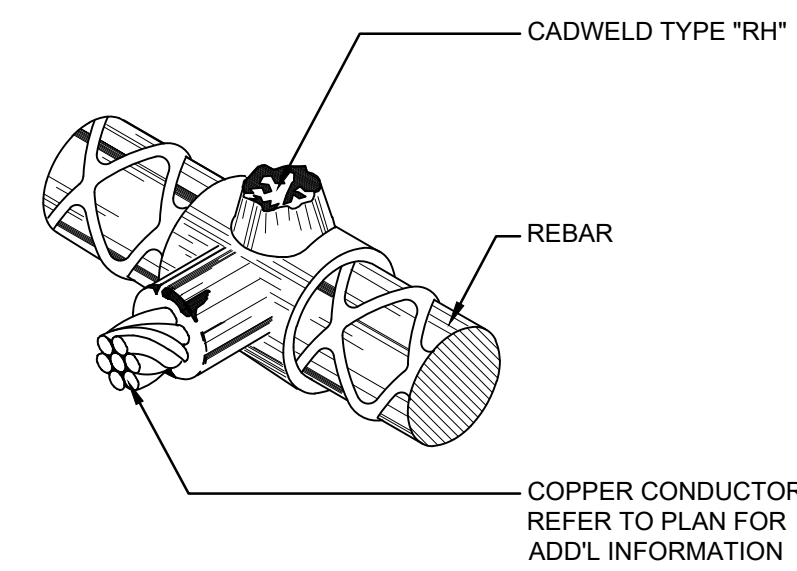


13  
STD  
GROUND ROD AND WELL  
NO SCALE



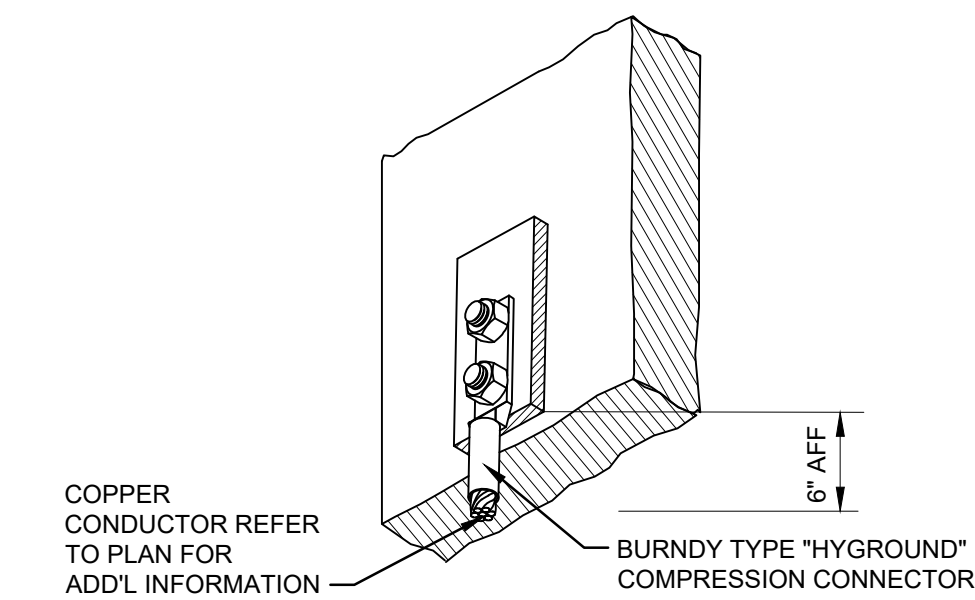
NOTE:  
BURNDY TYPE LISTED FOR REFERENCE ONLY AND DOES NOT PRECLUDE ANY OTHER MANUFACTURERS. CONNECTION SHALL BE HIGH STRENGTH IRREVERSIBLE COMPRESSION TYPE.

13  
STD  
GROUND ROD CONNECTION  
NO SCALE



NOTE:  
CADWELD TYPE LISTED FOR REFERENCE ONLY AND DOES NOT PRECLUDE ANY OTHER MANUFACTURERS. THERMOWELD IS AN APPROVED MANUFACTURER.

13  
STD  
REBAR GROUNDING CONNECTION  
NO SCALE



NOTE:  
BURNDY TYPE LISTED FOR REFERENCE ONLY AND DOES NOT PRECLUDE ANY OTHER MANUFACTURERS.

13  
STD  
BOLTED GROUNDING CONNECTION  
NO SCALE


Revision	By	Appd	Date
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NORTH COUNTY WATER RECLAMATION  
FACILITY ODOR CONTROL - PHASE II

Title  
ELECTRICAL  
TYPICAL DETAILS

Project No. 177311697 Scale NO SCALE

Phase Drawing No. E-502

BID SET 22 of 33

Client/Project Logo

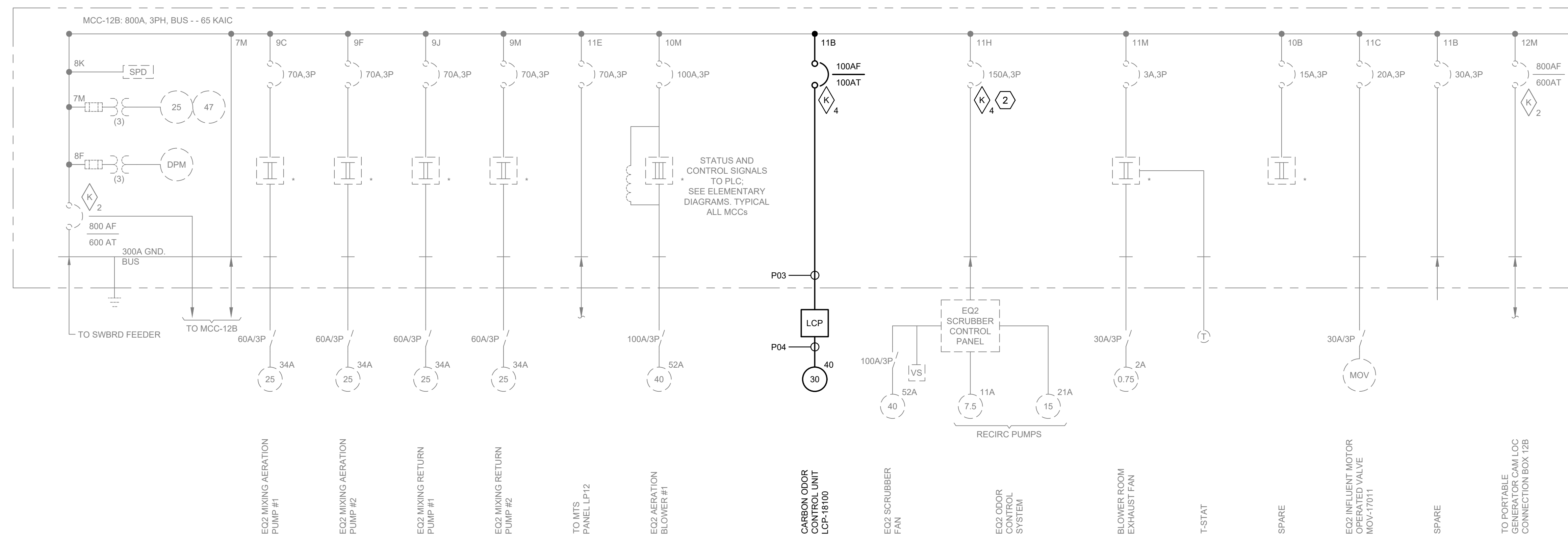
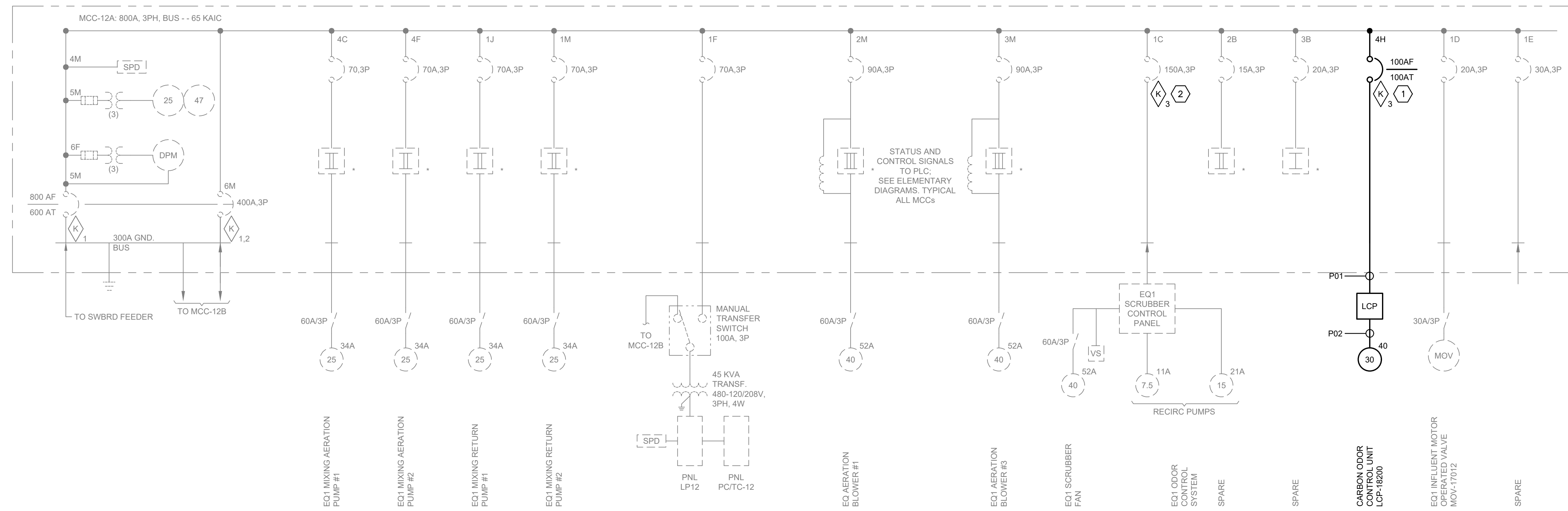


NOTES:

- A. DRAWING IS BASED OFF AS-BUILT INFORMATION AND DATA COLLECTED IN THE FIELD. THE CONTRACTOR SHALL ALERT THE ENGINEER IF ANY VARIATIONS FROM THE INFORMATION PRESENTED ARE UNCOVERED IN THE FIELD.

KEYED NOTES:

- FURNISH AND INSTALL FEEDER BREAKER FOR NEW ODOR CONTROL UNIT IN EMPTY SPACE AS SHOWN.
- FURNISH AND INSTALL A KIRK KEY INTERLOCK SYSTEM TO PREVENT SIMULTANEOUS OPERATION WITH EXISTING ODOR CONTROL UNITS. NEW CARBON SCRUBBERS HAVE SMALLER LOAD THAN EXISTING. TOTAL MAXIMUM OPERATING LOAD REMAINS UN-CHANGED. REFER ONE-LINE DRAWING FOR DETAIL.




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COLLIER COUNTY PUBLIC UTILITIES

NORTH COUNTY WATER RECLAMATION  
FACILITY ODOR CONTROL - PHASE II

Title  
ELECTRICAL  
ONE LINE DIAGRAMS  
MCC-12A/12B

Project No. 177311697 Scale NO SCALE

Phase Drawing No.

BID SET 23 of 33 E-601

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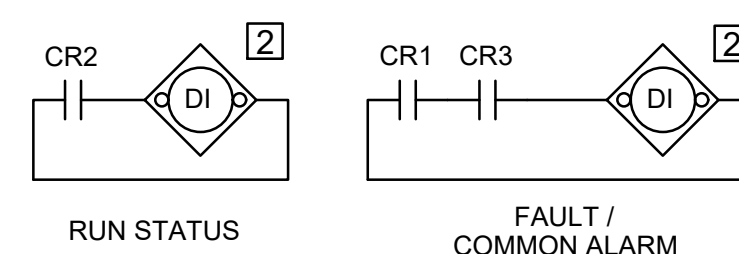
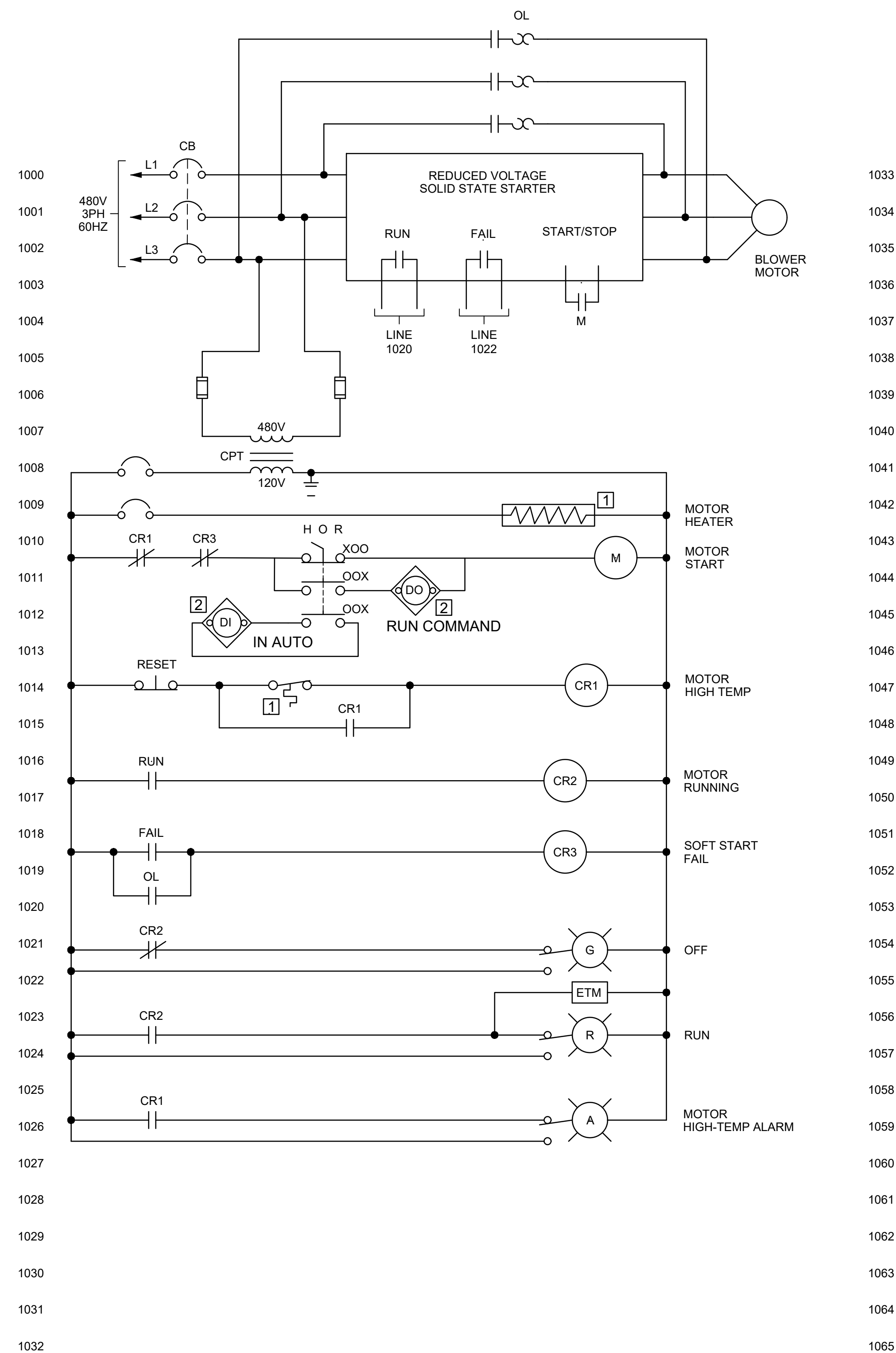


Client/Project Logo



NOTES:

- A. THE STARTER SCHEMATIC IS DIAGRAMMATIC IN NATURE AND IS INTENDED ONLY TO CONVEY MINIMUM REQUIREMENTS AND OPERATING LOGIC. THE PANEL MANUFACTURER SHALL SUBMIT DETAIL SHOP DRAWINGS. THE STARTER CONTROL PANEL SHALL BE MANUFACTURED BY A UL 508A PANEL SHOP AND BEAR THE UL LABEL.
- B. THE SOFT STARTER SHALL BE HOUSED IN A NEMA 4X STAINLESS STEEL ENCLOSURE, PAINTED WHITE, WITH SUNSHIELDS. ALL PUSHBUTTONS, SWITCHES, PILOT LIGHTS, AND HMI SHALL BE PROTECTED FROM DIRECT SUNWEATHER EXPOSURE.
- C. THE PANEL MANUFACTURER SHALL INCLUDE A COOLING SOLUTION AS NECESSARY TO MAINTAIN OPERATING TEMPERATURE WITHIN THE ENCLOSURE.
- D. THE STARTER CIRCUIT BREAKER SHALL BE PAD LOCKABLE IN THE OFF POSITION.



LOCATION LEGEND

- 1 FIELD
- 2 PLC

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File Name: 11697-E-601	FL	BB	RC NOVEMBER, 2023
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COLLIER COUNTY PUBLIC UTILITIES

NORTH COUNTY WATER RECLAMATION  
FACILITY ODOR CONTROL - PHASE II

Title  
TYPICAL EXHAUST FAN  
STARTER SCHEMATIC

Project No. 177311697	Scale NO SCALE
Phase BID SET	Drawing No. 25 of 33
E-603	

Client/Project Logo



NOTES:

- A. THE CONTRACTOR SHALL POST A LAMINATED COPY OF THE PROCEDURE FOR THE INTERLOCKS AT EACH MCC BUCKET WITH APPLICABLE KEYED INTERLOCK HARDWARE.

**GENERAL INFORMATION**

THE FEEDER BREAKERS FOR THE EQ1 SCRUBBER AND THE CARBON ODOR CONTROL UNIT LCP-18200 ARE INTERLOCKED TO PREVENT SIMULTANEOUS OPERATION DUE TO POWER LIMITATIONS. THIS PROCEDURE DOCUMENTS HOW TO FEED POWER TO EACH EQUIPMENT.

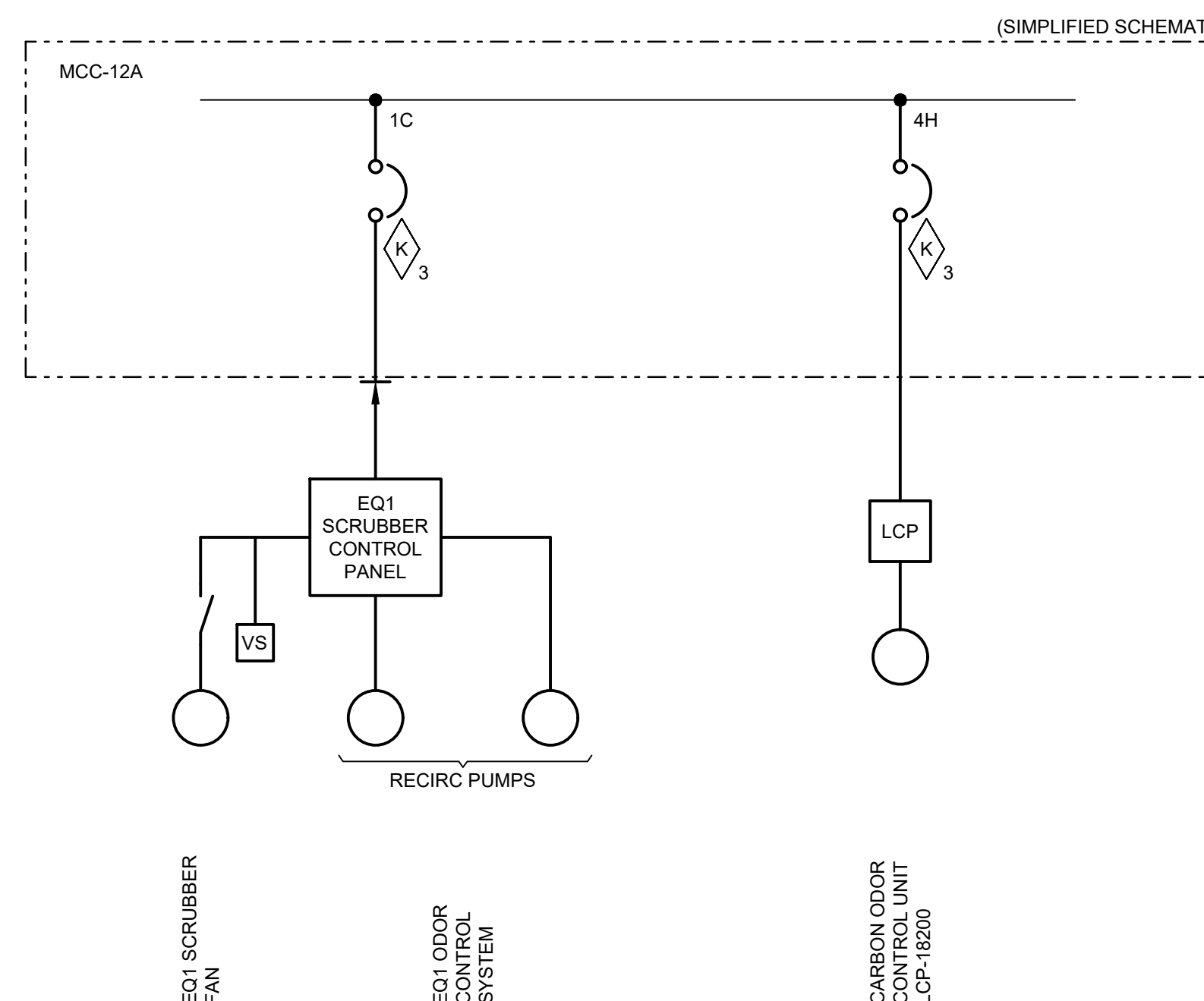
**PROCEDURES**

**POWER EQ1 SCRUBBER**

1. SHUT DOWN AND VERIFY BOTH EQ1 SCRUBBER AND CARBON ODOR CONTROL UNIT LCP-18200 ARE SHUT DOWN, AND SWITCHES ARE IN OFF POSITION AT THEIR RESPECTIVE CONTROL PANELS.
2. OPEN THE CARBON ODOR CONTROL UNIT LCP-18200 FEEDER BREAKER (4H) AT MCC-12A, THEN ROTATE THE K3 KEY AT THE CARBON ODOR CONTROL UNIT LCP-18200 FEEDER BREAKER (4H) UNTIL KEY IS NO LONGER HELD CAPTIVE. REMOVE KEY.
3. INSERT KEY REMOVED IN PREVIOUS STEP INTO THE K3 LOCK AT THE EQ1 SCRUBBER FEEDER BREAKER (1C) IN MCC-12A AND ROTATE UNTIL FULLY ENGAGED AND IS HELD CAPTIVE, THEN CLOSE THE EQ1 SCRUBBER FEEDER BREAKER (1C).

**POWER CARBON ODOR CONTROL UNIT LCP-18200**

1. SHUT DOWN AND VERIFY BOTH EQ1 SCRUBBER AND CARBON ODOR CONTROL UNIT LCP-18200 ARE SHUT DOWN, AND SWITCHES ARE IN OFF POSITION AT THEIR RESPECTIVE CONTROL PANELS.
2. OPEN THE EQ1 SCRUBBER FEEDER BREAKER (1C) AT MCC-12A, THEN ROTATE THE K3 KEY AT THE EQ1 SCRUBBER FEEDER BREAKER (1C) UNTIL KEY IS NO LONGER HELD CAPTIVE. REMOVE KEY.
3. INSERT KEY REMOVED IN PREVIOUS STEP INTO THE K3 LOCK AT THE CARBON ODOR CONTROL UNIT LCP-18200 FEEDER BREAKER (4H) IN MCC-12A AND ROTATE UNTIL FULLY ENGAGED AND IS HELD CAPTIVE, THEN CLOSE THE CARBON ODOR CONTROL UNIT LCP-18200 FEEDER BREAKER (4H).



**GENERAL INFORMATION**

THE FEEDER BREAKERS FOR THE EQ2 SCRUBBER AND THE CARBON ODOR CONTROL UNIT LCP-18100 ARE INTERLOCKED TO PREVENT SIMULTANEOUS OPERATION DUE TO POWER LIMITATIONS. THIS PROCEDURE DOCUMENTS HOW TO FEED POWER TO EACH EQUIPMENT.

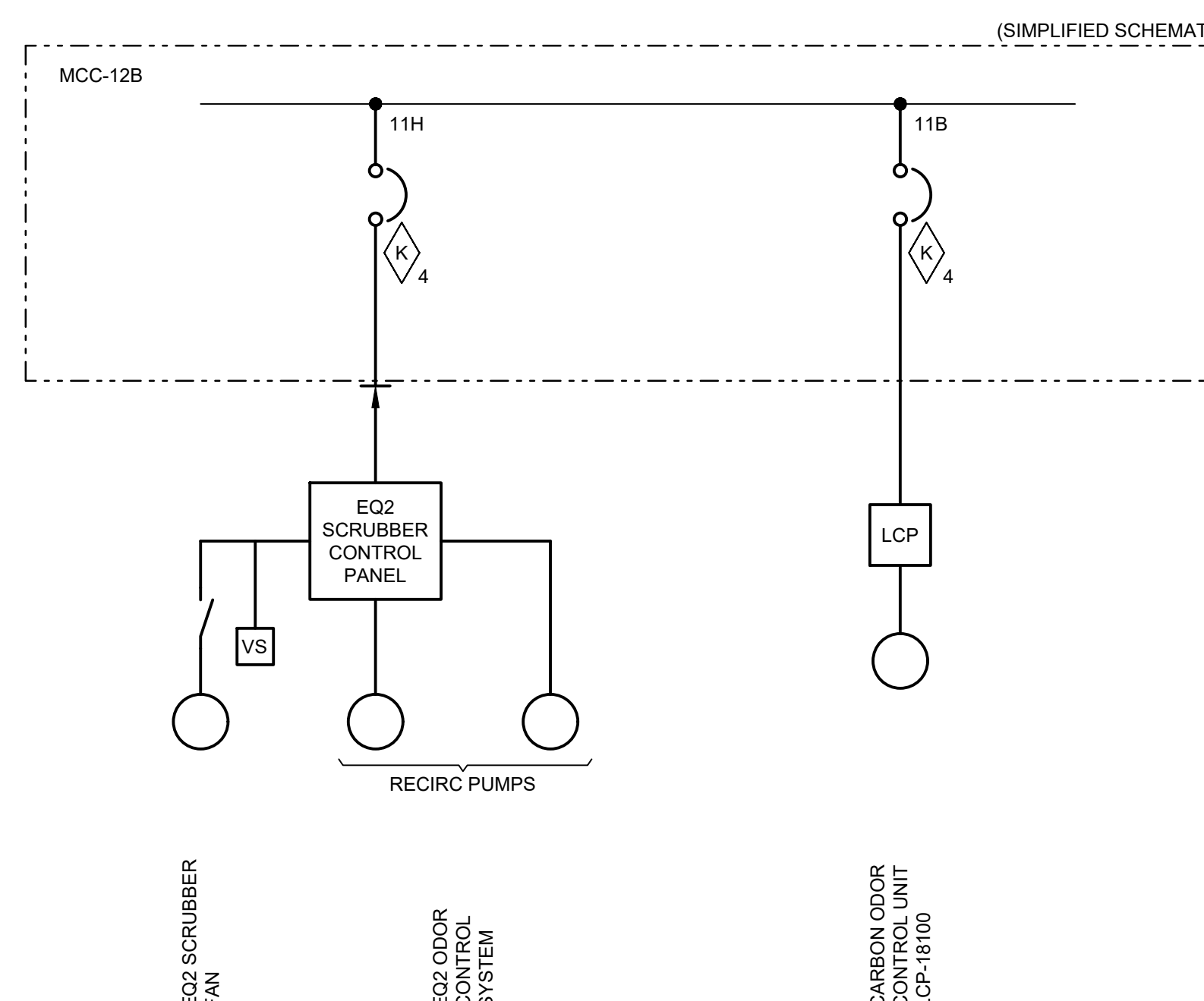
**PROCEDURES**

**POWER EQ2 SCRUBBER**

1. SHUT DOWN AND VERIFY BOTH EQ2 SCRUBBER AND CARBON ODOR CONTROL UNIT LCP-18100 ARE SHUT DOWN, AND SWITCHES ARE IN OFF POSITION AT THEIR RESPECTIVE CONTROL PANELS.
2. OPEN THE CARBON ODOR CONTROL UNIT LCP-18100 FEEDER BREAKER (11B) AT MCC-12B, THEN ROTATE THE K4 KEY AT THE CARBON ODOR CONTROL UNIT LCP-18100 FEEDER BREAKER (11B) UNTIL KEY IS NO LONGER HELD CAPTIVE. REMOVE KEY.
3. INSERT KEY REMOVED IN PREVIOUS STEP INTO THE K4 LOCK AT THE EQ2 SCRUBBER FEEDER BREAKER (11H) IN MCC-12B AND ROTATE UNTIL FULLY ENGAGED AND IS HELD CAPTIVE, THEN CLOSE THE EQ2 SCRUBBER FEEDER BREAKER (11H).

**POWER CARBON ODOR CONTROL UNIT LCP-18100**

1. SHUT DOWN AND VERIFY BOTH EQ2 SCRUBBER AND CARBON ODOR CONTROL UNIT LCP-18100 ARE SHUT DOWN, AND SWITCHES ARE IN OFF POSITION AT THEIR RESPECTIVE CONTROL PANELS.
2. OPEN THE EQ2 SCRUBBER FEEDER BREAKER (11H) AT MCC-12B, THEN ROTATE THE K4 KEY AT THE EQ2 SCRUBBER FEEDER BREAKER (11H) UNTIL KEY IS NO LONGER HELD CAPTIVE. REMOVE KEY.
3. INSERT KEY REMOVED IN PREVIOUS STEP INTO THE K4 LOCK AT THE CARBON ODOR CONTROL UNIT LCP-18100 FEEDER BREAKER (11B) IN MCC-12B AND ROTATE UNTIL FULLY ENGAGED AND IS HELD CAPTIVE, THEN CLOSE THE CARBON ODOR CONTROL UNIT LCP-18100 FEEDER BREAKER (11B).



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Client/Project  
COLLIER COUNTY PUBLIC UTILITIES

NORTH COUNTY WATER RECLAMATION  
FACILITY ODOR CONTROL - PHASE II

Title  
KEY INTERLOCK PROCEDURE

Project No. 177311697	Scale NO SCALE
Phase	Drawing No.
BID SET	26 of 33
	E-604



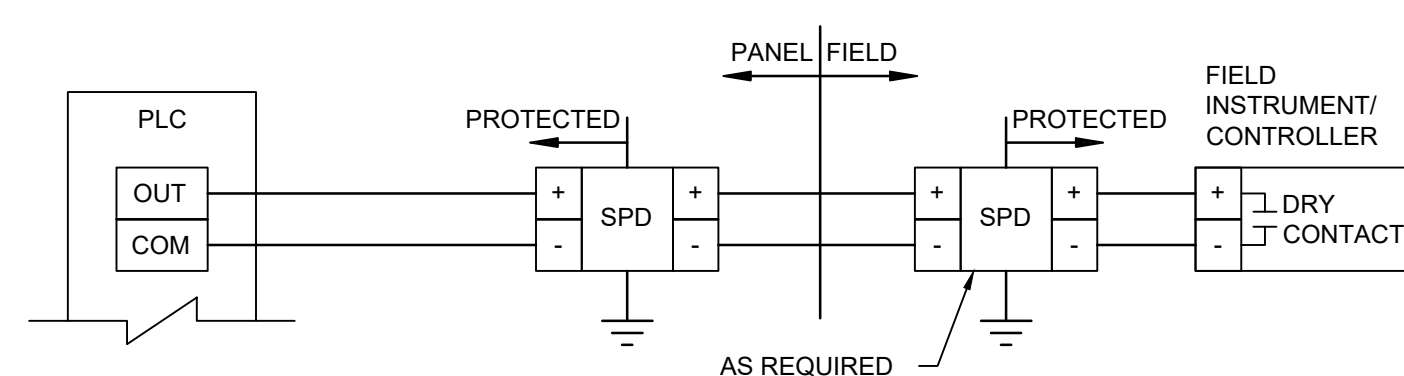


Client/Project Logo



NOTES:

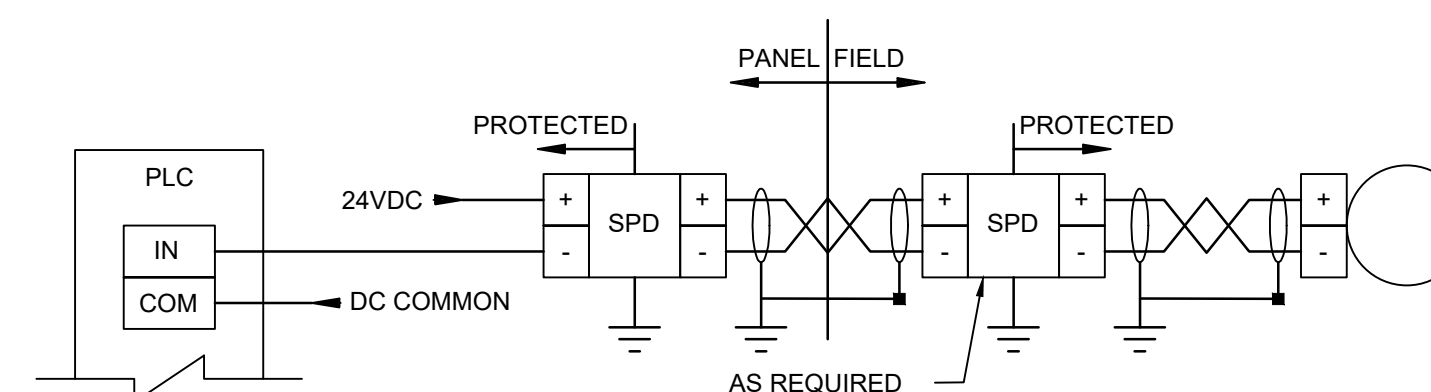
- THE CONTRACTOR SHALL FURNISH AND INSTALL SURGE PROTECTION DEVICES (SPD) IN THE PLC CABINET AND THE INSTRUMENT.



NOTES:

- TERMINATE SPD DIRECTLY TO GROUND BUS. DO NOT DAISI CHAIN.
- WHERE SPD ARE REQUIRED IN THE FIELD, INSTALL SURGE PROTECTION AS CLOSE TO FIELD DEVICE AS POSSIBLE.

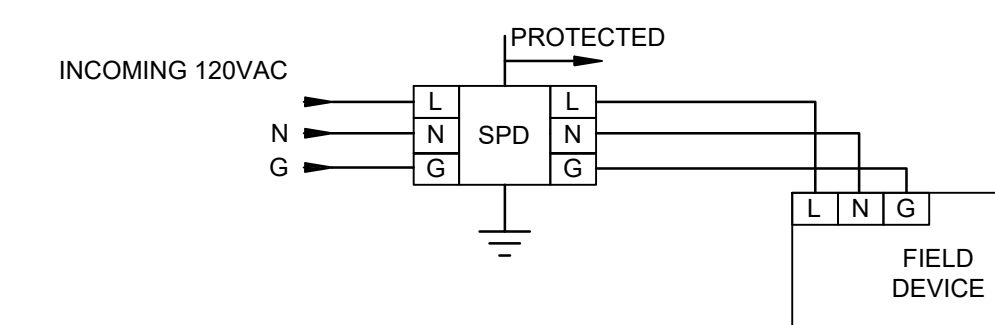
1 TYPICAL DISCRETE INPUT LOOP  
Scale: NO SCALE



NOTES:

- TERMINATE SPD DIRECTLY TO GROUND BUS. DO NOT DAISI CHAIN.
- TERMINATE SHIELD/ DRAIN WIRE DIRECTLY TO SHIELD BUS/ GROUND. DO NOT DAISI CHAIN.
- TAPE BACK SHIELD/ DRAIN WIRE WHERE INDICATED.
- WHERE SPD ARE REQUIRED IN THE FIELD, INSTALL SURGE PROTECTION AS CLOSE TO FIELD DEVICE AS POSSIBLE.

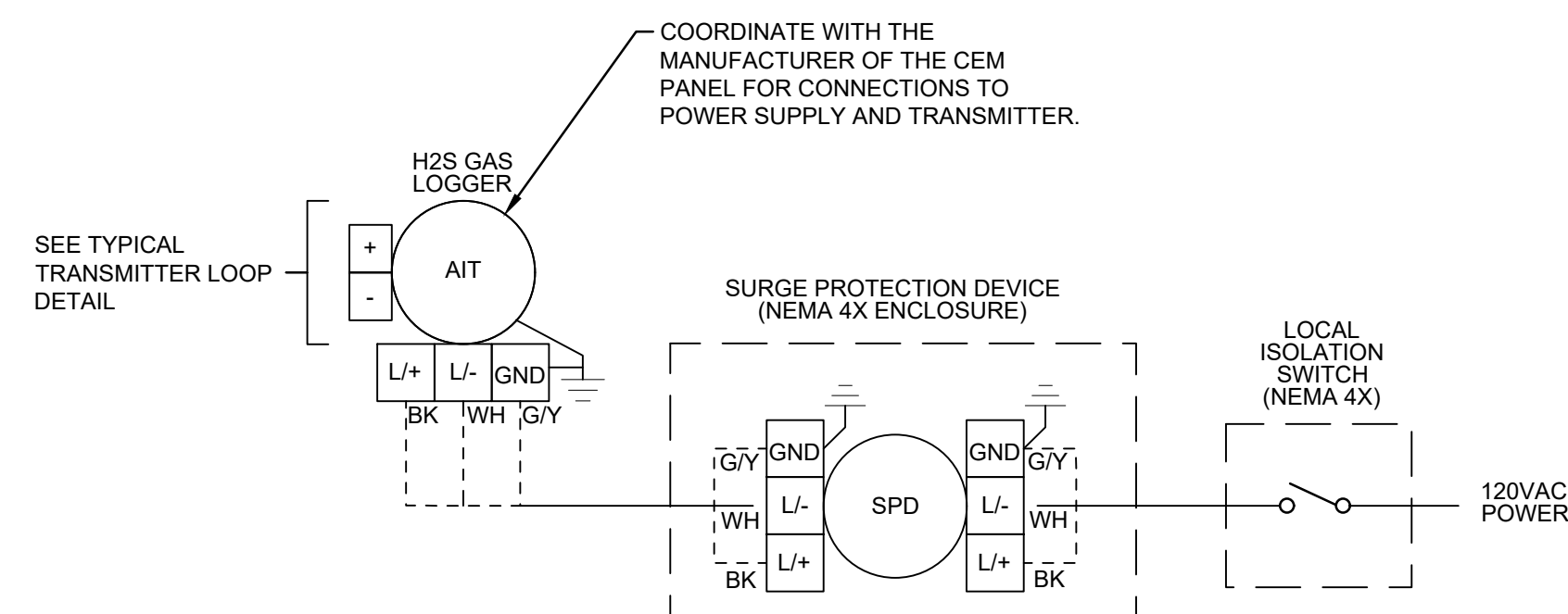
2 TYPICAL TRANSMITTER LOOP  
(LOOP POWERED: 2 WIRE)  
Scale: NO SCALE



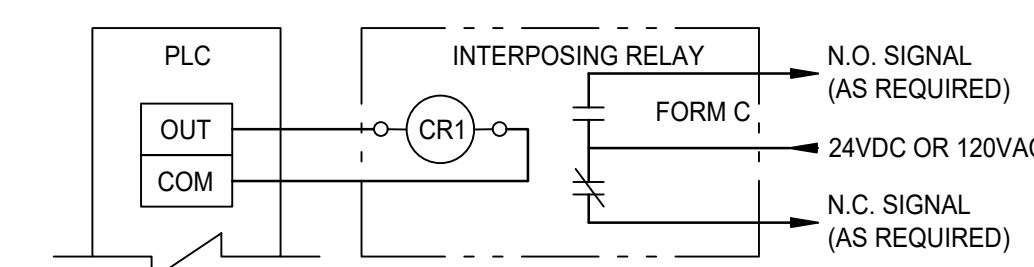
NOTES:

- TERMINATE SPD DIRECTLY TO GROUND BUS. DO NOT DAISI CHAIN.
- WHERE SPD ARE REQUIRED IN THE FIELD, INSTALL SURGE PROTECTION AS CLOSE TO FIELD DEVICE AS POSSIBLE.

3 TYPICAL FIELD INSTRUMENT  
120V SOURCE SURGE PROTECTION  
Scale: NO SCALE



4 TYPICAL CEM PANEL  
120V SOURCE SURGE PROTECTION  
Scale: NO SCALE



5 TYPICAL DISCRETE OUTPUT LOOP  
Scale: N.T.S.

Revision	By	Appd	Date
BID SET	BB	SM	NOVEMBER, 2023
Issued	By	Appd	Date
File Name: 11697-I-601	FL	BB	RC NOVEMBER, 2023
	Dwn.	Dsgn.	Chkd.

Permit/Seal

BRADLEY C. BUCHANAN, PE

86225

Client/Project  
COLLIER COUNTY PUBLIC UTILITIES

NORTH COUNTY WATER RECLAMATION  
FACILITY ODOR CONTROL - PHASE II

Title  
INSTRUMENTATION AND CONTROLS  
TYPICAL LOOP DIAGRAMS

Project No. 177311697 Scale NO SCALE

Phase Drawing No.

BID SET 29 of 33 I-602

Client/Project Logo



NOTES:


Revision	By	Appd	Date
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BID SET	BB	SM	NOVEMBER, 2023
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File Name: 116974-701	FL	BB	RC	NOVEMBER, 2023
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BRADLEY C. BUCHANAN, PE 86225

Client/Project  
COLLIER COUNTY PUBLIC UTILITIES

NORTH COUNTY WATER RECLAMATION  
FACILITY ODOR CONTROL - PHASE II

Title  
PLC-8 MODIFICATIONS  
LAYOUT

Project No. 177311697	Scale NO SCALE
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Phase	Drawing No.
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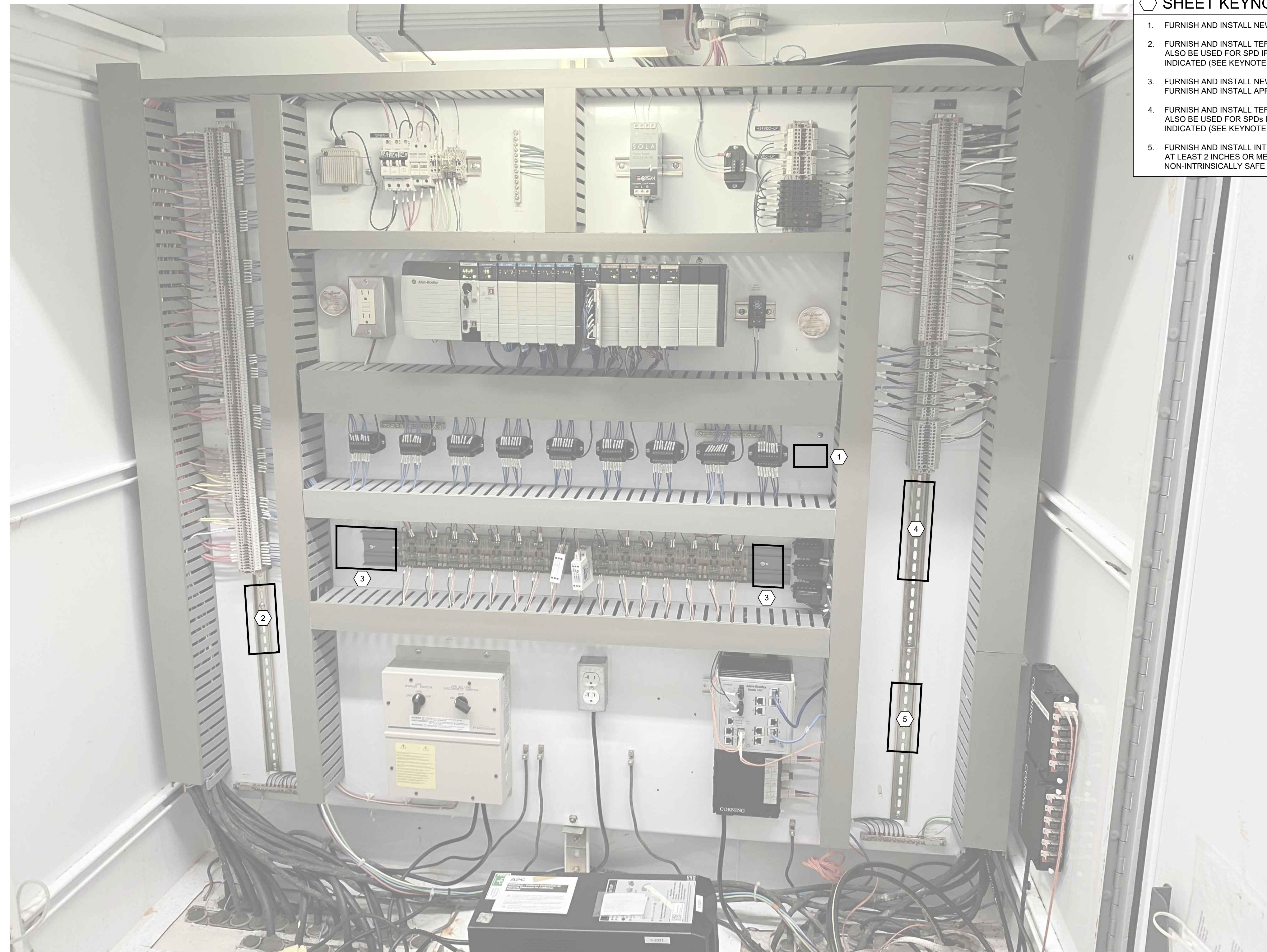
BID SET 30 of 33 I-701

GENERAL NOTES

- A. THE MODIFICATIONS SHOWN HEREIN ARE GENERAL IN NATURE. THE CONTRACTOR SHALL FURNISH AND INSTALL ALL WIRING, SPDs, TERMINALS, ETC. REQUIRED FOR CONNECTION OF THE NEW INSTRUMENTATION. WHERE PART NUMBERS ARE INDICATED, THEY SHALL BE AS INDICATED OR EQUIVALENT.
- B. ALL NEW TERMINALS AND WIRES SHALL HAVE UNIQUE TERMINAL AND WIRE NUMBERS, FOLLOWING THE FORMAT OF THE NUMBERING WITHIN THE PANEL.
- C. THE CONTRACTOR SHALL FURNISH AS-BUILT DRAWINGS IN ELECTRONIC FORMAT WITH SCHEMATIC UPDATES FOR ALL CHANGES MADE INSIDE THE CONTROL PANEL, AS WELL AS LAMINATED 8.5"x11" SHEETS TO REPLACE THE REVISED AS-BUILT DRAWING SCHEMATICS INSIDE THE PANEL.

SHEET KEYNOTES

- 1. FURNISH AND INSTALL NEW "SPD 10" DITEK DTK-4LVPLV OR EQUAL.
- 2. FURNISH AND INSTALL TERMINALS FOR DISCRETE I/O FIELD CONNECTIONS. SPACE MAY ALSO BE USED FOR SPD IF SUFFICIENT SPACE IS NOT AVAILABLE AT THE LOCATIONS INDICATED (SEE KEYNOTE 1).
- 3. FURNISH AND INSTALL NEW SPDs FOR ANALOG SIGNALS. FOR DIN-RAIL MOUNTED SPDs, FURNISH AND INSTALL APPROPRIATE LENGTH OF DIN-RAIL.
- 4. FURNISH AND INSTALL TERMINALS FOR ANALOG I/O FIELD CONNECTIONS. SPACE MAY ALSO BE USED FOR SPDs IF SUFFICIENT SPACE IS NOT AVAILABLE AT THE LOCATIONS INDICATED (SEE KEYNOTE 3).
- 5. FURNISH AND INSTALL INTRINSIC SAFE ISOLATORS. PROVIDE PHYSICAL SEPARATION OF AT LEAST 2 INCHES OR METAL PARTITION BETWEEN INTRINSICALLY SAFE AND NON-INTRINSICALLY SAFE CIRCUIT CONDUCTORS IN ACCORDANCE WITH NEC.



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NOTES:

- THE INTEGRATOR SHALL SUBMIT SHOP DRAWINGS WITH UNIQUE WIRE AND TERMINAL NUMBERS CONSISTENT WITH THE EXISTING PANEL'S NUMBERING SCHEME. THE CONTRACTOR SHALL FURNISH AND INSTALL LABELS WITH THE WIRE AND TERMINAL NUMBERS PROVIDED IN THE SHOP DRAWING SUBMITTAL.

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BRADLEY C. BUCHANAN, PE 86225

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COLLIER COUNTY PUBLIC UTILITIES

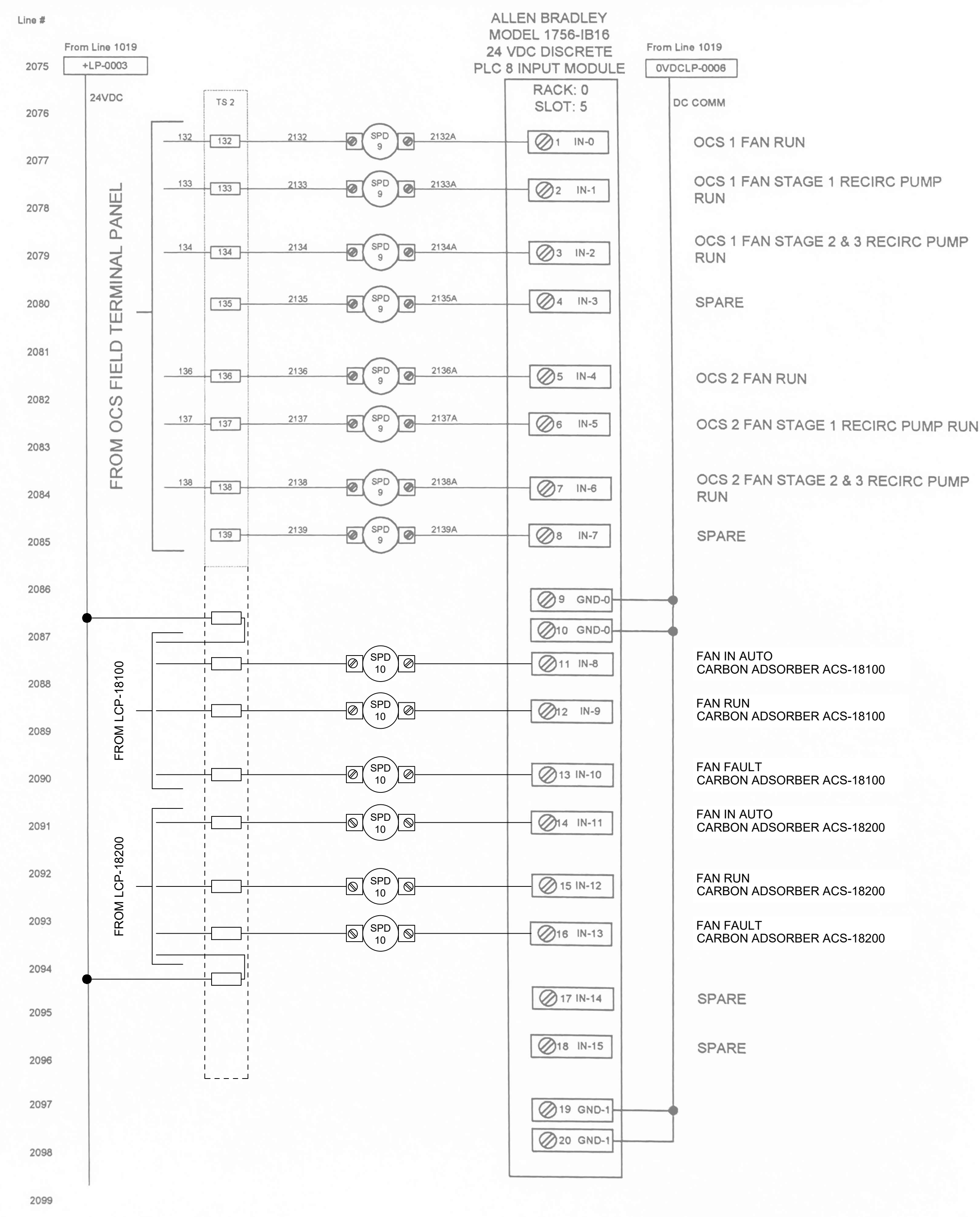
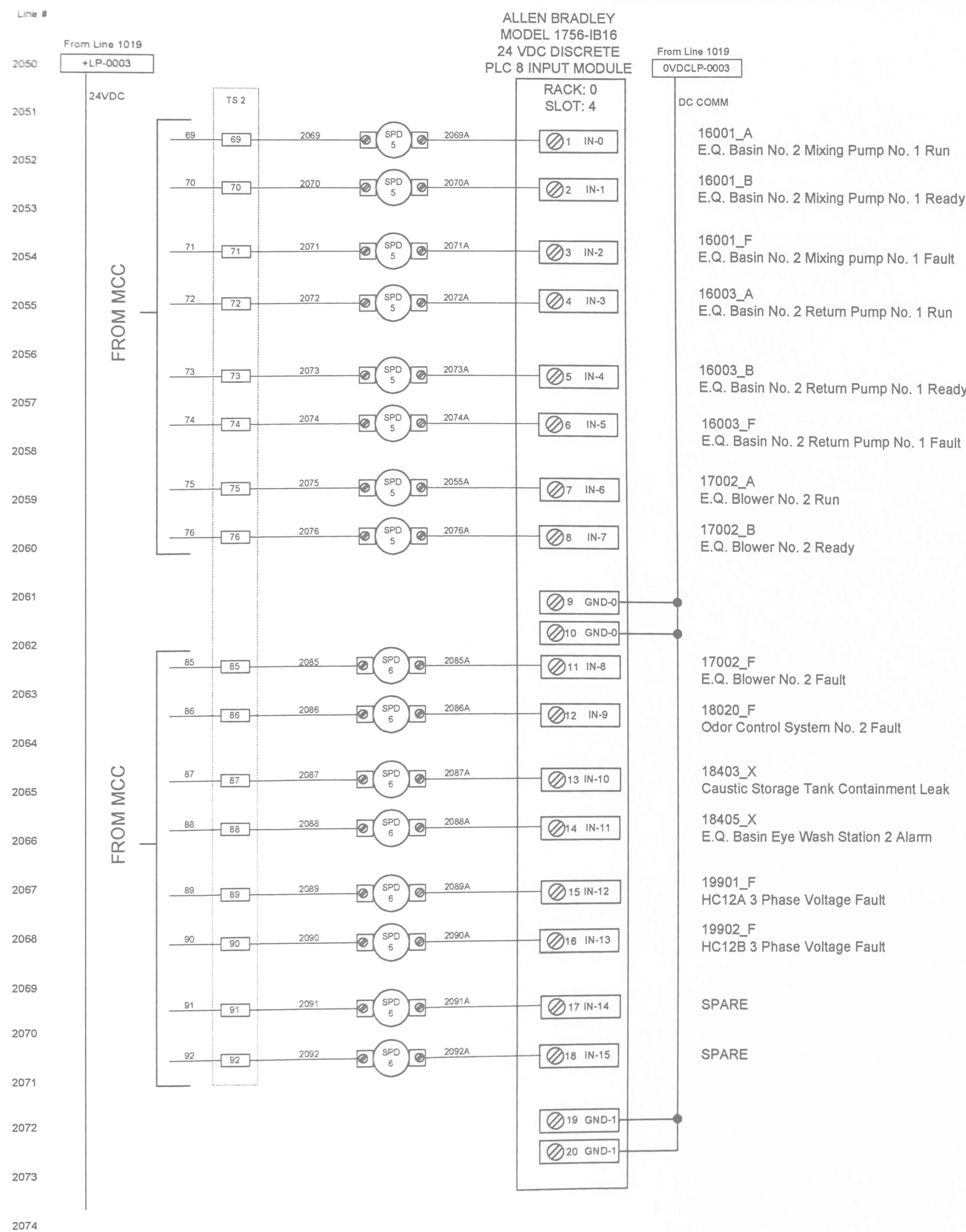
NORTH COUNTY WATER RECLAMATION  
FACILITY ODOR CONTROL - PHASE II

Title  
PLC-8 MODIFICATIONS  
SCHEMATIC - I

Project No. 177311697 Scale NO SCALE

Phase Drawing No.

BID SET 31 of 33 I-702



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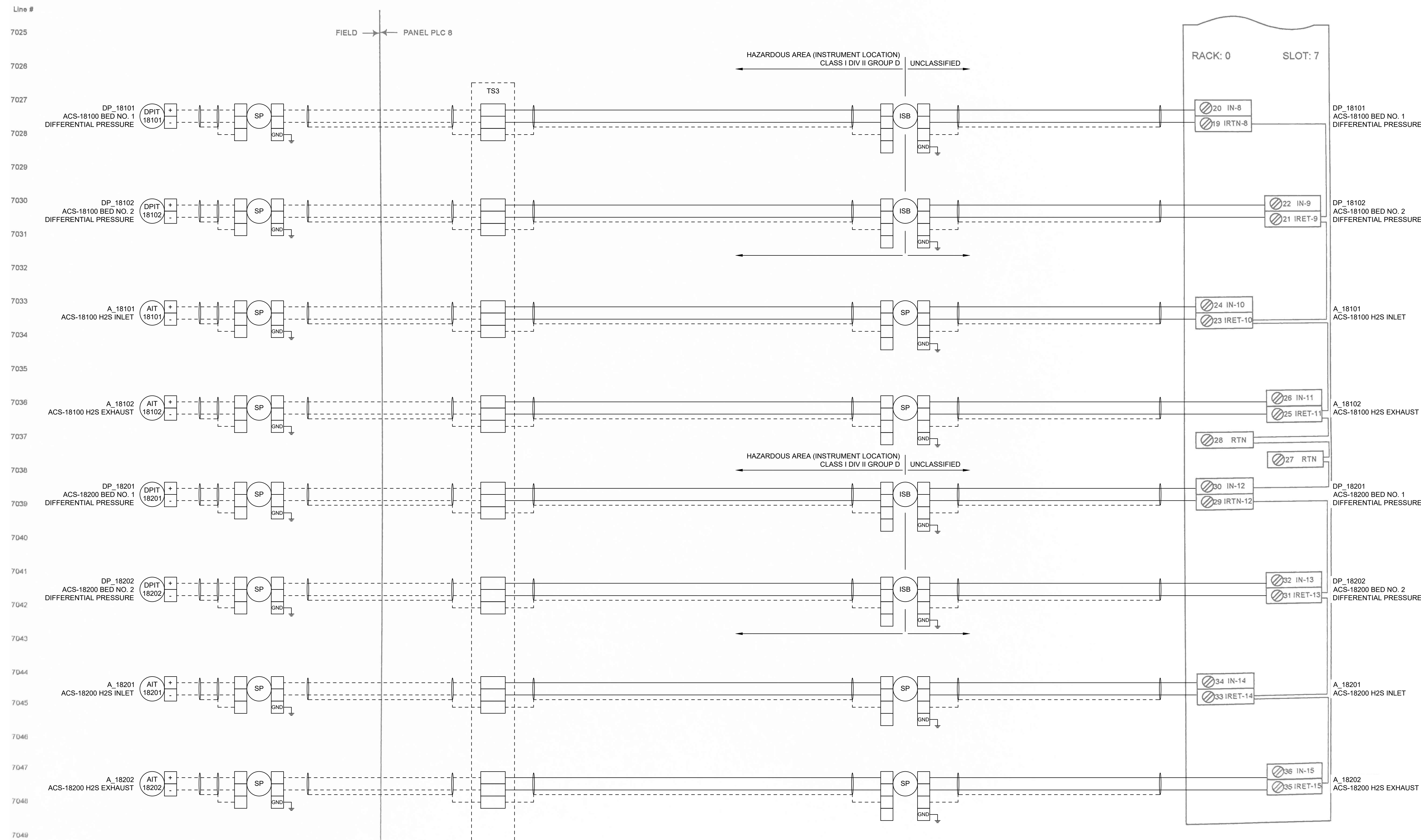


Client/Project Logo



NOTES:

- THE INTEGRATOR SHALL SUBMIT SHOP DRAWINGS WITH UNIQUE WIRE AND TERMINAL NUMBERS CONSISTENT WITH THE EXISTING PANEL'S NUMBERING SCHEME. THE CONTRACTOR SHALL FURNISH AND INSTALL LABELS WITH THE WIRE AND TERMINAL NUMBERS PROVIDED IN THE SHOP DRAWING SUBMITTAL.



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BRADLEY C. BUCHANAN, PE 86225

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NORTH COUNTY WATER RECLAMATION  
FACILITY ODOR CONTROL - PHASE II

Title  
PLC-8 MODIFICATIONS  
SCHEMATIC - III

Project No. 177311697	Scale NO SCALE
Phase BID SET	Drawing No. I-704
33 of 33	